

rians interested in the study of Roman glass vessels in the north-western provinces. This two-volume monograph will certainly also find many readers beyond glass specialists.

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**HELGA SEDLMAYER, Große Thermen, Palästra, Macellum und Schola im Zentrum der Colonia Carnuntum.** With contributions by Stefan Groh, Gabrielle Kremer, Elisabeth Pichler, and Ursula Schachinger. Zentraleuropäische Archäologie volume 5. Österreichisches Archäologisches Institut, Wien 2015. € 83.00. ISBN 978-3-7001-8192-7. 471 pages, 285 illustrations, 28 tables.

From the Claudian period until Late Antiquity, Carnuntum was one of the major Roman military sites on the Middle Danube. The legionary camp, the adjoining *canabae*, and the cavalry fort have been excavated since the early 20<sup>th</sup> century, while military inscriptions and militaria have been published and presented in the Museum Carnuntinum in Bad Deutsch Altenburg (W. JOBST [ed.], Carnuntum. Das Erbe Roms an der Donau. Katalog der Ausstellung des Archäologischen Museums Carnuntinum in Bad Deutsch Altenburg AMC. Kat. Niederösterreich. Landesmus. N. F. 303 [Carnuntum 1992]).

The publication reviewed here shifts the focus from the military to the civilian life of Roman Carnuntum, which had remained in the shadow of the army for a long time (W. JOBST, Provinzhauptstadt Carnuntum. Österreichs größte archäologische Landschaft [Wien 1983] 132; F. HUMER [ed.], Legionsadler und Druidenstab. Vom Legionslager zur Donaumetropole. Sonderausstellung aus Anlass des Jubiläums “2000 Jahre Carnuntum”. Textband. Kat. Niederösterreich. Landesmus. N. F. 462 [St. Pölten, Bad Deutsch Altenburg 2006] 270). It deals with the archaeological remains of a Roman *insula* situated in the heart of the Severan *colonia Carnuntum*, the former *municipium Aelium Carnuntinum*, a civilian settlement of 52 ha, about 2.2 km west of the legionary camp. The building complex covered an area of 1.4 ha and was excavated between 1932 and 1977 in the so-called Tiergarten of Petronell. Several preliminary reports labelled the site as a “Palastruine” (palace ruins), but no final report appeared until 2015, when Helga Sedlmayer, a researcher at the “Österreichisches Archäologisches Institut” (ÖAI), and her co-authors Stefan Groh, Gabrielle Kremer, Elisabeth Pichler, and Ursula Schachinger published the present study. It was funded between 2004–2008 by the Austrian “Fonds zur Förderung wissenschaftlicher Forschung” (Fund for the Promotion of Scientific Research FWF). Among the archaeological remains recovered in the excavations, they identify a large baths complex with a market building (*macellum*) and an assembly hall (*schola*), which they dub the “baths-*macellum* complex”.

The book consists of four main chapters: 1) history of research; 2) results of the excavations; 3) discussion of the urban and historic context; 4) reuse of the area after Late Antiquity. After a synthesis in chapter 5, an appendix (chapter 6) presents lists of abbreviations, a bibliography, and typological tables of pottery. Coins, pottery, and small finds are treated within their respective stratigraphic context. Except for the coins and sculptured stones, there are no overview chapters on the other categories of portable objects from the excavations.

In all, 22 campaigns took place on the site in 1932, 1939, 1955–1964 and 1967–1977; they were directed by Erich Swoboda until 1964 and thereafter by Herma Stiglitz. The records of these campaigns are held by the ÖAI and the University of Graz (Styria, Austria). Finds are kept in the

storerooms of the archaeological branch of the Government of Lower Austria and at the University of Graz. All the material from the 1939 campaign and most of the pre-1964 finds are now lost. In all, the authors studied 16 560 archaeological objects, of which they could examine about two thirds in the original (p. 11 f.).

