

FROM LATE ANTIQUITY TO THE EARLY MIDDLE AGES. THE “DARK CENTURIES” IN STYRIA (400–650 AD) AND THE “NEW BEGINNING” OF SETTLEMENT IN THE 7TH CENTURY

Christoph GUTJAHR, Stephan KARL, Christian GREINER

Abstract

This article deals with the period of Late Antiquity (from c. 380 AD) and the first phase of Early Medieval settlement on the territory of the present-day province of Styria. In the research area, finds from Late Antiquity and, even more so, from the transition to the Early Middle Ages (around 450–650), are surprisingly rare. This situation is illustrated here on the basis of selected groups of finds, including ARSW, Late Antique lead-glazed pottery, burnished pottery, coins and jewellery/attire. Apparently, Roman rural structures in Styria hardly survived beyond the end of the 4th century. It is also noteworthy that the activities of the Lombards, Ostrogoths, the (early) Avars and various other ancient gentes in the Eastern Alpine region, seem to have passed by Styria without a trace.

The second part of the contribution focuses on the earliest Slavic settlement features in Styria (c. 600–750). The Slavic settlement presumably started before 600, but there is only clear archaeological evidence for the last third of the 7th century. This early Slavic settlement horizon is limited in terms of material and finds and spatially restricted to western and central Styria. It is determined by the pit finds from Komberg, St. Ruprecht an der Raab and Enzelsdorf. Whereas settlement pits from Komberg and St. Ruprecht yielded pottery that can be dated to the middle or second half of the 7th century, continued excavations in Enzelsdorf have provided evidence of a settlement that probably existed from the 7th to the early 11th century.

Keywords: Styria, South East Alpine Region, Late Antiquity, Early Slavs, settlement, pottery

1. INTRODUCTION. AN OUTLINE OF THE HISTORICAL AND ARCHAEOLOGICAL SITUATION IN THE SOUTHEASTERN ALPINE REGION (380–600 AD)

Christoph Gutjahr

From the last third of the 4th century onwards, the citizens of the Western Roman Empire were confronted with massive upheavals. Decisive factors for this were, among other things, the crushing defeat of the Roman troops at *Adrianopolis*¹ in August 378 and, from the 5th

193–194, 199–200; Bratož 2011, 593. – A similar lasting effect is attributed to the crossing of the Rhine Limes by the Vandals, Quadian Suebi and Alans around 406–407 (Stickler 2002, 103–104; Lotter 2003, 195; Heather 2017, 244–248). The withdrawal of these populations from zones ahead of the Pannonian provinces may be tangible in the archaeological record (Tejral 2015, 173). Furthermore, the Vandal conquest of the Roman province of *Africa* in 429 and Rome's multiple failed attempts to reconquer it were decisive (Lotter 2003, 107; Heather 2017, 327–347); Western Rome's declining grip on the Iberian Peninsula also played a role (Heather 2017, 397–399). Momentous in terms of its exemplary effect was the *foedus* that Eastern Emperor Theodosius I concluded with the Danubian Goths under their leader Fritigern in 382, which granted the Goths extensive autonomy in Thrace and Moesia (Soproni 1985, 90; Wolfram 2003, 27; Lotter 2003, 199–200, 203; Rosen

¹ Weiler 1995, 163; Demandt 1996, 43; Lotter 2003, 48,

century onwards, the weakness of the empire's leadership. The Eastern Alps and the Pannonian region and thus also the former Eastern part of *Noricum mediterraneum*, today Styrian territory, were particularly affected by these changes.² Because of its strategic position between Italy and the Pannonian Plain, the south-eastern Alpine region was strongly involved in the political events of that time; the invasion of Radagaisus,³ the undertakings of Alaric⁴ and the internal Roman conflicts under Emperor Theodosius I against Magnus Maximus and Flavius Eugenius (388 and 394)⁵ bear witness to this. Certainly, people in *Noricum mediterraneum* were informed about the events in the Pannonian provinces

