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Roman cavalry helmets in ritual hoards from the Kops Plateau at Nijmegen, The Netherlands

Harry van Enckevort and Willem J.H. Willems

The town of Nijmegen is situated at the transition from the holocene river delta to the pleistocene valleys of the Rhine and Meuse. Especially the town's strategic location on the high ice-pushed ridge overlooking the river area and the easy connections to the south have contributed to the importance of this location, which can be traced back to the Neolithic. From a Roman point of view, Nijmegen will originally have been of supra-regional military and political significance. However, from the second quarter of the 1st century onwards, until well into the 5th century, its role was more limited to controlling the river delta. At the same time, Nijmegen was the administrative and economic centre of the Batavian *civitas* in the province of *Germania Inferior*/*Germania Secunda*.¹

Shortly before 12 BC, the Roman army built a legionary camp on the Hunerberg, a plateau which is part of the ice-pushed ridge between Nijmegen and Kleve. The camp measures 42 ha which is sufficient to accommodate a force the size of two legions.² Some of these troops, which were housed in wooden barracks, may have been quartermasters, charged with preparations for the campaigns into Germany under Drusus, between 12 and 9 BC.

The legionary camp seems to have been deserted around 10 BC and a new and smaller fort was built at the Kops Plateau, to the east of the Hunerberg.³ This fort was rebuilt several times, its maximum size being 4.5 ha. A rather large and luxurious *praetorium* and the number of what appear to be houses for officers suggest that this was the base-camp of a high-ranking commander, possibly Drusus himself. The troops were mainly legionary soldiers, which is indicated, for example, by the graffito of T. Ussi(us), horseman or *signifer* of the *legio I G*[---] on an Arretine cup type Haltern 7 from the first phase of the camp.⁴ A stamp

of the *legio XIII Gemina* on a dish of what is presumably imitation-Arretine ware probably belongs to the same phase.⁵ The same legion is mentioned on the well-known bronze helmet from the Meuse near Buggenum. It is a legionary helmet of the Montefortino or Buggenum type. The evidence indicates that this legion was located in the frontier zone and parts of it may have been charged with controlling connections to the Gallic hinterland along the Meuse valley.⁶

In about AD 10 the original fort was rebuilt, presumably in connection with the reorganisations of the army after the defeat of Varus in the Teutoburgerwald. Between 10 and 20 an additional small auxiliary camp was built at the Trajanusplein, at the western end of the ice-pushed ridge. In the same period at least one but probably three small auxiliary camps or annexes were added to the fort at the Kops Plateau. The most fully excavated annex, with the remains of stables, is located south of the fort and measures 0.75 ha. There is evidence that Gauls may have been present among the auxiliary soldiers stationed here, and also for Germanic troops. These units may have belonged to Germanicus' army, who campaigned in Germany between AD 14 and 16.

The change in the German policy, whereby military campaigns were replaced by diplomatic relations and the existing military infrastructure along the Rhine was converted into a *limes*, became apparent around AD 40. New *castella* were built on the banks of the Rhine. The fort at the Kops Plateau was largely demolished and replaced by a fort which – in contrast to the previous installations – seems to have been of only regional importance. This can, for example, be deduced from the fact that a large part of the *praetorium* was pulled down. Features and finds indicate the presence of cavalry and, as is argued below, it may well be that this was the base of the renowned *Ala*



Fig. 1: Roman Nijmegen between 15 B.C. and A.D. 70: 1 Augustan legionary fortress at the Hunerberg; 2 fort at the Kops Plateau; 3–5 military annexes on the Kops Plateau; 6 military camp at the Trajanus-plein; 7 the civilian settlement Batavodurum/Oppidum Batavorum; 8 Augustan/Tiberian settlement along the Berg en Dalseweg; 9 cemetery Kruisweg; 10 cemetery Museum Kamstraat; 11 cemetery Kronenburger-park; 12 graves at the Waalkade; 13 graves near the eastern gate of the legionary fortress. Drawing ROB/H. de Kort.

Batavorum. The fort was finally abandoned around 69, in connection with the Batavian revolt.

The excavations by the Dutch State Archaeological Service (ROB), which lasted from 1986–95, have yielded over 30,000 metal objects, including more than 1000 bronze and iron items of horse harnesses. This quantity indicates that cavalry units were probably present in all three of the successive forts at the plateau. There are also a number of iron helmets which are indicative of cavalry soldiers. Conservation of these helmets is still in progress, so this contribution can only be a provisional report. The importance of these finds merits a full study at some later stage.

Only a few fragments of helmets can be dated to the Augustan period. Among these is a pierced crest knob from a helmet of the Coolus or Hagenau type used by an infantryman.

