

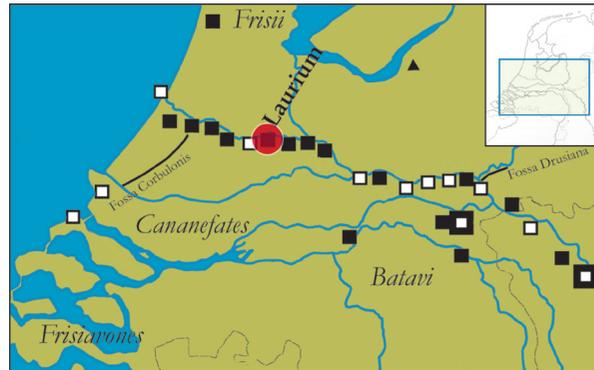
## An extraordinary sword from Roman Woerden (NL)

This short paper presents an extraordinary sword that has recently been found in the city of Woerden, province of Utrecht, the Netherlands<sup>1</sup>. First, we will present the context of, and background information on, the latest excavations of Roman Woerden. Second, the sword will be described and the possible origins of this exceptional find discussed.

### Background

Woerden is situated on the Oude Rijn between the cities of Utrecht and Leiden. In the Roman period this was the most important branch of the Rhine, along the southern bank of which the westernmost sector of the *limes* was constructed from 40–50 AD onwards<sup>2</sup>. One of the *castella* was located in present-day Woerden, which is generally assumed to be identical to a place called *Laurium* on the famous map of Conrad Peutinger (Fig.1)<sup>3</sup>. Excavations in Woerden have taken place since the 1970s, mostly in the centre around the medieval church of Saint Peter<sup>4</sup>. However, it was not until 1999 that actual traces of the Roman fortress were found. Although during these excavations only small parts were uncovered, we now can reconstruct the plan of the *castellum Laurium* with some interior details<sup>5</sup> (Fig.2).

The first of a succession of four fortresses was built in the early 40s of the 1<sup>st</sup> century AD. This *castellum* and its successors were surrounded by several



1 The *limes* in the Lower Rhine region (Woerden and Xanten are mapped). – Hazenberg Archeologie Leiden.

impressive defence ditches over five metres in width and were mostly built of timber, earth, clay and turf. In the last stage, some parts of the fort were built of stone made of tufa blocks. The excavation gave us information about some buildings in the camp, especially the foundation trenches of the timber barracks and the later stone wall of the headquarters of the army camp, the *principia*. The material culture is of a military character and the finds date from the 1<sup>st</sup> and 2<sup>nd</sup> centuries AD.

Near the fortress, traces of the military *vicus* were found. They consisted of wooden houses and probably a military bathhouse. In the fossil river bed of the Rhine we unexpectedly discovered a beautifully preserved ship, the so-called Woerden 7. The

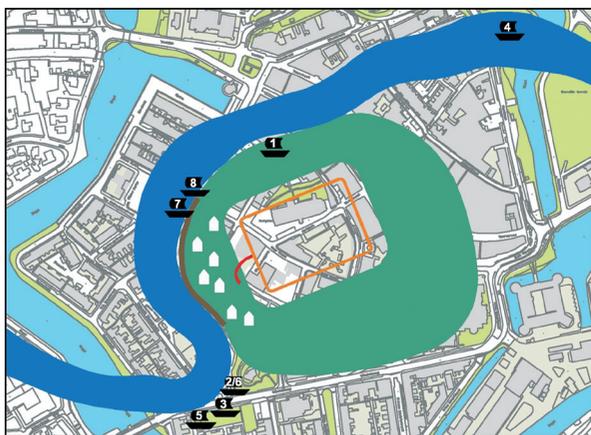
<sup>1</sup> Contact the authors at <http://www.hazenbergarcheologie.nl/>. – We are grateful to Evert van Ginkel (Leiden) for his comments on an earlier version of this paper.

<sup>2</sup> H. ENCKEVORT et al., Die Grenze in den Niederlanden. In: G. Klose/A. Nünnerich-Asmus (Hrsg.), Grenzen des Römischen Imperiums (Mainz 2006) 105 ff.

<sup>3</sup> T. BECHERT/W. J. H. WILLEMS (eds), Die römische Reichsgrenze von der Mosel bis zur Nordseeküste (Stuttgart 1995).

