# IX
# MUSEUM NOTES, 2002
## 1. A MATTER OF PEGS AND LABELS: A REVIEW OF SOME OF THE PREHISTORIC POTTERY FROM THE MILFIELD BASIN

### INTRODUCTION

The concept of regionality is one which is receiving increasing attention in Neolithic studies. It is accepted that ostensibly similar monuments, such as henge monuments, may have served slightly different functions in Scotland than in, say, Wessex. A similar regional diversity can be seen in the field of material culture. There are, for example, the regional styles of decorated earlier Neolithic pottery; there are the Seamer type axes of the Yorkshire Wolds, the carved stone balls peculiar to Scotland and the hollow-based scrapers which dominate many Irish lithic assemblages. Logically one might assume that this artefact regionality would extend to later Neolithic pottery and in 1971 Ian Longworth identified broad regional styles of Grooved Ware (Wainwright and Longworth 1971). His Rinyo style was restricted to northern Scotland, his Woodlands style was restricted to Wessex, the Clacton style had a generally south-eastern distribution and the Durrington Walls style was more widespread over England generally. There was however a notable void in the distribution of Grooved Ware in Northern England and Southern Scotland between the Yorkshire Wolds and the Firth of Forth.

Meanwhile, regional styles of Impressed Wares were also being recognised. The Ford style with its distinctive cord-impressed arcs and angular rim profiles was named after Greenwell's find at Ford in Northumberland. Later, following the excavations at Meldon Bridge in Peeblesshire, the distinctive Impressed Ware with its square-sectioned rims was christened the Meldon Bridge style by Colin Burgess (1976); this terminology was later adopted by others (e.g. Miket 1985 describing the pottery at Whitton Hill). The term 'Peterborough Northern' was similarly coined to acknowledge that these pots lay squarely in the Impressed Ware tradition yet were significantly different to the Peterborough Wares of southern England. At this time, Peterborough Ware was still believed to be later Neolithic, contemporary with Grooved Ware, overlapping with Beakers and directly ancestral to Food Vessels and Collared Urns. We now know that the southern British material was produced in the middle Neolithic, in the few centuries either side of 3000 Cal B.C. (Gibson and Kinnes 1997) and the recently published dates from Meldon Bridge would appear to confirm the contemporaneity of the northern material (Speak and Burgess 1999).

Dating aside, these finds were regarded as important as they helped fill the perceived gap in the ceramic distribution of the later Neolithic and were seen as linking the findspots in Yorkshire with those in central Scotland. There was still, however, a perceived gap in the distribution of Grooved Ware with only the Clacton-style sherds from Ford linking the Yorkshire and Scottish material.

It was against this background of a resurgence in Neolithic studies and an acknowledgement of, and desire to identify, regional styles that apparent finds of 'Grooved Ware' were made in the north east of England in the last three decades of the twentieth century. Some of the Grooved Ware identified during this period was seen as idiosyncratic to the north east and was regarded as regional and peculiar to the area; the fact that it differed from classical Grooved Ware assemblages elsewhere was explained as being a result of its regionality and so caused few problems of interpretation,

despite obvious fabric similarities between the Yorkshire and Southern Scottish material.

In 2000 and 2001, the present writer was invited by Peter Topping of English Heritage to comment on the Beaker and Bronze Age pit group from Wether Hill (Gibson 2000) and by Clive Waddington of the University of Newcastle to examine and report on a small Grooved Ware assemblage from the Milfield Basin (Gibson 2001). This work suggested that some earlier identifications were based on analogies with other local material whose dating was far from certain. Indeed, the identification of some of the Northumbrian Grooved Ware sites appeared to rely on circular arguments and there was a shortage of cultural pegs on which to hang some peculiar sherds. It seems timely to review the evidence and, perhaps, remove some assemblages from inappropriate pegs.