A MODIFIED IMPERIAL-GALLIC HELMET

The oldest helmet⁷ dates from the Tiberian period. The three transverse ridges on the occiput area of the bowl and the cut-outs on the side of the bowl for the ears indicate that we are dealing with a modified helmet of the Imperial-Gallic or Weisenau type. Stylized eyebrows, cheekpieces, brow guard, ear-protectors and neck-guard are missing. They may have been removed intentionally and it seems as if the owner remodelled the helmet to his own needs or taste. The helmet was found in a pit located south of the fort and east of the annex with stables. Apart from the helmet, the pit contained several broken but more or less complete pots, such as some Gallo-Belgic butt-beakers, a so-called cork-urn in chalk-tempered ware, a thin walled cup and a crucible. Date, location and other finds from the pit suggest that the helmet

belonged to one of the auxiliaries from the annex.

A similar modified helmet is known from *Gelduba* (Krefeld-Gellep, Germany).⁸ The find-circumstances indicate that it must have been lost in 69, when Civilis and his Batavians attacked the troops commanded by Vocula who occupied the fort. Due to special conditions of conservation, the remains of decorations made of organic material were preserved on the helmet. The rim was provided with a leather strap, while the top was covered by an animal skin. In addition, some feathers had originally been attached to the front. Reichmann, who studied the find, has concluded it probably belonged to a Germanic soldier, serving in one of the auxiliary units before the revolt.

THE AUXILIARY CAVALRY HELMETS

One iron helmet of auxiliary cavalry A or Weiler type⁹ presumably dates from the Tiberian period, in view of its association with several fragments of Arretine ware.¹⁰ This helmet is characterised by a narrow neck-flange. The cheekpieces lack ears, which indicates that such cheekpieces can indeed belong to this type of helmet, a fact for which Waurick¹¹ still lacked evidence.

Four additional helmets, dating from Claudian times, presumably belong to this category although this can only be established with certainty after the pieces have been properly cleaned.¹² They differ from the Tiberian specimen by the sculptured ears on the iron cheekpieces. In at least one case the narrow neckflange seems to be typical for the cavalry helmet. Indications for a brow-guard are lacking. All four specimens were found in the central part of the fort.

The Tiberian helmet was found in a pit. A proper analysis is still lacking, but the associated finds suggest this was a refuse pit. Three of the other helmets were buried together with broken but more or less complete pottery: in one case consisting of two terra nigra vessels while the others were both associated with a jar. The pottery dates these finds in the Claudian period.

CAVALRY SPORTS HELMETS

Cavalry sports helmets were normally worn by auxiliaries.¹³ In 1983, before the excavation started, a boy discovered an iron mask at the Kops Plateau, without ears and belonging to a two-piece cavalry sports helmet.¹⁴ During the excavations three such face masks were found together with the iron helmets in two pits dating from the reigns of Claudius or Nero.¹⁵

During provisional cleaning of the finds, it was discovered that the bowls were provided with covers, preserved by the iron-oxides of the helmets. In one case the cover was preserved in such excellent condition that it will be possible to reconstruct it nearly completely. It was made of fur and embroidery in various ingenious patterns, made of hair of bears and humans or horses. Shape and construction classify these helmets as auxiliary cavalry A or Weiler type. Final restoration and conservation of the face masks has not yet been completed, and the helmets are still being worked on. Two of the iron masks were originally covered with a silver sheathing, as can be deduced from the remains of this sheathing underneath the rivets on the edges.

The embroidery is directly comparable to that on the cover on an iron helmet of auxiliary cavalry type A or Weiler type, discovered in 1991 during gravel-dredging operations in a former Rhine channel near Xanten-Wardt (Germany).¹⁶

As mentioned by Waurick, helmets of auxiliary cavalry A or Weiler type are closely connected to the decorated cavalry sports helmets.¹⁷ Decoration consisting of embossed and/or engraved hair is, however, lacking on the specimens from the Kops Plateau. Instead, these have been provided with the decorated covers of organic materials. These covers and the associated masks show the close typological relation between the plain helmets of auxiliary cavalry A or Weiler type and the richly decorated cavalry sports helmets with masks.

Two of the helmets were placed in a small pit, together with the face masks. This pit did not contain other finds, at least none that were traceable (fortunately, the pit can be dated by a terminus post quem through finds from an earlier, underlying feature). The third helmet and mask were also placed in a pit, together with several items of pottery and a chicken.