<sup>4</sup> J. K. HAALBOS, Ausgrabungen in Woerden (1975–1982). In: C. Unz (eds), Studien zu den Militärgrenzen Roms III. 13. Internationaler Limeskongress in Aalen 1983. Forsch. u. Ber. zur Vor- u. Frühgesch. in Baden-Württemberg 20 (Stuttgart 1986) 169 ff.

<sup>5</sup> W. K. VOS et al., De Romeinse limes tijdens Caligula: gedachten over de aanvang van het castellum Laurium en onderzoeksresultaten van nieuwe opgravingen aan het Kerkplein in Woerden. Westerheem 52,2, 2003, 50 ff.



2 The geographical situation at Woerden presenting the Roman *castellum* and the shipwrecks. – Hazenberg Archeologie Leiden.

numeral indicates the fact that this was not the first Roman ship that had been excavated in Woerden, although none of the earlier finds were completely salvaged<sup>6</sup>. In 2003, the Woerden 7 had been explored and documented in great detail. The ship was of a well-known type of inshore cargo vessel or barge, but it had something special that attracted international media attention. For the first time it was made clear that a Roman barge could be equipped with oars and the appropriate fittings for them, which led us to the conclusion that this specimen could be rowed upstream<sup>7</sup>.

Nonetheless, none of these finds concern the actual subject of this paper. They are presented here as the context of the real object of interest: an extraordinary Roman sword.

## Discovery of the sword

After the large-scale excavations had been completed, most of the topsoil had been transported away from the site. This was necessary to build an underground car park. We sought the assistance of amateur archaeologists with metal detectors so that the soil could be searched for Roman finds, especially metal artefacts. Our main concern was to collect all the metal finds. The metal detector specialists searched the soil after it was transported to another location. Among various finds such as coins and fibulae, the sword was found by one of the amateur archaeologists<sup>8</sup>. Therefore, the sword's excavation context is not clear and we cannot be sure where exactly it came from. Most probably its original context was the *vicus* or the river. This latter location seems appealing because of the possibility that the sword had been deposited there in the course of some kind of ritual<sup>9</sup> (Fig. 3).

## Description

The Woerden sword did not survive whole. Like most other iron objects from archaeological excavations, it was not well preserved and was partly corroded<sup>10</sup>. Two fragments were salvaged, the smaller of which is the tip of the blade measuring 14 cm. The second fragment consists of the remaining part of the blade, still stuck in its iron scabbard, and the complete hilt. The length of the main fragment of the sword is 36 cm, including the hilt. The actual blade is 22 cm long and almost 5.4 cm at its widest point.

<sup>6</sup> J. K. HAALBOS, Ein römisches Getreideschiff in Woerden (NL). *Jahrb. RGZM* 43, 1996, 475 ff.; R. BOCKIUS, Die Prahme von Woerden. In: A. Mees/B. Pferdehirt (Hrsg.), *Römerzeitliche Schiffsfunde*, in der Datenbank „Navis I“, Kat. vor- u. frühgeschichtl. Altertümer 2 (Bonn 2002) 30 ff.

<sup>7</sup> E. BLOM/T. HAZENBERG/W. K. VOS, Het geroeide Nederlandse vrachtschip de 'Woerden 7'. *Onderzoeksresultaten van de opgraving van een Romeinse platbodem aan de Nieuwe Markt in Woerden (Hoochwoert)*. *Westerheem* 55,3, 2006, 141 ff.; E. BLOM/W. K. VOS (eds), *Woerden-Laurium. De opgravingen 2002–2006 van het Romeinse legerkamp, het kampdorp en het schip de 'Woerden 7'*. *ADC-Monografie 2* (Amersfoort 2008).

<sup>8</sup> T. HAZENBERG et al., *Woerden-Hoochwoert/Castellumgarage, Archeologische begeleiding ontgraving parkeergarage en archeologisch toezicht op aanleg funderingen winkelpanden* (Leiden 2006).

<sup>9</sup> See J. A. W. NICOLAY, *Armed Batavians: use and significance of weaponry and horse gear from non-military contexts in the Rhine Delta (50 BC to AD 450)*. *Amsterdam Arch. Series 11* (Amsterdam 2007).

