In general, the papers reflect a rather old-fashioned approach to archaeological material and its interpretation. Most do not appear to have in mind research questions designed to explore the historical, cultural, social and economic development of this major urban centre on the Lower Rhine. The majority of the studies were financed, via the University or the Museum, by the Ministerium für Stadtentwicklung, Kultur and Sport of Nordrhein-Westfalen or by the Fritz Thyssen Stiftung (an industrial foundation). One cannot help but wonder whether the funds might not have been better spent on inter-related research projects or on the proper evaluation and excavation of endangered sites in the city.

Department of Archaeology, University of Sheffield

identity and Romanisation," in S. Cottam *et al.* (edd.), *TRAC 94* (Oxford 1994) 133-40; N. J. Cooper, "Searching for the blank generation: consumer choice in Roman and post-Roman Britain," in J. Webster and N. J. Cooper (edd.), *Roman Imperialism: post-Colonial perspectives* (Leicester 1996) 85-98; or S. Willis, "Samian: beyond dating," in K. Meadows, C. Lemke and J. Heron (edd.), *TRAC 96* (Oxford 1997) 38-54, as well as more recent works.

The walls of Augsburg, provincial capital of *Raetia*

Peter-Andrew Schwarz

SALVATORE ORTISI (mit Beiträgen von LOTHAR BAKKER und MECHTHILD OVERBECK), *DIE STADTMAUER DER RAETISCHEN PROVINZHAUPTSTADT AELIA AUGUSTA–AUGSBURG. DIE AUSGRABUNGEN LANGE GASSE 11, AUF DEM KREUZ 58, HEILIG-KREUZ-STR. 26 UND 4* (Augsburger Beiträge zur Archäologie Band 2; Wissner Verlag, Augsburg 2001). Pp. 215, figs. 47 (some in color), pls. 73, maps 22 (6 maps in end pocket). ISBN 3-89639-288-3. Euro 40.

Between 1986 and 1995 the Archaeological Service of Augsburg examined large sections of the defensive wall and ditches of *municipium Aelium Augustum* in the context of four rescue-excavations. This richly-illustrated book, based on a dissertation submitted in 1997 to the Ludwig-Maximilians-Universität München, makes a detailed presentation and analysis of the excavated structures and finds. It offers important results for the history of Augsburg in the Imperial period and late antiquity, and its significance extends beyond the borders of the province of *Raetia*. Unfortunately, the results are only summarized in German (94),[1] so it is hoped that the present review will make the work better known outside Germany.

I will briefly review the other contents of the book before summarizing the main archaeological and historical results for our knowledge of the city. Chapter 1 deals with topography, the history of research as well as the results of excavations conducted by L. Ohlenroth between 1918 and 1933 and between 1945 and 1959. Chapter 2 elucidates the finds of the most recent excavations (1986-94). It treats the earlier settlement structures (cellars, storage pits, wells, rubbish pits) as well as the structures of the actual fortifications

1 The author presented the main results in an article: "Vallum cum turribus — Zur Westumwehrung der raetischen Provinzhauptstadt AELIA AUGUSTA/Augsburg," in L. Wamser and B. Steidl (edd.), *Neue Forschungen zur römischen Besiedlung zwischen Oberrhein und Enns* (München 2002) 145-56. For the history of the pre- and early Roman settlement, see A. Schaub, "Topographie und Stratigraphie des römischen Augsburg aufgrund neuerer Ausgrabungen," ibid. 109-20.

Permission to copy may be obtained only from *JRA* (jra@JournalofRomanArch.com)

(defensive wall, towers, defensive ditches). I draw particular attention to the very successful reconstruction drawings of the complex remains (e.g., figs. 22-23).

Chapter 3 deals with the excavated objects that are relevant for the dating of the settlement and fortifications: coins, brooches (figs. 28-29), weapons and military equipment (figs. 30-35) as well as pottery. The latter contains a detailed presentation of relief-decorated samian ware, plain samian ware, coarse and other pottery, transport and storage vessels, as well as soap stone (steatite) vessels. L. Bakker includes a discussion of one of the leading types of Late Roman ceramics in the NW provinces of the empire, Argonne rouletted terra sigillata (figs. 43-46). Of the total of 47 specimens known by 1984, fully 95% belong to the Form Chenet 320. Of special interest are the results (67-69) of a comparison of stratified pottery deposits of the third quarter of the 2nd c. and the second quarter of the 3rd c. A.D. The author reaches the surprising conclusion (69) that coarse ware vessels from the second quarter of the 3rd c. 'were still in use for some time beyond the middle of the 3rd c. A.D.' and that the percentage of new coarse ware types was astonishingly small.[2] I note also that the author establishes (69-70), on the basis of well-stratified examples, that green-glazed *mortaria* were being produced already in the first half of the 4th c. A.D.

