

The manufacture of pottery in Roman Scotland

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ABSTRACT

Recent work suggests that the manufacture of Roman pottery in Scotland was more extensive than has hitherto been believed. Two programmes of investigation are underway to examine possible local products through mineral analysis and through thin-section petrology and neutron activation analysis.

The various occupations of Britain north of the Cheviots by the Romans were essentially military in character. These episodes were all shortlived, none lasting longer than a generation. It would be easy to fall into the trap of assuming that each occupation was intended by the Romans to be brief. Yet this was not the case. On each occasion the army crossed the Cheviots intending to incorporate some or all of the northern tribes into the empire permanently. Thus, it must be expected that the army was followed by the full range of camp followers, themselves intending to set up home in Scotland. Caesar's army campaigning in Gaul was accompanied by merchants (*BG* VI, 37), and it seems probable that the traders, inn-keepers, prostitutes and soldiers' families who had lived outside the walls of forts in northern England packed up and tramped north with the army in 79, in the 140s and also perhaps in the early third century. On the two former occasions it might be expected that in time – perhaps a relatively brief time – an economic infrastructure would grow up in the newly occupied area, geared to meet the demands of the Roman army (Breeze 1984). Manning (1975) has discussed the presumed expansionist effect of the demands of the Roman army upon the agriculture of the north, but little investigation has taken place into the effect on other industries. In this paper I would like to examine the growing body of evidence for the manufacture of Roman pottery in Scotland.

Nearly 60 years ago Macdonald and Curle (1929, 527) tentatively suggested that some of the pottery found at Mumrills might have been manufactured there. However, it was not until the publication of Kay Hartley's seminal paper, 'Were mortaria made in Roman Scotland?' in 1976 that the first attempt was made to draw the disparate, and hitherto largely unrecognized, evidence together (Hartley 1976). Hartley investigated mixing bowls, concentrating on the second century, which 'saw the *floruit* of mortarium manufacture by potters with limited, sometimes even parochial markets' (Hartley 1976, 82). Based upon three criteria – the distribution of stamps, the presence of wasters and the type of trituration grit used – she was able to suggest that Roman pottery was probably made at Newstead and at an unlocated place in the western sector of the Antonine Wall to be distributed to several sites. Furthermore, she suggested that mortaria unique to individual sites were probably manufactured at those locations. These sites include Bar Hill, Balmuildy and Mumrills, and possibly also Cadder and Croy Hill. Mrs Hartley concluded that the

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potters working in Scotland had migrated north seeking new or better markets, while the manufacture of mortaria in Scotland was likely to have been accompanied by the production of other types of coarse pottery (Hartley 1976, 88).

Since the publication of Mrs Hartley's paper a kiln has been located and excavated within the fort at Bar Hill (Keppie 1985). The kiln lay beside the stoke pit of the regimental bath-house, and was therefore clearly military in nature. The pottery found at the kiln has not been found anywhere else within the fort, nor has it been recognized at any other site in Scotland. Another kiln, excavated outside the fort at Croy Hill, was suggested as possibly being for the manufacture of pottery (Hanson 1979, 20). Wasters suggest the existence of a kiln at Duntocher, also on the Antonine Wall (Gawthorpe 1980, 17).

Several recent excavations, mostly sponsored by Historic Buildings and Monuments, SDD, or its predecessors, have extended Mrs Hartley's list of sites yielding pottery found solely there. Such sites include Inveresk, where a type of Roman pottery unique to that site has been recognized by Thomas (forthcoming), and Bearsden, where as much as a third of the coarse ware appears to have been manufactured locally (Hird forthcoming). The range of sites has been extended chronologically as well as spatially with the publication of the report on the first-century legionary fortress at Inchtuthil, where some locally produced pottery has been found (Williams 1985, 339).