Apart from the four face masks and the three helmets, several other finds should be mentioned. There is one more face mask, this time a fragment, discovered in a small pit and only recently identified among the iron finds being treated in the ROB-laboratories.¹⁸ Also, finds from a cellar in the *praetorium* included a number of fragments of a helmet.¹⁹ This specimen was made of iron, embossed and engraved to look like hair on the bowl itself. The whole was originally covered with a silver sheathing, remains of which have been preserved. The helmet has not yet been restored or studied, and it is not clear whether or

No.	Dating	Type	Hoard	Associated with
1	Tiberian	Imp. Gallic	yes	pottery
2	Tiberian	Aux. cavalry A	?	
3	Claudian	Aux. cavalry A	yes?	pottery
4	Claudian	Aux. cavalry A	yes	pottery
5	Claudian	Aux. cavalry A	yes	pottery
6	Claudian	Aux. cavalry A	yes	pottery
7	?	Cavalry sports	yes	-
8	?	Cavalry sports	yes	-
9	Claudian/Neronian	Cavalry sports	yes	pottery, chicken
10	Claudian?	Cavalry sports	?	
11	Claudian	?	no	
12	?	Cavalry sports	no	

Table 1: The dating and context of the cavalry helmets from the Kops Plateau.

not a face mask could have been attached to it.

It is remarkable that in view of all these finds, other special equipment or armour for use at the so-called *hippika gymnasia*, such as shields (a single specimen has been found), thigh-guards and greaves, but also chamfrons and peytrals for the horses, are virtually absent. This is even more remarkable since the excavations yielded such large amounts of regular cavalry equipment. The only items which could qualify for use during tournaments could be the dozens of bronze bells in various sizes and shapes, which may have been part of the equipment of the horses, although this remains questionable.²⁰

Except for the complete or large pieces of helmets mentioned so far, the finds also include two almost complete helmets of the Imperial-Gallic or Weisenau type, a number of fragments and parts, such as cheek-pieces, two crest-supports with double tongue, carrying handles (?) and a plain ear-guard.

RITUAL HOARDS

The Kops Plateau excavations have produced an important collection of helmets, which merits more detailed study in the future. For the moment, it is useful to draw attention also to the context of these finds: it is remarkable that many of the more or less complete specimens were deposited in the same way. These are the modified Imperial-Gallic helmet, probably the four auxiliary cavalry helmets with ears on

the cheekpieces and the three cavalry sports helmets with covers. Six of these were buried together with (broken) pottery, for two others archaeologically traceable associated finds are lacking. The pits in which the helmets were deposited were not very large nor very deep, all having a similar fill. These circumstances, together with the fact that, except for occasional stray finds from earlier periods, refuse such as sherds or other material is absent, virtually rule out a function as refuse-pit.

It is also unlikely that we are dealing with hidden equipment which was not retrieved by its owner. No apparent attempt was made to shield the material from corrosion and at least in two cases the silver sheathing was removed from the face masks prior to their deposition. Also, the pottery was broken before deposition. Although during the excavations it was in some instances assumed that we might be dealing with symbolic 'house offerings', this alternative is less plausible because in several cases a connection between pits containing helmets and buildings can be completely ruled out.

A more attractive alternative seems to be an interpretation as hoards. Most helmets were found in the southern part of the fort. Their distribution, although as yet not very informative, has been indicated on fig. 2. Table 1 gives an overview of the helmet-deposits.

In an interesting study on prehistoric hoards, Levy²¹ has discussed ritual hoards, which are characterized by a special context. In general these hoards are composed of intact ornaments and/or weapons.