## DISCUSSION

Terry Manby (1974; 1999) was able to list eight Grooved Ware findspots in Northumberland. To these can now be added Waddington's recent finds from Milfield and a pit group assemblage from Milfield Gravel Quarry (inf J. Huntley and T. Manby):

### Milfield North

(Harding 1981: Museum of Antiquities Acc. No. 1996.11). The pottery identified as Grooved Ware came from the middle fill of Pit 2 in the pit alignment. The pottery is fragmentary and, while it is decorated with both impressed and incised techniques, is perfectly in keeping with Grooved Ware although the radiocarbon dates spanning 2300–1700 Cal B.C. may be more in line with a Bronze Age identification. The decoration on the sherds may also be found within the Food Vessel tradition. The radiocarbon dates ($3740 \pm 50$ BP (BM-1650), $3770 \pm 50$ BP (BM-1652) and $3605 \pm 50$ BP (BM-1653)) are from different levels in pit 2 and all are derived from unidentified charcoal and therefore must be regarded with caution in case they suffer from the effects of old wood (though the one sample documented as coming from pit 2 in appendix 2 is identified as hazel). The description of the opening agents as 'fine to medium grit' is somewhat subjective and imprecise but, assuming that 'grit' means 'stone', then this stone-filled fabric may *possibly* also support a Bronze Age hypothesis since Grooved Ware fabrics tended to utilise grog and shell as deliberately-added opening agents, while rock-tempered fabrics of the Bronze Age are well known.

### Yeavering Henge

(Harding 1981: Museum of Antiquities Acc. No. 1996.11). The pottery was found in the secondary silts of the henge ditch. A Grooved Ware identification rested on an analogy with similar pottery from other local sites and the presence of cordons as well as broad, incised decoration on some of the fragments. However, where present, the cordons only occur in the upper third of the vessels and there are none of the vertical cordons distinctive of Grooved Ware (though admittedly vertical cordons need not always be present). More alien to Grooved Ware is the restriction of oblique incisions to the area above this cordon and the presence of abundant large, angular stone inclusions in the fabric. Taken together, these features all find better parallels with material from Bronze Age contexts such as at Standrop Rigg (Jobey 1983), Green Knowe (Jobey 1980), Houseledge (Burgess 1995) and Wether Hill (Gibson 2000) than with classic Grooved Ware assemblages in Scotland and the North of England. This suggested Bronze Age context may also better suit the secondary silts of this small and possibly late henge.

### Thirlings

(Miket 1976, fig 7.15; Berwick Museum). Harding (1981) used the pottery identified as Grooved Ware from Thirlings to support his identification of the Yeavering henge material even though the Thirlings pottery was unstratified and came from the ploughsoil. It seems to have been identified as Grooved Ware only

because of its cordon and, as noted above, this feature may as easily find parallels in the Bronze Age in the centuries around 1200 B.C. Feature F466 at Thirlings seems to have contained an assemblage of Impressed Ware including Fengate-style pots, and the radiocarbon date of $4080 \pm 130$ BP (HAR 1451) is in keeping with this, though the large margin of error is unhelpful and the charcoal submitted was not identified (quantities of hazelnut shells are mentioned in the interim report). However, another pit is recorded 4 m distant from F466 (Manby 1999, 70; Miket 1976, 119) and the cord-decorated 'Durrington Walls' style pottery from this feature may equally be attributable to local Bronze Age types. Regrettably, there is considerable confusion in the interim report as to what was found in this pit. Miket refers to Figs. 7.10, 57.4 and 57.7, which illustrate sherds (57.4) with cord-impressed internal rim decoration comprising chevron motifs which are much more common on Food Vessel rim bevels than on Grooved Ware, as is the lattice decoration seen on a second rim sherd (57.7). In the illustration captions all this pottery is labelled as coming from F466. We must await the final publication before this confusion can be resolved.

The Grooved Ware (lugged sherd) listed by Manby (1999, 70) as coming from this second feature may also involve a dubious identification given its association with putative early Bronze Age types. Even if associated with Impressed Wares, the identification and/or association may be unlikely given the chronological separation that would seem to exist between the two traditions (see Gibson and Kinnes 1997).