M. Overbeck presents 8 clay moulds used to make cast imitations of coins (fig. 47). They may be divided, technologically and chronologically, into 2 groups. The single-sided moulds were to make cast imitations of issues of Nerva, Trajan and Hadrian; the double-sided moulds were intended to make cast imitations of coins of Elagabalus and Maximinus Thrax in the early 3rd c. It is remarkable that none of the numerous cast forgeries from Augsburg has yet been classified as fitting these cast moulds (109). It remains open whether private individuals produced forgeries with these moulds or whether we are dealing with 'tolerated substitute money' or even with officially produced coins. With good reason Overbeck takes the view that the moulds were not used to produce *falsa moneta*. This seems to be confirmed by an accumulation of as many as 6,000 discarded clay moulds recently found in Augusta Raurica (Augst).[3]

The catalogue is arranged according to topographical criteria (the excavations) and the different structures (pits, walls, ditches). The corresponding ensembles are listed and categorised in groups according to the structures. A representative selection is given on pls. 6-73. The clear presentation includes groups of finds such as prehistoric pottery, bone artefacts, glass, human bones, (re-used) architectural elements, as well as production waste. The latter is common and offers evidence for glass production (158-59, 164), for a potter's workshop (165, 204), a bronze foundry (203), and for the processing of bone (204). The catalogue of the stratified deposits provides a valuable working tool for further investigations or detailed studies of other groups of finds. For this reason it would have helped to list not only the special animal bones (e.g., a horse skull [206] or a dog skeleton [123]) but all the other animal bones, at least with their weights. The publication of well stratified late-Roman animal bones is a necessity for further archaeozoological research.[4]

The only other faults to be found in the book rest in the printing quality of the illustrations (e.g., figs. 1, 6-7, 14, 31, 34, 38 or pls. 8-9, 12-13, 15-16, 19, 22, 34-35, 69, or map 2). In this regard, however, there can be no criticism of the retail price of the book; it is simply that this excellent piece of work deserved a higher quality of printing.

The archaeological and historical results of the work, presented on pp. 71-93, can be summarized as follows. Excavation on the four sites Lange Gasse 11, Heilig-Kreuz-Strasse 26, Auf dem Kreuz 58, and Heilig-Kreuz-Strasse 4 permitted the identification of several phases in the development of the W sector of the fortifications (figs. 6-7). Also taken into account are the much older observations made by L. Ohlenroth in the S sector and in the vicinity of the W gate (see pp. 16-26 and figs. 8-18).

In order to make room for the construction of the fortifications, residential areas on the W fringes of *municipium Aelium Augustum*, which had been settled since Flavian times, were torn

---

2 Cf. P.-A. Schwarz (mit naturwissenschaftlichen Beiträgen von G. Breuer/P. Lehmann, H. Hüster Plogmann und M. Petrucci-Bavaud/S. Jacomet sowie Fundmünzenbestimmungen von M. Peter), *Kastelen 4. Die Nordmauer und die Überreste der Innenbebauung der spätrömischen Befestigung auf Kastelen. Die Ergebnisse der Grabung 1991–1993.51 im Areal der Insula 1 und der Insula 2* (Forschungen in Augst 24, 2002) 196-203.

3 Cf. also M. Peter, *Untersuchungen zu den Fundmünzen aus Augst und Kaiseraugst* (SFMA 17, Berlin 2001) 239-51 and esp. n.810. A detailed study by M. Peter will be published shortly.

4 Cf. P. Lehmann and G. Breuer, "Die Tierknochenfunde aus den befestigungszeitlichen Schichten," in Schwarz *et al.* (supra n.2) 379-80 (English summary).

down and levelled. Open basements and wells were filled in with rubble and earth. A coin struck by Antonius Pius established a *terminus post quem* for these levelling works in the years between 152 and 154 (see p. 74; coin inv. no. 9 on p. 41). The earliest Samian ware that can be securely attributed to the older pits beneath the defensive wall comes essentially from the potteries of Banassac (55), Lezoux (55-56) and Heiligenberg (56). Also present were a few fragments of early Rheinzabern-style vessels. Thus the W part of the town's fortification was completed in the 160s or 170s, evidently in the context of the wars against the *Marcomanni* dating to 171/173 (p. 82).

However, the actual beginning of construction possibly took place as early as the reign of Hadrian, in connection with the elevation of *Augusta Vindelicum* to the rank of *municipium (Aelium Augustum)*. The importance of the province's economic, administrative and military centre suggests (78) that the *procurator Augusti provinciae Raetiae* resided in Augsburg probably from this time on. An important new result (78) is that there are no indications of an earlier timber and earth fortification, as L. Ohlenroth had presumed.

The free-standing defensive wall measures between 2.1 and 2.4 m in width. Its foundations consisted of two wall facings made of tuff ashlars with a less structured filling in between. Piers for support were attached to the inside of the wall at regular distances (46.5 m). The foundation walls were set on gravel *c.*1 m deep inserted into the natural subsoil (pp. 29-31 with figs. 22-23; pp. 35-36 and 78-82). Following the observations made by Ohlenroth, it can be concluded that there was a small step or layer between the foundations and the wall itself (fig. 22). Coverstones from the parapets of the defensive wall discovered in the fillings of one of the ditches permit further reconstructions of the battlements (figs. 23a-b). Several post-holes with tuff flakes and traces of mortar were detected inside the walls and interpreted as evidence of the scaffolding (30, 38 and 130-31; map 4; pl. 1.4).[5] As part of the original layout, a double-ditch system was dug 1.5-1.8 m in front of the town wall (maps 4-7, 9-17 and 21-22). It comprised two V-shaped ditches, both of them *c.*6 m wide and 3 m deep.

