

# DOWN TO EARTH: A NOTE ON BOLT-HEADS AND RAKE-PRONGS

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In a recent publication (WILLEMS 1989), I discussed a late-Roman weapon-grave from a Gallo-Roman villa at Voerendaal in the Netherlands. The burial contained several weapons such as a spear-head, an arrowhead, a large knife and 11 bolt-heads (Fig.1). For this reason, the paper was included in the proceedings of the Fifth Roman Military Equipment Conference, although my interpretation of the burial was that it was not the grave of a soldier but a rather late example of a grave of a wealthy Gallo-Roman villa owner. Such burials frequently contain (hunting-) weapons which functioned as high-status grave goods. Nevertheless, the presence of the alleged bolt-heads was very surprising. I assumed that the presence of these primarily military objects provided indirect archaeological evidence for the crossbows known from two Gallo-Roman reliefs with hunting scenes. They appeared to be arranged in the grave rather carefully: not in a bundle but placed 5-6 in an alternating opposed direction (WILLEMS 1989, Fig.6).

Some time after publication, I received a letter from Dr D Baatz from the Saalburgmuseum, who expressed serious doubts about my identification of

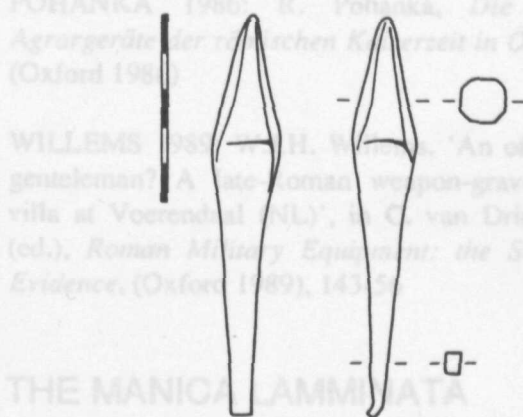


Fig.1 Iron rake prong from the Voerendaal burial, after WILLEMS 1989. Scale in cm.

the objects. Some of the illustrated 'bolt-heads' were somewhat asymmetrical (even more than the drawn specimen from Fig.1). Although the extensive corrosion of the objects makes an evaluation of their precise shape after conservation problematical, a re-examination has convinced me that Dr Baatz' scepticism was entirely justified: several are too

asymmetrical to attribute this to corrosion or to the conservation process. That, of course, rules out a use as bolt-head. In fact, the objects may be reinterpreted in a completely different way, namely as rake prongs. Conclusive evidence for this new interpretation is the fact that several of the iron points have bent tangs, a phenomenon which I found difficult to explain in my original description of the grave goods (p.151), but which has now become obvious.

Fig.2 illustrates a complete rake from the Saalburg as illustrated in the original publication (JACOBI 1897, 444, Fig.69.1). It consists of a

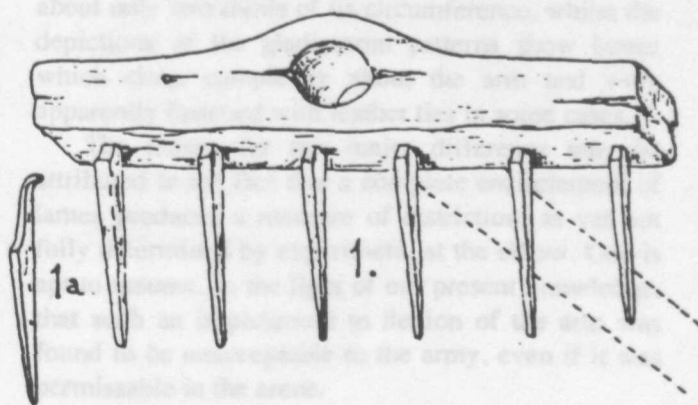


Fig.2 Wooden rake with iron prongs from the Saalburg, after JACOBI 1897. Scale c.1:4.