E. Swoboda's excavations of 1939 were generously funded by the Nazi Gauleiter Hugo Jury almost immediately after the German annexation ("Anschluss") of Austria in 1938. Carnuntum then played a prominent role in the National Socialist propaganda as the "gateway of Germania" through which Germanic tribes invaded the Roman Empire (M. KANDLER, Guido List, Adolf Hitler und Carnuntum. In: L. Dollhofer et al. [eds], *Altmodische Archäologie. Festschr. Friedrich Brein. Forum Arch.* 14,3, 2000, 103–110). With the outbreak of World War II, excavations were suspended, to be resumed in 1955 by Swoboda and his wife Roksandra Swoboda-Milenovic on behalf of Graz University. After E. Swoboda's death in 1964, Herma Stiglitz of the ÖAI directed the project until its end in 1977 (pp. 18–28).

The main chapter concerning the archaeological evidence starts with an introduction to the site's topography and hydrology (pp. 30–36). The baths-*macellum* complex measured 143.15 x 99.6 m and is situated on a slight slope just north of the forum of the *colonia* (p. 33). Water was supplied from springs in the south and west by at least two ancient conduits, traces of which were identified in surveys.

Deep soundings, mainly in the southern part of the site, revealed the pre-Roman ground surface and traces of fire clearance before a gravel road was built, embedding material of the first half of the 1<sup>st</sup> century AD (p. 37 f.). Adjoining floors of beaten earth, walls, hearths, and a well belong to the earliest occupation in the area. These structures were destroyed by fire around the middle of the 2<sup>nd</sup> century, but it remains unclear whether this episode is connected to the Marcomannic wars (pp. 38–52).

The *insula* of the baths-*macellum* complex was limited in the east by the *Cardo maximus* and in the south it had a portico fronting onto the *Decumanus maximus*. Both streets were paved most probably in the second half of the 2<sup>nd</sup> century (pp. 52–55). To the west, neighbouring buildings were attached directly to the exterior wall of the *insula*, leaving no room for another street. Subterranean sewage channels in the south-western part of the *insula* and underneath the *Cardo maximus* headed northwards to the Danube, with a latrine joined onto the north-eastern exterior wall of the *insula*. Apart from a well in the *macellum* and a water spout in the *natatio* of the baths, no traces of freshwater conduits have survived (pp. 55–68).

The baths complex in the northern part of the *insula* covers 4086.6 m<sup>2</sup>. It consists of an eastern wing with 14 rooms and a western wing with at least 18 rooms. Large heated halls are concentrated in the south-west, while the eastern wing was dominated by unheated corridors, a *sudatorium*, courtyards, a large *frigidarium* with a *piscina*, and a *natatio*. Heating was supplied by three *praefurnia*, two of them in the south and one in the north. In the adjoining courtyard four pillars of an elevated hot water tank were discovered. The walls consisted of ashlar masonry ("Pseudo-*opus vittatum*") with levelling layers of brick ("Ziegelausgleichsschicht"), placed on foundations of boulders set in concrete (*opus caementitium*). Fragments of sandstone columns, marble inlays, wall painting, and stucco were found in debris layers within the ruin, indicating the luxurious architectural decoration of the complex (pp. 68–118).

After a general description of the building, certain technical aspects are discussed in greater detail: these discussions concern mainly floors and ceilings, heating, freshwater use, and sewage. The analysis includes comparisons with baths in other Roman provinces, mainly in the Mediterranean (pp. 118–139).

Given its sloping surface, the site had to be levelled before the construction of the baths by at least 1 m of soil containing settlement debris. Sherds and coins in these layers covered the period from the second half of the 1<sup>st</sup> century AD to the late 2<sup>nd</sup> century AD, while layers associated with the construction contained material of the late 2<sup>nd</sup> century AD and a Severan coin, from which the author concludes that the baths were built in the Severan period (pp. 139–155). In the 3<sup>rd</sup> century, curtain walls were added to the southern and western façade of the building, and minor changes were made to the heating system (p. 155). Burnt layers on top of some floors indicate that parts of the complex of Period 1 were damaged by fire between AD 260 and 280 (pp. 155–157).

