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A NOTE ON THE PETROLOGY OF PREHISTORIC POTTERY FROM DORCHESTER-BY-PASS, DORSET.

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Summary

A small selection of Prehistoric pottery ranging in date from late Neolithic to Middle Bronze Age was examined in thin section. On the basis of the non-plastic inclusions present in the sherds a number of fabric divisions were made: (1) gabbro - from the Lizard in Cornwall, (2) flint - probably locally made, (3) fossil shell - the nearest suitable deposit is some five miles from the site, (4) calcite - the nearest suitable deposit is some eighteen to twenty miles from the site, and (5) grog - i.e. crushed-up pottery.

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A NOTE ON THE PETROLOGY OF PREHISTORIC POTTERY FROM DORCHESTER-BY-PASS, DORSET

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Introduction

Eighteen sherds of prehistoric pottery, ranging in date from late Neolithic to middle Bronze Age, were submitted for a detailed examination in thin section under the petrological microscope. The main purpose of the analysis was to confirm the validity of a provisional fabric identification in the hand-specimen by the excavator, and to see if any useful comments can be made about the likely origins of the pottery. The site at the Dorchester-by-Pass, south of the town and north-east of Maiden Castle, lies on Upper Chalk, nearby to pockets of Bagshot Beds and Valley Gravel (1" Geological Survey Map of England Sheet no. 328).

Petrology

Group 1

W183 85157 365/380 Fabric E1

W185B 85150 2293 Fabric R1

Thin sectioning shows that the dominant inclusions are made up of angular grains of partly decomposed felspar, some of which has altered to sericite, fresher

plagioclase and colourless or brown grains of amphibole, many of the latter appear as fibrous aggregates. Also noted were some grains of pyroxene, quartz, quartzite and serpentine. This distinctive fabric closely matches Peacock's (1969) description of the natural weathering clays overlying the gabbro on the Lizard Head, Cornwall, and these two vessels undoubtedly belong to this source.

Group 2 : Flint

W183 85147 273 Fabric F1

W186 85126 3128 Fabric F2

W137 FR15 85153 05722 Fabric F3

W137 851152 50851 838/851 Fabric Q2

W185 85154 2317 Fabric Q3

All of these five sherds contain angular pieces of flint. These are numerous and fairly large in 85147, less so in 85126 and 85153, and smaller and less frequent in 50851 and 85154 (although the latter sherd does contain one large dark coloured piece of flint/chert). In addition, all of the sherds have frequent grains of quartz, 50851 and 85154 have a scatter of small fragments of chalk, and 85126 and 85154 contain some argillaceous material. It is possible that the latter may be grog, though difficult to be absolutely sure, see below. Flinty fabrics are commonly found on sites situated on the Chalk, and these sherds may well represent locally made pottery.

Group 3 : Shell

W137 85103 52151 Fabric S1

W183 85148 273 Fabric S2

W183 85149 273 Fabric S3

All three sherds contain inclusions of shell, abundant in the case of 85148. It is difficult to decide if this is fresh or fossiliferous with 85103 and 85149, where the shell is only sparsely scattered through the fabric, but some recrystallization of the shell was noted in 85148, suggesting that in this sherd it is likely to be fossiliferous. The lack of any sign of chalk or flint in 85148 which might point to a fairly local origin, suggests instead that the fossil shell probably comes from a shelly limestone region. It is difficult to be certain without the identification of diagnostic fossils, but it is possible that the shell in this sherd is derived from the Jurassic, the nearest deposits of which lie some 5 miles to the south of Dorchester.
Also present in 85103 is some argillaceous material which may possibly be grog, see below.

Group 4 : Calcite

W183 85005 560 Fabric L1

W186 85007 3184/3099/34 Fabric L2

Both sherds are in a very distinctive fabric, the main characteristic of which is the high content of white angular crystals of calcite. The angularity of the pieces of calcite suggest that it was probably deliberately crushed and added to the clay rather than being a natural inclusion in the clay. The nearest suitable calcite deposits to Dorchester lie some 18/20 miles to the south west in the Lower Lias formations, where bands of 'beef' (i.e. fibrous calcite) are to be found (1" Geological Survey May of England Sheet no. 327). It is quite possible, of course, that this material may have come from even further afield.

Group 5 : ?Grog

W186 85110 3182/3099/86 Fabric G1

W137 85020 50856/856 Fabric G3

W137 FR15 720 Fabric Q1

The most prominent inclusions in all three sherds are small, reasonably angular pieces of argillaceous material. The angularity suggests that this may be grog (i.e. crushed up pottery). Also present in 85020 are some small fragments of chalk and flint, while a scatter of quartzite grains occurs in 85017. Due to the common nature of grog, it is difficult to suggest likely origins with any confidence. Other possible occurrences of 'grog' were noted in the sherds 85126, 85154 and 85103 above.

Group 6:

W183 85151 003 Fabric L3

W183 85155 67 Fabric L4

W183 85156 67 Fabric S4

Briquetage/daub ? All three sherds contain fragments of sandstone with some iron ore in, irregular pieces of cryptocrystalline limestone, a little shell (?fresh) and grains of quartz. Iron sandstone and limestone can be found in the nearby Bagshot Sands (Reid, 1899), which suggests the possibility of local production.

References

Peacock, D.P.S. (1969) 'A contribution to the study of Glastonbury ware from south-western Britain', Antiq. J., 49(1969), 41-61.

Reid, C. (1899) The Geology of the Country around Dorchester, London.