2009, 57–58; Brandt 2017, 59; see also Šašel Kos 1996, 161; Lippold 1996, 17–28). On the invasion of Pannonia (*Valeria*) by the Quades and Sarmatians, which is already recorded for 374–375, and the Roman cause for this, see especially Šašel Kos 1996, 154–173; Lotter 2003, 157. Heather (2017, 423–425) attributes a decisive part in the collapse of Western Rome to the Huns, especially to the fall of the Hun Empire. On the fall of Western Rome also: Ward-Perkins 2006, esp. 33–62; in general on Late Antiquity: Demandt 2008.

² After the Diocletian reforms, this area, which extended from *Aquileia* in the west to *Sirmium* in the east, corresponded to the four Pannonian provinces, two Norican provinces and the Dalmatian province in the Pannonian diocese, as well as the province *Venetia et Histria* in the Italian diocese (Lippold 1996, 17). The two Norican provinces belonged to the prefecture of Italy after the partition of Illyria in 396 (Weiler 1996, 137). For details on the course of events in the Pannonian diocese see Lotter 2003, 7–30.

³ Wolfram 2001, 175–176; Bratož 2011, 595–596.

⁴ In our opinion, before he marched to Italy in 408, Alaric took up quarters in the area of *Celeia*, as suggested by Grassl (1996, 177–184, esp. 183), which had been fortified with a city wall in the first half of the 4th century (Krempuš et al. 2005, 208–209; Ciglenečki 2014, 234). This is suggested by the route to Italy subsequently taken (via Hrušica); also, a camp in the vicinity of the capital of *Noricum mediterraneum* at that time would have been an ideal place to lend weight to Alaric's demands on Emperor Honorius (see also Gleirscher 2019, 34, 42–43). On Alaric's career and undertakings see Wolfram 2001, 143–168, esp. 161 (occupation of the Norican parts of present-day Slovenia, Carinthia and southern Styria in 408). A settlement in the Norican provinces had been brought up in negotiations by Alaric several times (Šašel 1979, 127; Wolfram 2003, 31–32). Glaser, on the other hand, assumes a direct replacement of *Virunum* in its function as capital by *Teurnia*, which is designated as capital in the *Vita Severini* 21, 2 by *Eugippius* ("*Tiburnia metropolis Norici*") (Glaser 2008, 597–599; 2015, 11–12). In any case, *Teurnia* became the Norican capital before the siege by the Ostrogoths, which is documented for 467 (*Vita Severini* 17, 4; on the correct dating of the event see: Wolfram 2003, 36 note 97; Glaser 2008, 599 note 8). For Rosenberger (2011, 213), referring to the mention of the later bishop *Paulinus* in the *Vita Severini*, it remains open whether *Teurnia* was the capital of both Norican provinces.

⁵ Lippold 1996, 18, 28; Bratož 1996, 334–344 (regarding the Christianisation process); Wolfram 2001, 142.

(especially in *Pannonia prima* and *Valeria*) and on the middle Danube border and knew about the political and socio-economic implications for the provincial population.⁶ In particular, the southeastern part of *Noricum mediterraneum* was tangentially affected, or at least alarmed, with regard to the events (Radagaisus, Alaric, later Huns)⁷ and the resulting flight of large parts of the population. The latter assertion, however, cannot be specifically inferred from the written sources for Styria and can only be guessed at from archaeological findings.⁸ In the early 5th century, Italy was the primary destination of those Pannonian refugees who turned westwards, later – during the Avar conquests in the late 6th century – also Istria.⁹

The "Hunnic factor" proved to be particularly momentous for the fortunes of Western Rome in general and for events in the (south-) eastern Alpine region in the first half of the 5th century, especially after the shift of the Hunnic centre of power to the Hungarian Danube region and the Tisza plain under King Ruga (around 430).¹⁰ As early as 433–434, *Valeria* and most of *Pannonia secunda* were taken into possession "without a formal cession of Roman territory", which was accompanied by a major change in the settlement pattern in this area.¹¹ Even those territories that Attila

