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MUSEUM NOTES, 1982*

Lindsay Allason-Jones and J. P. Gillam, and Julian Bennett

1. ROMAN POTTERY FROM HADRIAN'S WALL TURRET 27A. (fig. 1).

THE MUSEUM of Antiquities has recently been presented with some archaeological material left in the Institute of Archaeology in London by the late Professor Sir Ian Richmond.[1] Amongst this material is a box containing a few sherds of pottery labelled "sherds from Turret 27a, under Chesters fort. IAR".[2] In *JRS* XXXVI (1946), 134, Professor Richmond described his excavations of 1945 at Chesters: "Just east of the *principia* were found the foundations of Turret 27a, all the foundation work here both of Broad Wall and turret surviving as a single layer of clay and massive cobbles, worked stone having been entirely removed when the fort was built." There is no mention of pottery being found, nor was it published later. Thomas Hepple's note-

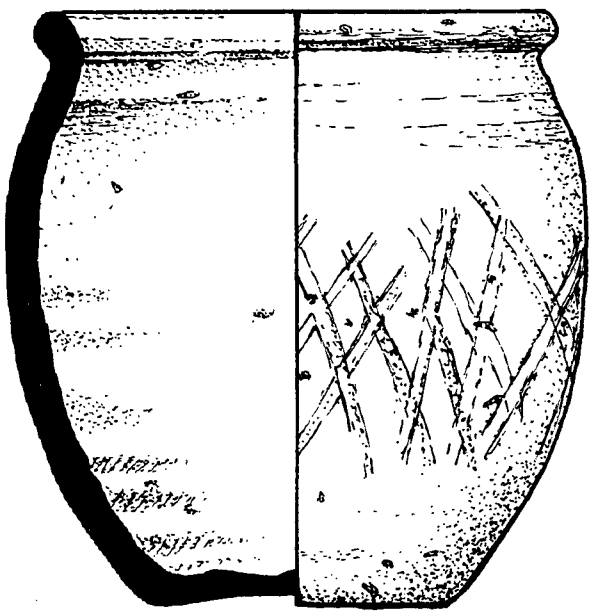

Fig. 1. Pot from Turret 27A (1:1). See Note 1. Drawn by Mary M. Hurrell

book (a copy of which is in the Department of Archaeology, University of Newcastle upon Tyne) has a sketch-plan labelled "Turret underneath Chesters fort, located Oct. 15th 1945", but again there is no mention of any pottery. The plan gives the thickness of the turret walls as 4ft. 6 in. and the width of the turret as 20ft., making the interior 11ft. square, which is smaller than the average for the turrets on Hadrian's Wall.[3] The foundation of the Wall to the east of the turret is given as 11ft. 10in.

The pottery consists of three conjoined fragments from a miniature cooking-pot in a very light grey fabric, laminated and almost devoid of inclusions. On the exterior, above and below the zone of cross-hatching, there are vestigial traces of a darker, medium grey surface, slightly burnished. Rilling, low down in the interior, shows that the vessel was thrown on a wheel.

Pottery from pre-fort turrets is rare if not entirely unknown. This pot, clearly lost in the earlier part of Hadrian's reign, is therefore of the utmost importance. It has the plain cut-away base of beakers in BBl fabric, and, like many of them is cross-hatched. The cross-hatching is acute-angled, which is an early feature. Bowls, dishes, cooking pots and beakers, in light grey fabric, closely copying early examples of BBl in general form and in certain significant details, reached the northern market simultaneously with BBl early in Hadrian's reign; in most Hadrianic groups they actually outnumber BBl. After Scotland was reoccupied their numbers fell away sharply and in Antonine groups they form a small minority among vessels in BB1 or BB2.

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2. THE GREAT CHESTERS "PILUM MURALE".[4] (fig. 2).