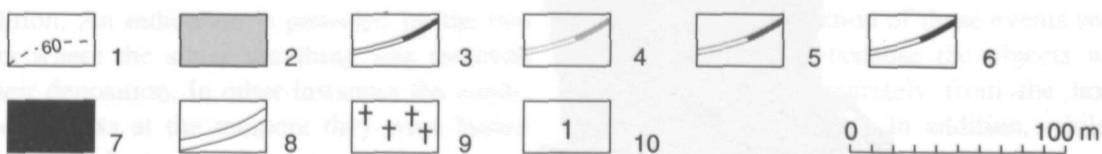
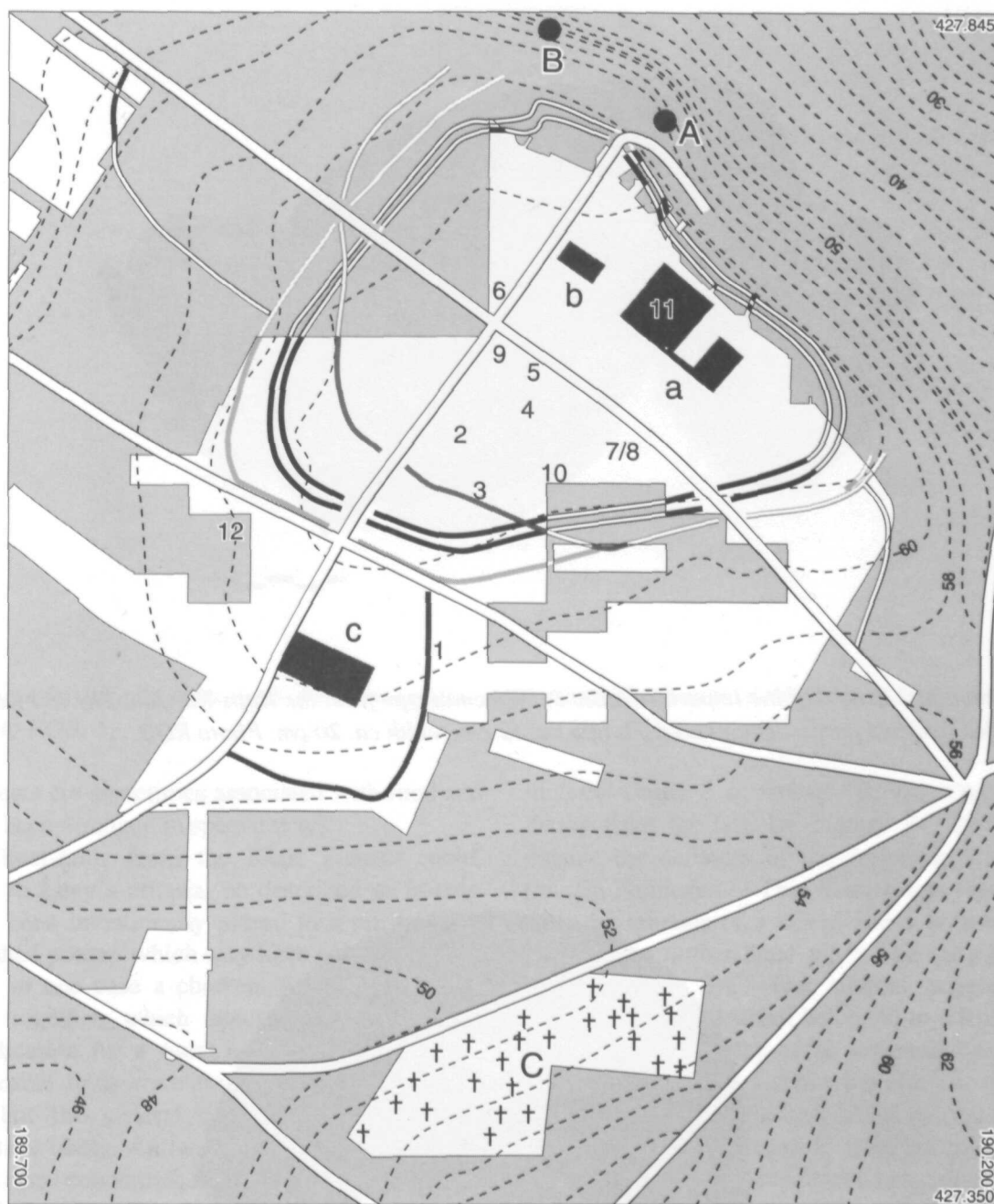


Fig. 2: The Kops Plateau between 12 B.C. and 70 A.D. 1 contour line; 2 unexcavated; 3 fort period 1 (ca. 10 BC–AD 10); 4 fort period 2 (ca. AD 10–30); 5 fort period 3 (AD 30–69); 6 annex; 7 buildings; 8 road; 9 graves; 10 findspot of a (fragment of a) helmet; a praetorium; b horreum; c stables; A first excavation Dr. Holwerda 1914; B excavation Catholic University 1971–1972; C excavation municipal archaeologist Nijmegen 1992. Drawing ROB/H. de Kort.



Fig. 3: The modified helmet of the Imperial-Gallic or Weisenau type from the Kops Plateau. The top was heavily corroded and has partly disappeared. Height ca. 12 cm, width ca. 20 cm. Photo ROB.



Fig. 4: An iron helmet of auxiliary cavalry A or Weiler type from the Kops Plateau. The cheek-pieces were put inside the helmet. Height ca. 19 cm. Findno. 433/315. Photo ROB.



Fig. 5: Three face masks from the Kops Plateau after restoration. The height of the mask in front is ca. 16.5 cm. Photo ROB.

These objects are sometimes associated with food and they have been arranged in special ways.

Six helmet-finds from the Kops Plateau could, according to Levy's criteria, be described as hoards. They had been intentionally placed in a pit, together with smashed pottery which may have contained drink and food, in one case a chicken. Two helmets were deposited together, which according to Levy is a strong indication for a ritual hoard. No archaeologically traceable finds were found together with these helmets, but the general context makes a similar interpretation likely. As far as the other helmets and fragments are concerned, the interpretation has to await further analysis.

It is noteworthy that not all helmets were buried in mint condition. An indication is provided by the two face masks where the silver sheathing was removed prior to their deposition. In other instances the condition of the helmets at the moment they were buried cannot be accurately determined due to corrosion, soil conditions and the method of excavation.²² The pottery was intentionally destroyed, which is reminiscent of prehistoric burial practices where weapons are known to have been treated in the same way.

