ATVATVCA | 8

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Cover Image
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Print
Drukkerij Jansen nv. - Hoeselt

Paper
Artic Volume white 90 gr/m²

ISBN
9789090312989

Atuatuca / Publications of the Gallo-Roman Museum Tongeren,
Under the supervision of Guido Creemers
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Tongeren 2018

A residential area in the Roman City of Atuatuca Tungrorum. Excavations on the Museum site in Tongeren

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ATVATVCA | 8
Publications of the Gallo-Roman Museum
Tongeren, 2018

Preface

Dear reader

As the Mayor of Tongeren, responsible for the Gallo-Romeins Museum since 1 January 2018, I am delighted to present an Atvatvca edition that lies very close to our hearts.

Before the Museum was extended in 2009, the provincial government organised excavations on the site, which were carried out in 2006 by ARON bvba and in 2007 by the then Flemish Heritage Institute (VIOE). These were followed by a scientific study of a significant proportion of the vast number of features and find material from the ARON excavation.

This publication brings together the results of that last study, enabling us to present to you the story of this central area within the Roman city, from the middle of the first century to the end of the fourth century AD.

As the capital of the *civitas Tungrorum* (the district of the *Tungri*), *Atuatuca Tungrorum* was for centuries a major political, religious and economic centre in northwestern Europe. Members of the regional elite had a '*pied à terre*' in the city. They took over the central residential areas in order to build sumptuous urban homes, which served as a base from which to conduct their business affairs. Our research findings confirm and reinforce this picture. For example, the 2006 excavations unearthed exceptionally well preserved, monumental remains of central heating systems, along with figurative wall paintings, including a life-size depiction of the god Dionysus. The researchers also discovered a colourful palette of magnificent decorative stones, which the Romans had imported from Turkey, Greece, Tunisia, Italy, France, Germany and elsewhere.

Finds from the Museum site excavation, such as a splendid votive shrine sculpted from Lorraine limestone and a colourful bronze ornamental fibula inlaid with enamel, have since found their way into the Museum's public collection, thereby bringing the past and the present together in seamless fashion.

I wish to thank the authors, editors and all those who have contributed in some way to the success of this publication. I would also like to thank the provincial government for the efforts it has made on behalf of this project.

It is the task of the Gallo-Romeins Museum to conduct and provide access to its own research. Only in this way can our heritage be made available to a wider audience. I wish you happy reading.

Patrick Dewael
Mayor of Tongeren

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Stone architectural elements, decorations, querns and millstones

Roland Dreesen, Else Hartoch, Frans Doperé, Petra Driesen, Silke Francis, Tatjana Gluhak & Eric Goemaere

The two excavations on the Museum site (ARON 2006 & VIOE 2007) in Tongeren yielded a total of 1165 stone objects dating from the Roman period. Of these, 937 came from the Museum site 2006 excavation (ARON). A selection of these finds will be discussed in this chapter.

In the first part of this chapter, Roland Dreesen gives an overview of the pieces of ornamental stones and polychrome marbles (n=297). Coloured decorative stones of local or regional origin (extracted from sites within the *civitas Tungrorum*), as well as more exotic coloured marbles have been found: they point towards import from the Mediterranean region, adding to the prestige or importance of the Roman dwellings in which they were encountered. A small votive altar found in one of the 2nd century pits is made of a particular Jurassic limestone from Lorraine (northern France) and is discussed in detail by Petra Driesen and Silke Francis. Eight querns/millstones, found *in situ*, are described by Else Hartoch (in collaboration with Frans Dopere, Tatjana Gluhak, Roland Dreesen and Eric Goemare). The rock types used to manufacture the querns have been identified as well as the quern/millstone types and the dressing patterns on their grinding surfaces. The toolmarks on the querns and millstones have been assigned to particular working tools.

Fig. 1 shows the distribution of the stones across the different archaeological contexts. About half of these contexts were selected for this publication and are mentioned in '*The Museum site: stratigraphy and features excavated*'. The same chapter also discusses features S 78, S 154 and S 266, as they play a key role in the

general stratigraphy of the site. The remaining eight contexts are the fill of a suspected wooden cellar (S 762), two layers (S 1005 and S 1063) from the pre-Flavian period, a layer from the end of the 1st century/first quarter of the 2nd century (S 459), a pit (S 624) and a wall pillar (S 372) from the second and third quarters of the 2nd century, a Roman pit (S 138) and the profile of a post-medieval cesspit (S 179).

Decorative stones and polychrome marbles

Introduction

Several pavement stones, fragments of decorative elements and encrustations ('marbles') have been identified in the collection of archaeological finds from the Museum site excavation in Tongeren. In general, the spectrum of rock types used for paving and decoration purposes is analogous to that of other Roman sites described earlier from the Tongeren *civitas*.[1,2] These include natural rocks derived from local sources (ancient quarries and outcrops within the limits of the *civitas Tungrorum*), regional sources (ancient quarries and outcrops located in areas adjacent to the *civitas*) and rather remote or 'exotic' sources (in particular, ancient quarries located in the Mediterranean area). All these pieces were supposedly part of luxurious decorations, including marble veneers and *opus sectile* works. The most commonly found building stones in the capital of the *civitas Tungrorum* (representing the bulk of the stone material found in the excavations) include grey Cretaceous flints and yellow calcarenites (limestones), brown and grey Upper Carboniferous sandstones, dark-brown Pleistocene volcanic tuffs, beige Holocene calcareous tuffs, dark-grey Lower Carboniferous limestones and cream-coloured to white Jurassic limestones[3]. However, the material from the Museum site also contains several

Context	601	Pre-Flavian 762	809	1005	1063	Flavian - IIa 459	486.3	IIb-c 266	294	368	370	372	463	466	622	624	IId-III 154	176	234B	330	P-MED 179	Indet -	138	Total
Ornamental and coloured stones																								
Breccia corallina	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Breccia di Sciro	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Breccia Portasanta	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Giallo antico brecciato	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Granito verde a erbetta/Trier diabase	-	-	-	-	-	1	-	-	-	4	6	-	-	-	-	1	3	-	-	-	-	-	-	15
Porfido vitelli (?)	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Rosso antico	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Marbre gris belge	-	-	-	-	-	-	-	-	-	3	18	-	1	-	-	1	-	-	1	-	-	-	-	24
Marbre rouge belge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Meuse limestone	-	-	-	-	-	-	-	-	-	3	9	1	-	-	-	1	1	-	1	1	-	-	-	17
Famennian micaceous sandstone	-	-	1	-	-	-	-	-	1	20	160	-	-	1	-	4	29	1	1	4	-	-	1	223
Jurassic oolithic limestone	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
White saccharoid marbles	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	1	-	-	7
Votive altar																								
Norroy limestone	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Querns and millstones																								
Volcanic Rock (Phono-téphrite, Eifel)	1	1	1	1	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	7
Wine-red coarse sandstone (Burnot Formation)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	1	1	2	1	8	1	2	2	1	31	194	1	2	1	1	7	37	1	4	5	1	1	1	306

Fig. 1. Frequency distribution of the studied stone artifacts over the archaeological contexts.

[1] Dreesen & Coquelet 2013; Coquelet *et al.* 2013; Coquelet *et al.* 2014.
[2] Dreesen *et al.* 2015.
[3] Dreesen & Vanderhoeven, 2017.

small fragments of prestigious coloured ornamental stones (e.g. polychrome marbles), which are quite similar to the material already described from the temple site and the Our Lady Basilica excavations.[4] The latter ornamental stones will be described here in more detail.

Methodology

The decorative stones were identified and their provenance determined using comparative macroscopic analysis with data from the literature,[5] existing reference collections (e.g. the collection of Roman marbles from Xanten, courtesy of Dr V. Ruppiene, University of Würzburg, Germany) or ancient marble atlases (e.g. Price, M.T., the Corsi Collection of Decorative Stones, Oxford University). Additional paleontological investigations (identification of macrofossils) or petrographic analysis (microscopic investigation of thin sections) were carried out for a few samples of the decorative stones and for drill cores taken from the millstones. Stable carbon and oxygen isotope analysis was also performed on selected samples in order to specify the origin and provenance of the saccharoid white marbles, whereas geochemical analysis was carried out by Tatjana Gluhak, on drill core samples taken from the millstones. Finally, the Geological Rock-Color Chart was used for the objective evaluation and description of the exact colour of the polychrome marbles. This chart uses Munsell standard colour chips with correct ISCC-NBS colour names and unique alphanumeric notations**.** The archaeological context and total number of stone varieties have been identified and presented in a frequency-distribution diagram (fig. 1).

Identification and description of the decorative stone types

Breccia corallina (marmor sagarium)

This is a monogenic limestone breccia with a coral-red groundmass and angular limestone clasts (fig. 2). The colour of the clasts ranges from light olive grey (5 Y 6/1) to very pale orange (10 YR 8/2). The matrix has a deep cherry-red colour. It was quarried in ancient Bithynia, near Vezirhan (Bilecik, Turkey), not far from the major river Sagarius (now Sakarya) that gave the stone its name. The breccia consists of angular, white-pink limestone clasts of varying size resting in a compact matrix, of which there are several chromatic varieties: orange, pink, bright coral red (hence the name *breccia corallina*) and brown. The clasts display solution-modified stylolitic contacts and calcite-filled fractures or veins. The stone was probably introduced to Rome in late Augustan times, and was used until the end of the Empire, predominantly for medium-sized columns, *tondi*, wall and paving

Fig. 2. *Breccia corallina* (GRM 18786)

4 Dreesen & Coquelet 2013; Coquelet *et al*. 2014 ; Dreesen *et al*. 2015.
5 E.g. Borghini 2004; Lazzarini 2004; Price 2007.

slabs, etc. The quarries in Turkey are well preserved and display frequent marks from the ancient quarrying techniques on the vertical quarry faces. The specimens in this study show limestone clasts ranging in size from 1 to 3 cm, possibly enclosing recrystallized fossils (corals?). They were probably used as thin encrustations (marble facings), 9 mm thick.

Breccia di Sciro (settibassi)

This red-and-white breccia displays several elongated white and pinkish marble clasts in a red, reddish brown to purplish red hematite-rich cement (fig. 3). The clasts show a preferential orientation. Locally, a yellowish oxidation colour may develop. The breccia was extracted from several quarries on the island of Skyros (Sporades Islands, Greece). Their geological age is Triassic to early Jurassic. Its name derives from the villa of Septimus Bassus (Villa dei Sette Bassi, 4th century).

Breccia Portasanta (marmor chium)

This is a breccia displaying a quite large variability. It is a tectonic breccia of Triassic age consisting of various fragments (of varying size) of fine-grained limestones and slightly metamorphic marbles (fig. 4). Stylolites and calcite veins frequently occur. Fossils (bioclasts) can still be recognised within some of the limestone clasts. The dominant colours are dull red, salmon-pink and grey but other colours are present as well, including orange, brown and yellow. The name derives from the Italian word for the entrance gate to the Vatican (Holy Gate), the frames of which are composed of this particular breccia. The former quarries were located on the Aegean island of Chios (hence its other name of *marmor chium*).

Giallo antico brecciato (marmor numidicum)

This yellow limestone breccia of Jurassic age, is composed of fine-grained, extensively recrystallised dolomitic limestone clasts in a ferruginous purplish red to brown micritic matrix (fig. 5). Areas of coarser crystalline calcite probably correspond to recrystallized fossils. The colour of the clasts ranges from pale yellowish orange (10 YR 8/6) to dark yellowish orange (10YR 6/6). *Giallo antico* is the most prestigious of the yellow antique marbles in the Mediterranean area. It was extracted from the Roman imperial quarries in the extreme west of Jebel Chemtou in Numidia, northeast Tunisia, from the 1st century BC until Augustan-Severan times. The small encrustation fragments recovered from the Museum site are only a few millimetres thick.

Fig. 3. *Breccia di Sciro* (GRM 18787)

Fig. 4. *Breccia Portasanta* (GRM 18789)

Fig. 5. *Giallo antico brecciato* (GRM 18785)

Fig. 6. *Granito verde a erbetta* or Trierer diabas (GRM 18794)

Granito verde a erbetta / Trier diabase

This is a fine to medium-grained dark-green porphyritic rock type with light-green clusters of tiny feldspar phenocrysts (fig. 6). Petrographically it is a metagabbro (diabase), with extensive alteration of augite to chlorite and some chloritisation around the edges of plagioclase feldspar crystals. Metallic pale-yellow pyrite is present as scattered crystals: it is often oxidised into orange-brown rusty stains. Although similar rock types might occur in the Palaeozoic formations of Southern Belgium and Germany (e.g. near Trier, and locally known as Trier Diabas),[6] the macroscopic appearance could indicate *Granito verde a erbetta*. However, additional geochemical analysis and/or isotope analysis is required to resolve this question. *Granito verde a erbetta* originates from Wadi Umm Wikala, near Wadi Semna, in the Eastern Desert of Egypt. The name refers to the green grassy appearance. It comes from Precambrian basement rocks at Wadi Umm Wikala and was mainly used during the late Empire. The macroscopically analogous Trier diabase comes from ancient quarries in the Trier area (western Germany). Macroscopically the diabases originating from Devonian deposits near Hochweiler and Pluwig show the best analogies with the archaeological material. The encrustation fragments of the Museum site range in thickness from 2 to 12 mm. The general colour of the matrix ranges from dusky yellow green (5GY 5/2), greyish olive green (5GY 3/2) to greenish black (5 GY 2/1). The small feldspar laths (phenocrysts) are 2-4 mm in length and their colour varies from yellowish grey (5 Y 7/23) to light olive grey (5 Y 5/2).

Porfido vitelli (?)

This sample has only very tentatively been assigned to the *Porfido vitelli* because of the lack of petrographic control. It is a finely speckled 'porphyry'-type ornamental stone with a distinct jade-green colour: it varies from dusky yellow green (5 GY 5/2), dark yel-

Fig. 7. *Porfido vitelli* (?) (GRM 18781)

[6] Ruppiene, *et al.* 2016.

lowish green (10 GY 4/4) to greyish green (10 GT 5/2) (fig. 7). Petrographically, it possibly represents a weakly metamorphosed, medium-grained porphyritic andesite. However, further petrographic analysis is needed to corroborate its identification. The fragment from the Museum site has a thickness of 6 mm. However, its overall shape and its aspect in cross section indicate that it probably represents a cosmetic plate dish rather than an encrustation fragment.[7]

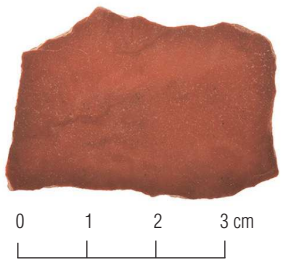


Fig. 8. *Rosso antico* (GRM 18783)

Rosso antico (marmor taenarium or marmor iassense rosso)

The *Rosso antico* is a fine-grained red marble (fig. 8) occasionally showing thin black veins and white markings. This fine marble gets its characteristic maroon colour from finely disseminated hematite. In thin section it is characterised by a fine-grained mosaic of calcite crystals and thin streaks or linings of hematite, locally exhibiting amygdaloid textures. When polished, it produces a warm brick-red colour, grading from dusky red (5 R 3/4 to greyish red (5 R 4/2). It was quarried above the village of *Agios Kyprianos* on the east coast of Cape Tenaro (Cape Matapan, Peloponnese) in Greece. It belongs to a series of metamorphic Upper Senonian to Upper Eocene (Late Cretaceous-Early Tertiary) formations. Although primarily used for small decorative architectural features, *Rosso antico* marble was also used for a few sculptures. It had first been exploited in the Late Bronze Age and exploitation continued extensively during the Roman Empire.

Marbre gris belge – 'Gris des Ardennes' (Frasnian) – grey Belgian marble

Intensely fractured pale-grey (light brownish grey – 5 YR 6/1) limestone with numerous white calcite veins (pinkish grey – 5 YR 8/1 to very pale orange – 10 YR 8/2), displaying a brecciated texture (fig. 9). This rock type most probably originates from the Entre-Sambre-et-Meuse area, where the existence of Roman quarries has been suspected, e.g. near Soulme

Fig. 9. Grey Belgian marble (GRM 18793)

7 Riha 1986.

in the Hermeton valley, southeast of Philippeville.[8] The overall texture and colour points towards the particular variety 'Gris des Ardennes' or 'Gris Versailles', a reefoid or biohermal (mud mound) limestone (boundstone) of Upper Devonian (Upper Frasnian) age. It occurs together with specimens of the pink or red 'Marbre Rouge Belge': both varieties represent distinct facies (different parts of mud mounds) of the same geological unit, the Neuville Formation. Their contrasting colours depend on the concentration of finely disseminated hematite. Fossils (corals) are present but they are not so obvious because of the low contrast with the enveloping grey microbial limestone. Numerous calcite veins crosscut the grey limestone matrix, producing an intricate pattern and resulting in a true (metamorphic) marble appearance. Some of the thickest, coarse-grained white calcite veins have even been used as a white marble analogue (see further).

Marbre rouge belge – red Belgian marble

This ornamental stone is very distinct because of its deep red colour (different hues) and the presence of relatively large white or grey fossils (fig. 10). It is a heterogeneous, coral-rich or reefal (biohermal) limestone (boundstone) of Upper Devonian (Upper Frasnian) age. It was extracted from different quarries in the same area – the Entre-Sambre-et-Meuse region – just as the Gris des Ardennes. Several varieties do occur that have been given different commercial names – '*Rouge griotte*', '*Rouge Royal*', '*Byzantin*', '*Rouge Byzantiné*', '*Gris Rosé*', etc. – depending on the intensity of red colouring, the presence of white, grey and black components (pure or stained calcite cements) and the presence of particular macrofossils (e.g. colonial corals, brachiopods). The few specimens recovered from the Museum site most probably belong to the '*Rouge Royal*' and '*Rouge Griotte*' varieties, possibly originating from the Rance area (Hainaut province, Belgium).[9] Their colour varies from pale red (10 5 6/2) to greyish red (10 R 4/2) and moderate red (5 R 5/4). It is no coincidence that the Romans liked the 'imperial' deep red-coloured varieties of this Belgian marble.