One of the most unprepossessing items in the Museum of Antiquities is also one of great rarity, being paralleled at only four other sites in the Roman Empire. This is the double-ended wooden stake commonly described—and labelled—as a *pilum murale*. As twenty-one years have elapsed since its discovery, apparently with no record in the literature on Roman Britain, and as much of the literature on similar objects is either incorrect or not easily available in Britain, this note is intended to bring the piece out of its obscurity and summarize the evidence for its date and purpose.

The *"pilum"* is of oak and measures 1·24 m. overall (fig. 2, A). It has a rectangular cross-section, except near the central "grip", and gradually tapers towards both ends to terminate in a point, although one of these is now missing. In the centre the shaft is thinned to form a rectangular-sectioned "grip". The workmanship is generally good, and has been done with an implement such as an adze, except for the "grip" where traces of knife-work can clearly be seen on either side. The *"pilum"* was found in May 1951, when Miss Brenda Swinbank (now Dr. Heywood) excavated the Vallum causeway at Great Chesters for the Durham University Excavation Committee. Her work, not fully published, established that the causeway was primary:[5] the *"pilum"* was found in the secondary silting/filling of the Vallum ditch.[6]

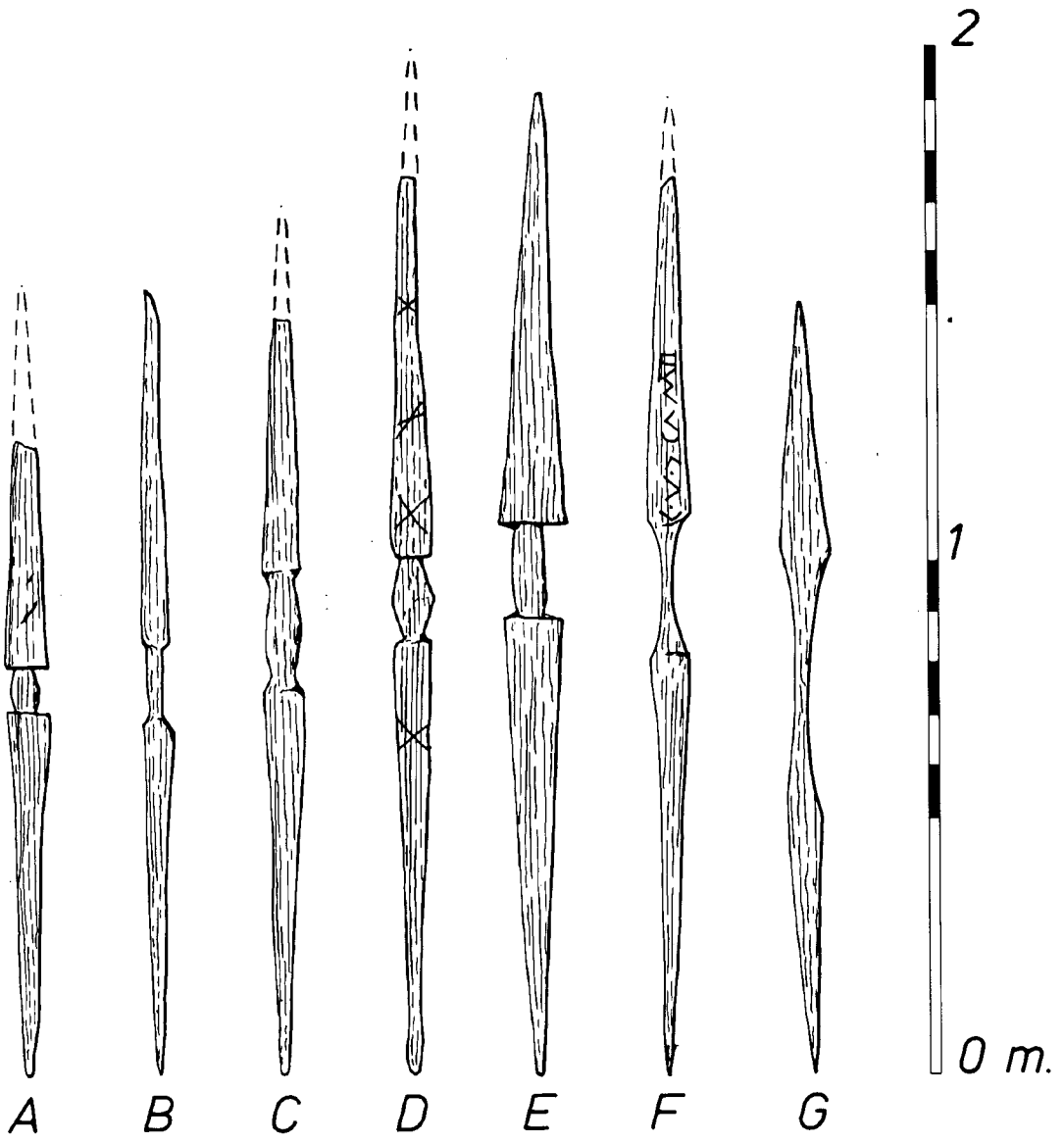

Fig. 2. *"Pila muralia"*. A, Great Chesters; B, Castleshaw; C, D, Saalburg; E, Welzheim; F, G, Oberaden. Drawn by Julian Bennett.

Parallels for the *"pilum"* can be found at Castleshaw, Yorkshire (two examples),[7] Saalburg, in the Taunus, Germany (ten examples),[8] the Ost-Kastell at Welzheim, Kreis Rems-Mur (three examples),[9] and Oberaden on the Lippe (300 examples).[10] The Castleshaw, Saalburg and Welzheim finds all came from wells and date from the late first-early second century, but those from Oberaden were found in the north-west ditch of the Augustan fortress.[11]

The common characteristics of this class of wooden artefact, which are always of oak where the wood has been identified, is that they vary in length from 1·50 to 2·00 m., are double-ended with a point at both ends, are of rectangular cross-section, and have a central "grip" of variable size and section (fig. 2). Three of the Saalburg examples have saltire crosses incised on them, perhaps as numerals or ownership-marks (e.g. fig. 2, D), while over 70 of the Oberaden specimens have centurial inscriptions, all cut with a knife to one side of the "grip" and normally reading from the right of the "grip" (e.g. fig. 2, F): the Oberaden stakes supply the names of at least twenty centurions, and the maximum number of stakes bearing the same name is 13.[12] None of the other known examples seems to bear any form of marking whatsoever.