The defensive wall is 6.4 km long and encloses an area of 85,000 m^2 (26, 77). No significant reduction of the fortified area can be seen before the early Middle Ages. As the author rightly notes (90), this is quite significant: *Municipium Aelium Augustum* is one of the few settlements in the NW provinces whose perimeter was not reduced during late antiquity.[6] Accordingly, the estimated number of inhabitants during the Imperial period (8,000-12,000) also holds for late antiquity (26, nn. 26-27).

The clear influence of military architecture on the town walls suggests that the programme was carried out on behalf of provincial or imperial authorities. Thus far there is no clear evidence for a centrally-coordinated fortification programme to protect the most important centres of civil administration from external threats (74). Yet there may be a possible connection with the temporary stationing at Augsburg of at least parts of *legio III Italica*. In any event, after their erection the fortifications were among the most impressive monuments of the province, and Ortisi correctly classifies them as "repräsentative Wehrarchitektur" (82).

In the early 3rd c. the defensive ditches were repeatedly repaired but this was not necessarily motivated by actual threats. After the inner ditch had been partly filled in with earth, it was re-shaped again as a V- or U-shaped ditch (31-33, 35-37). The settlement areas outside were destroyed in the 240s. The extent of this catastrophe is shown by the remains of at least 24 individuals found in the suburb *extra muros* (83-84). Eight clay moulds for making coin imitations give important indications for fixing the time of the destruction (as mentioned above, these are presented by Overbeck [107-10 with fig. 47]). Although they were not found *in situ*, they could belong to one and the same forger's operation. A mould of a *denarius* of Maximinus Thrax suggests that the forger's mint must have been destroyed no earlier than *c.*235/236 (pp.

5 Cf. also Schwarz *et al.* (supra n.2) 68-71 and 83 with nn. 248 and 251.

6 Cf. Schwarz *et al.* ibid. 24-25 and 428 and esp. nn. 62, 68 and 71.

107-8, no. 7; fig. 47.5). It makes sense (83-84) to connect this destruction horizon with the barbarian (German) invasions of the 240s. After 235/236 the inner ditch was filled in with rubble from destroyed buildings of the settlement outside, and the outer ditch was brought back into working order (86).

The Constantinian era saw a complete restructuring of the fortifications. Square towers were added, the foundations of which were made of re-used materials (86-90). The outer ditch had been partly filled with sediments and a U-shaped ditch was cut into its filling. Further west, some 25 m from the wall, a new V-shaped ditch (6 m wide, 3 m deep) was dug. This seems to have been prompted by local topographic conditions, and not to be related to larger measures spreading over several provinces. The modernised defences were an outward sign of an economic upturn and of the central rôle of the provincial capital during the first two thirds of the 4th c. as headquarters of the *praeses provinciae Raetiae II* and the office of a *praepositus thesaurorum* (90).

Of particular interest is a group of 5 burials (1 woman, 3 men, 1 child) found at the excavation site Auf dem Kreuz 58 (pp. 86 and 145). One of these individuals could be identified from its characteristic components of costume of the period as a member of a cavalry unit which must have come from *Germania magna* (fig. 26 and pl. 73). Ortisi suggests tentatively (86) that we may be dealing with the *equites stablesiani seniores* who are mentioned in the *Notitia Dignitatum* for Augsburg.

A coin issued between 388 and 402 by Honorius (p. 90; coin inv. no. 58 on p. 44) establishes a *terminus post quem* for the final construction phase, a V-shaped ditch right next to the old U-shaped ditch which differed in alignment from the earlier ditches. Possibly this work was a reaction to the invasion in 383 by the *Juthungi*. Repairs on the outer ditch that might have been connected with this were detected only in one place.

Following Ohlenroth, Ortisi interprets (88) the massive layers of humus and rubble in the area of the W gate as indicating that the defensive wall was allowed to go to ruin soon after the works were completed. This conclusion still needs to be proven: these layers, called "dark earth" by British researchers, are not the result of a natural soil formation in a deserted settlement, but rather the result of the continuous accumulation of settlement layers and garbage deposits.[7] This dark earth is a typical phenomenon in late antiquity and on early medieval settlements. In the town's early mediaeval battlements probably only the SW parts of the Roman provincial capital's fortifications were of importance for purposes of defence (92).

Seminar für Ur- und Frühgeschichte der Universität Basel, Petersgraben 9, CH 4051 Basel

Acknowledgements

I wish to thank Felix Engel, Susan Lüthi and John Humphrey for their help in translating and editing this review.

---

7 R. I. Macphail, "The reworking of urban stratigraphy by human and natural processes," in A. R. Hall and H. K. Kenward (edd.), *Urban-rural connections: perspectives from environmental archeology* (Oxford 1994) 14, 20 and 37. Compare in this context also Schwarz *et al.* (supra n.1) 35, esp. n.134.