Meuse limestone – Calcaire Mosan – Pierre de Meuse

This is a group of fine-grained fossiliferous dark-grey (N_3) to greyish black (N_2) limestones (bioclastic wackestones to packstones) with dispersed macrofossils, such as centimetre-sized solitary corals, small auloporids and gastropods (fig. 11). Polishing the fine-grained limestone produces an almost black stone grading into a true black 'marble'. This fossiliferous limestone is of Lower Carboniferous (Visean) age and was extracted from different quarries along the Meuse valley, more especially between Namur and Liège. The presence of particular index macrofossils such as the

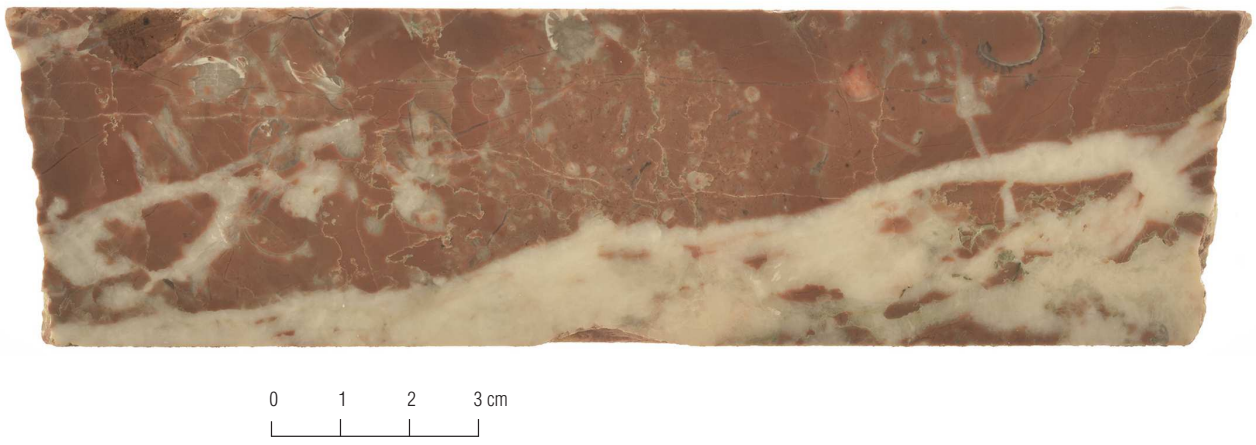


Fig. 10. Red Belgian marble (GRM 9394)

[8] Groessens, pers. comm.
[9] Peltier, pers. comm.

Fig. 11. Meuse limestone (GRM 18791)

rugose colonial coral *Siphonodendron martini* points to a particular geological unit, the Lives Formation (Awirs and/or Corphalie Members); this limestone is still being quarried today in the Engis/Flémalle area (Liège province, Belgium).[10] It is interesting to note that the Romans had quarried the same building stone that was used for the cities of Liège, Namur and Huy from medieval times until the 19th century.

Famennian micaceous sandstone (psammite du Condroz)

The bulk of the decorative stones found on the Museum site consist of flagstones or thin slabs of fine-grained micaceous sandstones, known as 'Psammites du Condroz' (fig. 12). Petrographically they can be identified as well-sorted fine-grained micro-arkosic sandstones because of their richness in feldspars and

Fig. 12. Famennian micaceous sandstone (GRM 18792)

[10] Poty, pers. comm.

micas. These micaceous sandstones are of late Upper Devonian age (Famennian) and crop out in the Condroz area, along the Meuse, Ourthe and Bocq valleys. Although these sandstones display a whole spectrum of different colours, the Romans selected only the purplish red variety (this colour is also known as 'lie-de-vin' – greyish red 5 R 4/2). The latter variety is quite typical of the sandstone beds of the Upper Famennian Evieux formation.

White saccharoid marbles

Several small pieces (edges or frames?) of 'true' white saccharoid (metamorphic) marbles have been encountered in the collection of ornamental stones from the Museum site excavation. However, establishing their exact origin requires a combination of detailed petrographic and geochemical analysis, followed by a comparison of the analytical data with a reference database for the main Mediterranean marbles used in antiquity.[11] Preliminary results of stable carbon and oxygen isotopic analysis (carried out by Prof. Michael Unterwürzacher, University of Salzburg, Austria) and petrographic characteristics (observed in thin sections), point to the presence of both white Carrara (fig.13) and Pentelic marbles (fig. 14), derived from Italian and

Fig. 13. White saccharoid Carrara marbles (GRM 18803)

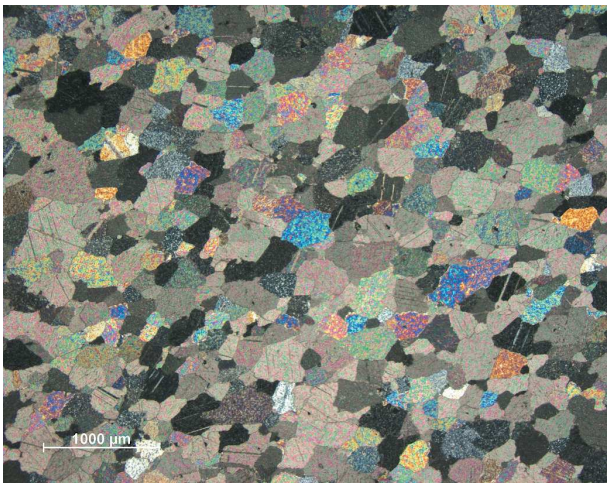
Fig. 14. White saccharoid Pentelic marbles (GRM 18798)

Fig. 15. Calcite vein (GRM 18805)

[11] Gorgoni *et al.* 1998.

Greek quarries respectively. Interestingly, some of the analysed white marble samples show quite aberrant isotopic data (see further). The latter white decorative stones are not "true" metamorphic marbles, but they rather correspond to coarse white vein calcite (fig. 15) that can be found in strongly veined Belgian grey marbles (such as the *Gris des* Ardennes or other Middle-Upper Devonian reefoid limestones). This is proven by petrographic control: indeed, relicts of host rock (grey limestone) at the borders of the vein calcite fragments, show all characteristics of microbial mud mounds, such as the above *Gris des Ardennes*. These vein calcite pieces were most probably used here as local white marble equivalents.[12] Fig. 16 (a-d) shows a series of relevant micrographs, illustrating diagnostic

Fig.16(a-d). Selection of micrographs of thin sections of white saccharoid marbles found at the Museum site. All micrographs taken in transmitted polarized light with crossed nicols. Note the characteristic polygonal mosaic of equigranular calcite crystals in the Carrara marble (maximum grain size 600 microns) and the undulating faces of slightly elongated calcite crystals in the Pentelic marble (maximum grain size 800 microns). (a) Carrara marble (sample GRM 18803), (b) Carrara marble (detail of same thin section), (c) Pentelic marble (sample GRM 18798), (d) Vein calcite (sample 18805): note very large calcite crystals with undulating extinction.



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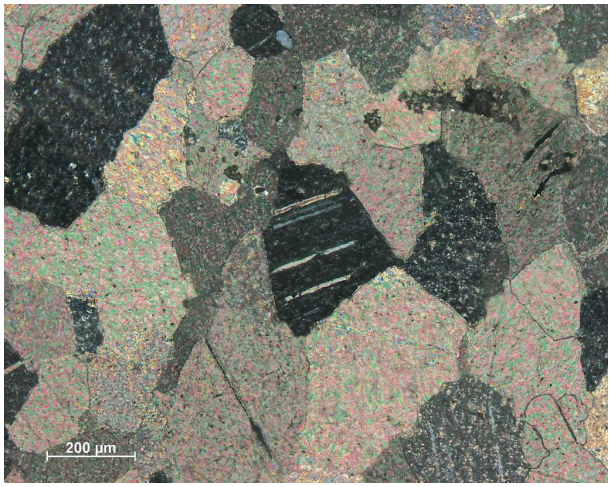

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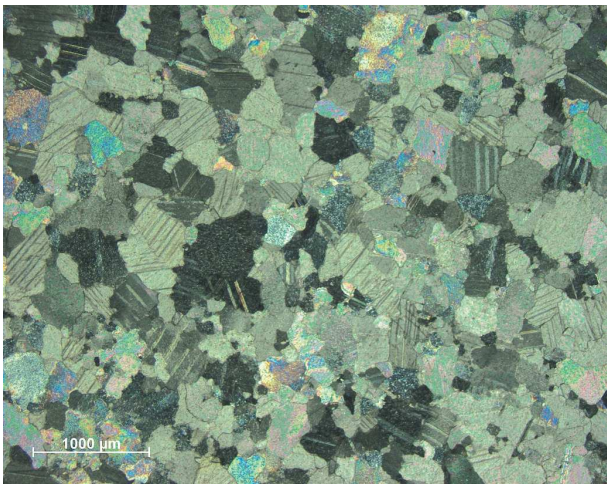

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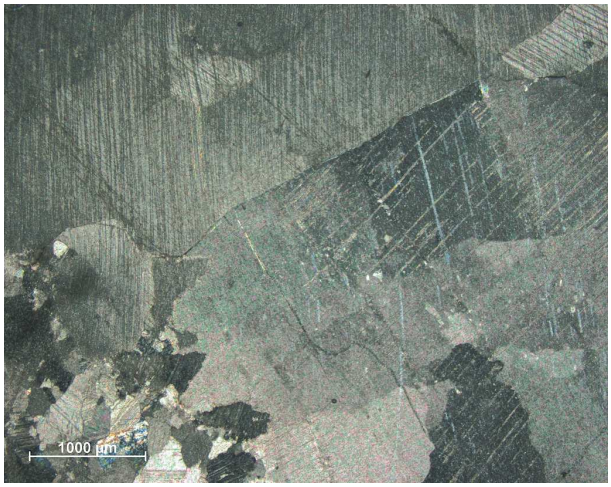

d

[12] Dreesen *et al.* 2015, 114-115.

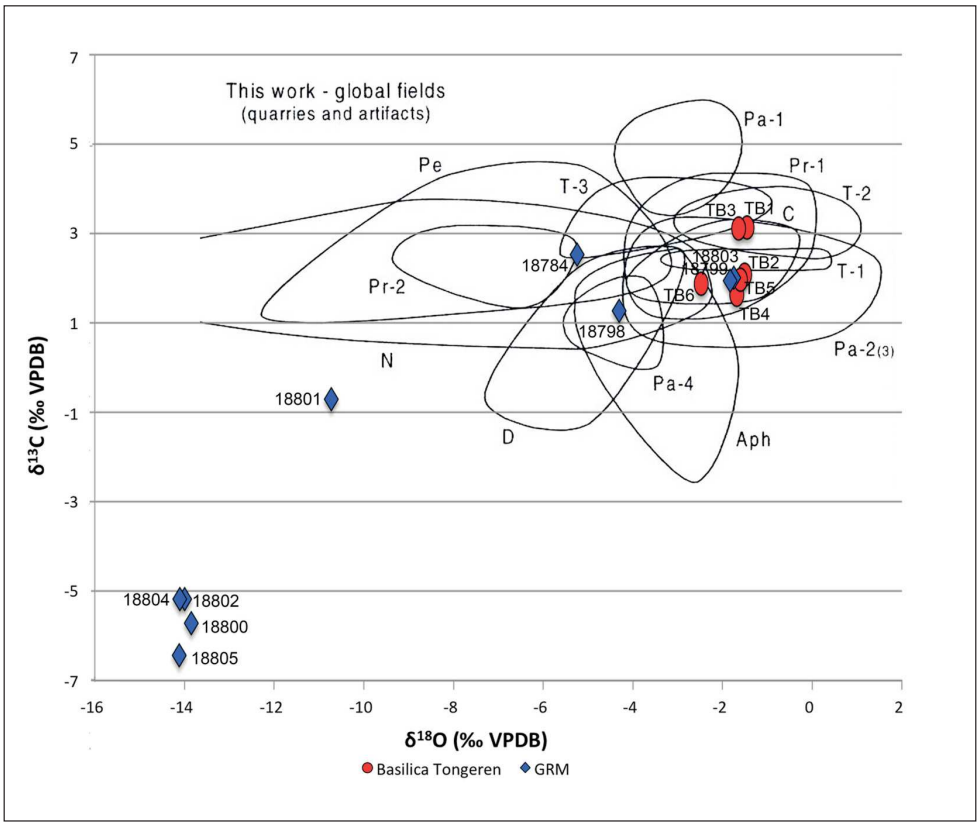

Fig. 17. Plot diagram of stable Oxygen and Carbon isotopes of white marble samples from the Museum site (blue diamonds) and the Basilica of Our Lady site (red dots), superposed on the reference diagram of Gorgoni et al, 1998 (for the main Mediterranean marbles used in Antiquity). Note the good coincidence of most plots of both the Museum site and Basilica samples with the isotope ratio fields of the Mediterranean marbles except for the aberrant plots at the bottom left that correspond to the vein calcite samples from the Museum site (taken from Dreesen et al, 2015)

microfacies of the white marble varieties and of the vein calcite. Moreover, the plots of stable C- and O-isotope data of samples of white marbles (fig.17) corroborate the petrographical identifications[13].

Norroy limestone

The Museum site excavation in 2006 unearthed a remarkable find: a stone household shrine in one of the 2nd century pits containing metalworking waste (S 463) (fig 18 – 19).

As well as practising religion outside the home, it was customary for the Romans to have a place inside the home where they could worship household deities. This *lararium* could take various forms: the more prosperous homes featured marble structures, often in the form of a miniature temple, while other houses would have a wooden *lararium* in the form of a shrine or just a simple wooden shelf. In luxury homes the *lararium* was usually located in the *atrium* or *perystilium*, although – in Pompeii at least – they were also regularly found in or near the kitchen.[14] In smaller, simpler dwellings, the *lararium* was often installed near the fireplace. Some houses boasted several *lararia*, both inside and outside the house. Various accessories were added to the *lararium* to honour the gods, such as metal or terracotta statues of deities, lamps, candles, vases and amulets. A shrine was always an essential component. Mini-shrines were used for offering food or for the burning of incense or other fragrant herbs. These were generally made of stone, although *terracotta* examples are known as well An inscription could indicate which deity the offer was being made to.[15]

13 Idem, 114 (fig.5)
14 Adam 2012, 92.
15 Orr 1978; Schmid & Kaufmann-Heinimann 1999.

Fig. 18. Votive altar of the Museum site excavation

There is no inscription on the shrine found on the Museum site. Measuring 16 x 14 x 14 cm, it is made of a pale limestone, corresponding to a cream-coloured or beige, coarse pseudo-oolitic and bioclastic limestone. Cream-coloured oolitic and/or bioclastic Jurassic limestones (especially the *Norroy*, *Chémery* and *Euville* limestones), were often used by the Romans for decorative purposes, within the *civitas Tungrorum*.[16] The provenance of the stone type of the votive altar can be sought in Norroy-les-Pont-à-Mousson in northern France (Lorraine area). The plinth and cornice of the shrine are tripartite. A basin or *foculus* has been hollowed out in the upper side, the edges of which show traces of rust. The beginnings of corner decorations are also still preserved. Similar examples of small shrines without inscriptions are also known from Xanten (D),[17] Cologne (D),[18] Saint-Bertrand-de-Comminges (FR)[19] and Saint-Gabriel (FR).[20] Additionally, a tiny specimen of a creamy-white fine-grained oolitic limestone has been observed in the collection (not illustrated here).

Fig. 19. Picture of the votive altar during the excavation

16 See for instance Coquelet *et al.* 2013.
17 Schmitz & Schreiter 2014, 215.
18 Fremersdorf 1956, 102, Tafel 20.
19 Sablayrolles & Schenck 1988.
20 www.paca.culture.gouv.fr/banqueImages/imago/

Use and provenance

Floor and wall decorations made of coloured stones (marble veneers and incrustations, often in *opus sectile*) combined with wall paintings were common in both Roman religious buildings (e.g. temples) and prestigious private houses. Locally, wall paintings imitating coloured marbles have been discovered in Tongeren as well [21]. Over 1000 pieces of decorative stones and polychrome marbles of varying size from various important archaeological sites within *Atuatuca Tungrorum* have been described recently, including those from the actual Museum site.[22] The material from the Museum site contains mostly local, but also regional and even some 'exotic' stones. The most frequent rock types encountered are local red Famennian sandstone, Belgian grey marble and Meuse limestone, as well as a more 'exotic' green porphyry-like rock type, possibly known as *Trier diabase*. The *Carrara* and *Pentelic* white marbles, *Rosso antico*, *Giallo antico* and *Breccia corallina*, represent a suite of decorative stones with a rather remote provenance pointing to the Mediterranean region. Although rare amongst the finds from the Museum site (e.g. the votive altar) but more commonly found in most of the other inventoried archaeological sites of Tongeren, the white Jurassic limestones are regional, pointing to nearby sources outside the *civitas* such as the Lorraine area in Northern France. The above lithological spectrum shows analogies with that of the rich wall and floor decorations found in the harbour temple of Xanten,[23,24] although local decorative stones quite distinct from the local ones described from Tongeren were also used here. Various local or regional coloured decorative stones might have been good alternatives for the more prestigious and expensive Mediterranean marbles, taken into account that even here in Gallia, Rome must have played a role model, even in the decorations of public and private buildings.

The abundance of local red sandstones from the Condroz area is conspicuous. Analogous red sandstone slabs have also been found in the temple of Tongeren[25]. The dominance of local Belgian grey marble amongst the decorative stone types in the Museum site of Tongeren is noteworthy, as is the relative abundance of a green porphyry-like rock type. Although the latter may have been imported from Egypt, a provenance from the nearby Trier area, is more likely (but requires additional geochemical evidence).

The representativeness of the coloured stone fragments is debatable as most of the marbles and limestones were most probably burnt for the production of lime and quite a number of decorative stones were recycled in later post-Roman structures, as can be observed at other archaeological sites in Tongeren, such as the Basilica of Our Lady.[26] Some preliminary conclusions can already be drawn, however, based on a frequency distribution analysis of the lithic material (fig. 1) and its archaeological context. The highest frequencies correspond to the second and third quarter of the 2nd century, whereas the local red Famennian sandstone and the grey Belgian marble represent the most common (local) stone varieties. Due to the overall thickness of those samples (2 cm on average) we suggest that the latter were used as floor tiles (*tegulae*). The presence of some prestigious rare Mediterranean polychrome marbles is recorded from the Pre-Flavian period onwards. Their occurrence added to the prestige and luxury of the buildings and their inhabitants.[27]

21 Dreesen & Vanderhoeven, 2017.
22 Dreesen *et al.* 2015
23 Ruppiene, 2015
24 Zelle 2008.
25 Coquelet et al, 2014.
26 Vanderhoeven, *et al.* 2016.
27 We would like to thank Emeritus Prof. Edouard Poty (Liège University) for the paleontological analysis, and Florence Peltier (Musée du Marbre, Rance) and Dr. Eric Groessens (Geological Survey of Belgium) for additional information regarding the provenance of the Belgian red marbles. Prof. Michael Unterwürzacher (University of Salzburg) carried out the stable isotope analysis and Dr. Vilma Ruppiene (University of Würzburg) helped with the identification of the marble samples.

Querns and millstones

During the Iron Age, agriculture in the Tongeren region was characterised by a polyculture of cereals, the most important of which were barley, wheat and millet. Different cereal species seem to have been sown and harvested at the same time and are evidence of subsistence farming.[28] As in previous excavations in the Kielenstraat,[29] no relevant changes have been observed in the agricultural system of Tongeren and the surrounding countryside until the end of the pre-Flavian epoch. Monocultures were introduced at the end of the 1st century AD and during the 2nd century, particularly those of six-row hulled barley (*Hordeum vulgare*), emmer wheat (*Triticum dicoccum*) and spelt wheat (*Triticum spelta*); this would indicate the introduction of a market-oriented production system, replacing the ancient system of subsistence farming, as already stated by Vanderhoeven 1996, 2004.[30]

Fig. 20. Overview of quern and/or millstone finds belonging to selected contexts of the Museum site excavation.