In 1908 Kropatscheck identified the Oberaden examples as the *pila muralia* mentioned by Caesar and Tacitus, amongst other classical authors, evidently a heavy spear of some kind for fighting in the vicinity of a camp's defences.[13] In concluding an erudite etymological discourse, Kropatscheck saw the Oberaden stakes as an older version of the iron-shod *pila* issued to Imperial troops: "es sind Beispiele der Waffe, die den Namen pilum zuerst, und zwar noch mit vollem recht und jedem verstandlich, trug, pila muralia". Bruton, in discussing the Castleshaw examples, was evidently none too happy with this identification, for he wrote "it is difficult to understand, however, how so light a weapon could ever acquire sufficient momentum to be in any sense deadly", and "I venture to think that no one who has handled one of these stakes can imagine that it would have much effect as a weapon to be hurled at the enemy".[14] A seminal paper by Jacobi agreed with Kropatscheck's conclusions, seeing the Oberaden and other stakes as a "leichter Festungsartillerie für den Nahkampf in Wallgraben", possibly used as a "Bajonettiergewehr" on top of the rampart *in extremis*.[15] Conrads, however, shared the objections of Bruton, and conclusively argued that these items could not be *pila muralia* in the understood sense of the ancient authorities.[16] He also noted that, in addition to objections on grounds of weight, the form and poor balance of these stakes were unsuitable for throwing weapons, while use as a thrusting weapon was unlikely not only because of these reasons but also on account of their double-ended form: "Auch als Abwehrwaffe scheinen sie mir nicht geeignet, weil dieselben hierzu kurz sind und man bei der Handhabung leicht mit der rückwärtigen Spitze seinen Hintermann verletzen konnte". Conrads noted that the Oberaden *"pila"* had all been found beneath the collapsed timber palisade of the fortress, one end pointing downwards into the ditch while the other end lay against the inner slope of the ditch. He suggests that they had originally formed part of a fixed emplacement to deter attacks or clandestine entry to the fortress, with one end embedded in the palisade, the central "grip" lashed to a vertical stake driven