**Whitton Hill 1**

(Miket 1985: Berwick Museum). The small bucket-shaped pot with applied lugs from this site similarly cannot be convincingly identified as Grooved Ware. Coming from secondary contexts within a segmented ring ditch, it is associated with two radiocarbon dates; unfortunately, there are problems with both of these dates. Firstly, they were obtained from unidentified timber charcoal and so an 'old wood' factor must be considered. Secondly, these dates suffered from calculation errors at the British Museum; they have been recalculated (BM2265R and BM2206R) but with such large margins of error that they span the period *c.*3400–1500 Cal B.C. (at 2 sigma). Once more the greater probability is for a date between *c.*2900 and 2000 Cal B.C. but this is almost certainly a result of the middle Neolithic 'plateau' in the calibration curve. The statistical problem combined with the unidentified nature of the charcoal must render these dates useless. Once more a Bronze Age affinity might be suggested for this sherd, and certainly such small lugged cups are common in Deverel-Rimbury assemblages further south. That said, it must be acknowledged that similar vessels have been identified as Grooved Ware at Carnaby Top Site 20 and North Carnaby Temple Site 3 (Manby 1974).

Also at Whitton Hill 1 (Miket 1985), Meldon Bridge style Impressed Ware was identified in association with, and containing, the central cremation. Cremations with Impressed Wares are extremely rare and it is notable that none of the pits associated with substantial quantities of Impressed Ware at the Meldon Bridge type-site contained cremations (Speak and Burgess 1999). The rim sherd illustrated in the Whitton Hill report may find better parallels within the Food Vessel Urn class of pottery among which associated cremations are far more common. This excavation took place at a time when the Meldon Bridge style was becoming accepted in the archaeological literature and therefore there may have been an unconscious desire on the part of the excavator to increase the local corpus. It can also be difficult to distinguish between Impressed Wares and Food Vessel Urns on wall-sherd evidence since both employ angular stone inclusions to open their fabrics. The radiocarbon date, again obtained from unidentified charcoal, may also suffer from the 'old wood factor' mentioned above and thus must be regarded as unreliable. In addition, this date also had to be re-run due to the BM laboratory error previously cited. The recalculated date (BM2266R) spans the period *c.*3600–1400 Cal B.C. at 2 sigma with a greater

probability falling between *c.*2900 and 2000 Cal B.C., but this weighting again results from the effects of the middle Neolithic 'plateau' in the calibration curve. These factors combine to render the radiocarbon date useless. Unfortunately the fragility of the vessel meant that it did not survive the excavation and it is therefore unavailable for re-assessment. If an earlier Bronze Age identification is accepted, and I feel that the arguments in favour of this far outweigh those against, then the sherds from a flat-based tub-shaped vessel interpreted as 'Grooved Ware' recovered from the upper fill (Miket 1985, P2) must also be Bronze Age in date.

### Ewart 1

(Miket 1981; Berwick Museum). The pottery from the pit alignment is more in keeping with Grooved Ware. Converging parallel grooves (e.g. No. 4.10) suggest a Clacton style element as identified by Manby, but near-vertical internal bevels (3.3 and 5.16) may also hint at a Durrington Walls element, though this trait alone does not serve to identify the sherds conclusively. A Clacton-style sherd was found by Greenwell at Redscar Bridge (Longworth 1969).

### Old Yeavering

(Ferrell 1990; Museum of Antiquities Acc. No. 1982.39). Woodlands and Durrington Walls style pottery has been found at this site and the assemblage has been re-assessed by Ferrell. The sherds identified are fairly classic Grooved Ware and the reassessment would appear to be reliable.

## CONCLUSION

A common feature of later Neolithic Grooved Ware is its general uniformity over the whole country (see Cleal and McSween 1999) though Scottish and Irish styles can be distinguished within that uniformity. Now that classic Grooved Ware assemblages have been recognized in the region, such as those from Yeavering, Milfield Gravel pit (inf. J. Huntley and T. Manby) and Milfield (Gibson 2001), then the past identifications of atypical 'regional' material must be open to question, especially given the unreliability of the few radiocarbon dates available.