Inv. Nr.	Context (selected)	Structure	Context Date	Quern/Millstone	Material	The grinding surface: Dressing pattern and and working tool(s)
GRM 18764 TOO6KI1396 Hartoch et al. 2015, cat. N° 12	Urban, *domus intra muros*. Feature 486-3.	Ditch belonging to the first timber construction phase. The associated ceramics date from the Flavian epoch.	68-96 AD	Rotary quern, meta (fragment) - Max. diam.: 39 cm - Max. hight: 6,8 cm - Hight of the flank: 5,5 cm + Form: straight - Inclination of the active surface: 3° - Thickness of the eye: 5,1 cm - Eye: max. diam.: 3,0 cm - Weight: 1,9 kg	Volanic rock, probably from the Eifel	Furrowed dressing: Complex straight furrows pattern Stone-axe or polka
GRM 18767 TO07KI1818 Hartoch et al. 2015, cat. N° 11	Urban, *intra muros*. Feature 809.	Rectangular pit situated underneath the first timber construction phase, associated with ceramics (*terra rubra*) and pig remains.	41-68 AD	Rotary quern, meta (fragment) - Max. diam.: 40,5 cm - Max. hight: 7,2 cm - Hight of the flank: 5,8 cm + Form: slightly outwardling downwards - Inclination of the active surface: 5° - Thickness of the eye: 5,5 cm - Eye: max. diam.: 3,5 cm - Weight: 1,85 kg	Volanic rock, probably from the Eifel	Furrowed dressing: Complex herringbone pattern Pointel
GRM 18770 TO06KI1376 Hartoch et al. 2015, cat. N° 13	Urban, *intra muros*. Feature 601-1.	Post hole. Three sherds are associated including *terra rubra*. The post hole couldn't be attributed to a specific construction.	0-68 AD	Rotary quern, meta (fragment) - Max. diam.: 41 cm - Max. hight: 7,6 cm - Hight of the flank: 6,6 cm + Form: straight - Inclination of the active surface: ? - Thickness of the eye: ? - Eye: max. diam.: ? - Weight: 2,10 kg	Volcanic rock, probably from the Eifel	Furrowed dressing: Complex straight furrows pattern Pointel

[28] Vanderhoeven 2013, 387-411; *Id.* 1996, 189-260.
[29] Vanderhoeven *et al.* 1991, 107-124; Vanderhoeven *et al.* 1992, 89-146.
[30] Vanderhoeven 2004, 59-62; *Id.* 1996, 189-260.

Nevertheless, the creation of the city of Tongeren in a region of high agricultural potential in the Augustan period, and its integration into the Roman Empire, led to intensified cereal production. The latter was vital for the permanent or military populations of the Lower Rhine area. As was the case with Tongeren during Roman times, the most commonly recorded cereals in the Roman habitation sites established in the loamy soil area are generally six-row hulled barley (*Hordeum vulgare*), spelt wheat (*Triticum spelta*), emmer wheat (*Triticum dicoccum*) and millet (*Panicum miliaceum*) and to a lesser extent oats (*Avena* sp., *Avena sativa*) and common/bread/spring wheat (*Triticum aestivum*). Throughout the 1st and 2nd centuries AD, spelt wheat remained the primary cultivated cereal on the fertile loamy soil of the Hesbaye region.[31]

As far as we know, no ancient bakeries have been identified in Roman Tongeren, although *Atuatuca*, as the capital of the *civitas*, was an important trade location, characterised by a dynamic flow of travellers needing to be fed. What we do know, however, is that families were able to make their own bread without an oven. It was perfectly possible to make bread by baking it on a ceramic plate (Pompeian red ware) topped by a perforated lid of the same fabric and covered by embers.[32]

A total of eight specimens represents the corpus of our study of querns and millstones from the Museum site excavation. They are all stored at the Gallo-Roman Museum in Tongeren; three specimens originate from three selected archaeological contexts (fig. 20) and the remaining five from four other archaeological contexts (fig. 21). The finds include one protohistoric saddle-quern "Napoleon's hat" that might be considered residual in a Roman context, and at least six Roman rotary querns (more precisely four meta, two catillus and one undetermined specimen) (figs. 22 – 26). The latter is a rotary quern (with a diameter of less than 50 cm) or millstone (characterised by a diameter bigger than 50 cm) of which the diameter could not be determined. The saddle-querns ("Napoleon's hat") with a triangular section and a high keel (lower stone) made of volcanic rock from the Eifel were imported into our region during the La Tène epoch. They consist of a lower stone slab on which the cereals (or grinding stock) were ground with a rubbing stone.

The rotary querns were designed for domestic use, mostly for grinding cereals. Two rotary querns form together a hand mill which consists of an immobile lower stone, also termed the bed stone or meta, and a mobile upper stone, also called the runner or catillus. Grain was added through the eye (the central perforation in the upper stone). The latter was turned using a handle. The grain (or milling stock) was ground in between the two active sides of the querns, with the flour leaving the millstones at the outer edge through centrifugal force. The millstones were designed for watermills or mills driven by either people or animals. The latter were intended for grinding cereals, ores and other products on a much larger scale.[33]

Different rock types were used to manufacture the querns. Most of the querns (and one undetermined quern or millstone) of the analysed corpus (7 out of 8 specimens) are made of volcanic rock. The corpus contains also one saddle-quern of the type 'Napoleon's hat' (fig. 27) and six Roman rotary querns (and one undetermined quern or millstone). The saddle-quern originates from the Eastern Eifel Bellerberg area, more precisely from the Mayener Grubenfeld (for all details see Hartoch *et al.* 2015). We assume that all querns made of volcanic rock originate from one and the same Eifel area: consequently they were extracted outside the *civitas*. This assumption is based on recent petrographic-geochemical research.[34]

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31 Vanderhoeven *et al.* 1995/1996, 69-84; *Id.* 1994, 49-74; Vanderhoeven 1996, 189-260.
32 Hürbin *et al.* 1994, 10; Deru 2005, 469-478; pers. comm. by Vanderhoeven; Hartoch 2015 *et al.*
33 Hartoch *et al.* 2015.
34 Ibid.

Inv. Nr	Context (unselected)	Structure	Context Date	Quern/Millstone	Material	The grinding surface: Dressing pattern and and working tool(s)
GRM 18765 TO07KI1657 Hartoch *et al.* 2015, cat. N° 10	Urban, *intra muros*. Feature 762.	Fill of a pit characterized by a knicked-out wall probably belonging to the cellar. The saddle-quern probably originates from an underlying feature.	0-100 AD The saddle quern is older and probably belongs to the La Tène period	Saddle-quern 'Napoleon's hat', lower stone (fragment) - Max. length: 4,8 cm - Max. hight: 4,8 cm - Max. width: 5,7 - Weight: 0,10 kg - Angle formed by the active surface and the flank: 53° (to 60°).	Volcanic rock: grey vesicular lava with, small sized vesicles (Phono-téphrite from the Eifel: Bellerberg, Mayener Grubenfeld). For a detailed lithological description we refer to Hartoch et al. 2015, cat. N° 10.	/
GRM 18769 TO07KI1845 Hartoch *et al.* 2015, cat. N° 14	Urban, *intra muros*. Feature 1005.	Strata which are considered to be part of an habitation level	68-96 AD	Rotary quern, catillus (fragment) - Max. diam.: ? - Max. hight: 6,8 cm - Hight of the flank: 6,1 cm + Form: slightly outwardling upwards - Inclination of the active surface: ? - Thickness of the eye: ? - Eye: max. diam.: ? - Weight: 0,55 kg	Volanic rock, probably from the Eifel	Furrowed dressing: Complex straight furrows pattern Pointel
GRM 18766 TO06KI647 Hartoch *et al.* 2015, cat. N° 15	Urban, *intra muros*. Feature 266.	Habitation level corresponding to the epoch of the metal working workshops	125-175 AD	Rotary quern, catillus (fragment) - Max. diam.: 36,0 cm - Max. hight: 7,8 cm - Hight of the flank: 7,8 cm + Form: straight - Inclination of the active surface: ? - Thickness of the eye: ? - Eye: max. diam.: ? - Weight: 1,10 kg	Volanic rock, probably from the Eifel	Simple dressing: Random pecking pattern Pointel
GRM 18772 TO06KI709 Hartoch *et al.* 2015, cat. N° 17	Urban, *intra muros*. Feature 266.	Habitation level corresponding to the epoch of the metal working workshops	125-175 AD	Rotary quern, meta (fragment) - Max. diam.: 36,0 cm - Max. hight: 5,1 cm - Hight of the flank: 5,1 cm + Form: convex - Inclination of the active surface: ? - Thickness of the eye: ? - Eye: max. diam.: ? - Weight: 0,80 kg	Sedimentary rock: wine-red coarse sandstone belonging to the Burnot Formation (Eifelian, Palaeozoic). For a detailed lithological description and representative micrographs we refer to Hartoch et al. 2015, fig. 120 a and b	Furrowed dressing: Simple straight furrows pattern Pointel
GRM 18768 TO07KI1693 Hartoch *et al.* 2015, cat. N° 16	Urban, *intra muros*. Feature 622.	Fill of a pit corresponding to the epoch of the metal working workshops	125-175 AD	Rotary quern or millstone (fragment) - Max. diam.: ? - Max. hight: 8,2 cm - Hight of the flank: 8,2 cm (incomplete) + Form: straight. - Inclination of the active surface: ? - Thickness of the eye: ? - Eye: max. diam. : ? - Weight: 0,40 kg	Volcanic rock, probably from the Eifel	Simple dressing: Random pecking pattern Pointel

Fig. 21 Overview of quern and/or millstone finds belonging to non-selected contexts of the Museum site excavation.

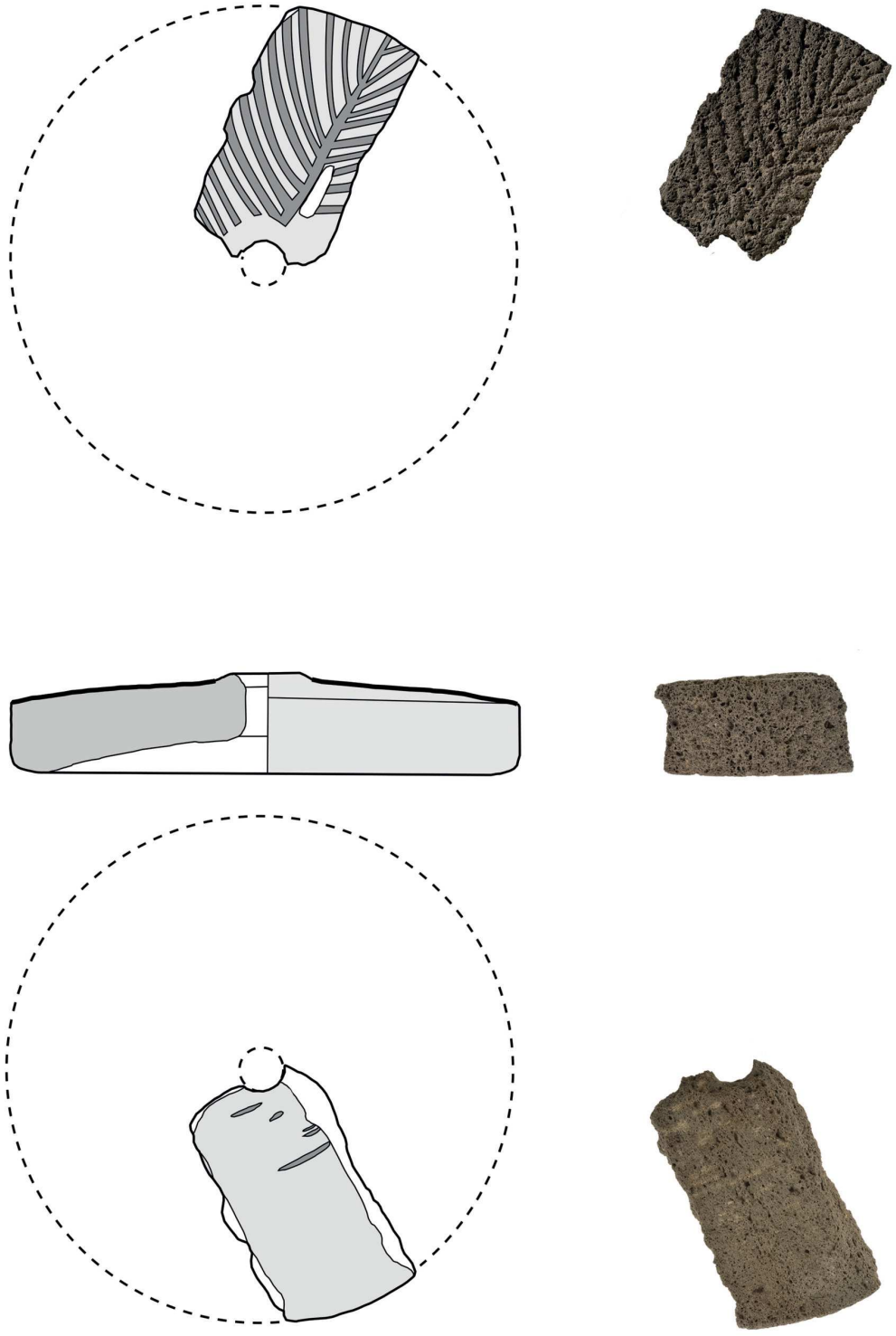
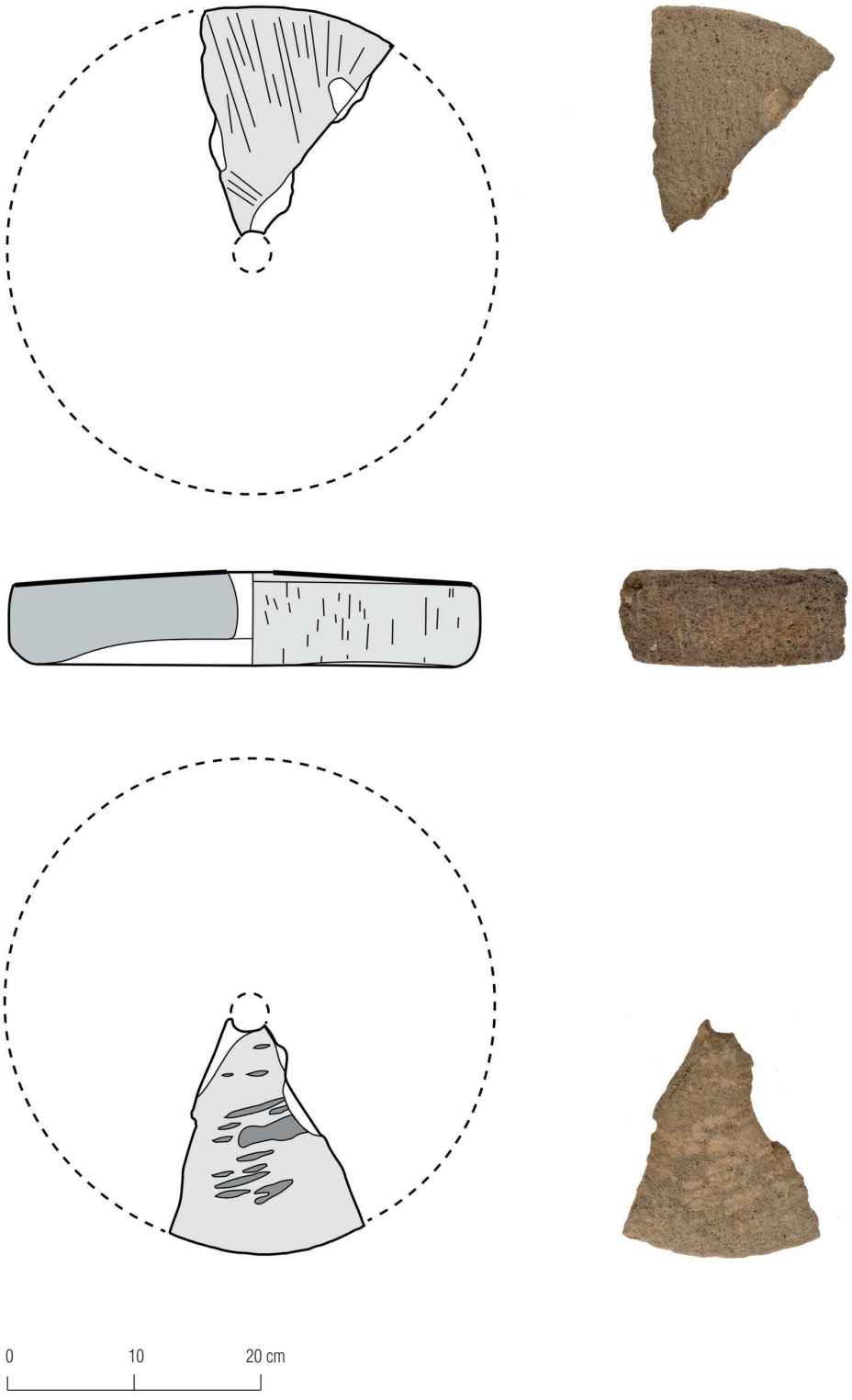


Fig. 22. Drawing of quern (meta) GRM 18767 (from Hartoch *et al.* 2015, fig. 111.)



Fg. 23. Drawing of quern (meta) GRM 18764 (*Idem*, fig. 112.)

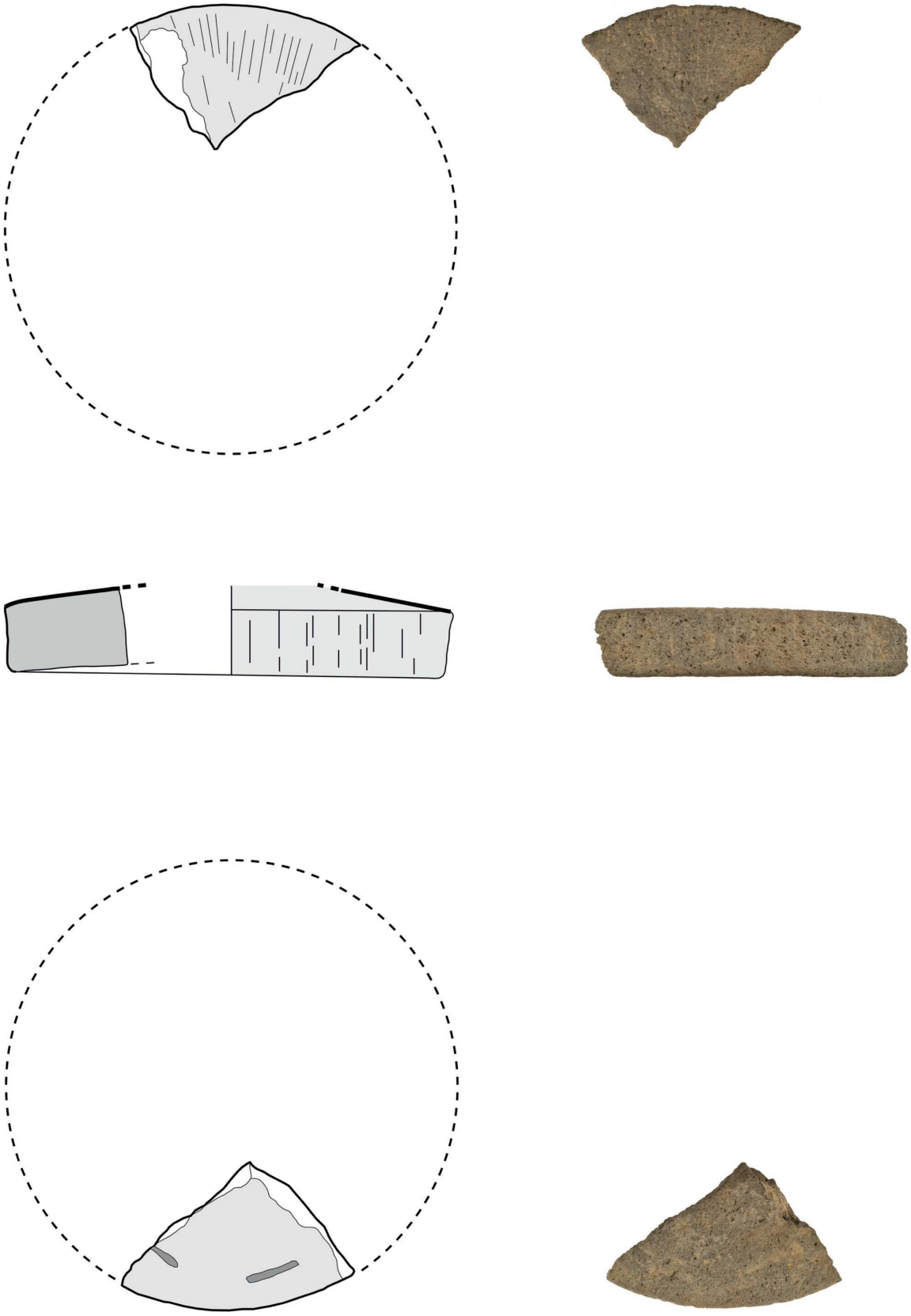


Fig. 24. Drawing of quern (meta) GRM 18770. (*Idem*, fig. 113.)