into the ground, and the other end either horizontal or pointing into the ditch. Conrads developed this hypothesis by drawing attention to the fact that the Oberaden stakes were found in distinct groups, each group bearing the same centurial mark, and he related this to classical references which indicate that, in constructing a fort or camp, each individual century was allotted a distinct length of the defences.[17]

The explanation advanced by Conrads did not receive universal acceptance or wide dissemination.[18] More recent studies, while rejecting the earlier identification as a throwing weapon, have suggested that the stakes were used for forming palisades on the ramparts of temporary camps,[19] or that they were a dual-purpose implement for carrying baggage and preparing post-holes:[20] as we have seen, the term *"pila muralia"* is still used erroneously to describe the artefacts. It is unlikely that these stakes represent examples of those carried by legionaries for use in a palisade:[21] their shape allows them to be easily thrust into the soft matrix of a rampart, but makes it equally easy for an attacker to pull them out—even if tied to their neighbours. In addition, none of the classical authors refers to the palisade as anything other than of "stakes", i.e. simple pointed pieces of wood, while none of the known examples has an individual ownership-mark, the centurial marks on the Oberaden pieces indicating that these at least were carried along with the general baggage rather than as individual items. As for use as a glorified post-hole "dibbler"-cum-carrying stock, the legionary was well equipped with the *dolabra* and other tools to make such an implement unnecessary, and the carrying stocks depicted on Trajan's Column at least are distinctly cross-shaped.[22] And such use would neither explain the centurial marks on the Oberaden examples or the circumstances of their findspot at the fortress.

A brief examination of the classical literature, however, does tend to support the explanation offered by Conrads, while such stakes may well have been used in other forms of defensive barrier mentioned, but not clearly described, by certain of the ancient authors.[23] The clearest use of stakes as a defensive fence along the lines reconstructed by Conrads, and implied by the circumstances of the Oberaden find, is to be found in Caesar's *Gallic Wars*, VII, 72: *huic loricam pinnasque adiecit grandibus cervis eminentibus ad commissuras pluterorum atque aggeris, qui ascensum hostium tardarent*, where *cervis* means projecting pointed stakes either horizontal or inclined downwards, at the junction of breastwork and rampart. Several of Caesar's camps were attacked while troops were on detached duty foraging for materials, and it could well be that stakes for use in this fashion were prefabricated for distribution to centuries, along with the palisade supports carried by the individual legionaries. The description given by Caesar of *cippi* and *lillia* indicates that the stakes used in these were not prefabricated or of a slender form (*Gallic Wars*, VII, 73).

As the stakes are double-ended, it may well be that they were intended for use in a variety of ways, and could be equally well used in other forms of barrier beside the *cervis*. Another use to which double-pointed stakes could be put was as a form of oversize caltrop. Several classical authors refer to the caltrops (*tribuli*) of iron, used against cavalry attack and familiar from examples found at Newstead,

Haltern and Lauriacum,[24] but Vegetius, III, 8, indicates the use of a larger form of wood for use on the rampart of a temporary camp: *tribus autem modis definiunt castra muniri posse. primum in unius noctis transitum et itineris occupationem leuiorem, cum sublati caespites ordinantur et aggerem faciunt, supra quem valli, hoc est sudes uel tribuli lignei, per ordinem digeruntur....* Clearly, three stakes of the Great Chesters type, lashed together at the central "grip", would prove an effective temporary fence or picket, which could not easily be moved and yet would prove easy to erect and dismantle after use, and would not add significantly to an army's baggage.