Having suggested that the assemblages from Milfield North, Yeavering Henge, Whitton Hill and Thirlings should be taken off their cultural pegs, we are left with the dilemma of where now to hang them. In the north east of England there had been a perceived break in the ceramic record between the decorated pottery of the earlier Bronze Age and the coarse bucket- and barrel-shaped tubs found on Iron Age and Romano-British settlements; pottery from the second half of the Bronze Age and the early Iron Age was unknown. Over 20 years ago, the present writer suggested that there was a class of coarse, barrel- and bucket-shaped urns which were associated with cremation burials and which might represent the northern equivalents of the bucket and barrel urns of the Deverel-Rimbury tradition of southern England (Gibson 1978, 9). These vessels were either undecorated or decorated with simple devices such as cordons around the upper third of the pot, encircling finger-grooves externally below the rim, or simple and crudely incised motifs on the upper part of the exterior. This suggestion was later supported by the recovery of later Bronze Age pottery from the platform and unenclosed settlement sites such as Green Knowe (Jobey 1980), Standrop Rigg (Jobey 1983) and Houseledge (Burgess 1980). Colin Burgess (1995) has taken up this observation and has further refined and defined the pottery from this period, which can now be seen to have its roots firmly in the earlier Bronze Age ceramic traditions and may reasonably be considered to represent the decline in ceramic technology that characterizes later Prehistory in northern Britain. The cordoned and incised pottery from the Yeavering henge and the cordoned sherd from Thirlings, in particular, find better parallels with pottery from Houseledge and Standrop Rigg than they do in Grooved Ware assemblages, and it may be that the lugged pots (such as that from Whitton Hill) represent another facet of this later

Bronze Age repertoire just as they do in the south of the country.

To conclude, the study of the Neolithic ceramics of Northumberland has suffered from over-enthusiasm in the identification of regional styles, from a circularity of argument regarding local parallels, from a lack of attention to fabrics and from unusable radiocarbon dates. Now that laboratory errors have largely been eradicated and archaeologists are more discerning in their choice of samples for dating, the time might be right to re-examine other museum collections for secure and datable materials to attempt the construction of an absolute chronology for the Neolithic and Bronze Age ceramics from the north east of England. Antiquarian and more recent excavations have produced a number of site-specific relative chronologies which might be combined with radiocarbon dates to produce a refined framework. Now that cremated bone can also be radiocarbon dated we have an opportunity to obtain more data from a variety of sites by using existing archives. Perhaps we are entering a new period of enthusiasm for the study of the earlier Prehistoric ceramics of the North.

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Alex Gibson

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## 2. ROMAN VAULTING TUBES (*TUBI FITTILI*) FROM CHESTERS

On display in the Museum of Antiquities is a pair of Roman earthenware pipes from Chesters. The Society acquired them prior to the audit of 1956, and they carry the accession number 1956.30.3 (figs 1 and 2). Both are hollow, cylindrical tubes, narrowing to a nozzle at one end, and bear surfaces which are strongly corrugated. The first (fig. 1; inv. 61/61), reassembled from eight fragments, has its wider end partly preserved, but the nozzle is broken. At its widest it has an internal diameter of 52 mm, an overall diameter of 74 mm, and a maximum surviving length of 155 mm. The second tube (fig. 2; inv. 19/98), intact, is 218 mm long. It has a maximum internal diameter of 51 mm and walls 10 mm thick, making its overall diameter 71 mm. The external diameter of the nozzle end is 17 mm, and the length of the nozzle, from the tip to where the tapering finishes and the cylindrical body of the tube begins, is 45 mm. Both are in a very similar fabric. The first is in a hard, brownish-orange fabric, fired greyish-buff on the surface, with scattered black and red inclusions. There are traces of yellowish-white mortar on the outside. The second pipe is of a slightly darker reddish-brown fabric, fired uniformly, and has more numerous black inclusions.