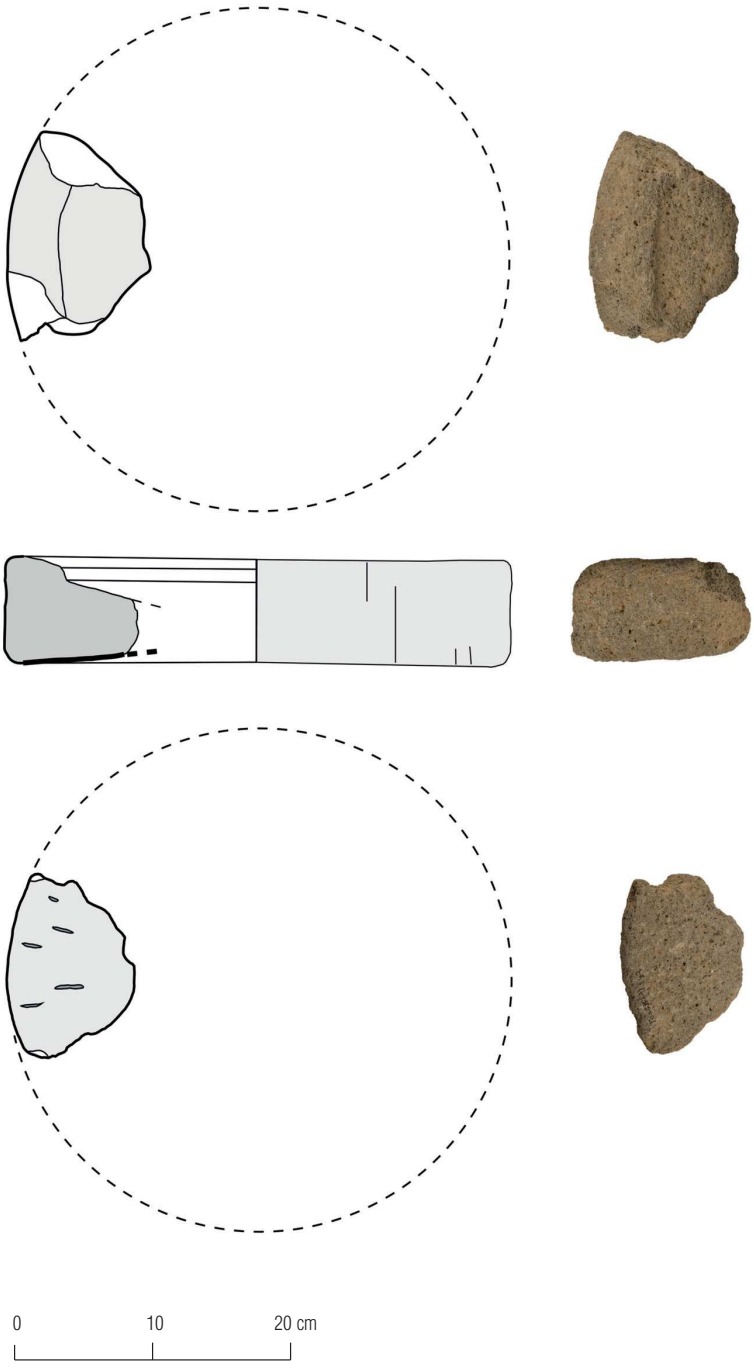


Fig. 25. Drawing of quern (catillus) GRM 18766. (*Idem*, fig. 115.)

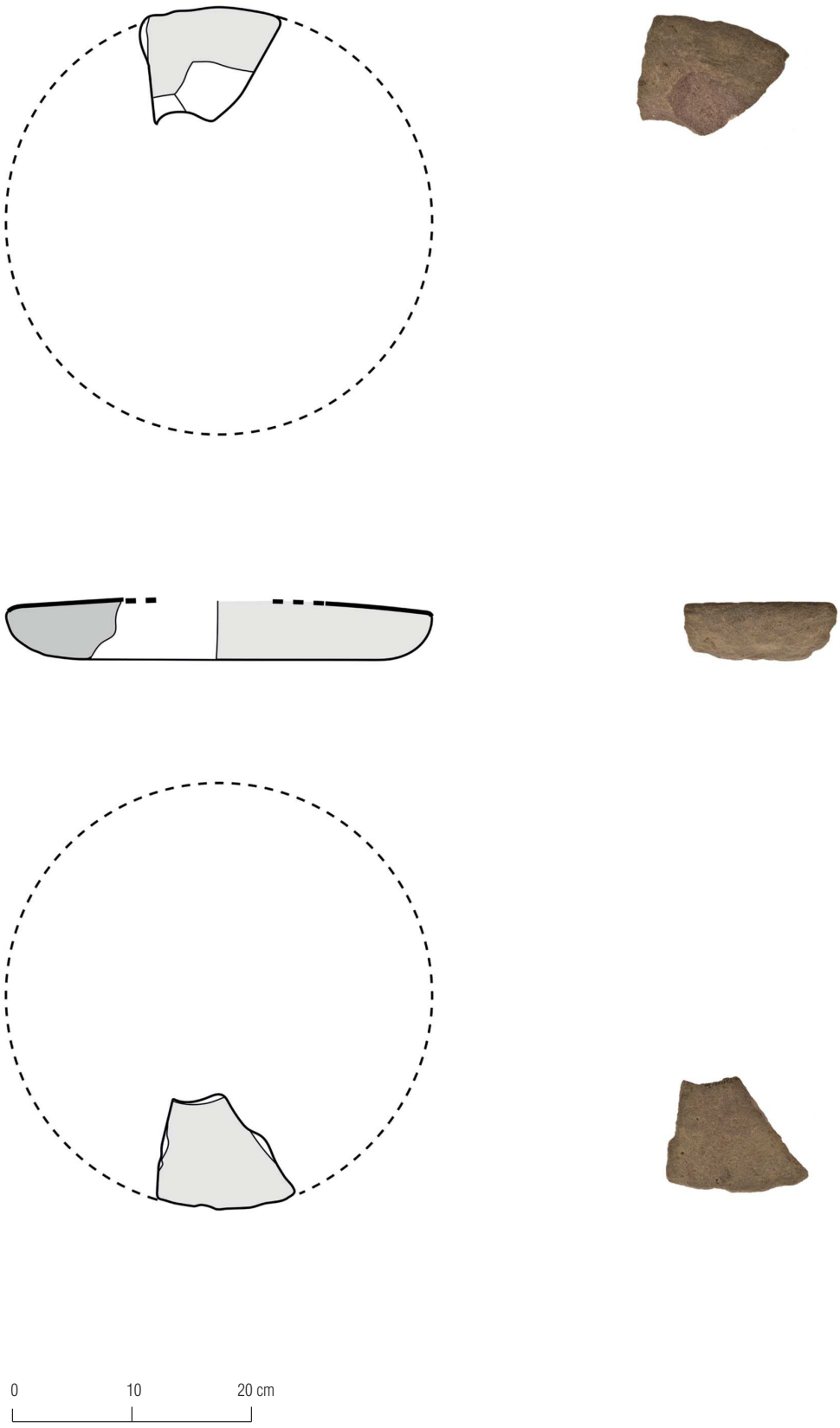


Fig. 26. Drawing of quern (meta) GRM 18772. (*Idem*, fig. 117.)

Fig. 27. Macroscopic view of the sawed surface of saddle-quern GRM 18765 of the type 'Napoleon's hat' in grey vesicular lava, from the Eastern Eifel Bellerberg area: Mayener Grubenfeld (from *Idem*, fig. 109.).

Fig. 28. Detail of the fracturated exterior surface of quern GRM 18772 made of wine-red coarse sandstone belonging to the Burnot Formation (Eifelian, Palaeozoic). (from Hartoch *et al.* 2015, fig. 118.)

One rotary quern is made of a particular type sedimentary rock, a wine-red coarse sandstone (fig. 28) belonging to the Burnot Formation (Eifelian, Palaeozoic), extracted within the territory of the *civitas Tungrorum*.[35]

We csuppose that the querns and millstones from the Eifel area were transported by boat along a route from the Eifel via the Rhine, the Waal, and the Meuse rivers to Maastricht (NL), where the small Jeker river joins the Meuse. Thus the querns and millstones may have reached Tongeren via the Jeker. The quern made of coarse sandstone was supposebly transported via the Sambre and Meuse rivers to Maastricht (NL) and then further via the Jeker to Tongeren.[36]

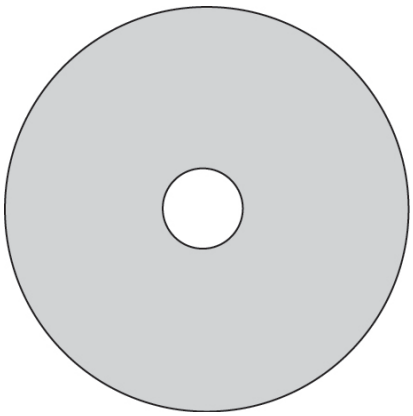
Depending on the natural abrasiveness of the stone, it was sometimes necessary to sharpen or 'dress' the active grinding surfaces of the saddle-querns, querns or millstones (fig. 29). This involved simply pecking the surface at random, dressing it with multiple linear furrows or pecking it with small cup-shaped marks arranged in patterns.[37] The following dressing patterns appear on the grinding surfaces of the querns and/or millstone studied from the Museum site:

- Simple dressing: Random pecking pattern (2 specimens) (fig. 29a)
- Furrowed dressing: Simple straight furrows pattern (1 specimen) (fig. 29c)
- Furrowed dressing: Complex straight furrows pattern (3 specimens) (fig. 29d)
- Furrowed dressing: Complex herringbone pattern (1 specimen) (fig. 29e)

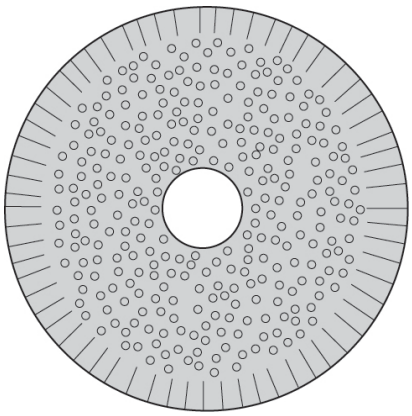
As far as we know and based on our recent research,[38] we can state that the pointel (or pick) was predominantly used for dressing the grinding (active) surface of our querns and millstones made of vesicular lava and sandstone. In addition, a set of working tools with a straight cutting edge, such as a stone-axe or chisel, seems to have been entirely reserved for querns and millstones made of vesicular lava.

Regarding the studied rotary querns, six out of seven grinding surfaces were carved with a pointel and one specimen was carved using a working tool with a straight cutting edge, such as a stone-axe or chisel. The results of our recent study[39] indicate that tools with a straight cutting edge, as well as a pointel, were regularly used to redress the meta, while the pointel was the favourite tool for redressing the catillus. The Roman querns and millstones carved with a pointel mainly originated from urban sites. Vertical non-functional grooves have been preserved on the flanks of some rotary volcanic-rock hand mills from the Museum site. The decorations on the flanks of both meta and catillus and on the upper non-grinding surface of the catillus, are characteristic of the Eifel (Bellerberg) production area.

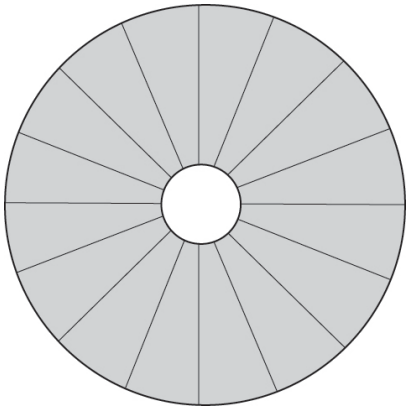
35 Ibid.
36 Ibid.
37 Lepareux-Couturier 2014.
38 Hartoch *et al*. 2015.
39 Hartoch *et al*. 2015.



a.



b.



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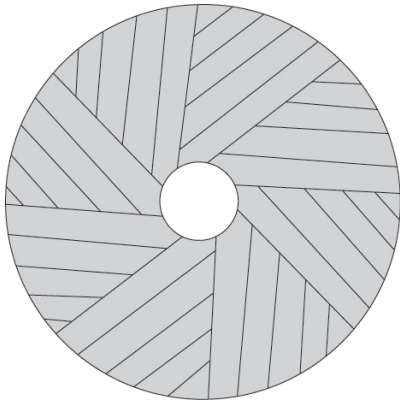
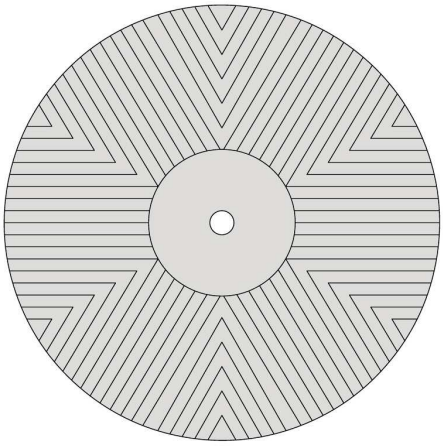


d.



e.

Fig. 29. The dressing patterns appearing on grinding surfaces of Roman rotary querns and millstones of the studied corpus are the following: (a) Simple dressing: Random pecking pattern, (b) Mixed dressing: Honeycomb pattern surrounded by short straight furrows, (c) Furrowed dressing: Simple straight furrows pattern, (d) Furrowed dressing: Complex straight furrows pattern, and (e) Furrowed dressing: Complex herringbone pattern. [Schemes a-d: Lepareux-Couturier *et al.* 2011, 377; e: drawing by S. Heynickx after Lepareux-Couturier *et al.* 2011, 379, fig. 17; Hartoch *et al.* 2015, fig. 58.]

Bibliography

Adam J.P. 1994: *Roman Building. Materials & Techniques*, London.

Adam J.P. 2012: *La maison Romaine*, Arles.

Alberti G. 2009: *La maison urbaine gallo-romaine en Gaule Belgique et dans les Germanies*, thèse pour obtenir le grade de Docteur de l'Université de Strasbourg Sciences de l'Antiquité, Strasbourg.

Allag C. & Batrel M. 1985: Les peintures murales de Lisieux. In: Barbet A., *Peinture murale en Gaule, Actes des séminaires AFPMA Lisieux 1982, Bordeaux 1983*, BAR, International Series 240, Oxford, 29-38.

Allag C., Bardoux B. & Chossenot D. 1989: Une scène mythologique à Boult-sur-Suippe (Marne). In: *Peinture murale romaine*, Actes du Xème séminaire de l'AFPMA, Vaison-la-Romaine, 1-2-3 mai 1987, Vaison-la-Romaine, 147-160.

Allag C. & Joly D. 1995: Les peintures murales de Chartres (E. et L.). Etude de quelques ensembles homogènes. In: *Actes des séminaires de l'AFPMA, Aix-en-Provence 1990 - Narbonne 1991 - Chartres 1993*, Revue archéologique de Picardie 10, Amiens, 169-187.

Allison P.M. 2004: *Pompeii households*, Analysis of the material culture, Monograph 42, Los Angeles.

Allonsius C. 2008: *Etude des enduits peints, 28, rue du Château d'Albâtre*, Rapport interne CEPMR, unpublished.

Almgren O. 1923: *Studien über Nordeuropaïsche Fibelformen: Der ersten nachchristlichen Jahrhunderte mit Berücksichtigung der provinzial-römischen und südrussischen Formen*, Mannus-Bücherei 32, Bonn.

André J. 1981: *L'alimentation et la cuisine à Rome*, Paris.

Aufderheide A.C. & Rodriguez-Martin C. 1998: *The Cambridge Encyclopedia of Human Paleopathology*, Cambridge.

Bakker L. 1985-1986: Neue Untersuchungen im römischen Gräberfeld an der Fröhlichstrasse in Augsburg, *Das archäologische Jahr in Bayern*, 113-116.

Baldassare I., Pontrandolfo A., Rouveret A. & Salvadori M. 2003: La Peinture romaine de l'époque hellénistique à l'Antiquité tardive, *Actes Sud/Motta*, Milan, 338-341.

Ballien D. 1995: *Tongeren en zijn straten door de eeuwen heen*, Tongeren.

Barbet A. 2008: *La peinture murale en Gaule romaine*, Paris.

Barbet A. 2013: *Peintures romaines de Tunisie, Paris.*

Barbet A., Monier F., Bost J.-P., Sternberg M., Girardy-Caillat C., Dagand P., Maleyre I., Allag C., Groetembril S., Lefevre A. & Lefevre J.-F. 2004: Peintures de Périgueux. Edifice de la rue des Bouquets ou la domus de Vésone, II- Les peintures fragmentaires, *Aquitania* 20, 149-219.

Barbet A. & Fuchs M. 2008: *Les murs murmurent. Graffitis gallo-romains*, Catalogue de l'exposition crée au Musée romain de Lausanne-Vidy.

Barnes E. 2012: *Atlas of Developmental Field Anomalies of the Human Skeleton: A Paleopathology Perspective*, New Jersey.

Bartosiewicz L., Van Neer W. & Lentacker A. 1997: *Draught cattle: their osteological identification and history*, Annales du Musée Royal de l'Afrique Centrale. Sciences Zoologiques 281, Tervuren.

Bechert T. & Ankel C. 1973: *Römische Fibeln des 1. und 2. Jahrhunderts n. Chr.*, Funde aus Asciburgium 1, Duisburg.