wooden beam with six iron prongs of a very characteristic shape which is described by Manning (1985, 59) as follows: 'a slightly curved, tapering stem is topped by a tang which has a distinct step on one side at its junction with the stem. In use the tang passed through the clog (or beam) to be hammered over the back of it.' The Voerendaal specimens differ quite a bit from this typical shape, which is known from various sites, including military sites such as the Saalburg and Newstead. Several recent studies of iron tools (e.g. POHANKA 1986, 102-106) 'Zinkenhausen' and PIETSCH 1983, 72 'Karst-zinken') offer overviews of these finds, although rake prongs which resemble those from Voerendaal appear to be exceptional.

Fortunately, the interpretation of the Voerendaal burial as that of a villa owner need not be changed, indeed it has received further confirmation by the exposure of the 'carefully arranged' bolt-heads as the remains of two rakes. Their presence in the grave is, by the way, as exceptional as the bolt-heads would have been. Agricultural tools in burials are quite rare. An interesting parallel is a late-Roman grave from Rodenkirchen in Germany (HABEREY 1949) with a large number of bronze miniature tools, including a

rake.

The fact that prongs are quite common in both military and civilian contexts suggests that there may have been more cases where prongs of the Voerendaal type have been misinterpreted as bolt-heads. In any case, bolt heads with bent-tangs should henceforth be regarded with extreme suspicion even if they are perfectly symmetrical. There is, after all, a big difference between the presence of artillery and that of a gardener!

## REFERENCES

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## THE MANICA LAMMINATA

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One item of military and gladiatorial equipment which has caused some difference of opinion amongst students of armour, over the years since serious investigation of Roman arms began, is the laminated plate arm defence, or *manica lamminata*.\*

Representations of defences, particularly in mosaics depicting gladiatorial scenes, and fragments of actual specimens from two sites of a military context, show that they were constructed from lames

of either iron or bronze. Both the patterns of 'civil' and military use doubtless had their lames joined vertically by internal strips of hide, most probably goat, in a similar manner to leathering already encountered in the laminated cuirasses, since to attach the lames to a complete sleeve of thin hide would, judging by more recent attempts, have proved weak; the lames tearing themselves away from the leather foundation at a point where any considerable movement was necessary.

However, *manicae* for military and gladiatorial use appear to have little, if anything else in common; the military examples encircling the wearer's arm to about only two thirds of its circumference, whilst the depictions of the gladiatorial patterns show lames which close completely about the arm and were apparently fastened with leather ties in some cases.

The reason for this major difference may be attributed to the fact that a complete encirclement of lames produces a measure of restriction, as yet not fully determined by experiment, at the elbow. One is apt to assume, in the light of our present knowledge, that such an impediment to flexion of the arm was found to be unacceptable to the army, even if it was permissible in the arena.

Identification of *manica* lames may be achieved by noting the different angles to which the ends of the lames have been cut; those of the upper arm being less acute than those of the forearm. This difference is most clearly apparent with the fragments found at Carnuntum,<sup>1</sup> where the end of an upper-arm lame contrasts sharply with a pair from the forearm.

The multiple fragments of one, or possibly more than one, bronze *manica*, from Trimontium (Newsstead), previously identified as remains of a thigh-guard, are less definite in their differences of angularity; however, they do conform reasonably well to the requirements for a *manica* and appear to provide a clue to the means by which a lining could have been attached. Any internal lining or sleeve of hide or fabric obviously had to be well-secured to the ends of the lames, which was no doubt the purpose of the holes punched centrally, close to the angles' extremities. Precisely how the the lining was attached, is impossible to determine with certainty at this time; however, short lengths of thong passed through pairs of the lames and the lining and then knotted on the outside would seem appropriate, rather than passing the thongs over the ends of the lames, which would render them liable to rapid damage from the metal edges. The whole would then presumably have been fastened about the arm by means of lacing, or straps and buckles.