The tubes have been interpreted hitherto as water pipes, but three considerations make this unlikely. First, they are very small for water pipes. Brodribb (1987, 84–8), quoting exclusively British examples, says that the length of water pipes varies from an enormous 940 mm (at Folkestone) down to 230 mm (at Caerleon), but most of those he lists are in the range of 300 mm to 500 mm; in fact, as we shall see, the Caerleon pipe is probably not a drainpipe at all. Secondly, water pipes tend to have a slight outward flare at their upper end, and a similarly slight taper at the opposite end, to enable them to fit well into one another when laid (e.g. at South Shields: Bidwell and Speak 1994, 156–9 with fig. 5.10; cf. the complete examples from Pompeii, between 380 mm and 630 mm long, illustrated by Adam 1994, fig. 610). Drainpipes do not, therefore, have the very pronounced tapering to a nozzle which characterises the Chesters pipes. Thirdly, the marked corrugation of the outer surface (and the inner too), made by the potter's fingers while the object was being fashioned on the wheel, is a distinctive feature of the pipes under consideration which does not appear in drainpipes or water pipes; the latter are normally smooth.

These features make it much more probable that the pipes from Chesters are not drainpipes or water conduit pipes but vaulting tubes. Rows of such tubes, fixed together with mortar or plaster during construction, were used to create an initial rough-and-ready vault very rapidly, providing an immensely strong centring on which to pour the mortared rubble aggregate

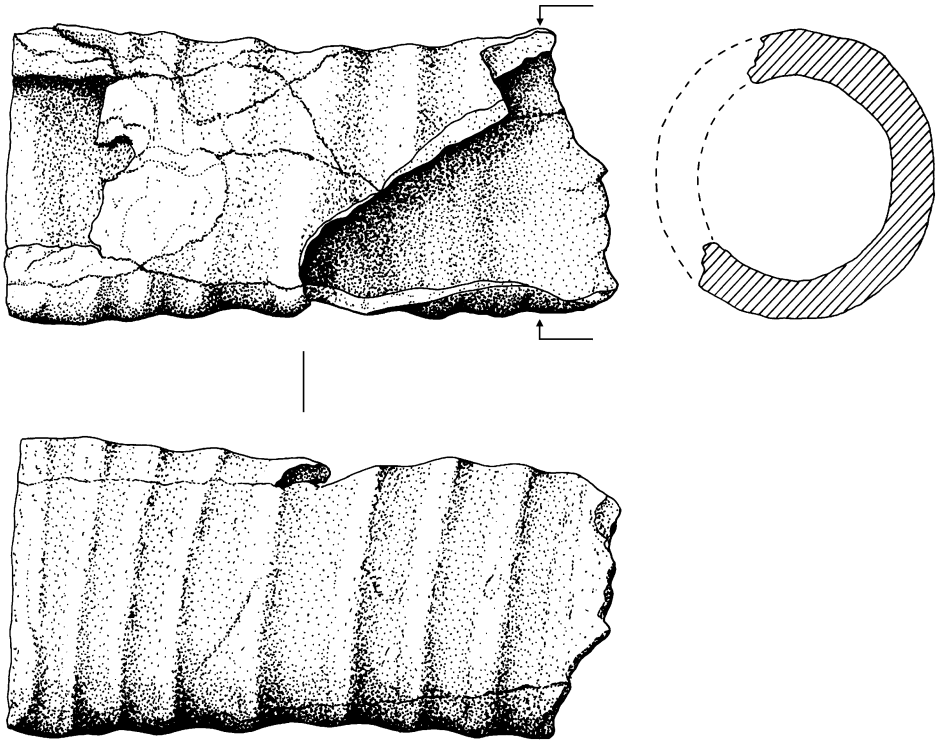

*Fig. 1 Scale 1:2*

of the vault proper. The need for a conventional centering made of timber was thereby dispensed with completely. Once the vault was set, a layer of plaster was applied to the underside of the vaulting tubes, so that they were entirely encased and invisible once the building was finished. The purpose of the corrugated surfaces which vaulting tubes invariably display was to enhance the 'keying' properties of the tube, so that both the mortar of the vault on one side of each tube and the plasterwork of the room's ceiling on the other side would be able, in theory, to adhere more easily than if the tube had been smooth. The slight traces of mortar visible on one of the Chesters tubes lends further support to this interpretation of their function.