Bellens T. & Vanderhoeven A. 1999: Noodonderzoek aan het Vrijthof in Romeins Tongeren, *Romeinendag*, Gent, 19-22.

Belot E. 1985: Architectures fictives de Famars. Mise en évidence d'une vogue picturale archaïsante antonino-sévérienne, *Actes AFPMA*, 21-62.

Benecke N. 1994: *Der Mensch und seine Haustiere. Die Geschichte einer jahrtausendealten Beziehung*, Stuttgart.

Bequet A. 1902: La bijouterie chez les Belges sous l'empire romain (II^{e} sciècle), *Annales de la Société Archéologique de Namur* 24, 237-276.

Bertrand E. 2005: *La production des céramiques à paroi fine à Lyon : une typologie pour les ateliers du Ier siècle apr. J.-C*, Lyon.

Bet P. & Delor A. 2000: *La Typologie de la sigillée lisse de Lezoux et de la Gaule Centrale du Haut-Empire*, SFECAG, Actes du Congrès de Libourne. Société Française d'Étude de la Céramique en Gaule, Marseille.

Bink M. & Franzen P.F.J. 2009: *Forum Hadriani Voorburg: definitief archeologisch onderzoek*, BAAC-rapport 05.0125, 's Hertogenbosch.

Bloemers J.H.F. 1985: Les Bassins de l'Escaut, de la Meuse et du Rhin. In: Lasfargues J. (ed.), *Architecture de terre et de bois. Actes du Congrès archéologique de Gaule méridionale. Luyon, 2-6 novembre 1983*, Documents d'Archéologie française 2, 131-142.

Bloemers J.H.F. & Haalebos J.K. 1973: Roman pottery finds in Heerlen, Province of Limburg, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 23, Amersfoort, 259-272.

Boessneck J., Müller H.-H. & Teichert M. 1964: Osteologische Unterscheidungsmerkmale zwischen Schaf (Ovis aries Linné) und Ziege (Capra hircus Linné), *Kühn-Archiv* 78, 1-2, 1-129.

Boreel G. 2014: Metaalslakken en limoniet. In: Hiddink H., *De Romeinse villa-nederzetting op de Kerkakkers bij Hoogeloon (Noord-Brabant)*, Zuidnederlandse Archeologische Rapporten 53, 2, 567-592.

Borgers K. 2004: *Metalen spelden, gordelbeslag en riemverdelers uit de 'Romeinse' periode in het Provinciaal Gallo-Romeins Museum te Tongeren*, onuitgegeven eindverhandeling, Leuven.

Borgers K., Steenhoudt M. & Van de Velde E. 2008: Een derde noodopgraving aan de Vermeulenstraat te Tongeren, *Romeinendag*, Brussels, 21-24.

Borgers K., Steenhoudt M. & Van de Velde E. 2009: *Tweede en derde fase van het archeologisch onderzoek 'Anicius' aan de Elfde Novemberwal te Tongeren*, onuitgegeven opgravingsrapport, Tongeren.

Borghini G. 2004: *Marmi antichi*, Roma.

Boudin M., Synal H.-A., Wacker L. & Van Strydonck M. 2015: *RICH - A new AMS facility at the Royal Institute for Cultural Heritage, Brussels, Belgium*, Nuclear Instruments and Methods in Physics Research, Section B 361, 120-123.

Bouet A. 2001: Les collèges dans la ville antique: le cas des Subaediani, *Revue archéologique* 32, 227-278.

Bouet A. 2009: *Les latrines dans les provinces gauloises, germaniques et alpines*, Supplément à Gallia 59, Paris.

Boussier J. 2011: *Voedseleconomie in Romeins Tongeren: faunaresten uit de opgravingen aan de Kielenstraat (eind 1ste – begin 3de eeuw n. Chr.)*, Master Thesis KU Leuven.

Bridger C.J. 1984: The 'Pes Monetalis' and the 'Pes Drusianus' in Xanten, *Britannia* 15, London, 85-88.

Brødholt E. T. & Holck P. 2012: Skeletal trauma in the burials from the royal church of St. Mary in Medieval Oslo, *International Journal of Osteoarchaeology* 22, 201 – 218.

Brodribb G. 1979: Markings on Tile and Brick. In: Mcwhirr A. (ed.), *Roman Brick and Tile, Studies in Manufacture, Distribution and Use in the Western Empire*, BAR International Series 68, Oxford, 211-220.

Brodribb G. 1987: *Roman brick and tile*, Gloucester.

Bronk Ramsey C. 2005: *OxCal Program v3.10*. http://c14.arch.ox.ac.uk/oxcal3/oxcal.htm

Brooks S.T. & Suchey J.M. 1990: Skeletal Age Determination Based on the Os Pubis: a Comparison of the Acsádi-Nemeskéri and Suchey-Brooks Methods, *Human Evolution* 5, 227-238.

Brulet R. (Ed.) 1993: *Braives Gallo-Romain. V La fortification du Bas-Empire*. Publications d'Histoire de l'Art et d'Archéologie de l'Université Catholique de Louvain 83, Louvain-La-Neuve.

Brulet R. (dir.) 2008: *Les Romains en Wallonie*, Brussels.

Brulet R., Symonds R.P. & Vilvorder F. 1999: *Céramiques engobées et métallescentes gallo-romaines. Actes du colloque organisé à Louvain-la-Neuve le 18 mars 1995*, Rei Cretariae Romanae Fautorum Acta Supplementum 8, Oxford.

Brulet R., Dewert, J.P. & Vilvorder F. (red.) 2001: *Liberchies IV. Vicus Gallo-Romain*, Publications d'Histoire de l'Art et d'Archéologie de l'Université Catholique de Louvain 101, Louvain-La-Neuve.

Brulet R., Coquelet C., Defgnee A., Pigiere F. & Verslype L. 2004: Les sites à « terres noires » à Tournai et le secteur des anciens cloîtres canoniaux. Etudes archéozoologique, palynologique et contextualisation. In: Brulet R. & Verslype L. (eds.), *Terres noires. Actes de la table ronde de Louvain-la-Neuve 09-10 novembre*, Collection d'Archéologie Joseph Mertens 14, Louvain-la-Neuve, 152-172.

Brulet R., Vilvorder F. & Delage R. 2010: *La céramique romaine en Gaule du Nord. Dictionaire des céramiques. La vaisselle à large diffusion*, Turnhout.

Brunsting H. 1937: *Het grafveld onder Hees bij Nijmegen*, Amsterdam.

Buckberry J.L. & Hadley D.M. 2007: An Anglo-Saxon execution cemetery at Walkington Wold, Yorkshire, *Oxford Journal of Archaeology* 26, 309–329.

Callewaert M. 2012: Les fibules romaines: archéologie, usages et fonctions. In:

Cattelain P., Bozet N. & Di Stazio G.V., *La parure de Cro-Magnon à Clovis "Il n'y a pas d'Âge(s) pour se faire beau"*, Guides archéologiques du Malgré-Tout, Editions du Cedarc, Treignes, 117-134.

Capasso L., Kennedy K.A.R. & Wilczak C.A. 1998: *Atlas of Occupational Markers on Human Remains*, Teramo.

Chamonard J. 1934: *Les mosaïques de la maison des Masques*, Explorations Archéologiques de Délos 14.

Chenet G. 1941: *La céramique gallo-romaine d'Argonne du IVe siècle et la terre sigillée décorée à la molette*, Mâcon.

Clerbaut T. in prep: *Roman ceramic building materials in the Roman North. Production, distribution and use*, PhD-thesis Ghent University.

Clerbaut T. & Geerts R. 2014: Nieuwe vondsten en inzichten met betrekking tot de 'MHF'-stempels te Tongeren, *Signa* 3, Brussels, 51-54.

Cool H.E.M. & Price J. 1995: *Roman vessel glass from excavations in Colchester 1971-85*, Colchester Archaeological Report 8, Essex.

Coquelet C. 2011: *Les capitales de cité des provinces de Belgique et de Germanie: étude urbanistique*, Publications d'histoire de l'art et d'archéologie de l'Université Catholique de Louvain 103.

Coquelet C., Creemers G., Dreesen R. & Goemaere E. 2013: Les "pierres blanches" dans les monuments publics et funéraires de la cité des Tongres, *Signa* 2, Brussels, 29-34.

Coquelet C., Creemers G. & Dreesen R. 2014 : Le décor du "grand temple Nord" de Tongres, *Signa* 3, Brussels, 55-64.

Coutelas A., dir. (2009) : *Le mortier de chaux*, Paris.

Creemers G. 2016 : *100 key pieces, one hundred stories*, Tongeren.

Dardenay A. 2014: Les décors pariétaux des édifices collégiaux en Gaule. Quelques éléments de réflexion, *Bulletin de l'Ecole Antique de Nîmes* 31, 115-134.

Debruyne T. 2001: Het Gallo-Romeinse grafveld van Tienen, *Openbaar Kunstbezit in Vlaanderen* 1, 18-21.

De Clercq W. & Degryse P. 2008: *Mineralogy and petrography of Low Lands Ware 1 (Roman lower Rhine-Meuse-Scheldt basin; the Netherlands, Belgium, Germany)*, Journal of Archaeological Science.

De Cupere B. & Van Neer W. 1993: La faune du site de l'Hospice Saint-Gilles à Namur: résultats préliminaires. In: Corbiau M.H. & Plumier J. (eds.), *Actes de la Première Journée d'Archéologie Namuroise*, Namur, 87-92.

De Cupere B., Lentacker A., Van Neer W., Waelkens M. & Verslype L. 2000: Osteological evidence for the draught exploitation of cattle: first applications of a new methodology, *International Journal of Osteoarchaeology* 10, 254-267.

Defente D. 1995: Découvertes récentes en Picardie. Nouveaux décors à Amiens et Soissons. In: *Actes des séminaires de l'AFPMA, Aix-en-Provence 1990 - Narbonne 1991 - Chartres 1993*, Revue archéologique de Picardie 10, Amiens, 147-157.

De Laet S.J. 1966: Etudes sur la céramique de la nécropole gallo-romaine de Blicquy (Hainaut) II. La poterie dite 'savonneuse', *Helinium* 6, 1, 3-25.

De Laet S.J. & Thoen H. 1969: Etudes sur la céramique de la nécropole gallo-romaine de Blicquy (Hainaut) IV. La céramique 'à enduit rouge-Pompeien', *Helinium* 9, 1, 28-38.

Delarue Th. 1983: Les marques NEH sur *tegulae* aux fours de tuiliers de et leur distribution dans la civitas Tungrorum, *Bulletin Cercle Arch. Hesbaye-Condroz* 18, 133-145.

Delmaire R. 1972: Les mortiers de Pont-sur-Sambre et l'atelier de Brariatus, *Septentrion* 2, 46-54.

De Niro M.J. 1985: Postmortem preservation and alteration of in vivo bone collagen isotope ratios in relation to palaeodietary reconstruction, *Nature* 317 (6040), 806-809.

De Poorter A. & Claeys P.-J. 1989: *Les sigles sur matériaux de Construction romains en terre cuite en Belgique*, Acta Archaeologica Lovaniensia Monographiae 1, Leuven.

Derks T. 2011: Town-country dynamics in Roman Gaul. The epigraphy of the ruling elite. In: Roymans N. & Derks T. (red.), *Villa Landscapes in the Roman North. Economy, culture and Lifestyles*, Amsterdam Archaeological Studies 17, Amsterdam, 107-138.

Deru X. 1994: La deuxième génération de la céramique dorée (50-180 après J.-C.), *La céramique du Haut-Empire en Gaule Belgique et dans les régions voisines: faciès régionaux et courants commerciaux. Actes de la Table ronde d'Arras 1993*, Nord-Ouest Archéologie 6, 81-94.

Deru X. 1996: *La céramique Belge dans le Nord de la Gaule. Caractérisation, Chronologie, Phénomènes Culturels et Economiques*, Publications d'Histoire de l'Art et d'Archéologie de l'Université catholique de Louvain (Louvain-la-Neuve) 89, Louvain-la-Neuve.

Deru X. 2005: Les productions de l'atelier de potiers des « Quatre Bornes » aux Rues-des-Vignes (Nord), *Société Française d'Etudes de la Ceramique Antique en Gaule. Actes du congrès de Blois*, 469-478.

Deschler-Erb E. 1999: *Ad arma! Römisches Militär des 1. Jahrhunderts n. Chr. in Augusta Raurica*, Forschungen in Augst 28, Augst.

De Winter N. 2009: *Het archeologisch onderzoek op de hoek van de Pliniuswal en de Bilzersteenweg te Tongeren*, ARON-Rapport 21, Sint-Truiden.

De Winter N. & Van de Staey I. 2014: *Een archeologische opgraving aan de Grendelbaan te Diepenbeek (KMO Zone Dorpsveld). Onderzoek uitgevoerd voor het AGB Diepenbeek*, ARON Rapport 207, Sint-Truiden.

De Winter N. & Reygel P. in preparation: *De archeologische opgraving aan de Vermeulenstraat, fase 4*.

Dieudonné-Glad N. 1999: Métallurgie du fer et habitat rural: comment reconnaître les vestiges archéologiques? In: Polfer M. (ed.), *Artisanat et productions artisanales en milieu rural dans les provinces du nord-ouest de l'Empire romain. Actes du colloque d'Erpeldange. Mars 1999*, Monographies Instrumentum 9, Montagnac, 39-43.

Dieudonné-Glad N. & Parisot J.1999: A propos des récipients à liquide retrouvés dans les ateliers de forge, *Instrumentum* 10, 24-26.

Dobney K. & Ervynck A. 2007: To fish or not to fish? Evidence for the possible avoidance of fish consumption during the Iron Age around the North Sea. In: Haselgrove C. & Moore T. (eds.), *The Later Iron Age in Britain and beyond*, Oxford, 403-418.

Dollfus M.A. 1973: Catalogue des fibules de bronze de Haute-Normandie, *Extrait des Mémoires présentés pas divers savants à l'académie des inscriptions et belle-lettres* 16, Paris.

Dragendorff H. 1895: Terra Sigillata. Ein Beitrag zur Geschichte der griechischen und römischen Keramiek, *Bonner Jahrbücher* 46, 18 – 155.

Dreesen R. & Coquelet C. 2013: Steenmateriaal van de tempelsite van Tongeren. In: Cosyns P., Sfingopoulos S., Vandewal S. & van Rechem H. (red.), *Bouwmeesters voor de Goden. Een Romeins tempelcomplex aan de Keversstraat, Tongeren*, Tongeren, 27-31.

Dreesen R., Bogaert L., Coquelet C., Creemers G., De Winter N., Driesen P., Goemaere E., Vanderhoeven A. & Vynckier G. 2015: Van heinde en verre: gebruik en herkomst van polychrome marmers in Romeins Tongeren - een eerste stand van zaken, *Signa* 4, Brussels, 103-118.

Dreesen R., Ruppiene V. & Peltier F. 2016: On the Roman use of Belgian marbles. In: Coquelet et al. (eds.), *Abstract book of the International Conference Roman ornamental stones in North-Western Europe*, Tongeren, SPW Editions, Rapports Archéologie 2, 18-19.

Dreesen R. & Vanderhoeven A. 2017: Romeins gebruik van natuursteen in de provincies Limburg. In: Quist W. & Tolboom H.J. (red.), *Natuursteen in Limburg*, Delft, 61-93.

Driesen P. & Borgers K. 2008: *Rapport 19. Archeologisch onderzoek aan de Kielenstraat te Tongeren, naar aanleiding van de uitbreiding van het Provinciaal Gallo-Romeins Museum. Fase 1: Interimrapport*, Sint-Truiden, unpublished report.

Driesen P., Van de Staey I. & Steegmans J. 2012: *Het archeologisch onderzoek in het kader van de DN1000 aardgasvervoersleiding VTN2. Lot 1 en 2: Deeltraject Opwijk-Voeren*. Onderzoek uitgevoerd in opdracht van Fluxys nv, ARON-Rapport 170, Sint-Truiden.

Eristov H. & de Vaugiraud S. 1997: La cave gallo-romaine n°4 du 12, rue de l'Abbé de l'Epée, les décors muraux, *Cahiers de la Rotonde* 19, 17-45.

Eristov H. & Groetembril S. 2006: Murs blancs en Gaule, entre économie et raffinement, *Dossiers de l'Archéologie* 318, 58-61.

ERVYNCK, A. 2005: Detecting the seasonal slaughtering of domestic mammals: inferences from the detailed recording of tooth eruption and wear, *Environmental Archaeology* 10, 153-169.

ERVYNCK, A. 2011: Everything but the leather. The search for tanneries in Flemish archaeology. In: THOMSON R. & MOULD Q. (eds.), *Leather tanneries. The archaeological evidence*, London, 103-115.

ERVYNCK A., GAUTIER A. & VAN NEER W. 1997: Import van schelpdieren en vis in een Romeinse nederzetting te Nevele, *VOBOV-info. Tijdschrift van het Verbond voor Oudheidkundig Bodemonderzoek in Oost-Vlaanderen* 46, 24-28.

ERVYNCK A., VANDEVORST K. & OOMEN E. 2014: *De Onze-Lieve-Vrouw-Basiliek van Tongeren: een ontzettend lang verleden*, Leuven.

ERVYNCK A., LENTACKER A. & VAN NEER W. 2017: De dierlijke resten. In: ERVYNCK A. & VANDERHOEVEN A. (red.), *Het archeologisch en bouwhistorisch onderzoek van de O.L.V.-basiliek van Tongeren (1997-2013). Deel 2: Studie van de vondsten*, Relicta Monografieën 12, Brussels, 455-523.

ETTLINGER E. 1973: *Die römischen Fibeln in der Schweiz. Handbuch der Schweiz zur Römer- und Merowingerzeit*, Bern.

FEREMBACH D., SCHWIDETZKY I. & STLOUKAL M. 1980: Recommendations for Age and Sex Diagnosis of Skeletons, *Journal of Human Evolution* 9, 517-549.

FIORATO V., BOYLSTON A. & KNÜSEL C.J. 2007: *Blood Red Roses. The Archaeology of a Mass Grave from the Battle of Towton AD 1461(2nd edition)*, Oxford.

FISCHER G. 1994: Antiker Marmorluxus von Rom zum Rhein. Funde, Fotos, Modelle, *Archäologisches Institut der Universität Köln*, 25-27.

FÖLZER E. 1913: *Die Bilderschüsseln der ostgallischen Sigillata-Manufacturen*, Bonn.

FRANCIS S. 2012: *Fibulae van de Romeinse cultusplaats te Wijshagen (Meeuwen-Gruitrode), Een typochronologische en spatiale analyse*, onuitgegeven eindverhandeling, Gent.

FREMERSDORF F. 1956: *Das römische Haus mit dem Dionysos-Mosaik vor dem Südportal des Kölner Domes*, Kölner Ausgrabungen 1, Berlin.

FRÉSARD N. 2006: Le danseur indien au carquois: relecture d'un décor peint du sanctuaire de Bois-l'Abbé, *Histoire de l'Art* 58, 13-23.

FEUGÈRE M. 1985: *Les fibules en Gaule méridionale de la conquête à la fin du Ve s. ap. J.-C.*, Révue Archéologique de Narbonnaise Supplément 12, Paris.