A context very similar to the Kops Plateau finds is provided by the well known iron helmet of early

imperial-Gallic A or archaic Weisenau type, probably dating from the late 1st century BC and found just outside the defences of the Augustan legionary fortress in Nijmegen.²³ This helmet was found together with the remains of a shield and a bronze strigil, all placed in a timber-lined pit.²⁴ The strigil was dated between 12–8 BC. The authors suggest that the helmet, shield and strigil belonged to a Roman soldier who kept watch on top of the ice-pushed ridge. During his vigil an incident cost him his life. The thrust with a blunt instrument in his face, which caused a large dent in his helmet, is assumed to have led to his death. At some later time his decomposed remains, the decomposed remains of three (not cavalry) horses and his helmet, shield and strigil were buried in separate pits.²⁵ The reconstruction of these events seems rather far fetched, if only because the objects would then have been buried separately from the body, which would be quite unusual. In addition, while weapon-burials of veterans are scarce but not unusual,²⁶ such burials of Roman soldiers in cemeteries near their camps would be very unusual indeed.²⁷ It is much more likely that we are dealing here with a ritual hoard comparable to those at the Kops Plateau.

The well known fort at Newstead has also yielded a number of helmets in pits which appear to be ritual



Fig. 6: Some details of the cover of a cavalry sports helmet. Photo ROB.

hoards.²⁸ Especially the composition of the finds from pit XXII, with the helmet of auxiliary cavalry type A, dated between AD 80 and 100, is highly informative.²⁹ Besides this helmet the excavators found for instance a skull of a horse, an iron sickle, an iron armband, the skull of a dog, antlers of red deer, portions of amphorae, a quern, two iron bridle-bits, several bronze objects, a complete set of four saddle horns, a brass helmet, another iron helmet and some pottery

sherds. In some other comparable pits bones of men and horses and fragments of shields have been found.

Although the Newstead pits contained a richer assemblage of finds, parallels with the ritual hoards from Nijmegen are striking. The Augustan helmet of early imperial-Gallic A or archaic Weisenau type was found together with a shield, in combination with human and horse bones in two other pits. The pits at the Kops Plateau have a slightly different and perhaps



Fig. 7: Some bells from the Kops Plateau which may have been part of a horse harness. Photo ROB.

more modest character.

The Newstead evidence indicates that it is quite likely that pieces of military equipment other than helmets were also deposited in ritual hoards. Such finds are also present at the Kops Plateau. For example, in one case a folded shield was placed in a pit, again together with a number of broken pots.³⁰ There are other finds which might be interpreted in the same way, such as the two complete hackamofes,³¹ eleven bronze saddlehorns,³² and an undamaged bronze scabbard containing a dagger with the hilt broken off. The context in these cases has not as yet been sufficiently clarified to allow an interpretation.

WHY RITUAL HOARDS?

Robinson³³ wonders why the additional expense represented by the cost of items totally unsuitable for battle purposes, such as cavalry sports helmets and

other equipment, should have been incurred by the Roman army for the sake of the auxiliary units. He gives two solutions. He thinks they were used in displays of skill, for instance during religious festivals, the *hippika gymnasia*, and also that the sports helmets had a function to impress the conquered frontier people.

It is interesting that many helmets and masks were found during dredging operations in river valleys. Oldenstein³⁴ refers to the fact that about 80% of the imperial helmet finds mentioned in Klumbach³⁵ and Robinson³⁶ come from water. The same is true, for instance, for the early helmets of the Montefortino or Buggenum type in the Netherlands listed in the article of Bogaers³⁷ and the helmets and other military equipment from Xanten-Wardt.³⁸ Oldenstein thinks '... that this number seems too large (...) for any interpretation whereby the helmets were all lost by soldiers by bridge or ferry. As a rule, river finds can

also interpreted as votive deposits'.³⁹ Bishop and Coulston agree with this conclusion. Soldiers vowed 'some item of personal value (and soldiers had few things of greater value than their equipment) to a deity in exchange for his safety. This practice fits into our picture of the contract religion practised by the Celts and Romans'.⁴⁰

A similar interpretation is offered by Roymans, who elaborates further on this theme. In his analysis it is shown that the deposition of metalwork in water in pre- and protohistory had a long tradition, which started in the Early Bronze Age when swords and other bronzes were thrown in the rivers and bogs of Central, Atlantic and Northern Europa. Religious and social motives underlie this deposition pattern and therefore the majority of the water finds can be regarded as ritual evidence. Roymans states that the ritual deposition of metalwork in rivers is a public display of wealth, which might have been employed by elites in building up and consolidating social status positions and is closely connected with elite competition.⁴¹