The reasons why this method of vaulting developed in the first place are not entirely clear. The initial inspiration for it probably came from the common habit of using waster jars from pottery kilns, locking into one another, to create a makeshift dome over the kiln every time a new firing took place; but one might nevertheless have thought that the expense of manufacturing thousands upon thousands of these ceramic tubes, however speedily each could be thrown on the wheel, might still have outweighed the cost of timber to provide centring in the conventional manner. Shortage of wood, one reason put forward to explain the phenomenon of *tubi fittili*, is unlikely to have been a factor in their use (and certainly not in Britain), nor is an alleged need to lessen the weight of a vault; convenience, fashion and the familiarity of individual architects with their use are likely to have been the main driving factors in the employment of vaulting tubes (Wilson 1992, 105–9).

The earliest known use of vaulting tubes occurs in the dome of a bath-building at Morgantina in Sicily in the third century B.C., but

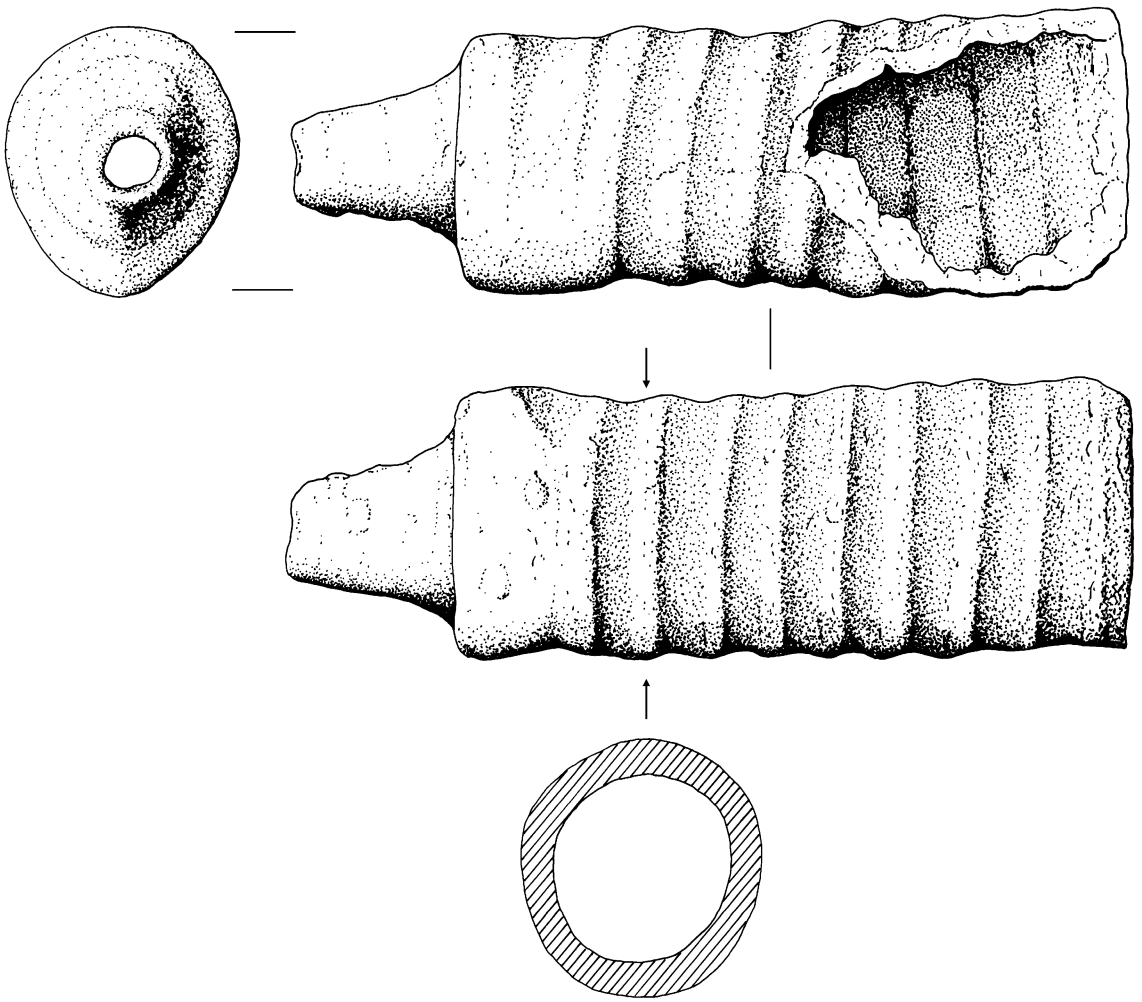

*Fig. 2 Scale 1:2*

they were used sparingly until the second half of the second century A.D., when their use caught on, especially in barrel vaults and semi-domes, in north Africa. They are extremely plentiful there, especially in Tunisia and Algeria (less so in Tripolitania and Morocco), and they also re-appear in Sicily at about the same time (Wilson 1992; Storz 1994). Later they enjoyed a more widespread distribution in the central Mediterranean area, especially in Italy, where they were adopted by late antique church-builders in places such as Ravenna and Milan in the fifth and sixth centuries A.D. (Wilson 1992, 114, fig. 19 for a distribution map; Wilson 1997). In Italy they are called *tubi fittili*, and this terminology is sometimes employed by those writing in other languages to describe this curious class of artefacts. There are scattered examples as far afield as Pella in Jordan (Smith and Day, 1989, 13 and 101–2 with fig. 30 and pl. 3B), Dura Europos in Syria (Wilson 1992, 112, fig. 18) and even in Dacia (information courtesy of Dr. John Hayes). Apart from underwater finds, there are virtually no