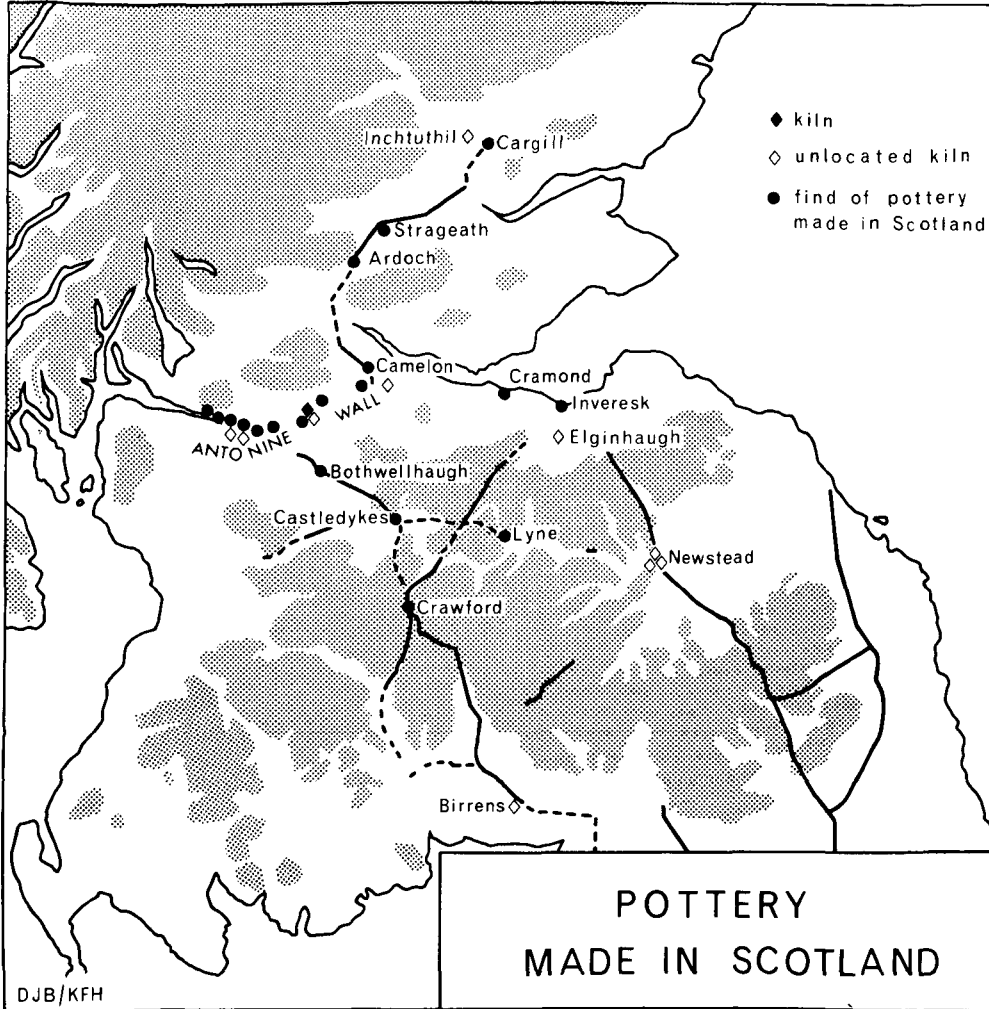
An attempt to plot this information, much of which is still unpublished, is reproduced as *illus 1*. The aim of publishing this distribution map, and this discussion, is to draw the information to the attention of a wider audience, as an advance warning of more detailed, but disparate, future publications and as an encouragement to further work in this field. Such work has already commenced in one area, and the opportunity is also taken to announce this research programme.

Illustration 1 offers three categories of information. The location of actual and presumed kilns are indicated, while those sites which have yielded pottery believe to have been made in Scotland are plotted. Pottery of both first- and second-century date is included.

The main conclusions to be drawn from this map are that far more Roman pottery was manufactured in Scotland than has hitherto been supposed, and very many forts must have either contained kilns or, more likely, have had kilns located close-by. The map also emphasized the importance of Newstead as the centre of pottery manufacture, the wares made here being distributed north and west, particularly to the forts on the Antonine Wall. This conforms to the general distribution pattern of Roman pottery in Britain, nearly all wares being transported north and west to Roman forts from kilns mostly situated in lowland Britain.

The suggestion by Miss Louise Hird that perhaps as much as a third of the coarse pottery in use at Bearsden was made locally, and the growing realization that this was not a unique local phenomenon, encouraged the establishment of a small-scale project by Mr G H Collins funded by Historic Buildings and Monuments, to conduct an investigation by means of mineral analysis to see if it was possible to confirm the provisional identification of local products, these products having been isolated on the basis of form and fabric. Mr Collins's research indicates that it is probable that some at least of these vessels had been made in Scotland (see appendix).

While this work was in progress the opportunity arose to undertake a more detailed and wider analysis of Roman pottery probably made in Scotland. A SERC/CASE three-year research studentship was awarded to Bradford University, with the co-operation of Historic Buildings and Monuments, to investigate the problem using techniques of thin-section petrology and neutron activation analysis. This was taken up by Mr Mark Gillings in October 1986, under the supervision of Dr R F J Jones and Mr Arnold Aspinall of the School of Archaeological Sciences at Bradford. It is hoped not just to analyse pottery from excavations sponsored by Historic



ILLUS 1

Buildings and Monuments but, through the raising of outside funding, excavate at least one kiln in order to examine clays at source: a possible kiln site has been identified by Mr Walter Elliot at Newstead. It is hoped that a subsequent report on this research will be published in these *Proceedings*.