<sup>10</sup> Preservation and research have been carried out by the Dutch Institute of Cultural Heritage (ICN) and Restaura: I. JOOSTEN/L. MEGENS, *Internal preliminary report of the Netherlands Institute of Cultural Heritage (ICN)* (Amsterdam 2007); T. LUPAK, *Behandelingsvoorstel met kostenoverzicht voor de behandeling van het falcata zwaard uit Woerden*. *Internal report Restaura* (Haalen 2007).



3 The Woerden sword, photograph and technical drawing. – Hazenberg Archeologie Leiden.

Because it has not yet been possible to remove the blade from the scabbard, it is not certain at present if the sword is single- or double-edged. For the same reason, it is not possible to present a proper cross-section of the blade. The smaller fragment shows part of the core which has been established as iron.

The original length of the sword is difficult to estimate because the remaining parts do not fit together. The sword may have measured 50–60 cm. The hilt of the sword is 14 cm long and 7.6 cm wide. It is decorated with sheet-bronze and fitted with wooden grips. It has five circular studs or rivet blocks, also made of bronze. With regard to the axis of the blade, the hilt is slightly curved.

The slightly corroded scabbard is made of iron. The upper side of the scabbard, or the mouth, is fitted with ribbed plates of cast brass and on one side an X-mark has been found. It is not clear if this should be interpreted as a graffito that represents ownership. No organic remains of leather or bone were found on the scabbard (Fig. 4).



4 Detail of the hilt and the X-mark. – Hazenberg Archeologie Leiden.

## Reconstruction and determination

What can be said about the origin, determination and dating of this sword? First of all, this sword is certainly not a common Roman *gladius* or *spatha*. But what are the other options?

Concerning the typical hilt, the supposed short length of the sword and the assumption that the central axis of the blade was slightly curved, we have started our search for parallels in the Mediterranean area. The Celto-Iberians, who lived roughly in the middle of present-day Spain, used a type of sword that has some resemblances to our weapon: the *falcata*<sup>11</sup>. This sword was widely used in the Republican period, especially during the Punic Wars. It is derived from the Greek *kopis* and related to the ancient Egyptian *khopesb*. The Romans thought that the *falcatae* were made of an early form of steel, but that seems to be a myth transmitted by Roman authors of Spanish origin<sup>12</sup>. Nevertheless, the *falcata* was a most powerful weapon due in large part to its triangular shaped blade. It earned a fearsome reputation for being able to crush helmets, chop through shields and remove limbs. The general type is to be found all over the Mediterranean and dates roughly from the 6<sup>th</sup> to the 1<sup>st</sup> centuries BC.

Can the sword be defined as a Celto-Iberian *falcata*? In the period that the type was first used, dur-

<sup>11</sup> F. QUESADA SANZ, El armamento ibérico. Estudio tipológico, geográfico, funcional, social y simbólico de las armas en la Cultura Ibérica (siglos VI–I a. C.). Monogr. Instrumentum 3,1–2 (Montagnac 1997).

<sup>12</sup> Personal comment F. Quesada Sanz (Madrid).

ing the 6<sup>th</sup>–5<sup>th</sup> centuries BC, many variations were in vogue, after which there seems to have been an evolution in blade and hilt. A first look at the hilt shows some resemblance to the Iberian type of hilt. But closer inspection leads to a different interpretation. According to Fernando Quesada Sanz, a connoisseur of Iberian swords, the hilt does not correspond to any of the *kopis* types known from the Mediterranean, neither does it fit any of the types of the Iberian *falcata* hilt, which could be a bird's head, a horse's head or a rectangular pattern<sup>13</sup>.

However, the overall shape of our sword may have been inspired by these shapes and could be a very late evolution of the type<sup>14</sup>. But there is another argument that this sword is not a true Celto-Iberian *falcata*, based on the characteristics of the blade. *Falcata* blades are quite wide close to the hilt, and very strongly asymmetrical: the back of the blade, which is not edged, is a straight prolongation of the back of the hilt line, while the cutting edge is very concave and tapering<sup>15</sup>. This is not the case with our sword, as both sides of the blade seem to run parallel from the hilt upwards. Also, the whole blade seems quite straight, although there are some late *falcata* types that are not very curved.

