

Whetstones in Gaul: building a typology

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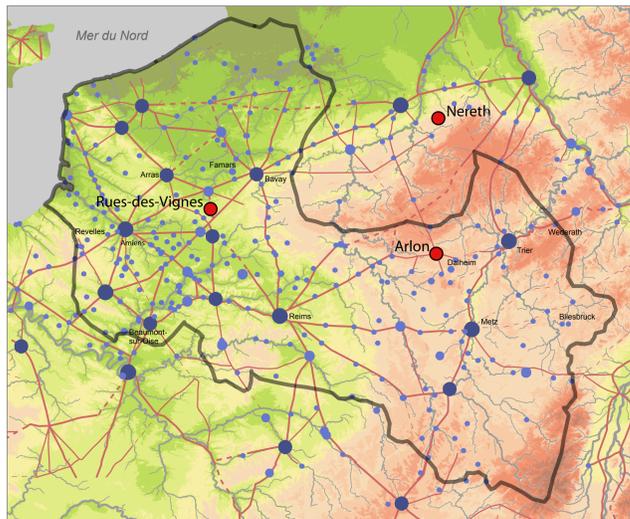


Fig. 1. Location of Nereth, Rue-des-Vignes and Arlon on the Gaul map.

Tool of the tool, whetstones are meant for the sharpening of metal utensils: knives, scythes, weapons... Used in the context of a profession or more simply objects of the daily life, they are often rediscovered in excavations, sometimes in great number. However, scientific interest for these whetstones is minimal. Often quoted, sometimes described, they encounter an astonishing void in literature. To study and characterise this unpublished material is really important. It will as well deal with the raw material, manufacturing, trade and typology of these tools. Thinking about the tool, its place in the operative chains of agricultural, craft and domestic activities will reveal a testimony to the knowledge of Roman society in northern Gaul.

Building a typology is the first step of this study, based on four selected sites: Nereth-Baelen (Province of Liège, Belgium), Rues-des-Vignes (Nord 59, France), Arlon (Province of Luxembourg, Belgium) and the fort of Saalburg (Hesse, Germany).

Nereth-Baelen (Province of Liège, Belgium)

The excavations carried out on the site of Nereth near Baelen in North-West of Belgium (Fig. 1) led to the discovery of a large settlement dated from the Early Roman Empire to the Late Antiquity (Hanut *et al.*, 2011). The site includes two buildings and several pits with evidences of metallurgical and domestic activities. The archaeological material reveals an important settlement during the Late Antiquity. The great number of modeled pottery point out the presence of one or more Germanics families coming from beyond the Rhine. Nereth is probably the most important Germanic rural site excavated in Wallonia.

Tableau 1. Typology. Example for every type.

Site	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Type VIII	Type IX
Nereth (40 items)	/	/	/	1 item	12 items	/	27 items	/	/
Rues-des-Vignes (11 items)	/	/	/	6 items	1 item/	/	3 items	1 item	/
Arlon (36 items)	/	4 items L: 9.98 cm	/	22 items L: 7.2 cm	6 items L: 12.32 cm	/	4 items L: 13.2 cm	/	/
Saalburg (243 items)	34 items D: 6.12 cm	4 items L: 14.2 cm	27 items (?) L: 8.7 cm	54 items L: 8 cm	84 items L: 7.21 cm	21 items L: 9 cm	8 items L: 11.32 cm	/	11 items L: 11 cm

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Rues-des-Vignes (Nord 59, France)

The Rues-des-Vignes site is a potter's workshop located in the south of *Civitas Nerviorum* (Fig. 1) in the present Cambrésis. The occupation of the whole settlement covers two centuries from about 65-70 to 270-280 A. D. (Deru, 2005). The excavated buildings are houses and spaces for pottery work (pits for clay storage, pits for wheel and pottery kilns). The production of this workshop is a high quality pottery showing a regional diffusion.