It is generally presumed that practically all Roman pottery manufactured in the second century – and later – was made by civilians. Military, or to be precise, auxiliary, potteries operating in the first century seem, with the odd exception, to have closed down by the time of Hadrian (Gillam 1973, 54). It has been suggested that ‘this may have happened as forts were being evacuated in consequence of new troop dispositions, new depots not being opened’ (Gillam 1973, 54). However, the discovery of a kiln within the fort at Bar Hill indicates that military inactivity in the production of pottery may not have been so complete as hitherto presumed. It

may be that in the early phase of the re-occupation of Scotland in the second century the civilian *negotiatores* or distributors may not have caught up with the army and therefore that soldiers turned, for a time, to the manufacture of pottery themselves. As the new distribution network was established then the soldiers presumably ceased production. However, if that were the case, it would seem that potters working in more southerly parts did not rely solely upon middle-men operating over long distances to distribute their wares, but moved north in some numbers. In fact, it may be that each fort, or at least most forts, had outside one or more potters making goods for sale to the soldiers in the local regiment, and, it may be presumed, also to the civilians living in the adjacent settlement. The implication of this suggestion is of some considerable significance in altering our perception of the nature of the Roman occupations of Scotland

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APPENDIX

PETROGRAPHICAL EXAMINATION OF ROMAN POTTERY FROM BEARSDEN

G H Collins

Twenty-five sherds of Roman pottery were selected by Dr Breeze for thin-section examination. The aim of the research was to determine if any of the rock and/or mineral fragments (grits) present in the pottery could be identified, and a possible Scottish source given. It should be emphasized that this research is dependent on the slide containing a representative selection of grits present in the pot and that the actual plane of the slide is determined to a large extent by chance. Since the grits were almost certainly obtained from glacial or recent sedimentary deposits, it necessarily follows that geological knowledge is required of a considerably greater area than that in which the pottery was found, or may have been manufactured.

The pottery and thin sections are numbered and prefixed RP. Of the 25 slides examined, 16 have produced an assembly of rocks which, while not unique to Scotland, can be found within a 30-mile radius of Bearsden. The grits in the remaining nine are predominantly quartz and have been ignored as this mineral is so ubiquitous. The 16 slides have been divided into three groups.

Group 1 Slides containing basic igneous rock fragments (RP33, 40 and 42)

These slides contain fragments of basic igneous rock, being most abundant in RP40. Rounded grains of basalt, up to 4 mm in diameter, are found. They contain labradorite feldspar, olivine altered to iddingsite and ilmenite altering to leucoxene. In RP33 and 42 the rock is not so fresh, the feldspar being altered to secondary minerals. This basalt may be related to the lavas of Lower Carboniferous Calciferous Sandstone age, the rocks of which the Campsie Fells and the Kilpatrick Hills are composed (Macgregor & MacGregor 1948, 2). These are areas of high ground to the north and west of Bearsden.

Group 2 Slides containing rocks similar to those found along the Highland Border (RP35, 36, 39, 47 and 60)

These slides contain fragments of chert, chloritic-schist, and serpentinites. RP47 and 60 contain rounded grains of serpentinite, pale yellow in colour, up to 0.3 mm dia. Chert, sometimes mottled with veinlets of quartz in cryptocrystalline silica is present (RP47). Schistose-grit and chloritic-schist are found in RP35 and 36.

These rocks may be compared with rocks of Cambro-Ordovician age from the Highland Border (Johnstone 1966, 60). The nearest outcrops are at Balmaha and Aberfoyle.

Group 3 Slides containing quartzites, psammites and greywackes, similar to those of the Dalradian Assemblage (RP31, 32, 38, 39, 41, 43, 44, 45 and 50)

These slides contain rock fragments of quartzites, schistose-grits, alkali-feldspar and greywackes, none of which are diagnostic in themselves, but when taken together, may have been derived from the Upper Psammitic Group of the Dalradian Assemblage (Johnstone 1966, 38). RP31, 32, 38, 39 and 45 contain alkali-feldspar (orthoclase and rarely, microcline) and quartz rock, similar to psammitic-schists and schistose grits. The rock crop-out in a band, from 2 to 5 kilometres wide, stretching from the Clyde to the coast of Aberdeenshire (Johnstone 1966, Pl VI). RP38 also contains a fragment of biotite-granite of obscure origin.

Conclusion

Since the predominant drainage pattern is from the north-west (Macgregor & MacGregor 1948, 3), rocks from north of the Highland Boundary Fault could have been eroded and carried south-easterly towards the line of the Antonine Wall. The Carboniferous basalts are relatively local in origin. Thus it should be possible to find all the types of rock mentioned in this report within a comparatively small radius of Bearsden.

Acknowledgements

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