A third use for stakes of the Great Chesters type would be to provide a barrier for the entrance of a temporary camp. It is clear from excavation and the ancient literary sources that temporary camps were not provided with gates *per se*. Caesar, however, indicates that some form of barrier was provided at the entrance to temporary camps: *erat objectus portis ericus* (*Civil Wars*, III, 67) where the *ericus* or "hedgehog" is clearly a beam studded with spikes. It is possible to reconstruct such a barrier utilizing stakes of the Great Chesters type, in which these are lashed to a beam at opposing angles, forming a solid obstacle which would be effective against both cavalry and infantry. The stakes would either be lashed in twos, forming a four-pointed obstacle, two points of which would provide ground support, or in threes, in which case two points would rest on the ground, two at an angle in the air, and two horizontally. An obstacle of this kind would not be easy to move or ignore, and yet would prove easy to erect—using prefabricated stakes and a beam—and to dismantle after use, and again would not add significantly to an army's baggage.

The Great Chesters *"pilum murale"*, together with other artefacts of this type, is therefore to be seen as a prefabricated implement for use in the campaigns of the Roman Army, although equally at home, in the case of the Oberaden material, as a fixed defensive line for a permanent fortress. The date-range, from an admittedly small number of sites, is Augustan to Hadrian and later, given that the Great Chesters example came from the silted Vallum ditch. The presence of this particular example at Great Chesters is no doubt connected with the number of camps south, east, and west of the fort itself, some of which may well be practice works,[25] and is not to be connected with a palisade of the type suggested by Dr. Nielson who thought that the south mound of the Vallum had been erected and defended with sharp wooden stakes to deter attacks during construction of the Wall itself.[26]

POSTSCRIPT

Dr. Dietwulf Baatz, of the Saalburg Museum, has kindly drawn my attention to dendrochronological work which gives dates of 11 B.C. for the timber defences of Oberaden, and of between A.D. 165–190 ± 10 for the Welzheim stakes. Dr. Baatz also believes that the Saalburg *"pila"* derive from an Antonine context. I am most grateful to Dr. Baatz for this information.

Julian Bennett

NOTES

* Prepared for the press by Dr. D. J. Smith, with warmest thanks to the contributors.

[1] We are indebted to Professor S. S. Frere for having passed the material to the Museum.

[2] Accession Number 1982.1.

[3] Information from J. Bennett.

[4] I am grateful to the Joint Museum Committee for the opportunity to examine and publish this item (Accn. no. 1956.305), to Dr. B. Heywood for permission to consult her thesis, and to Jon Coulston for discussing the evidence with me.

[5] B. Swinbank, "The Vallum Reconsidered" (1954: unpublished Durham Ph.D. thesis), 154–63, and B. Heywood, "The Vallum—its problems restated", in M. G. Jarrett and B. Dobson (ed.), *Britain and Rome* (1965), 86. In the last-named work Dr. Heywood suggests that the *Pater Patriae* inscription from Great Chesters (*RIB* 1736) gives a *terminus post quem* of A.D. 128 for the Vallum. This is not necessarily so, for although Hadrian did not formally adopt the title until that year, there are at least five other inscriptions with *Pater Patriae* that are indisputably earlier, e.g. *RIB* 2244 (A.D. 120) and 2265 (121), and *CIL* III, 1445 (117/8), 2828 (118) and 3968a (125); and the possibility that Great Chesters was upstanding prior to 128 must not be discounted.

[6] Swinbank 1954, pp. 154–63 and 535–7.