Apart from their inherent purpose, weapons and armour also have an important function in the realm of social relations, ceremonial exchange and ritual. This is reflected in the specific ritual context in which they are often found. Roymans⁴² studied this theme in the context of the martial elite-ideology in Northern Gaul. In his view, many of the late La Tène swords and helmets found in cult places and rivers can be seen as 'votive offerings, intended for deities who were closely associated with warfare and who symbolised a warrior ideology'.⁴³ In the pre-Flavian period the Roman army used large numbers of native auxiliaries recruited locally, allowing them to retain their own warrior traditions and organisational structures. The persistence of traditional martial votive practices explains why so many helmets and swords are found in river-channels in the frontier zone along the Rhine. 'In the Rhineland, a substantial part of the native elite remained a warrior elite who considered the martial ideal to be of high importance. (...) The trend described above was materialised in the continuation of a wide range of ritual depositions of weapons in the Rhineland area'.⁴⁴ According to Roymans, the specific motive for offering weapons in rivers and at cult places can be found in the behaviour of veterans of probably auxiliary units; after their *missio honesta* they dedicated the most honorable parts of their equipment to a deity who had protected them during

their period of service.

If Robinson and Roymans are correct in attributing religious connotations to the helmets of auxiliaries, as mentioned above, it would not be surprising if soldiers would offer this equipment, which has such a strong symbolic meaning, to a deity on the occasion of an important moment in their military career. In this way, several helmets and face masks found in the river Waal at Nijmegen could be explained.⁴⁵ A similar ritual could be the reason for the deposition of helmets and masks at sites such as the Kops Plateau and Newstead. It is futile to speculate on the precise occasion for which such a ritual was performed. Perhaps it was a different one than the circumstances leading to offerings in water. It is also possible, and in fact quite likely, that we are dealing with different deities.

Roymans assumes that the offering of helmets in the Lower Rhine zone in the pre-Flavian period must be attributed to native auxiliaries. The distribution of these finds in early-Roman times, however, includes helmets of various kinds, including those who are generally attributed to legionary troops. Some even have graffiti with the names of legionaries.⁴⁶ It is of course possible that auxiliary troops were provided with legionary helmets. This would have some consequences for existing typologies which make a clear distinction between the two. An alternative option, however, is that in the early-Roman period Celtic soldiers from, for example, northern Italy who served in the legions also engaged in the practice of offering their equipment.⁴⁷ There is also evidence from the Greek world for helmets being left at cult sites,⁴⁸ and the practice, as were so many others, may have been copied by the Romans. This would imply that not all finds need to be ascribed to offerings by auxiliaries from northern Gaul and the Lower Rhine area.

BATAVIAN HELMETS?

The modified helmet of the Imperial-Gallic or Weisenau type from the Kops Plateau and the modified helmet from *Gelduba* are very similar, although the former is several decades older and the organic cover has not been preserved. The *Gelduba* helmet is connected to the Batavian Revolt and it is entirely possible that it belonged to one of the rebel soldiers. Despite the differences, this leads to another interesting possibility which should be mentioned here.

The helmet from the Kops Plateau could have belonged to a Batavian stationed in the annex of the fort between AD 10–20. The three cavalry sports helmets with cover date from the third and final fort at the plateau, a *castellum* for which these and numerous other finds indicate the presence of cavalry. It may be very significant that this fort was not burnt down during the Batavian Revolt, as were so many other *castella* on the Lower Rhine. Even the nearby civilian settlement of *Oppidum Batavorum*, the central place of the Batavian *civitas*, did not escape this fate. This is less surprising than it may seem to be, because recent research has shown that this was not a native settlement at all. It was a capital *for* rather than *of* the Batavians with all the characteristics of a Roman, colonial implantation.⁴⁹

This makes the apparent survival of the fort even more curious. The obvious explanation would be, that the fort was garrisoned by auxiliary cavalry who joined the cause of the Batavians during the revolt. Because we know that the *Ala Batavorum* was stationed in its own tribal area the combination of evidence suggests that this *ala* was stationed at the plateau. The helmets with covers of human and/or animal hair from the plateau and the helmet from Xanten-Wardt could thus constitute a Lower Rhine or even a Batavian variant of the cavalry sports helmet with embossed and engraved hairs which was used widely in the Roman empire.