Consequently, the building of Period 1 fell into disuse, except for the rooms on the southern side. The northern sector of the baths was converted to workshops and simple dwellings. Other parts of the structure collapsed, and fresh soil accumulated over the floors. Period 2 is characterised by dismantlement and restructuration: hypocausts were filled with debris, marble decorations dismantled for use in lime kilns, and walls torn down for reuse as building stone. Metal fittings were removed and melted down for secondary use, bones were cut for tools and instruments, and capitals and other decorative architectural elements were chipped off for reuse (pp. 157–220).

Stratified finds associated with these workshops date from the early 4<sup>th</sup> century AD to the 380s. In the mid-4<sup>th</sup> century AD an earthquake ruined the vaulted halls in the south. Later in that century, major parts of the building collapsed once again (pp. 220–224).

The baths complex is surrounded in the south by a *palaestra* of 1580 m<sup>2</sup> and in the north by an access yard. The open space of the *palaestra* was limited by porticoes on the western, southern, and eastern side. Access from the *Decumanus maximus* was through two corridors, the western later converted to a urinal. Like the baths complex, the *palaestra* was constructed in the Severan period and damaged by fire in the second half of the 3<sup>rd</sup> century AD. Reuse of the ruin in Period 2 is dated to the 4<sup>th</sup> century by coins and pottery (pp. 224–236).

The structures bordering the *palaestra* to the south are identified by Sedlmayer as a *macellum* with a *schola*. They consisted of a U-shaped row of 16 *tabernae* behind a peristyle. One round and two octagonal pavilions occupied the open space between the portico and the *Decumanus maximus*. Beam slots in the walls of the *tabernae* indicate that the original floor level was elevated and that the preserved walls belong to the basement. The architectural decoration of the *macellum*, with limestone columns and painted plaster, was more modest than in the baths. The *schola* is separated from the *macellum* by a corridor / urinal. Its tripartite entrance opening onto the *Decumanus* is a peculiar feature, commonly known, however, amongst ancient synagogues of the so-called Galilean type. The stratigraphy of the *macellum-schola* wing corresponds roughly to the building history of the *thermae*: after fire clearance, the area was levelled with layers of soil mixed with artefacts of the 1<sup>st</sup> and 2<sup>nd</sup> century up to about AD 170/180, when the *macellum* and *schola* were built. Their wooden floors were destroyed by a fire around the third quarter of the 3<sup>rd</sup> century, which interrupted market activities. The *tabernae* were filled with debris after Constantine I, with sparse indications of reuse until the latter half of the 4<sup>th</sup> century (pp. 237–263).

The identification of the *schola* is attested by a dedicatory inscription found together with other fragments of stone sculpture inside the *schola*. The inscription was dedicated by Lucius Octavius Faustianus on behalf of the *collegium fabrorum Karnuntinensium* (pp. 263–270).

In a detailed numismatic report, Ursula Schachinger analyses the 287 coins from the baths-*macellum* compound and compares them with the 38 500 coins of the overall list compiled for Carnuntum. While pre-Flavian coinage is represented only sparsely, a regular influx in coins is recorded from the period of Domitian onwards. Particular peaks can be observed for the years 161–192 (Marcus Aurelius to Commodus), 260–275 (Gallienus to Aurelianus), and c. 330–380. The latest

coins from both the baths and the *macellum* can be attributed to the period 388–392. This distribution pattern corresponds well with the general coin list of the civilian town of Carnuntum, except for the sparse occurrence of Severan coins from the *thermae* (pp. 271–318).