⁶ In particular, that of the first decade of the 5th century. – Müller 2000, 241–253; Tomičić 2000, 255–297; Lotter 2003, 32, note 100, 156–192, esp. 161–164 (the migration of the population of the towns of North and East Pannonia in the first half of the 5th century is compared to that of "Ufernoricum" in 488); Bratož 2007, 247–284; in detail: Bratož 2011, 589–614, esp. 596 (catastrophic conditions in the Middle Danube region in the first decade of the 5th century). The economic decline of *Noricum* and *Pannonia* began as early as with the Praetorian prefect of *Illyricum* Probus (368–375 [376], 383–387) and his ruthless fiscal policy (Lotter 2003, 156; Bratož 2011, 589–592). Several cities appear already heavily affected and partly devastated in the last third of the 4th century (e.g. *Carnuntum*, *Aquincum*, *Savaria*, *Sirmium*; Šašel Kos 1996, 162–163; Lotter 2003, 157; Bratož 2011, 592).

⁷ Already after the defeat at *Adrianopolis* (Bratož 2011, 593, *Poetovio*). – Stickler 2002, 103–104; Heather 2017, 231–232, Map 7 (Radagaisus' route through south-eastern *Noricum*).

⁸ Karl 2011, 117–126; 2013, 291–300; Gutjahr 2013, 193–294, esp. 259–275; Gutjahr, Steigberger 2018, 454–461. – It should be considered whether some of the people fleeing Pannonia initially sought refuge in the relatively safe Noricum, perhaps as a stopover on the way to Italy (especially *Venetia et Histria/Aquileia*) or awaiting a possible return to Pannonia (Bratož 2011, 598–599). According to Lotter (2003, 166), the migration from Pannonia in the first half of the 5th century "partially or not at all covered the two Norican provinces." Flight movements under Hun rule also took place within the Pannonian region from *Valeria* to *Savia* (Bratož 2011, 604–605, 611).

⁹ Bratož 2011, 611–612.

¹⁰ Stickler 2002, 105.

¹¹ Bratož 2011, 604–606. – With partly different assump-

received in connection with his appointment as *magister militum*¹² were not formal cessions of imperial territory (nor were they federal lands).¹³ In fact, however, these developments meant the political-administrative breaking away of large parts of Pannonia from the Roman empire.¹⁴ From the 430s until the death of Attila in 453, the campaigns of Hunnic armies roamed large parts of Western, Central and Eastern Europe and advanced into today's Turkish-Arab region.¹⁵ They devastated large areas, but "Attila's autocracy [...] had created clear conditions in the Danube region and thus brought a period of relative peace, even if this stability was bought

tions regarding the temporal occupation of Pannonian territory: Šašel 1979, 128 (*Pannonia Valeria* and *Pannonia secunda* are ceded to the Huns as Eastern Roman federates under King Ruga); Bona 1991, 46–60, 52 ("official" cession of the provinces of *Valeria* and *Pannonia prima* by Aëtius in 434–435), 50 (*Valeria* already in Hunnic hands in 425), 56 (conquest of the province of *Pannonia secunda* in 441), respectively; Tomičić 2000, 266 (conquest of *Pannonia secunda* in 441, cession of *Pannonia Savia* under Valentinian III in 446); Stickler 2002, 105–114, 108–109 (taking into account the Hunnic understanding of rule and rejecting an early formal handover of Pannonian territory to Ruga under Aëtius); Wolfram 2003, 33; Lotter 2003, 16–17 ("Pannonia, i.e. besides *Valeria* also Upper Pannonia up to the Sava" in 433). – The occupation of the province of *Pannonia secunda* in 427 by Eastern Rome was also only of short duration, see Lotter 2003, 15 ("... at least western and southern Pannonia, temporarily placed under Roman rule again around 427 ...").