FÜNFSCHILLING S. 2006: *Das quartier Kurzenbettli im Süden von Augusta Raurica*, Forschungen in Augst 35.

GAUTIER A. 1975: Ossements d'animaux du site d'Orp-le-Grand (Brabant, Age du Fer), *Bulletin du Centre archéloqique Hesbaye-Condroz* 13, 56-70.

GAUTIER A. 1987: Taphonomic groups: How and Why?, *ArchaeoZoologia* 1, 2, 47-52.

GAZENBEEK G. 2014: Grofkeramiek van Voorburg-Arentsburg. In: DRIESSEM M. & BESSELEN E. (eds.), *Voorburg-Arentsburg. Een Romeinse havenstad tussen Rijn en Maas*, Themata 7, Amsterdam, 503-546.

GOFFOUX B. 2012: A la recherche des édifices collégiaux hispaniques. In: DONDIN-PAYRE M. & TRAN N. (eds.), *Collegia. Le phénomène associatif dans l'Occident romain*, Scripta Antiqua 41, 199-227.

GORGONI C., LAZZARINI L., PALLANTE P. & TURI B. 1998: An updated and detailed mineropetrographic and C-O-stable isotopic reference database for the main Mediterranean marbles in antiquity, *Proceedings of the ASMOSIA Conference*, Boston, 1998, 1-15.

GRANT A. 1982: The use of tooth wear as a guide to the age of domestic ungulates. In: WILSON B., GRIGSON S. & PAYNE S. (eds.), *Ageing and Sexing Animal Bones from Archaeological Sites*, British Archaeological Reports, British Series 109, Oxford, 91-108.

GROETEMBRIL S. 2004: *Etude des peintures murales de Montcy-Saint-Pierre à Charleville-Mézières*, Rapport interne CEPMR, unpublished report.

GROETEMBRIL S., ALLONSIUS C. & LEMOIGNE L. 2013: Tongres, le programme ornemental d'une riche domus. Etude des peintures murales romaines issues des fouilles de la basilique Notre-Dame, *Signa* 2, Brussels, 82-87.

GROS P. 1997: Maisons ou sièges de corporations? Les traces archéologiques du phénomène associatif dans la Gaule romaine méridionale, *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 1, 213-241.

HAALEBOS J.K. 1986: *Fibulae uit Maurik*, Leiden.

HAALEBOS J.K. 1990: *Het grafveld van Nijmegen-Hatert*, Beschrijvingen van de verzamelingen in het Provinciaal Museum G.K. Kam te Nijmegen 11, Nijmegen.

HALES S. 2003: *The Roman house and social identity*, Cambridge.

Hanoune R. (ed.) 2007: *Les villes romaines du Nord de la Gaule. Vingt ans de recherches nouvelles. Actes du XXVe colloque international de HALMA-IPEL UMR CNRS 8164*, Revue du Nord. Hors Série. Collection Art et Archéologie 10, Villeneuve-d'Ascq.

Hanut F. 2001: Les amphores et cruches-amphores de Gaule belgique et de Germanie inférieure. In: Tuffreau-Libre M. & Jacques A. (eds.), *La céramique en Gaule et en Bretagne romaines: commerce, contacts et romanisation. Actes de la table-ronde d'Arras (23 au 25 octobre 1998)*, Nord-Ouest Archéologie 12, Berck-sur-Mer, 19-38.

Harper J. 1972: The tardy domestication of the duck, *Agricultural History* 46, 3, 385-389.

Hartley B.R & Dickinson B.M. 2008: *An Index of Makers' Stamps and Signatures on Gallo-Roman terra sigillata (Samian Ware)*, Institute of Classical Studies 102, London.

Hartoch E. (ed.), Doperé F., Dreesen R., Gluhak T., Goemaere E., Manteleers I., Van Camp L. & Wefers S. 2015: *Moudre au Pays des Tungri*, ATVATVCA 7, Publications of the Gallo-Roman Museum, Tongeren.

Hawkey D.E. & Merbs C.F. 1995: Activity-induced Musculoskeletal Stress Markers (MSM) and Subsistence Strategy Changes among Ancient Hudson Bay Eskimos, *International Journal of Osteoarchaeology* 5, 324-338.

Helsen J., Moermans W., Severijns P. & Vandeplas E. (eds.) 1988: *2000 jaar Tongeren, 15 voor Chr. tot 1985*, Hasselt.

Hensen G. 1999: *De bronzen, Romeinse fibulae uit het Provinciaal Gallo-Romeins Museum te Tongeren*, unpublished master thesis, Leuven.

Hensen G., Schurmans M. & Vanderhoeven A., 2003: Een noodopgraving van 5000 m2 Romeinse stad aan de Clarissenstraat te Tongeren. In: Lodewijckx M. & Corbiau M.- H. (red.), *Romeinendag-Journée d'archéologie romaine*, Leuven, 31-32.

Hensen G., Schurmans M., Vanderhoeven A. & Vynckier G. 2004: Het noodonderzoek aan de Clarissenstraat te Tongeren: de opgravingscampagne van 2003, *Romeinendag*, 53-55.

Hensen G., Schurmans M., Vanderhoeven A. & Vynckier G. 2006a: Tongeren: Clarissenstraat. In: Creemers G. & Vanderhoeven A. (red.), Archeologische kroniek van Limburg 2001, *Limburg - Het Oude Land van Loon*, 47-50.

Hensen G., Schurmans M., Vanderhoeven A. & Vynckier G. 2006b: Tongeren: Clarissenstraat. In: Creemers G. & Vanderhoeven A., Archeologische kroniek van Limburg 2003, *Limburg - Het Oude Land van Loon*, 314-318.

Hiddink H. 2003: *Het grafritueel in de Late IJzertijd en Romeinse tijd in het Maas-Demer-Schelde gebied, in het bijzonder van twee grafvelden bij Weert*, Zuidnederlandse Archeologische Rapporten 11, Amsterdam.

Hiddink H. 2005: *Archeologisch onderzoek aan de Beekseweg te Lieshout*, Zuidnederlandse Archeologische Rapporten 18, Amsterdam.

Hiddink H. 2014: *De Romeinse villa-nederzetting op de Kerkakkers bij Hoogeloon (Noord-Brabant)*, Zuidnederlandse Archeologische Rapporten 53 / VU-opgravingen in de Kempen 3, Amsterdam.

Hiddink H. 2015: The villa settlement of Hoogeloon-Kerkakkers. In: Roymans N., Derks T. & Hiddink H.A. (red.), *The Roman Villa of Hoogeloon and the Archaeology of the Periphery*, Amsterdam Archaeological Studies 22, Amsterdam, 87-124.

Hobson B. 2011: Location of Private Toilets. In: Jansen G.C.M., Koloski-Ostrow A.O. & Moorman E.M., *Roman Toilets. Their Archaeology and Cultural History*, BABESCH, Suppl. 19, Leuven-Paris-Walpole, 123-126.

Holst M. & Sutherland T. 2014: Towton Revisited. Analysis of the Human Remains from the Battle of Towton 1461. In: *Schlachtfeld und Massengrab: Spektren Interdisziplinärer Auswertung von Orten der Gewalt*, Zossen, 97-129.

Holwerda J.H. 1923: *Arentsburg. Een romeinsch militair vlootstation bij Voorburg*, Leiden.

Holwerda J.H. 1941: *De Belgische waar in Nijmegen*, Beschrijving van de verzamelingen in het Rijksmuseum G.M. Kam te Nijmegen 2, Nijmegen.

Höpken C. 2005: *Die römische Keramikproduktion in Köln*, Kölner Forschungen 8, Köln.

Höpken C. & Liesen B. 2005: Töpfereiabfall des 3. Jahrhunderts aus Köln, *Kölner Jahrbuch* 38, Köln, 755-771.

Hunger H. & Leopold D. 1978: *Identifikation*, Berlin.

Hürbin W., Bavaud M., Jacomet S. & Berger U. 1994: *Römisches Brot. Mahlen. Backen. Rezepte*, Augster Blätter zur Römerzeit 4, Augst.

Ingelmark B.E. 1939: The skeletons. In: Thordeman B. (ed.), *Arms and Armour from the Battle of Wisby 1361*, Stockholm, 149-209.

Işcan M.Y., Loth S.R. & Wright R.K. 1984: Metamorphosis at Sternal Rib End: a New Method to Estimate Age at Death in White Males, *American Journal of Physical Anthropology* 65, 147-156.

Işcan M.Y., Loth S.R. & Wright R.K. 1985: Age Estimation from the Rib by Phase Analysis: White Females, *Journal of Forensic Science* 30, 853-863.

Isings C. 1957: *Roman Glass from Dated Finds*, Groningen.

Jacques A., Lepetz S., Van Andringa W., Matterne V. & Tuffreau-Libre M. 2008: Vestiges de repas et identification d'un siège de collège à Arras-Nemetacum (Gaule Belgique). In : Lepetz S. & Van Andringa W. (eds.), *Archéologie du sacrifice animal en Gaule romaine. Rituels et pratiques alimentaires*, Montagnac, 237-252.

Janssens D. 1977: *Een Gallo-Romeins grafveld te Maaseik*, Archaeologia Belgica 198, Brussels.

Jennings J., Inman J., Ullinger J., Van Gerven D. P. & Sheridan S. G. 2004: Femoral Neck Activity and Kneeling at a Byzantine Monastery, *American Journal of Physical Anthropology* 38, 120-121.

Jurmain R., Alves Cardoso F., Henderson C.Y. & Villotte S. 2012: Bioarchaeology's Holy grail: the reconstruction of activity. In: Grauer A.L. (ed.), *Companion to Paleopathology*, Malden, 531-552.

Katherine M. & Dunbabin D. 1999: *Mosaics of the Greek and Roman World*, New York.

King S. 1992: *Violence and Death during the fall of the Roman Empire. Interpretations of a late 4th century/early5th century charnel house deposit from Arras*, unpublished Ph.D. Thesis, University of Bradford.

Kienzle P. 2008: Die zivile Wohnbebauung in der CUT. In: Müller M., Schalles H.-J. & Zieling N. (eds.), *Kolonia Ulpia Traiana. Xanten und sein Umland in römische Zeit*, Mainz, 413 – 432.

Kjellstrom A. 2005: A Sixteenth-century Warrior Grave from Uppsala, Sweden: The Battle of Good Friday, *International Journal of Osteoarchaeology* 15, 23-50.

Knowles A.K. 1983: Acute traumatic lesions. In: Hart G. (ed.), *Disease in ancient man*, Toronto, 61-83.

Knüsel C.J. 2007: Activity-related skeletal change. In: Fiorato V., Boylston A. & Knüsel C.J. (eds.), *Blood Red Roses. The Archaeology of a Mass Grave from the Battle of Towton AD 1461(2nd edition)*, Oxford, 103-118.

Knüsel C.J. & Boylston A. 2007: How has the Towton project contributed to our knowledge of medieval and later warfare? In: Fiorato V., Boylston A. & Knüsel C.J. (eds.), *Blood Red Roses. The Archaeology of a Mass Grave from the Battle of Towton AD 1461 (2nd edition)*, Oxford, 169-197.

Koegler K. 1998: *Een zeskantige sokkel in Tongeren*, unpublished master thesis, Leiden.

Kramis S. 2009: Unusual Treatment of the Dead outside Cemeteries in Roman Times. In: Brambilla E. (ed.), *Routines of Existence: Time, Life and After Life in Society and Religion*, Religion and Philosophy 4, Pisa, 86-105.

Lange G. & Schultz M. 1982: Die menschlichen Skelete aus dem Lagergraben der römischen Erdbefestigung bei Heldenbergen, Main-Kinzig-Kreis, *Hanauer Geschichtsblätter* 28, 7-34.

Larsen C.S. 1997: *Bioarchaeology: interpreting behavior from the human skeleton*, Cambridge.

Laubenheimer F. 1998: *Les amphores en Gaule – Vol. 2. Production et circulation*, Paris.

Lauwerier R.C.C.M. 1995: Dertig lijsterborstjes in een pot. Geïmporteerde conserven uit Nijmegen, *Numaga* 42, Nijmegen, 7-12.

Lazzarini L. 2004: *Pietre e marmi antichi. Natura, caratterizzazione, origine, storia d'uso, diffusione, collezionismo*, CEDAM, Milan.

Lentacker A. 1994: La faune romaine et carolingienne de la Place Saint-Pierre à Tournai (Prov. Hainaut, Belgique), *Acta Archaeologica Lovaniensia* 433, Leuven, 55-66.

Lentacker A., Van Neer W. & Desender K. 1993: Archéozoologie. In: Brulet R. (ed.), *Braives Gallo-Romain V. La fortification du Bas-Empire*, Publications d'Histoire de l'Art et d'Archéologie de l'Université Catholique de Louvain 83, Louvain-la-Neuve, 284-339.

Lentacker A., Van Neer W. & Pigiere F. in press: L'étude archéozoologique du site du quai Marché-aux-Poissons/CV12 à Tournai. In: Brulet R. & Verslype L. (eds.), *L'Escaut à Tournai au fil du temps. Les fouilles et surveillances archéologiques de travaux de pose de collecteurs d'eaux usées le long de l'Escaut à Tournai*, Collection d'Archéologie Joseph Mertens 14, Louvain-la-Neuve.

Lepareux-Couturier S. 2014: Complex dressing patterns on grinding surfaces of rotary querns and millstones from Antiquity in the Paris Basin, France: state of research and perspectives. In: Selsing L. (dir.), *Seen through a millstone*, AmS-Skrifter Series, Stavanger, 225-234.

Lepareux-Couturier S., Boyer F. & Jodry F. 2011: Le traitement de la surface active des meules rotatives antiques. In: Buchsenschutz O., Jaccottey L., Jodry F. & Blanchard J.-L.(dir.), *Évolution typologique et technique des meules du Néolithique à l'an mille. Actes des IIIe Rencontres Archéologiques de l'Archéosite gaulois, Table ronde de Saint-Julien-sur-Garonne (F) du 2 au 4 octobre 2009*, Aquitania

Supplément 23, Bordeaux, 367-382.

Lerat L. 1956: *Les Fibules Gallo-Romaines*, Annales littéraires de l'Université de Besancon, Paris.

Lerat L. 1957: *Les fibules Gallo-Romaines de Manduere*, Annales littéraires de l'Université de Besancon 16, Paris.

Lewis J.E. 2008: Identifying sword marks on bone: Criteria for distinguishing between cut marks made by different classes of bladed weapons, *Journal of Archaeological Science* 35, 2001-2008.

Livingstone Smith A., Bosquet D., Henton A., Defgnee A., Van Neer W., Deramaix I., Ingels D., Neven S. & Dewamme E. 1995: Un site d'habitat protohistorique à Brugelette-Bois d'Attre. Rapport préliminaire sur la fouille du secteur II, *Lunula Archaeologia protohistorica* 3, 13-25.

Loeschke S. 1909: *Keramische Funde in Haltern, ein Beitrag zur Geschichte der augusteischen Kultur in Deutschland*, Mitteilungen der Altertumskommision für Westfalen 5.

Loeschke S. 1919: *Lampen aus Vindonissa. Ein Beitrag zur Geschichte von Vindonissa und des antiken Beleuchtungswesens*, Zürich.

Lovejoy C.O., Meindl R.S., Pryzbeck T.R. & Mensforth R.P. 1985: Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age at death, *American Journal of Physical Anthropology* 68, 15-28.

Maat G.J.R. 2000: The impact of diet on age at death determination based on molar attrition. In: Willems G. (ed.), *Forensic Odontology, Proceedings of the European IOFOS Millennium Meeting*, Leuven, 49-54.

Mallet F., Besson C. & Allonsius C. 2011: Les enduits peints de deux villas en Ile-de-France. In: Balmelle C., Eristov H. & Monier F. (dir.), *Décor et architecture en Gaule entre l'Antiquité et le haut Moyen-Age, Actes du colloque international de Toulouse, 9-12 octobre 2008*, Aquitania suppl. 20, 161-170.

Marien M.E. 1980: *Belgica antiqua. De stempel van Rome*, Antwerpen.

Mariotti V., Facchini F. & Belcastro M.G. 2004: Enthesopathies. Proposal of a Standardized Scoring Method and Applications, *Collegium Anthropologicum* 28, 145-159.

Martens M. 2012: *Life and culture in the Roman small town of Tienen. Transformations of cultural behaviour by comparative analysis of material culture assemblages*, unpublished Ph.D. dissertation, Amsterdam.

Martens M., Debruyne T. & Vanderhoeven A. 2002: La ceramique d'un enclos tiberoclaudien dans le vicus de Tirlemont et la commercialisation du sel au debut de l'epoque romaine en Gaule du nord. *SFECAG, Actes du Congrès de Bayeux*, Marseille, 401-416.

Martens M. & Willlems S. 2002: La production et la diffusion de céramiques locales. Les exemples de Tirlemont et Tongres. *SFECAG, Actes du congrès de Bayeux*, Marseille, 331–343.

Martens M., Debruyne T., Degeest R., Martens G., Hartoch E., Lauwers V. & Van Doninck J. 2004: *Typologie Gallo-Romeinse Tiense Waar*, Tienen.

Martin-Kilcher S. 1987: Die römischen Amphoren aus Augst und Kaiseraugst 1: Die südspanischen Ölamphoren (Gruppe 1), *Forschungen in Augst* 7, Augst.

Martin-Kilcher S. 1990: Fischsaucen und Fischkonserven aus dem römischen Gallien, *Archäologie der Schweiz* 13, 37-44.

Martin-Kilcher S. 1994a: *Die römischen Amphoren aus Augst und Kaiseraugst 2: Die Amphoren für Wein, Fischsauce, Südfrüchte (Gruppen 2-24) und Gesamtauswertung*, Forschungen in Augst 7, Augst.

Martin-Kilcher S. 1994b: *Die römischen Amphoren aus Augst und Kaiseraugst 3: Archäologische und naturwissenschaftliche Tonbestimmungen und Katalog und Tafeln (Gruppen 2-24)*, Forschungen in Augst 7, Augst.

Martin-Kilcher S. 2003: Dépôts en milieu urbain et amphores: évacuation organisée – réutilisation – déchets. In: Ballet P. et al. (red.), *La ville et ses déchets dans le monde romain: rebuts et recyclages*, Actes coll. Poitiers 2002, 231-242.

Mauné S., Monteix N. & Poux M. 2013: *Cuisines et boulangeries en Gaule romaine*. Gallia. Archéologie de la France antique 70,1, Paris.

May E. 1985: Widerristhöhe und Langknochenmaße bei Pferd – ein immer noch aktuelles Problem, *Zeitschrift für Säugertierkunde* 50, 368-382.

Mees A.W. 1995: *Modelsignierte Dekorationen auf südgallischer Terra Sigillata*, Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Würtemberg 54, Stuttgart.

Meindl R.S. & Lovejoy C.O. 1985: Ectocranial suture closure: a revised method for the determination of skeletal age at death based on the lateral-anterior sutures, *American Journal of Physical Anthropology* 68, 57-66.

MERBS C.F. 1996: Spondylolysis and spondylolysthesis: A cost of being an erect biped or a clever adaptation?, *Yearbook of Physical Anthropology* 39, 201- 228.