In her synthesis (chapter 3), Helga Sedlmayer discusses the conception and function of the compound in the middle and late Imperial period (pp. 319–383). The construction date, late in the 2<sup>nd</sup> century, and structural characteristics, such as the spacious *palaestra*, are paralleled primarily by baths buildings in the African provinces and differ significantly from the row-type *thermae* familiar in the north-west of the Roman Empire. Furthermore, the ground plan of the *macellum* with its three *tholoi* is related to a North African archetype from Leptis Magna and has a parallel in Aquincum. Thus, according to Sedlmayer, the *thermae-macellum* complex of Carnuntum is the result of an initiative of Septimius Severus to honour the place where he was proclaimed emperor. The construction may have been realised by the Imperial legate Lucius Fabius Cilo, governor of Pannonia under Septimius Severus and, like the Emperor, of North African origin (pp. 320–355). By its central position at the crossroads formed by the *Cardo* and *Decumanus maximus* next to the forum, the building complex represents the urbanistic concept of the Severan dynasty and materialises Carnuntum's new status as a *colonia* (pp. 357–370). Later in the 3<sup>rd</sup> century, a fire put the baths-*macellum* complex out of use, the roof collapsed, and the water and sewage channels no longer functioned. Thus, the complex shared the fate of the civilian city. Soil covered the ancient floors (pp. 381–383). Decades later, recycling workshops and minor dwellings took over the ruin, until nothing of value was left. When an earthquake hit Carnuntum late in the 4<sup>th</sup> century, the former baths-*macellum* complex must have been a deserted ruin. Two graves dated to Late Antiquity or the Early Middle Ages and stray finds of jewellery and pottery point to a reuse of the area between the 5<sup>th</sup> and the 8<sup>th</sup> century, possibly as a burial ground (pp. 374–376).

With their thorough analysis of the archaeological evidence, Helga Sedlmayer and her co-authors provide us with a convincing new view of a building complex which had long been considered enigmatic or misunderstood as a “Palastruine” (cf. E. SWOBODA, Carnuntum. Seine Geschichte und seine Denkmäler. Röm. Forsch. Niederösterreich 1 [Graz, Köln 1964] 153: “[...] es fehlt lediglich ein Fund, der die einstige Zweckbestimmung des Bauwerks über jeden Zweifel erhebt. Demnach hat jede Aussage hierüber hypothetischen Charakter”). Their work is an important contribution to a better understanding of the urban development of Carnuntum in the 3<sup>rd</sup> and 4<sup>th</sup> centuries. The powerful impact of the Severan dynasty raised the pre-existing civilian settlement to the rank of a *colonia* with a monumental municipal centre. Less than a century later the splendour of Period 1 had gone. Damage by fire led to a partial abandonment of the compound, followed by dismantling and recycling of the ruin in Period 2 (4<sup>th</sup> century).

In the opinion of the present reviewer, it is precisely this focus on the 3<sup>rd</sup> and 4<sup>th</sup> centuries that constitutes the book's special value. Even after decades of *limes* research, the demise of Roman provincial life along Rome's northern frontiers is still insufficiently understood. Although it would be worth knowing more about the pre-*colonia* settlement of the 1<sup>st</sup>–2<sup>nd</sup> centuries AD too, the real challenge for archaeology is to find out how the flowering civilian life behind the *limes* came to an end between the 3<sup>rd</sup> and the early 5<sup>th</sup> centuries AD. Helga Sedlmayer and her team have made a significant contribution to this issue, showing that the decline of Carnuntum was not a single blow by barbarian armies but a gradual process involving various agencies.

From personal experience with the publication of earlier excavations, so-called “Altgrabungen” (H.-P. KUHNEN [ed.], Das Amphitheater Trier I. Ausgrabungen und Forschungen 1816–1996. Arch. Rheinland-Pfalz 2 [Rahden / Westf. 2017] VIII f.), this reviewer appreciates the authors' labour of compiling and analysing information from rather uneven sources, including excavation diaries (“Grabungstagebücher” or GTB), museum files, and preliminary reports.