¹² Material traces of ethnic Huns are very rare. The find material in question can only be interpreted as Hun period or as equestrian nomadic (for the southeastern Alpine area see Knific 1993, 521–542; Tomičić 2000, 266–268, 267, fig. 2). – The grave of a Hun tribesman from the middle of the 5th century from Ptuj is mentioned by Lubšina Tušek (2004, 76–79, fig. on p. 77), less certain Ciglencčki 2023, 341, 342 Fig. 4.5, ("nomadic warrior"). Heather (2017, 382–383) states that in the entire area of Hunnic activity (incl. Volga steppe, north of the Black Sea and Great Hungarian Plain) no more than 200 graves have been identified as possible Hunnic. On the difficulties of identifying finds as Hunnic (attribution to the Hunnic ethnicity) see, for example, Tejral 2010, 81–122, esp. 85, 93, 99, 101–102, 108, 110, 113–116; 2015, 175–186, 181 fig. 36 (core area of the Hunnic dominion at the time of Bleda and Attila). The find material of some graves close to the Untersiebenbrunn style group with equestrian nomadic features (e.g. Vienna-Simmering) is associated with the federated "Roman" Huns by Tejral (2015, 157).

¹³ Stickler 2002, 120.

¹⁴ Noricum was not part of the Hunnic territory on Roman imperial soil, as can be seen from the legation sent by Aëtius to the court of Attila in 449 with the participation of the governor of *Noricum ripense* or *mediterraneum Promotus* (Šašel Kos 1994a, 99–111, esp. 108–109; 1994b, 285–295; Gračanin 2003, 53–74, esp. 68–70; Weber 2004, 277–283, esp. 282–283. Lotter (2003, 18–19) assumes the year 448.

¹⁵ See also, for example, the accompanying map of the Hunnic campaigns in: Bóna 1991; Heather 2017, 359, Map 11; 391, Map 13.

at the price of double loyalties".¹⁶ The power of the Hun Empire kept the Germanic and horse-nomadic tribes on the Danube, which were controlled by the Huns, from pursuing an independent policy towards Rome.¹⁷ For the south-eastern Alpine region, it is primarily the campaign leading to Upper Italy (452) that is associated with caesuras, especially with regard to the continuity of urban culture (*Celeia*, *Poetovio*).¹⁸

After Attila's death in 453, uncertain conditions prevailed "in both Pannonia and the other areas bordering the Danube" (Noricum/Raetia) due to the unresolved question of succession, as can be seen from the *Vita Severini*.¹⁹ Lotter, however, assumes a "consolidation of conditions in the Middle Danube region" as early as 455, which brought Noricum another two decades of relative peace.²⁰ Pannonia, on the other hand, which was the settlement area of the Ostrogoths from 456/57 to 473,²¹ remained heavily involved in the gentile conflicts for regional hegemony in the years following the breakdown of the Hunnic empire after the Battle on the *Nedao* (454), as well as later in the Ostrogothic-Byzantine War (South Pannonia).²²

As early as 467, a few years before the formal end of the Western Roman Empire – usually associated in historiography with the deposition of the (counter-)emperor Romulus Augustus by Odoacer (476) – the Ostrogoths made a first, unsuccessful attempt to conquer the province of *Noricum mediterraneum*.²³ But only Theoderic succeeded after the final victory over Odoacer in the course of the longed-for permanent empire building in Italy.²⁴ For *Noricum mediterraneum*, the incorporation into the Ostrogothic "multi-ethnic state"²⁵ and the rule of Theoderic (493–526) meant about four decades

¹⁶ Wolfram 2003, 33.

¹⁷ Heather 2017, 384–385, 423–425. – "Gentile Anarchy" was neither desirable for Attila nor for the two halves of the Roman Empire: Stickler 2002, 94–95 (also focussing on the special nature of Roman-Hunnic conflict communication).