NOTES

1. For a general overview, see WILLEMS, 1990; see also BECHERT & WILLEMS, 1995.
2. See HAALEBOS a.o. 1995, 9–26.
3. BOGAERS & HAALEBOS, 1975; WILLEMS, 1991a; VAN ENCKEVORT & HAALEBOS, 1995; VAN ENCKEVORT & ZEE, 1996.
4. BOGAERS & HAALEBOS, 1975, 164–6 and plate LI.8.
5. WILLEMS, 1990, 30; WILLEMS, 1991a, 213, fig. 36.4.
6. BOGAERS, 1959; WAURICK, 1988, 353–4; HAALEBOS, 1993, 22–3. It is remarkable that these helmets in Northwestern Europe seem to have been found only around Nijmegen (FEUGÈRE, 1994, 81, fig., supplemented by finds mentioned by BOGAERS, 1959, 90). An exception is a specimen from the isle of Texel (BOGAERS, 1959, 90), which may be connected to a campaign over water under Drusus or Tiberius.
7. Helmet no. 1, finds no. 395/095.
8. REICHMANN, 1994, esp. the illustrations on p. 7.
9. Helmet no. 2, finds no. 379/188. Compare the helmet from Newstead in CURLE, 1911, plate XXVI.1 and ROBINSON, 1975, 94, plate 246.
10. Two sherds of coarse ware could, however, be early-Claudian.
11. WAURICK, 1988, 343: 'Ob die Wangenklappen ohne Ohrbildung ebenfalls hierher gehören, ist mangels entsprechender Befunde nicht zu entscheiden'.
12. Helmets nos. 3–6, finds nos. 424/144; 428/123 and 124; 429/067; 433/115.
13. ROBINSON, 1975, 107.
14. Helmet no. 12, finds no. 000/001. See WILLEMS, 1991b, especially 10–11, fig. 1–2 and WILLEMS, 1992, especially 57–8, fig. 1–2.
15. Helmets nos. 7–9, finds nos. 401/198; 401/199; 429/039, 040 and 041.
16. SCHREITER, 1993, 47–9; KEMPKENS, 1993.
17. WAURICK, 1988, 343 and Beilage 2. See also FEUGÈRE, 1994, 110.
18. Helmet no. 10, finds no. 296/208.
19. Helmet no. 11, finds nos. 373/167, 168 and 174.
20. They are virtually never mentioned in the literature, see e.g. BISHOP & COULSTON, 1993.
21. LEVY, 1982, 17–44.
22. Unfortunately in a few instances not all fragments seem to have been recognised and collected during excavation, which prohibits conclusions about the condition in which these helmets were buried.
23. BRUNSTING & STEURES, 1992, with further references 101, note 2. See also BISHOP & COULSTON, 1993, 93, fig. 56. 3.
24. BRUNSTING & STEURES, 1992, 103: No trace of human remains was found. The pit also contained some sherds.
25. BRUNSTING & STEURES, 1992, 109–10.
26. KRIER & REINERT, 1993.
27. ROYMANS, 1993, 46.
28. CURLE, 1911, 164–72.
29. CURLE, 1911, 121–2.
30. Finds no. 399/066, Claudian.
31. WILLEMS, 1992, 65, fig. 11.
32. WILLEMS, 1992, 64, fig. 9.
33. ROBINSON, 1975, 107.
34. OLDENSTEIN, 1990, 36.
35. KLUMBACH, 1961.
36. ROBINSON, 1975.
37. BOGAERS, 1959.
38. SCHREITER, 1993.
39. OLDENSTEIN, 1990, 36. See also BISHOP & COUL-

- STON, 1993, 37.
40. BISHOP & COULSTON, 1993, 37–8.
41. ROYMANS, 1991, 24–7. See also TORBRÜGGE, 1970–71 and LEVY, 1982.
42. ROYMANS, 1993.
43. ROYMANS, 1993, 37.
44. ROYMANS, 1993, 48.
45. See a.o. WILLEMS, 1992, 61, fig. 6.
46. ROYMANS, 1993, 47.
47. There is a large number of late-Iron Age helmets from Northern Italy: see the distribution of La Tène and C helmets in FEUGÈRE, 1994, 65.
48. BISHOP & COULSTON, 1993, 37.
49. WILLEMS, 1990, 35.