There is little that could be improved: a synthesis chapter about the pottery would have shortened and focused the descriptions of the excavation results. Some more statistical analysis in the numismatic report might have made the periodisation clearer, and a fold-out plan would have been easier to handle (but more expensive to produce) than the general plans within the text (fig. 3). But these are details. In sum, Helga Sedlmayer and her team should be congratulated on this volume, which will enrich the history of civilian Carnuntum and of the province of Upper Pannonia.

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**DAVID BREEZE, Bearsden. A Roman Fort on the Antonine Wall.** The Society for Antiquaries of Scotland, Edinburgh 2016. £ 30,-. ISBN 978-1-90833-208-0. xxxii + 405 Seiten mit 277 Abbildungen und 59 Tafeln.

Mit dem vorliegenden Band erfolgt nach 25 Jahren die lange erwartete Publikation der von 1973–1992 mit Unterbrechungen im römischen Lager von Bearsden am Antoninuswall durchgeführten Ausgrabungen. David Breeze baut damit auf einer Reihe von Vorberichten und Aufsätzen auf (S. xxi) und liefert Datengrundlagen und Diskussionsbeiträge, welche die bisher publizierten Thesen untermauern. Obwohl die Aufmachung des Bandes eine Art *coffee-table-book* zu einem römischen Kastell vermuten lässt, handelt es sich hier um einen detaillierten Ausgrabungsbericht, der, wo möglich, den Idealstandards der New Archaeology Großbritanniens der 1960er Jahre folgt (siehe Einführung und insbesondere den Verweis auf den Aufbau der Publikation nach den Parametern Leslie Grinsells auf S. 1).

So folgen der von D. Breeze selbst verfassten Einführung und seiner Besprechung der Ausgrabungen eine Reihe detaillierter *specialist reports* zu Böden, Stein, Ziegeln, Keramik, Mörtel, Glas, Gemmen, Metall, Münzen, botanischen Überresten, Dendrochronologie, Knochen, Insektenfunden, Leder und anderen Fundkategorien, die von namhaften Experten der jeweiligen Materie verfasst sind. Hier sind sowohl der akademische Sektor (Queen's University Belfast, Vrije Universiteit Amsterdam, University of Glasgow, University of Leicester, University of Bradford, University of Oxford, University of York, University of East London, University of Durham, University of Southampton) und die wichtigen Museen der Region (British Museum, Arbeia Roman Fort and Museum, National Museums of Scotland, Tyne and Wear Archives and Museums, Hunterian Museum) vertreten, es finden sich aber ebenso bekannte Namen aus den Bereichen Denkmalpflege (Historic Scotland) und Spezialisten aus der kommerziellen Archäologie. Die Detailstudien dieser weit gefächerten und bewusst gewählten Expertengruppe, welche Schlüsselfiguren der römischen Archäologie in Großbritannien wie Lindsay Allason-Jones, Paul Bidwell, Brenda Dickinson, Lawrence Keppie und Jennifer Price, um nur einige wenige zu nennen, umfasst (siehe vollständige Liste S. xxvii), werden von D. Breeze im Rahmen einer umfangreichen Abschlussdiskussion noch einmal zusammengefasst und holistisch ausgewertet.

Aus diesem Aufbau ergibt sich eine Fülle von Details, die mitunter zu erstaunlichen Erkenntnissen führt. So konnte festgestellt werden, dass in den Kastelllatrinen wohl Moos zur Selbstreinigung verwendet wurde (S. 327; 371), was einen wichtigen Beitrag zum Verständnis römischer Hygiene liefert; große Teile der Kastellbevölkerung litten anscheinend unter Wurmbefall (S. 301–303) und verzehrten Schlafmohn in signifikanten Mengen (S. 272). Das Kapitel zu Mühlsteinen (S. 94–98)