¹⁸ Stickler 2002, 145–150; Ciglencčki 2014, 245.

¹⁹ *Vita Severini* 1: "utraque Pannonia ceteraque confinia Danuvii rebus turbantur ambiguis" – On this topic, see Lotter 1976, 67–68.

²⁰ Lotter 2003, 19, 167.

²¹ Schwarcz 2000, 60 (most of *Pannonia II* and parts of the old province of *Pannonia I*, perhaps also the extreme southwest of *Valeria*); Wolfram 2001, 259–268, esp. 262 (parts of *Pannonia I*, *Savia* and *Pannonia II*).

²² Bratož 2011, 607; Heather 2017, 405–425. – Recently: Ruchesi 2020, 19–25.

²³ Šašel (1979, 131) suspects Vidimir's Goths. Schwarcz (1996, 125) assumes that the Vidimir group roamed the south of the province of *Noricum* on their way to Italy or Gaul. – Gleirscher 2019, 25–26.

²⁴ Theoderic's march to Italy in 489 probably led along the Drau/Drava valley via *Poetovio* and *Celeia* (Schwarcz 2000, 62).

²⁵ Bratož 2017, 215–248.

of political stability and economic prosperity.²⁶ In the course of the Byzantine-Gothic War 536/537, *Noricum mediterraneum*, along with the Provence and the two Raetian provinces, was ceded by treaty to the Franks, who held the territory until about 565.²⁷ The Byzantine occupation of *Noricum mediterraneum*, which lasted until 568, was only a brief interlude. This can be seen in the last phases of settlement at the fortified sites of Duel near Feistritz²⁸ and Rifnik near Šentjur.²⁹

The most south-eastern part of *Noricum mediterraneum*, referred to in written sources as *Pólis Norikón*, had already fallen to the Byzantine Empire in 538. Only a few years later (547/548), Eastern Rome handed over the territory together with the Pannonian provinces of *Savia* and *Pannonia secunda* to the Lombards. During the Ostrogothic-Byzantine War, the Lombards had been entrusted with protective tasks as federates of the Byzantine Empire.

The extent of the territory on which the term *Pólis Norikón* is applied is disputed among scholars. Historical research believes that the name refers to *Poetovio*, which still existed in the 6th century, but archaeological sources have not yet been able to provide any proof of this.³⁰ Archaeology, on the other hand, associates the *Pólis Norikón* with the hilltop settlements in the *agri* of *Poetovio* and *Celeia*, where the presence of Lombard groups is well documented.³¹

With the above in mind, the following development can be outlined for the (south-) eastern Alpine region.³² The process of general instability that began in the 4th century, as well as the successive loss of state administration and authority in the face of continuing barbarian invasions³³ led to drastic changes in the settlement landscape and in the road network.³⁴ This

is clearly expressed – with regional and temporal variations – in a vertical shift in settlement topography.³⁵ In the course of this shift, in *Noricum mediterraneum* mainly between 350/380 and 450, hilltops favourable for settlement were newly founded or places already used in prehistoric times were resettled.³⁶ In addition to mostly civilian settlements, there is also evidence of a military presence at strategically relevant sites. These military bases had a control and signaling function with regard to securing access to Italy, especially after the abandonment of the *claustra Alpium Iuliarum* shortly after 400.³⁷ This change in settlement was accompanied by the abandonment of the *vici* and *villae rusticae* from the third quarter of the 4th century onwards; in general, a sharp decline in rural settlement can be observed.³⁸ Smaller hilltop settlements may have been the result of initiatives by the regional population and organised by local militias.³⁹

The urban structures were also subject to massive change, which became tangible as early as the beginning of the 5th century. The examples of *Celeia* and *Poetovio* show that the exact point in time when the cities were abandoned is difficult to pin down precisely. However, the continuity of urban culture in this region is unlikely to have extended beyond the middle of the 5th century.⁴⁰ For towns exposed in the foothills of the Alps, such as *Solva*, it is highly probable that settlement ceased as early as around 400.⁴¹ Only a few towns, favoured by their nat-

³⁵ Ciglencéki 2017, 143–157. – An early, probably occasion-related settlement phase at high altitudes (as “refuge castles”, with temporary military use) can already be proven for the second half of the 3rd century. See Ciglencéki 2008, 486–487, 493–494 (settlement phase 1); 2015, 403; Ciglencéki 2016a, 16. – E.g. Veliki vrh above Osredek near Podsreda.