examples in France (La Madrague de St Cyr, Servian and Limoges are the exceptions), and only a single example in Germany, at Cologne (Rouquette 1991 has a useful list, not known to Wilson 1992).

They are however attested in three other places in Britain: the legionary fortresses of Caerleon, York and Chester. At Caerleon, vaulting tubes were first located in the extramural Castle Baths in the nineteenth century (Lee 1862, 41 with pl. XXII.9), where they were 235 mm long and had a maximum diameter of 75 mm, only slightly larger than the Chesters examples. It is almost certainly these to which Brodribb is referring when writing that the 123 complete examples of Roman 'ceramic pipes or drains', which he examined from Britain, ranged in size from 940 mm to 230 mm in length (see above). The date of the Castle baths at Caerleon is unknown, but vaulting tubes from the intramural legionary baths there appear to belong to the last constructional phase of the late third century (Zienkiewicz 1986, 336 with fig. 111).

A single stray example of vaulting tube is known from the Church Street sewer inside the legionary fortress at York (Whitwell 1976, 45 with fig. 21.23). The sewer underlay the intramural legionary bath-house in York, and so it would not be surprising if *tubi fittili* were also used in a repair or reconstruction of that building too. The only part of the baths known, however, is the apsed heated room and parts of adjacent rooms below nearby St Sampson's Square, ascribed to the fourth century. If vaulting tubes were found at the time of their discovery in the 1930s they were probably not recognised for what they were: there is no mention of them in the excavation report (Corder 1933).