BIBLIOGRAPHY

- BECHERT & WILLEMS 1995: T. Bechert & W.J.H. Willems (eds.), *Die römische Reichsgrenze zwischen Mosel und Nordseeküste*, Stuttgart
- BISHOP & COULSTON 1993: M.C. Bishop & J.C.N. Coulston, *Roman military equipment, from the Punic wars to the fall of Rome*, London
- BOGAERS 1959: J.E. Bogaers, Twee vondsten uit de Maas in midden-Limburg, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 9, 85–94
- BOGAERS & HAALBOS 1975: J.E. Bogaers, J.K. Haalebos a.o., Problemen rond het Kops Plateau, *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 56, 127–78
- BRUNSTING & STEURES 1992: H. Brunsting & D.C. Steures, The Lone Watchman. The find circumstances of the Augustan iron helmet from Nijmegen and the Date of the Augustan Legionary fortress, *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 72, 101–11
- CURLE 1911: J. Curle, *A Roman frontier post and its people. The fort of Newstead in the parish of Melrose*, Glasgow
- VAN ENCKEVORT & ZEE 1996: H. van Enckevort & K. Zee, *Het Kops Plateau. Prehistorische grafheuvels en een Romeinse legerplaats in Nijmegen*, Abcoude
- VAN ENCKEVORT & HAALBOS 1995: H. van Enckevort & J.K. Haalebos, Frühromische Lager in Nijmegen, in J.-S. Kühnborn, *Germaniam pacavi – Germanien habe ich befriedet*, *Archäologische Stätten augusteischer Okkupation*, Münster, 29–58
- FEUGÈRE 1994: M. Feugère, *Casques antiques. Les visages de la guerre de Mycènes à la fin de l'Empire romain*, Collection des Hesperides, Paris
- HAALBOS 1991: J.K. Haalebos, Das große augusteische Lager auf dem Hunerberg in Nijmegen, in: R. Abkamp & S. Berke (eds.), *Die römische Okkupation nördlich der Alpen zur Zeit des Augustus*, *Bodenaltertümer Westfalens* 26, Münster, 97–107
- HAALBOS 1993: J.K. Haalebos, (without title), in: A.A.J.J. van Pinxteren a.o. (eds.), *Pronkstukken. Venlo 650 jaar stad*, Venlo, 17–23
- HAALBOS et al. 1995: J.K. Haalebos et al., *Castra und canabae. Ausgrabungen auf dem Hunerberg in Nijmegen 1987–1994*, *Libelli Noviomagensis* 3, Nijmegen
- KEMPKENS 1993: J. Kempkens, Restaurierung des Reiterhelms Inv. RMX 91,21.003 (Kat. Mil 16), in: H.-J. Schalles & C. Schreiter (eds.), *Geschichte aus dem Kies. Neue Funde aus dem Alten Rhein bei Xanten*, *Xantener Berichte Band 3/Führer des Regionalmuseums Xanten Nr. 34*, Köln, 113–20
- KLUMBACH 1961: H. Klumbach, Ein römischer Legionarshelm aus Mainz, *Jahrbuch RGZM* 8, 96–105
- KRIER & REINERT 1993: J. Krier & F. Reinert, *Das Reitergrab von Hellingen. Die Treverer und das römische Militär in der frühen Kaiserzeit*, Luxemburg
- LEVY 1982: J.E. Levy, *Social and religious organization in Bronze Age Denmark. An analysis of ritual hoard finds*, BAR International Series 124, Oxford
- OLDENSTEIN 1990: J. Oldenstein, Two Roman Helmets from Eich, Alzey-Worms district, *Journal of Roman Military Equipment Studies* 1, 27–37
- REICHMANN 1994: C. Reichmann, Römisch-germanische Schlachtfelder bei Krefeld, *Archäologie in Deutschland* 4, 6–11
- ROBINSON 1975: H.R. Robinson, *The armour of imperial Rome*, London
- ROYMANS 1991: N. Roymans, Late urnfield societies in the Northwest European Plain and the expanding networks of Central European Hallstatt groups, in: N. Roymans & F. Theuws (eds.), *Images of the past. Studies on ancient societies in Northwestern Europe*, Amsterdam, 9–89
- ROYMANS 1993: N. Roymans, Romanisation and the transformation of a martial elite-ideology in a frontier province, in: *Frontières d'empire. Actes de la Table Ronde Internationale de Nemours 1992*, *Mémoires du Musée de Préhistoire d'Ile-de-France* 5, 33–50
- SCHREITER 1993: C. Schreiter, Die Militaria, in: H.-J. Schalles & C. Schreiter (eds.), *Geschichte aus dem Kies. Neue Funde aus dem Alten Rhein bei Xanten*, *Xantener Berichte Band 3/Führer des Regionalmuseums Xanten Nr. 34*, 43–57 and 191–3
- TORBRÜGGE 1970–71 (1972): W. Torbrügge, Vor- und frühgeschichtliche Flußfunde. Zur Ordnung und Bestimmung einer Denkmälergruppe, *Bericht der römisch-germanische Kommission* 51–52, 1–146

- WAURICK 1988: G. Waurick, Römische Helme, in: A. Bottini a.o., *Antike Helme. Sammlung Lipperheide und andere Bestände des Antikenmuseums Berlin*, Römisch-Germanisches Zentralmuseum Monographien Band 14, Mainz, 327-64
- WILLEMS 1990: W.J.H. Willems, *Romeins Nijmegen. Vier eeuwen stad en centrum aan de Waal*, Historische reeks Nijmegen 2, Utrecht
- WILLEMS 1991a: W.J.H. Willems, Early Roman camps on the Kops Plateau at Nijmegen (NL), in: V.A. Maxfield & M.J. Dobson (eds.), *Roman frontier studies 1989: Proceedings of the XVth International Congress of Roman Frontier Studies*, Exeter, 210-14
- WILLEMS 1991b: W.J.H. Willems, Een Romeins viziermasker van het Kops Plateau te Nijmegen, *Jaarboek Numaga XXXVIII*, 9-18
- WILLEMS 1992: W.J.H. Willems, Roman face masks from the Kops Plateau, Nijmegen, The Netherlands, *Journal of Roman Military Equipment Studies* 3, 57-66