MERTENS J. 1964: *Enkele beschouwingen over Limburg in de Romeinse tijd*, Archaeologia Belgica 75, Brussels.

MERTENS J. 1967/1968: Een Romeins tempelcomplex te Tongeren, *Kölner Jahrbuch für Vor- und Frühgeschichte* 9, 101-106.

MERTENS J. 1977a: Korte bijdrage tot het stadsplan van Tongeren. In: ROYMANS N., BIEMANS J., SLOFSTRA J. & VERWERS W.J.H. (red.), *Brabantse Oudheden: opgedragen aan Gerrit Beex bij zijn 65ste verjaardag*, Bijdragen tot de Studie van het Brabants Heem 16, Eindhoven, 143-148.

MERTENS J. 1977b: De laat-Romeinse stadsmuur van Tongeren, *Archaeologia Belgica* 196, Brussels, 49-54.

MERTENS P. 1989: *La géographie historique des provinces Belgica Prima, Belgica Secunda et Germania Secunda dans le Bas-Empire (284-476)*, Mémoire de licence, Louvain-la-Neuve.

MEYER K. E. 1999: Axial peristyle houses in the western empire, *Journal of Roman Archaeology* 12, 101-121.

MITTAG E. 1999: Untersuchungen zu sogenannten Halterner Kochtöpfen aus dem Bereich der Colonia Ulpia Traiana, *Xantener Berichte* 8, Mainz, 201-311.

MURAIL P., BRUZEK J., HOUËT F. & CUNHA E. 2005: DSP: A tool for probabilistic sex diagnosis using worldwide variability in hip-bone measurements, *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 17, 167-176.

NOELKE P. 2010/2011: Neufunde von Jupitersäulen und Jupiterpfeilern in der Germania inferior seit 1980 nebst Nachträgen zum früheren Bestand, *Bonner Jahrbücher* 210/211, 149-374.

NOUWEN R. 1988: *De verloren grens. De Germaanse invallen en de Frankische kolonisatie in onze gewesten*, Publicaties van het Provinciaal Gallo-Romeins Museum te Tongeren 39, Hasselt.

NOUWEN R. 1997: *Tongeren en het land van de Tungri (31 v.Chr. – 284 n.Chr.)*, Maaslandse Monografieën 59, Leeuwarden.

NOUWEN R. 2012: *Tongeren. Een Romeinse stad in het land van de Tungri*, Tongeren.

NOVAK S.A. 2007: Battle Related Trauma. In: FIORATO V., BOYLSTON A. & KNÜSEL C.J. (eds.), *Blood Red Roses. The Archaeology of a Mass Grave from the Battle of Towton AD 1461*, Oxford, 90-102.

OELMANN F. 1914: *Die Keramik des Kastells Niederbieber*, Materialien zur Römisch-Germanischen Keramik 1, Bonn.

ORR D.G. 1978: Roman Domestic Religion: The Evidence of the Household Shrines. In: TEMPORINI H. & HAASE W., *Aufstieg und Niedergang der römischen Welt II*, Berlin-New York, 1557-1591.

ORTNER D.J. 2003: *Identification of pathological conditions in human skeletal remains*, San Diego.

OSTERHAUS U. 1984-1985: Zwei römische Brunnen aus einer Villa rustica in Regensburg-Harting, *Das archäologische Jahr in Bayern*, 115-118.

OSWALD F. & PRYCE D. 1920: *An Introduction to the Study of Terra Sigillata (With a Preface and Corrigenda and Addenda by Grace Simpson, 1966)*, London.

PANHUYSEN R. 2005: *Demography and health in early medieval Maastricht. Prosopographical observations on two cemeteries*, Maastricht.

PEACOCK D.P.S. 1977: Pompeian red ware. In: PEACOCK D.P.S. (ed.), *Pottery and early commerce. Characterization and trade in Roman and later ceramics*, London - New York - San Francisco, 147-162.

PETSAS PH. 1963: Mosaics from Pella, CMGR, I, 41-56.

PFAHL S.F. & THIEL M. 2006/2007: Ein Kultmortarium mit Schlangendekoration des IVSTINUS aus Trier, *Trierer Zeitschrift. Archäologie und Kunst des Trierer Landes und seiner Nachbachbargebiete* 69-70, Trier, 39-49.

PHENICE T.W. 1969: A newly developed visual method of sexing in the os pubis, *American Journal of Physical Anthropology* 30, 297-301.

PHILIPPART J.-C. & VRANKEN M. 1983: *Atlas des poissons de Wallonie. Distribution, écologie, ethologie, pêche, conservation*, Cahiers d'éthologie appliquée à la protection et à la conservation de la vie sauvage, à la gestion et au contrôle des ressources et productions animales, Collection Enquêtes et Dossiers 4, Liège.

PHILPOTT R. 1991: Burial Practices in Roman Britain. A Survey of Grave Treatment and Furnishing A.D. 43–410, *British Archaeological Reports British Series* 219, Oxford.

PIGIÈRE F. 2008: *Approche archéozoologique de l'évolution socio-économique de l'Antiquité à la période mérovingienne sur les sites urbanisés de la zone limoneuse de la Moyenne Belgique et du sud des Pays-Bas*, Unpublished Ph-D Thesis, Louvain-la-Neuve.

Pigière F. 2009: *Evolution de l'économie alimentaire et des pratiques d'élevage de l'Antiquité au haut Moyen Age en Gaule du nord. Une étude régionale sur la zone limoneuse de la Moyenne Belgique et du sud des Pays-Bas*, BAR International Series 2035, Oxford.

Pirling R. 1986: Ein Mithräum als Kriegergrab: Neue Untersuchungen im Vorgelände des Kastells Gelduba, *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 20, 244-246.

Poll M. 1947: *Poissons marins*, Brussel.

Price M. T. 2007: *Decorative stones. The complete source book*.

Price M.T. s.d.: *The Corsi collection of decorative stones*. http://www.oum.ox.ac.uk/corsi/

Raepsaet G. 1987: Aspects de l'organisation du commerce de la céramique sigillée dans le Nord de la Gaule au IIe siecle de notre ere. I: les données matérielles, *Münstersche Beiträge zur Antiken Handelsgeschichte* 6, 2, 1-29.

Raepsaet-Charlier M.-Th. 1995: Municipium Tungrorum, *Latomus* 54, 361-369.

Raepsaet-Charlier M.-Th. & Tassignon I. 1998: Iconographie et religion dionysiaques en Gaule Belgique et dans les deux Germanies, *L'antiquité classique* 67, 584-586.

Reimer P.J., Baillie M.G.L., Bard E., Bayliss A., Beck J.W., Blackwell P.G., Bronk Ramsey C., Buck C.E., Burr G.S., Edwards R.L., Friedrich M., Grootes P.M., Guilderson T.P., Hajdas I., Heaton T.J., Hogg A.G., Hughen K.A., Kaiser K.F., Kromer B., McCormac F.G., Manning S.W., Reimer R.W., Richards D.A., Southon J.R., Talamo S., Turney C.S.M., van der Plicht J. & Weyhenmeyer C.E. 2009: IntCal09 and Marine09 radiocarbon age calibration curves, 0–50,000 years cal BP, *Radiocarbon* 51, 4, 1111-1150.

Reinach S. 1922: *Répertoire des peintures grecques et romaines*, Paris.

Reygel P. 2014: *Opgraving aan de Wijngaardstraat te Tongeren. Onderzoek uitgevoerd in opdracht van vzw Bejaardenzorg Grauwzusters Limburg*, ARON-Rapport 200, Sint-Truiden.

Reygel P. & Wesemael E. 2011: *Opgraving op het Vrijthof te Tongeren. Onderzoek uitgevoerd in opdracht van Technum NV en de Stad Tongeren*, ARON Rapport 100, Sint-Truiden.

Reynolds A. 1997: The definition and ideology of Anglo-Saxon execution sites and cemeteries. In: De Boe G. & Verhaege F. (eds.), *Death and Burial in Medieval Europe*, Zellik, 33–41.

Riha E. 1979: *Die römischen Fibeln aus Augst und Kaiseraugst*, Forschungen in Augst 3, Augst.

Riha E., 1986: Römisches Toilettgerät und medizinische Instrumente aus Augst und Kaiseraugst, *Forschungen in Augst* 6, Augst, 43-55.

Riha E. 1990: *Der römische Schmuck aus Augst und Kaiseraugst*, Forschungen in Augst 10, Augst.

Riha E. 1994: *Die römischen Fibeln aus Augst und Kaiseraugst, Die Neufunde seit 1975*, Forschungen in Augst 18, Augst

Riha E. 2001: *Kästchen, Truhen, Tische – Möbelteile aus Augusta Raurica*, Forschungen in Augst 31, Augst.

Riha E. & Stern W.B. 1982: *Die römische Löffel aus Augst und Kaiseraugst, archäologische und metallanalystische Untersuchungen*, Forschungen in Augst 5, Augst.

Ritterling E. 1913: *Das frührömische Lager bei Hofheim im Taunus*, Annalen des Vereins für nassauische Altertumskunde und Geschichtsforschung 4, Wiesbaden.

Roberts C.A. & Manchester K. 2005: *The archaeology of disease*, 3th ed., New York.

Rogers J. 2000: The paleopathology of joint disease. In: Cox M. & Mays S.A. (ed.), *Human Osteology in Archaeology and Forensic Science*, London, 163-182.

Rogers J. & Waldron T. 1995: *A field guide to joint disease in archaeology*, Chichester.

Rogers J., Waldron T., Dieppe P. & Watt I. 1987: Arthropathies in palaeopathology: the basis of classification according to most probable cause, *Journal of Archaeological Science* 14, 179-193.

Rose H. 2006: *Die römischen Terrakottamasken in den Nordwestprovinzen*, Monumenta Artis Romanae 37, Wiesbaden.

Rosso E. 2013: Secundum dignitatem municipi. Les édifices collégiaux et leur programme figuratif, entre public et privé. In: Dardenay A. & Rosso E., *Dialogues entre sphère publique et privée dans l'espace de la cité romaine. Vecteurs, acteurs, significations*, Scripta Antiqua 56, 67-122.

Roymans N. & Derks T. 2011: Studying Roman villa landscapes in the 21st century. A multi-dimensional approach. In: Roymans N. & Derks T. (red.), *Villa Landscapes in the Roman North. Economy, culture and lifestyles*, Amsterdam Archaeological Studies 17, Amsterdam, 1-44.

ROYMANS N. & HABERMAHL D. 2011: On the origin and development of axial villas with double courtyards in the Latin West. In: ROYMANS N. & DERKS T. (red.), *Villa Landscapes in the Roman North. Economy, culture and lifestyles*, Amsterdam Archaeological Studies 17, Amsterdam, 83- 105.

RUPPIENE V. 2015: *Natursteinverkleidungen in den Bauten der Colonia Ulpia Traiana. Gesteinskundliche Analysen,Provenienzbestimmung und Rekonstruktion*, unpublished Ph.D. dissertation, Wurzburg.

RUPPIENE V., GLUHAK T. & DREESEN R. 2016: The Trier Diabas: a possible regional source rock for Roman green porphyry. In: COQUELET C., CREEMERS G., DREESEN R. & GOEMAERE E., *Roman ornamental stones in Western Europe. International Conference Tongeren 20-22 April 2016. Abstract Book.*

RÜTTI B. 1991: *Die römischen Gläser aus Augst und Kaiseraugst*, Forschungen in Augst 13, Augst.

SABLAYROLLES R. & SCHENCK J.-L. 1988: *Les autels votifs*, Collections du Musée Archéologique Départemental de Saint-Bertrand-de-Comminges 1, Haute-Garonne/ Saint-Bertrand-de-Comminges.

SABLEROLLES Y. 2005: *Het glas van Alphen-Chaam Kerkakkers*, Notingham.

SABRIÉ M., SABRIÉ R. & SOLIER Y. 1987: *La maison à portiques du Clos de la Lombarde à Narbonne et sa décoration murale*, Revue Archéologique de Narbonnaise suppl. 16, Paris.

SAUER N.J. 1998: The timing of injuries and manner of death: distinguishing among antemortem, perimortem and postmortem trauma. In: REICHS K.J. (ed.), *Forensic Osteology. Advances in the identification of human remains*, Springfield, 321-332.

SCHEUER L. & BLACK S. 2000: *Developmental Juvenile Osteology*, London.

SCHINDLER R. 1970: *Landesmuseum Trier. Führer durch die vorgeschichtliche und römische Abteilung*, Trier.

SCHLEIERMACHER M. 1987: Römische Wand-und Desckenmalereien aus dem Limeskastell Echzell. In: *Pictores per provincias*, Aventicum 5, Cahiers d'Archéologie Romande 43, 213-218.

SCHLUSMANS F. 1990: *Inventaris van het cultuurbezit in België, Architectuur, Provincie Limburg, Arrondissement Tongeren, Kantons Riemst - Tongeren*, Bouwen door de eeuwen heen in Vlaanderen 14N1, Brussels-Turnhout.

SCHMID D. & KAUFMANN-HEINIMANN A. 1999: *Götter im Haus.Les dieux chez soi. Gods in the Home*, Augster Museumhefte 21, Augst.

SCHMITT A. 2005: Une nouvelle méthode pour estimer l'âge au décès des adultes à partir de la surface sacro-pelvienne iliaque, *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 17, 89-101.

SCHMITZ D. & SCHREITER CH. (eds.) 2014: *Am den Grenzen des Reiches, Grabungen im Xantener Legionslager am Vorabend des Ersten Weltkrieges*, Mainz am Rhein.

SCHNEIDER M., LEPETZ S., BALASSE B. & SALIEGE J.-F. 2007: L'exploitation, la commercialisation et la consommation des huîtres à l'époque romaine en Gaule. Origine géographique et source d'approvisionnement des huîtres du Vieil-Evreux et de Chartres. In: RIDEL E., BARRE E. & ZYSBERG A. (eds.), *Publication des actes du colloque "Les nourritures de la mer, de la criée à l'assiette. Colloque de TATIHOU organisé par la S.F.H.M du 2 au 4 octobre 2003*, Caen, 11-34.

SCHRÖTER P. 1984-1985: Skelettreste aus zwei römischen Brunnen von Regensburg-Harting als archäologische Belege für Menschenopfer bei den Germanen der Kaiserzeit, *Das archäologische Jahr in Bayern*, 118-120.

SHARMA L. 2001: Epidemiology of osteoarthritis. In: MOSKOWITZ R.W., HOWELL D.S. , ALTMAN R.D., BUCKWALTER J.A. & GOLDBERG V.M. (ed.), *Osteoarthritis: diagnosis and medical/surgical management*, 3th ed., Philadelphia, 3-27.

SILVER I. A. 1969: The Ageing of Domestic Animals. In: BROTHWELL D. & HIGGS E. (eds.), *Science in Archaeology*, 2nd ed., London, 283-302.

STEWART T.D. 1979: *Essentials of forensic anthropology*, Springfield.

STIRLAND A. 1984: A possible correlation between os acromiale and occupation in the burials from the Mary Rose. In: *Proceedings of the Fifth European Meeting of the Paleopathology Association, Siena, Italy, 3–4 September 1984*, Siena, 327–334.

STROUD G. & KEMP R.L. 1993: *Cemeteries of St. Andrew, Fishergate*, York.

STUART P. 1977: *Gewoon aardewerk uit de Romeinse legerplaats en de bijbehorende grafvelden te Nijmegen*, Beschrijvingen van de verzamelingen in het Rijksmuseum G.M. Kam te Nijmegen 6, Nijmegen.

SUCHEY J. & KATZ D. 1986: Skeletal age standards derived from an extensive multiracial sample of modern Americans, *American Journal of Physical Anthropology* 69, 269.

SYMONDS R.P. 1992: *Rhenish wares. Fine Dark Coloured Pottery from Gaul and Germany*, Oxford University Committee for Archaeology 23, Oxford.

TASSIGNON I. 1996: Iconographie et religion dionysiaques en Gaule Belgique et dans les deux Germanies, *Bibliothèque de la Faculté de Philosophie et Lettres de l'Université de Liège* 140, 206-214.

THOMAS S. 1963: Zur Verbreitung und Zeitstellung der fünfscheibigen Emailfibeln, *Germania* 41, p 344-350.

THÜRY G.E. 1990: Römische Austernfunde in der Schweiz, im rechtsrheinischen Süddeutschland und in Österreich. In: SCHIBLER J., SEDLMEIER J. & SPYCHER H. (eds.), *Festschrift für Hans R. Stampfli. Beiträge zur Archäozoologie, Archäologie, Anthropologie, Geologie und Paläontologie*, Basel, 285–301.

TICHELMAN G. 2005: *Het villacomplex Kerkrade-Holzkuil*, ADC Archeoprojecten Rapport 155, Amersfoort.

TOMBER R. & J. DORE 1998: *The National Roman Fabric Reference Collection. A Handbook*, MoLAS Monograph 2, London.

TOYNBEE J.M.C. 1996: *Death and burial in the Roman world*, Baltimore-London.

TROTTER M. 1970: Estimation of stature from intact long limb bones. In: STEWART T.D. (ed.), *Personal identification in mass disasters*, Washington, 71-83.

TUIJN W. 1998: Het geheim van de kurkurn, *Westerheem* 47, 5, 236-237.

UBELAKER D. 1979: Skeletal Evidence for Kneeling in Prehistoric Ecuador, *American Journal of Physical Anthropology* 51, 679-686.

UBELAKER D.H. & ZARENKO K.M. 2012: Can Handedness be Determined from Skeletal Remains? A Chronological Review of the Literature, *Journal of Forensic Sciences* 57, 1421-1426.

UNVERZAGT W. 1968: *Die keramik des kastells Alzei*, Materialien zur Römisch-Germanischen Keramik 2, Bonn.

VADAY A. 2003: *Cloisonné Brooches in the Sarmatian Barbaricum in the Carpathian Basin*, Acta Archaeologica Academiae Scietiarum Hungaricae 54, Budapest.

VAN BOEKEL G.M.E.C. 1986: Roman terracotta figurines and masks from the Netherlands. Catalogue III and conclusions, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 36, 25-404.

VAN DEN BROEKE P.W. 1995: Soutern sea salt in the low Countries, a reconnaissance into the land of the Morini. In: LODEWIJCKX M. (red.), *Archaeological and historical aspects of West-European societies (Album amoricum André van Doorselaer)*, Acta Archaeologia Lovaniensia Monographiae 8, 193-205.

VAN DEN HOVE P., VANDERHOEVEN A. & VYNCKIER G. 2002: Het archeologisch onderzoek in de O.L.V.-basiliek van Tongeren. Fase 1: 1999-2001, *Monumenten en Landschappen* 21, 4, 12-37.

VAN DEN HOVE P., VANDERHOEVEN A. & VYNCKIER G. 2003: De Romeinse bewoningssporen onder de Onze-Lieve-Vrouwebasiliek van Tongeren, *Romeinendag*, Leuven, 73-74.

VANDERHOEVEN A. 1996: The earliest urbanisation in Northern Gaul: some implications of recent research in Tongres. In: ROYMANS N. (ed.), *From the sword to the plough. Three studies on the earliest romanisation of Northern Gaul*, Amsterdam Archaeological Studies 1, Amsterdam, 189-260.