The most coherent known use of vaulting tubes in Britain comes from the legionary baths at Chester, where part of the vault of the *tepidarium* was found during emergency excavation in 1964, still *in situ* on the floor where it had fallen. This vault was composed partly of interlocking hollow vaulting-tubes, and enough survived to show that the *caldarium* had been roofed in a similar manner (Mason 1990). The Chester tubes vary from 185 mm to 225 mm in length (cf. the intact Chesters example, 218 mm), and have nozzles between 38 mm and 55 mm long (Chesters: 45 mm); maximum external diameters ranged from 65 mm to 81 mm (Chesters: 71 mm and 74 mm), and the nozzle end from 22 mm to 30 mm (the measurable example at Chesters is appreciably narrower, at 17 mm). The terracotta vaulting tubes at Chester were not, however, used on their own to provide a centring for the vault, as they generally are in north Africa; they were employed in conjunction with tile voussoirs to compartmentalise the vault. In other words, there was an inner framework of hollow tile voussoirs, onto which the concrete of the roof proper was poured, and both 'the framework and the concrete envelope above were subdivided into compartments by ribs built of . . . earthenware tubes' (Mason 1990, 221).

To these British examples of the use of *tubi fittili* can now be added the fort at Chesters on Hadrian's Wall, the most northerly recorded example of their use in the Roman Empire. The occurrence of such vaulting tubes elsewhere in Britain only at the three legionary fortresses cannot be accidental. Mason (1990, 222) has plausibly suggested that the distribution implies the presence of one or more military architects from north Africa, where the technique was so widespread from the later second century; it was they, suggests Mason, who were responsible for refurbishing the ageing *thermae* at the three fortresses, and who introduced this vaulting technique to Britain. Such men may well have been present in Britain with Septimius Severus and his sons during their campaigns in Britain in 208 and the following years. The dating evidence for the use of *tubi fittili* in Britain is, however, scanty: the Chester baths were probably rebuilt at the same time as the rest of the refurbishment of the fortress *c.* 215–235 (Mason 2001, 161–8, 177–9), but their use at Caerleon is, as noted above, not thought to be earlier than the late third century. Nevertheless, the presence of such an unusual vaulting technique at Chesters probably implies

the presence of a legionary *architectus* and direct legionary help there at some stage during the third century.

The precise findspot of the *tubi fittili* displayed in the Museum of Antiquities is unknown, but the building at Chesters most likely to have been a candidate for specialised outside help is the well-known extramural garrison bath-house between the fort and the river North Tyne. First cleared in the 1880s (Holmes 1887), it was later the subject of a classic study by Sir George Macdonald (Macdonald 1931); but only recently has it been subjected to detailed modern scrutiny, the results of which are still awaited (Snape 1999). The building clearly went through several alterations and rebuildings, mostly undated, but one of them is likely to have taken place in A.D. 223 or 224 because a dedication slab, found in the bath-house in 1884 (*RIB* 1467), refers to work being done while Claudius Xenophon was governor of Britain; and he is known to have held office after 222 and before 225 (Birley 1981, 191–2). The stone is fragmentary, so whether this work was carried out by the auxiliary unit then stationed at Chesters, the Second *Ala* of Asturians, or by legionary detachments, is unknown: legionary building work at Chesters (by the Sixth) is attested in 139 (*RIB* 1460–1461) but not later.

The use of a highly original vaulting method in the *caldarium* of these baths, consisting of shaped tufa voussoirs with spacer tiles between, is well known (Macdonald 1931). Whether this was the primary roof, or the result of a third-century (or later) re-roofing is uncertain, but it would not be surprising if such an original design was the work of an imported legionary architect rather than the outcome of purely local initiative. As for the vaulting tubes, they might have been used to partition the vault in much the same way as at Chester, or they might have come from a separate room altogether in the baths, not necessarily of the same period as the main *caldarium* roof. But all this is of course speculation. Without a precise provenance, and without the discovery of further better-documented examples at Chesters, the exact context and date of the two vaulting tubes now in Newcastle must remain uncertain.

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R. J. A. Wilson

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