Arlon (Province of Luxembourg, Belgium)

Located in the South of present Belgium, the Arlon's vicus belongs to the *Civitas treverorum* (Fig. 1). Since 2006, some excavation's campaigns are led in the city. They pointed out the organisation of the vicus and revealed areas of settlement, of craft activities (ceramic, glass, metal, fuller's workshop) and road. The settlement is dated from the IInd to IVth century AD. The whetstones come from five specific sectors : Goffaux (site Neu), rue de la Moselle, rue de la Semois (résidence Justine et terrain Lazzari) et rue de la Meuse (Goemaere, 2010 ; Henrotay, 2007).

The fort of Saalburg (Hesse, Germany)

The roman fort "Saalburg" is located at the Upper German-Raetian Limes, the frontier between the Roman Empire and Germania (Fig. 2).

Large-scale excavations were carried out in the second half of the 19th century and at the beginning of the 20th century. These early excavations are the reason why many of the finds can't be located in its archaeological context. But the great number of whetstones allows to define a detailed and enlarged typology. Around 90 AD, the fort with an area of 0.7 ha was built. Around 135 AD, a 3.2 ha fort was constructed. The camp village extended on all sides of the fort. Here the baths, the

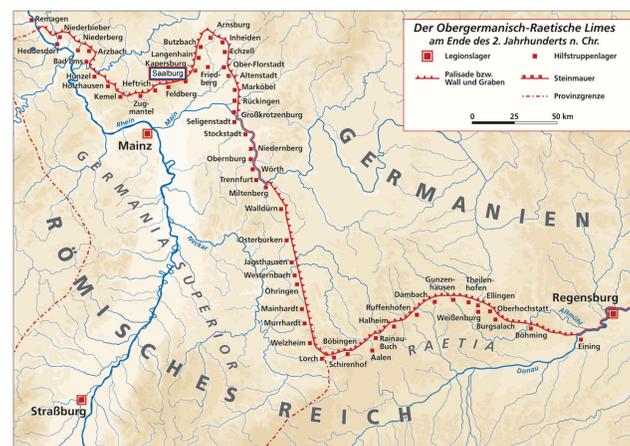


Fig. 2. Location of the fort of Saalburg on the Limes

guest house, a zone with shrines, and finally a burial ground were situated. In the Middle Ages, the Roman ruins were used as quarries.

The fort and the camp village are among the best known fort locations on the Upper German-Raetian Limes.

Typology

- Nine groups can be defined based on primary form without considering wear¹:
- Type I: spheroid (multifaceted after used)
 - Type II: cylinder with circular cross-section ($d/D > 0.9$)
 - Type III: thin elongated plate with an elliptic cross-section ($d/D < 0.3$)
 - Type IV: cylinder with elliptic cross-section ($0.3 \leq d/D \leq 0.9$)
 - Type V: parallelepiped rectangle (smooth or slightly to highly concave after use)
 - Type VI: xenomorph
 - Type VII: pebble
 - Type VIII: shuttle
 - Type IX: rectangular plate (with or without perforation)

Every type is based on natural shape (Type VI and VII) or on shape obtained by cutting or by sawing (other types).

The attribution of rectangular plate to the Roman period remains uncertain. This kind of whetstone could be medieval.

Whetstones present different types of wear (worn edges and surfaces, streaks and grooves). Worn surfaces can be simply flat or slightly to highly concave or convex. These aspects are still in progress and will be published in the next months.

Material identification

Based on the identification of material's lithology and their characteristics (faunistic content, texture, color, cleavage, fractures, quartz veins, cement), geological and geographical origins and (litho)stratigraphic ages can be proposed. Mesomacrosopic observation is completed by analysis still in process (petrography, X-ray diffractometry, magnetic susceptibility, EDS...).

A large part of raw material consists of detrital sedimentary rocks. Their granulometry ranges from fine siltstone to medium-sized sandstone. They are mainly well-sorted. According to the cementation degree, the sandstones vary from poorly cemented sandstone to quartzite (low-grade metamorphism).

Low cementation leads to a fast wear but makes new grains appear. At the opposite, the quartzites, with their siliceous cement and the grain imbrication, generate a mirror-polished surface reducing progressively their sharpening properties. This material is may be used for another aim that sharpening. Study of marks and metallic residues will answer this question.

¹ Types I, II, IV, V, VI correspond respectively to Type, I, II, IV, V, IV after Henrich, P. *et al.*, 2008.