VANDERHOEVEN A. 2001: Das vorflavische Tongeren: Die früheste Enwicklung der Stadt anhand von Funden und Befunden, *Xanter Berichte: Genese, Struktur und Entwicklung Römischer Städte im 1. Jahrhundert n. Chr. in Nieder- und Obergermanien* 9, 157-176.

VANDERHOEVEN A. 2004: Tongres – Atuatuca Tungrorum. In: BAYARD D. & MAHÉO N., *La marque de Rome. Samarobriva et les villes du nord de la Gaule. Catalogue d'exposition à l'occasion de l'exposition « La marque de Rome. Samarobriva et les villes du nord de la Gaule » présentée au Musée de Picardie du 14 février au 16 mai 2004*, Amiens, 59-62.

VANDERHOEVEN A. 2007: Tongres au Haut-Empire romains. In: HANOUNE R. (ed.), *Les villes romaines du Nord de la Gaule. Vingt ans de recherches nouvelles. Actes du XXVe colloque international de HALMA-IPEL UMR CNRS 8164, Revue du Nord. Hors Série. Collection Art et Archéologie* 10, Villeneuve-d'Ascq, 309-336.

VANDERHOEVEN A. 2012: The Late Roman and early medieval urban topography of Tongeren. In: ANNAERT R., JACOBS T., IN 'T VEN I. & COPPENS S. (eds.), *The very beginning of Europe? Cultural and Social Dimensions of Early-Medieval Migration and Colonisation (5th-8th century), Archaeology in Contemporary Europe, Conference Brussels*, Relicta Monografieën 7, Brussels, 135-147.

VANDERHOEVEN A. 2013: Die römische Stadt Tongeren. In: VON HAEHLING R. & SCHAUB A. (eds.), *Römisches Aachen. Archäologisch-historische Aspekte zu Aachen und der Euregio*, Regensburg, 387-411.

VANDERHOEVEN A. 2015: Town-country relations from the perspective of Roman Tongeren. In: ROYMANS N., DERKS T & HIDDINK H.A. (red.), *The Roman Villa of Hoogeloon and the Archaeology of the Periphery*, Amsterdam Archaeological Studies 22, Amsterdam, 189-206.

VANDERHOEVEN A., VAN DE KONIJNENBURG R. & DE BOE G. 1987: Het oudheidkundig bodemonderzoek aan de Kielenstraat te Tongeren. Interimverslag 1986, *Archaeologia Belgica* n.r. 3, Brussels, 127-138.

VANDERHOEVEN A., VYNCKIER G. & VYNCKIER P. 1991: Het oudheidkundig bodemonderzoek aan de Kielenstraat te Tongeren (Prov. Limburg). Interimverslag 1987, *Archeologie in Vlaanderen* 1, Brussels, 107-124.

VANDERHOEVEN A. & VYNCKIER G. 1992: Opgraving aan de Kielenstraat te Tongeren, *Museumfax* 1992, 3, 1-2.

VANDERHOEVEN A., VYNCKIER G. & VYNCKIER P. 1992: Het oudheidkundig bodemonderzoek aan de Hondsstraat te Tongeren (Prov. Limburg). Interimverslag 1989, *Archeologie in Vlaanderen* 2, Brussels, 65-88.

VANDERHOEVEN A., VYNCKIER G., ERVYNCK A. & COOREMANS B. 1993: Het oudheidkundig bodemonderzoek aan de Kielenstraat te Tongeren (Prov. Limburg), interimverslag 1990-1993. Dl. 1: De vóór-Flavische bewoning, *Archeologie in Vlaanderen* 2, Brussels, 89-146.

VANDERHOEVEN A., VYNCKIER G. & VYNCKIER P. (eds.) 1993: Het oudheidkundig bodemonderzoek aan de Veemarkt te Tongeren (Prov. Limburg) 1988, *Archeologie in Vlaanderen* 3, Brussels, 177-186.

VANDERHOEVEN A., ERVYNCK A. & VAN NEER W. 1994: De dierlijke en menselijke resten. In: VANDERHOEVEN A., VYNCKIER G. & VYNCKIER P. (eds.), *Het oudheidkundig bodemonderzoek aan de Veemarkt te Tongeren (Prov. Limburg). Final Report 1988*, Archeologie in Vlaanderen 3, Brussels, 177-186.

VANDERHOEVEN A., VYNCKIER G., ERVYNCK A., VAN NEER W. & COOREMANS B. 1994: Het oudheidkundig bodemonderzoek aan de Minderbroederstraat te Tongeren, (Prov. Limburg) 1991, *Archeologie in Vlaanderen* 4, Brussels, 49-74.

VANDERHOEVEN A., VYNCKIER G. & VYNCKIER P. 1994: Het oudheidkundig bodemonderzoek aan de Veemarkt te Tongeren (Prov. Limburg) 1988, *Archeologie in Vlaanderen* 3, Brussels, 127-205.

VANDERHOEVEN A., VYNCKIER G., ERVYNCK A., VAN NEER W. & COOREMANS B. 1995: Het oudheidkundig bodemonderzoek aan de Minderbroederstraat te Tongeren (Prov. Limburg) 1991, *Archeologie in Vlaanderen* 4, Brussels, 49-74.

VANDERHOEVEN A., VYNCKIER G., ERVYNCK A., COOREMANS B. & WOUTERS W. 1995/1996: Het oudheidkundig bodemonderzoek aan de Koninksemsteenweg te Tongeren (Prov. Limburg) 1995, *Archeologie in Vlaanderen* 5, Brussels, 69-84.

VANDERHOEVEN A. & VYNCKIER G. 1999: Tongeren: Elisabethwal. In: CREEMERS G. & VANDERHOEVEN A. (red.), Archeologische kroniek van Limburg 1997, *Limburg – Het Oude Land van Loon* 78, 3, 213-216.

VANDERHOEVEN A., VYNCKIER G., ERVYNCK A., COOREMANS B. & WOUTERS W. 1999: Het oudheidkundig bodemonderzoek aan de Koninksemsteenweg te Tongeren (Prov. Limburg) 1995, *Archeologie in Vlaanderen* 5, Brussels, 69-84.

VANDERHOEVEN A. & ERVYNCK A. 2007: Not in my back yard? The industry of secondary animal products within the Roman civitas capital of Tongeren, Belgium. In: HINGLEY R. & WILLIS S. (eds.), *Roman finds: context and theory*, Oxford, 156-175.

VANDERHOEVEN A., VYNCKIER G., COOREMANS B., ERVYNCK A., LENTACKER A. & VAN NEER W. 2007a: Het oudheidkundig bodemonderzoek aan de de Schaetzengaarde te Tongeren (Prov. Limburg) 2004, *Relicta* 3, Brussels, 159-182.

VANDERHOEVEN A., VYNCKIER G., COOREMANS B., ERVYNCK A., LENTACKER A., VAN NEER W. & DE GROOTE K. 2007b: Het oudheidkundig bodemonderzoek aan de Mombersstraat te Tongeren (Prov. Limburg) 2005, *Relicta* 3, Brussels, 93-158.

VANDERHOEVEN A. & VYNCKIER G. 2009a: Tongeren: Clarissenstraat. In: CREEMERS G. & VANDERHOEVEN A. (red.), Archeologische kroniek van Limburg 2004, *Limburg – Het Oude Land van Loon* 88, 4, 324-328.

VANDERHOEVEN A. & VYNCKIER G. 2009b: Tongeren: Vermeulenstraat 1. In: CREEMERS G. & VANDERHOEVEN A. (red.), Archeologische kroniek van Limburg 2005, *Limburg – Het Oude Land van Loon* 88, 4, 374-375.

VANDERHOEVEN A. & VYNCKIER G. 2010: Tongeren: Vermeulenstraat 2. In: CREEMERS G. & VANDERHOEVEN A. (red.), Archeologische kroniek van Limburg 2007, *Limburg – Het Oude Land van Loon* 89, 2, 147-150.

VANDERHOEVEN A., VYNCKIER G., LENTACKER A., ERVYNCK A., VAN NEER W., COOREMANS B., DEFORCE K., VAN HEESCH J. & DE BIE M. 2014: Het oudheidkundig bodemonderzoek aan de Sacramentstraat te Tongeren (Prov. Limburg) 1993, *Relicta* 11, Brussels, 7-162.

VANDERHOEVEN A., PANHUYSEN T. & DREESEN R. 2016: The use and reuse of local-regional and imported decorative stones in a Roman urban quarter and early medieval church in *Atuatica Tungrorum* (Tongeren, Belgium). In: COQUELET C., CREEMERS G., DREESEN R. & GOEMAERE E., *Roman ornamental stones in Western Europe. International Conference Tongeren 20-22 April 2016. Abstract Book*, 34.

VANDERHOEVEN A. & ERVYNCK A. (Eds.) 2016: *Het archeologisch en bouwhistorisch onderzoek van de O.L.V.-basiliek van Tongeren (1997-2013)*, Relicta Monografieën 11 &12, Brussels.

VAN DER WERFF J.H., THOEN H. & VAN DIERENDONCK R.M. 1997: Amphora Production in the Lower Scheldt Valley (Belgium)? The Valkenburg-Marktveld Evidence, *Rei Cretariae Romanae Fautores-Acta* 35, Abingdon, 63-71.

VAN DE STAEY I. 2014: *Archeologisch onderzoek aan de Heurkensberg te Tongeren*, ARON-Rapport 210, Sint-Truiden.

VAN EMMERIK W.A.M. & DE NIE H.W. 2006: *De zoetwatervissen van Nederland. Ecologisch bekeken*, Bilthoven.

VAN ENCKEVORT H. 2004: Bredase akkers eeuwenoud. 4000 jaar bewoningsgeschiedenis op de rand van zand en klei. In: KOOT C.W. & BERKVENS R. (red.), *Het gedraaide aardewerk uit de Romeinse Tijd*, Rapportage Archeologische Monumentenzorg 102, Breda, 281-358.

VAN ENCKEVORT H. & THIJSSEN J. 2003: Nijmegen - A Roman Town in the Frontier Zone of Germania Inferior. In: BENNETT J., VAN ENCKEVORT G. & BUCKLEY R. (eds.), *The archaeology of Roman towns : studies in honour of John S. Wacher*, Oxford.

VAN HAEPEREN F. 2012: Collèges de dendrophores et autorités locales et romaines. In: DONDIN-PAYRE M. & TRAN N. (eds.) *Collegia. Le phénomène associatif dans l'Occident romain*, Scripta Antiqua 41, 47-62.

VAN HEESCH J. 1998: *De muntcirculatie tijdens de Romeinse tijd in het noordwesten van Gallia Belgica. De civitates van de Nerviërs en de Menapiërs (ca. 50 v.C. – 450 n.C.)*, Monografie van nationale archeologie 11, Brussels.

VAN KERCKHOVE J. & BOREEL G.L. 2014: A characterization of the pottery production in Heerlen (Limburg, The Netherlands): fabric analysis and typo-chronology, *Xantener Berichte* 27, 241-286.

VAN KERCKHOVE J., LEPOT A., BORGERS B. & WILLEMS W. 2014: Understanding Consumption Patterns in the civitas Tungrorum through the Identification of the 'Noor 1' ware, *Rei Cretariae Romanae Fautorum Actae* 43, 173-182.

VAN KLINKEN G.J. 1999: Bone collagen quality indicators for palaeodietary and radiocarbon measurements, *Journal of Archaeological Science* 26, 6, 687-695.

VAN NEER W. 1994: Het dierlijk beendermateriaal. In: VANVINCKENROYE W. (ed.), *Een bijdrage tot het stadskernonderzoek van Romeins Tongeren*, Publicaties van het Provinciaal Gallo-Romeins Museum Tongeren 46, Tongeren, 28-36.

VAN NEER W. & ERVYNCK A. 2007: De zoöarcheologische studie van de ontwikkeling van de exploitatie van de zee: een status quaestionis voor Vlaanderen. In: DE KRAKER A.M.J. & BORGER G.J. (eds.), *Veen-Vis-Zout. Landschappelijke dynamiek in de zuidwestelijke delta van de Lage Landen*, Geoarchaeological and Bioarchaeological Studies 8, Amsterdam, 45-54.

VAN NEER W. & ERVYNCK A. 2009: The Holocene occurrence of the European catfish (*Silurus glanis*) in Belgium: the archaeozoological evidence, *Belgian Journal of Zoology* 139, 70-78.

VAN NEER W., WOUTERS W., VILVORDER F. & DEMANET J.-C. 2009: Pont-à-Celles/Luttre: importation de poissons marins dans le vicus des « Bons-Villers » à Liberchies, *Chronique de l'Archéologie Wallonne* 16, 46-48.

VAN NEER W., ERVYNCK A. & MONSIEUR P. 2010: Fish bones and amphorae: evidence for the production and consumption of salted fish products outside the Mediterranean region, *Journal of Roman Archaeology* 23, 1, 161-195.

VAN PRUISSEN & VAN DER CHIJS 2005: Slakken en ovenmateriaal. In: TICHELMAN G., *Het villacomplex Kerkrade-Holzkuil*, ADC Archeoprojecten Rapport 155, Amersfoort, 238-243.

VANVINCKENROYE W. 1965. *Opgravingen te Tongeren in 1963-1964 door het Provinciaal Gallo-Romeins Museum*, Publicaties van het Provinciaal Gallo-Romeins Museum Tongeren 8, Tongeren.

VANVINCKENROYE W. 1975: *Tongeren Romeinse stad*, Publicaties van het Provinciaal Gallo-Romeins Museum te Tongeren 23, Tongeren.

VANVINCKENROYE W. 1984: *De Romeinse zuidwestbegraafplaats van Tongeren. Opgravingen 1972-191*, Publicaties van het Provinciaal Gallo-Romeins Museum 29, Tongeren.

VANVINCKENROYE W. 1985: *Tongeren Romeinse stad*, Tielt.

VANVINCKENROYE W. 1991: *Gallo-Romeins aardewerk van Tongeren*, Publicaties van het Provinciaal Gallo-Romeins Museum 44, Tongeren.

VANVINCKENROYE W. 1994a: *Een bijdrage tot het stadskernonderzoek van Romeins Tongeren*, Publicatie van het Provinciaal Gallo-Romeins Museum Tongeren 46, Tongeren.

VANVINCKENROYE W. 1994b: Een Romeins votiefaltaar te Tongeren, *Limburg* 73, 225-237.

VELDMAN H., GEERTS R., HAZEN P. & VAN DER VELDE H. (red.) 2014: *Aan de rand van de Romeinse stad Atuatuca Tungrorum*, ADC Monografie 16, Amersfoort.

VERBOVEN K. 2012: Les collèges et la romanisation dans les provinces occidentales. In: DONDIN-PAYRE M. & TRAN N. (eds.), *Collegia. Le phénomène associatif dans l'Occident romain*, Scripta Antiqua 41, 13-46.

VILVORDER F., HARTOCH E., VANDERHOEVEN A. & LEPOT A. 2010: La céramique de Tongres, quatre siècles de production d'un caput civitatis, *SFECAG. Actes du Congrès de Chelles*, 241-256.

VIPARD P. 2007: Maison à péristyle et élites urbaines en Gaule sous l'Empire, *Gallia* 64, 227-277.

VITRUVIUS 2008: *Handboek bouwkunde*. Vertaling Ton Peters, Amsterdam.

VON DEN DRIESCH A. & BOESSNECK J. 1974: Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmassen vor- und frühgeschichtlicher Tierknochen, *Säugetierkundliche Mitteilungen* 22, 4, 325-348.

VRIELYNCK S., BELPAIRE C., STABEL A., BREINE J. & QUATAERT P. 2003: *De visbestanden in Vlaanderen anno 1840-1950. Een historische schets van de referentietoestand van onze waterlopen aan de hand van de visstand, ingevoerd in een databank en vergeleken met de actuele toestand*, Rapport Instituut voor Bosbouw en Wildbeheer IBW.Wb.V.R. 2002, 89, Hoeilaart.

VYNCKIER G. & VANDERHOEVEN A. 2011: *Een noodopgraving aan de Moerenstraat te Tongeren (Prov. Limburg)*. Intern VIOE-rapport 7, Tongeren.

WARRY P. 2006: *Tegulae, Manufacture, typology and use in Roman Britain*, BAR British Series 417, 2006, Oxford.

WATTS D. 1998: *Religion in Late Roman Britain*, London.

WENHAM S. 1989: Anatomical interpretations of Anglo-Saxon Weapon injuries. In: HAWKES S. (ed.), *Weapons and warfare in Anglo-Saxon England*, Oxford, 123-139.

WESEMAEL E. 2009: *Prospectie met ingreep in de bodem aan de Meulenweg te Kesselt (Lanaken). Onderzoek naar aanleiding van de uitbreiding van een leemgroeve*, ARON-Rapport 46, Sint-Truiden.

WILLEMS S. 2005: *Roman pottery in the Tongeren reference collection: mortaria and coarse wares*, VIOE-Rapporten 1, Brussel.

WILLEMS S. 2013: Le potier. In : CLOTUCHE R.(dir.), *La ville antique de Famars*, Valenciennes, 90-105.

WILLEMS S. & DUBOIS C . 2013: Le faciès précoce des militaires et des civils, des vivants et des morts: données nouvelles en territoire nervien, *SFECAG. Actes du Congrès d'Amiens*, 81-97.

WILTSE L.L., WIDDLL E.H. Jr & JACKSON D.W. 1975: Fatigue fracture: the basic lesion in isthmic spondylolisthesis, *Journal of Bone & Joint Surgery* 57, 17-22.

WYNS S. 2010: *Tongeren, de oude busstelplaats fase 1. Een Definitief Archeologisch Onderzoek*, ADC Archeoprojecten Rapport 1293/ Vlaams Archeologisch Rapport 2, Amersfoort.

ZELLE M., 2008: Schöne bunte Welt-Aspekte der farblichern Gestaltung einer römischen Stadt. In: HÜLLER M., SCHALLES, H.J. & ZIELING, N. (eds.): *Colonia Ulpia Traiana. Xanten und seine Umland in römischer Zeit*. Xantener Berichte, Sonderband Geschichte der Stadt Xanten 1, Mainz am Rhein, 433-446

Historia Augusta, Vita Didi Iuliani.

Primitief kadaster Tongeren,1829, sectie C.

Kadaster Tongeren, circa 1840-1844, sectie C.

Kadaster Tongeren, circa 1880-1890, sectie C, 1044.

http://www.isprambiente.gov.it/it/museo/collezioni/collezioni-litomineralogiche/lito-reperti ISPRA (Instituto Superiore per la Protezione e la Ricerca Ambientale). *Collezione Litomineralogiche. Lito reperti.*

Munsell Color, X-Rite, 2009: *Geological Rock-Color Chart*.http://munsellstore.com/files/CIPA00011%5C599.pdf

MUSNAF (Museo di Storia Naturale dell'Accademia del Fisicocritici). Catalogo della Collezione di Marmi. http://www.musnaf.unisi.it/collezione-marmi.asp

Universita dei Marmori di Roma. Elenco Campionario Marmi. http://www.universitadeimarmorari.it/campionario.html