Last but not least, we have to look at the dating. The youngest *falcata* swords date from the middle of the 1<sup>st</sup> century BC. The last known literary mention, by Seneca (*Machaera hispana*) refers to Caesar's time<sup>16</sup>. The last iconographic representations date from the time of Augustus. Therefore, the sword seems to have been out of use by the time of Tiberius' reign. Of course, some examples could well have ended up in the hands of a Roman officer as old spoils or perhaps as a souvenir from the battlefield.

Because of the circumstances in which the Woerden sword was found, the age of the weapon cannot be defined by way of a dateable find-layer, so its exact dating is unknown. An Augustean or Tiberian date is excluded because that would be too early for Roman occupation in Woerden, which started during Caligula's or Claudius' reign. If the sword is in any way related to the presence of Hispanic soldiers in Lower Rhine *castella*, it could be of a Flavian date<sup>17</sup>. But that would be rather late compared to the conventional dating of this type of weapon.

Recapitulating the former arguments, we have to conclude that our sword is not a true Celto-Iberian type of *falcata*. Are there any alternatives? There is a possibility that the sword is of a Germanic type and has its origins in northern Europe<sup>18</sup>. In that case, it could be a big knife-like sword, a kind of sabre, or a sword from the so-called Invasion period. On the other hand the sword could also have been inspired by Thracian curved swords. If we want to examine the above mentioned possibilities, we also have to answer the important question of whether the blade is single-edged or double-edged.

Quesada Sanz had another suggestion<sup>19</sup>. He thought the sword could be a kind of gladiatorial weapon inspired by the *falcata* type. However, so far nothing 'gladiatorial' has ever been found in Woerden, as for example an arena or theatre.

By presenting the Woerden sword during ROMEC 2007, we hope that our colleagues will be able to help us reveal its type, date and origin. Our presentation in Xanten resulted in two suggestions that pointed in more or less the same direction. K. Czarnecka and B. Kontny from Poland and P. Johnsson from Sweden kindly told us that the

<sup>13</sup> See also the discussions at <http://www.romanarmy.com/cms/> and <http://www.myarmoury.com/home.php>.

<sup>14</sup> Personal comment F. Quesada Sanz (Madrid).

<sup>15</sup> Compare QUESADA SANZ 1997 (note 11) 90 fig. 31.

<sup>16</sup> Sen. benef. 5,24.

<sup>17</sup> It is within units of Celtiberian origin (or maybe Hispanic, though not from the north of Spain because according to Quesada Sanz they did not use this 'native' weapon) that we would probably have to look for the owner of our sword. Regarding other *castella* on the Lower Rhine *limes* like Utrecht, Vechten, Maurik and Nijmegen, we can see that Hispanic units were indeed stationed in the region, especially in the Flavian period (J. E. BOGAERS/CH. B. RÜGER, *Der niedergermanische Limes. Materialien zu seiner Geschichte* In: *Kunst und Altertum am Rhein. Führer d. Rhein. Landesmus. Bonn* 50 [Köln 1974]). However, there are no such clues in Woerden. None of the graffiti on *terra sigillata* bowls can be exclusively identified with Hispanic names, nor can the stamps on Roman military tiles from Woerden be related to Hispanic *auxilia* troops. Nevertheless, we believe that it would not be very exceptional if Hispanic soldiers were actually stationed at Woerden.

<sup>18</sup> C. VON CARNAP-BORNHEIM (ed.), *Bewaffnung der Germanen und ihrer Nachbarn in den letzten Jahrhunderten vor Christi Geburt* (Lublin 2002).

<sup>19</sup> 'At most, it could be a 'fashion' recreation of a *falcata* by an imaginative armourer, perhaps under commission by a Spaniard or a fashion gladiatorial weapon.' Quesada Sanz posed this idea also at <http://www.romanarmy.com/cms/>.

sword looks like examples from the Baltic region and the Scandinavian coastal area. So, after having explored the possible Mediterranean origins of the Woerden sword, the search will now be directed to the north. To be continued ... .

TOM HAZENBERG and WOUTER VOS  
Hazenberg Archeologie  
MiddelsteGracht 89  
NL-2312 TT Leiden  
t.hazenberg@hazenbergarcheologie.nl  
w.vos@hazenbergarcheologie.nl