[7] F. A. Bruton, *Excavation of the Roman Forts at Castleshaw: 2nd Interim Report* (1911), p. 41.

[8] H. Jacobi, "Die *Pila Muralia* der Saalburg", *Saalburg Jahrbuch* VI (1927), pp. 156–67.

[9] J. Beeser, *"Pilum Murale?"*, *Fundberichte aus Baden-Württemberg* 4 (1979), p. 133. The wooden artefact from Remagen, included by Beeser as a *"pilum murale"* in his list on pp. 133–34, and mentioned and illustrated by Jacobi 1927, loc. cit. and Taf. XIII is clearly not of the same form as the items under discussion.

[10] The site is discussed in C. M. Wells, *The German Policy of Augustus* (1972), pp. 211–20.

[11] Castleshaw: Bruton, *op. cit.*, p. 41, 52; Saalburg: Jacobi, *op. cit.*, p. 156, and D. Baatz, *Der Römische Limes* (1975), p. 119; Welzheim: Beeser, loc. cit., p. 133, Baatz, *op. cit.*, pp. 204–205, and P. Filtzinger, D. Planck and B. Cämmerer, *Die Römer in Baden-Württemberg* (1976), pp. 558–561; Oberaden: C. Albrecht, *Die Römerlager in Oberaden und das Uferkastell in Beckinghausen an der Lippe* II (i) (1938), pp. 76–81, Taf. 9, A. Conrads, "*Pila Muralia* und ihre Verwandung", *Germania* XI (1928), 73, and Wells, *op. cit.*, p. 213.

[12] Albrecht, *op. cit.*, pp. 76–81, Taf. pp. 53–59.

[13] G. Kropatscheck, "Mörserkeulen und *Pila Muralia*", *Jahrbuch des Kaiserlichen Deutschen Archaeologischen Instituts* XXIII (1908), pp. 80–94: *ibid.*, "Nachtrag", *op. cit.*, pp. 181–4. Caesar, *Gallic Wars*, V, 40, 6, VII, 82, 1; Tacitus, *Annales*, VI, 51.

[14] Bruton, *op. cit.*, pp. 42, 44.

[15] Jacobi, *op. cit.*, pp. 158, 159.

[16] Conrads, loc. cit., p. 73.

[17] e.g. Vegetius, III, 8.

[18] See e.g. Jacobi, *op. cit.*, p. 163.

[19] e.g. G. Webster, *The Roman Imperial Army* (1969), pp. 170–71, and J. Warry, *Warfare in the Classical World* (1980), pp. 134–5.

[20] Beeser, loc. cit., pp. 137–42.

[21] Vegetius, I, 24.

[22] C. Cichorius, *Die Reliefs der Traianssäule* (1896–1900), scene iv.

[23] H. Jacobi, "Die Ausgrabungen", *Saalburg Jahrbuch* VI (i) (1921), pp. 7–108, includes one of the most comprehensive discussions on the evidence from classical sources for all types of Roman fortifications. See also W. Fischer, *Das Römische Lager* (1913).

[24] e.g. Vegetius III, 24, and other references given by Jacobi, *op. cit.*, pp. 62–3. The Newstead example is illustrated in J. Curle, *A Roman Frontier Post and its People* (1911), Pl. XXXVIII, 14.

[25] J. Bennett, "'Temporary' camps along Hadrian's Wall", in W. S. Hanson and L. J. F. Keppie (eds.), *Roman Frontier Studies 1979* (1980), 152–72. Recent excavations at one site close to Great Chesters (Bennett, loc. cit., p. 170, no. 31), showed that the rampart was formed of piled turf, with no true ditch around the camp, only a shallow scoop. This is recommended by Vegetius, III, 8, when danger does not threaten, and is a possible reason why no Roman camps appear on aerial photographs of southern England (Bennett, loc. cit., 171).

[26] G. Nielson, *Per Lineam Valli* (1891), p. 43.