³⁶ Ciglencéki 2016a, 16. – The exact point in time of the abandonment of valley settlements and the succession of hilltop sites is mostly difficult to grasp: Gleirscher 2019, 28, 30.

³⁷ See, in particular, Ciglencéki 2015, 406–422 (providing examples from the southeastern Inner Noricum, with reference to the rather indefinite boundaries between civilian and military or purely military use of hilltop settlements in the southeastern Alpine region). See also Ciglencéki 2007, 317–328, esp. 323–325; 2017, 147–148.

³⁸ Ciglencéki 1999, 291; Gutjahr 2015a, 75; Ciglencéki 2017, 146–147.

³⁹ Gleirscher (2019, 67–68) with reference to the “problem of correctly addressing the various hilltop settlements”, especially with regard to the interpretation of weapons found.

⁴⁰ Ciglencéki 2017, 145–146; Milavec 2020, 159–160. – Gleirscher (2019, 43) argues against a complete abandonment of *Celeia* referring to the “powerful fortification wall and the name continuity”. With regard to the name continuity, the same also applies to *Poetovio* (Wolff 2000, 33; Gleirscher 2019, 45). See also Šašel Kos (1994a, 102) with the assumption of partially existing and functioning administrative units in *Poetovio* in the 5th/6th century.

⁴¹ See recently Groh 2021, 313 (assuming just a few hundred inhabitants left towards the end). Stephan Karl and I assume for *Solva*, however, a final settlement phase (so called

²⁶ Wolfram 2001, 284–290; 2003, 58–65.

²⁷ Wolfram 2001, 315, 343; Winckler 2012a, 150–151.

²⁸ Von Petrikovits 1985, 236–238; Ciglencéki 2009, 210, 217; Gleirscher 2019, 68. – On the hilltop settlement on Duel, in detail: Steinklauber 2013, 33–53, 35, Fig. 9.

²⁹ Ciglencéki 1994, 245–246; 2017, 151; Gleirscher 2019, 69.

³⁰ Šašel Kos 1994a, 99–102, 111 (including the *ager*); Ciglencéki 2017, 145.

³¹ Ciglencéki 1992; 2017, 150–151. – For Gleirscher (2019, 43), the *Pólis Norikón* is the urban area of *Celeia*, which together with that of *Poetovio* went to the Lombards. See also Pohl 1996, 29–30; Pohl 2008, 6–7.

³² Some of these developments, however, were not limited to this area, but affected the entire eastern Alpine region and the former Roman prefecture of Illyricum, or they were a widespread phenomenon in late antiquity, such as the retreat to elevations favourable for settlement and/or defence, which was common throughout the *Imperium Romanum*. With regard to the Illyrian prefecture, see Ciglencéki 2014, 232–250.

³³ Šašel Kos (1996, 164) points out a general decline in the level of culture.

³⁴ Ciglencéki 1985, 255–284; 1997, 179–191; 2005, 273–274; 2015, 391.

ural environment, were able to escape this development and, for example, *Teurnia* (with settlement relocation within the town area on the naturally protected hill) was still able to occupy a prominent position in the 6th century.⁴² Consequently, the need to distinguish between “a consolidated to moderately prosperous inner-alpine area (*municipia* Virunum, Teurnia and Aguntum) and an ‘amber road’ area (*municipia* Celeia and Poetovio)” was also pointed out lately for *Noricum mediterraneum*, which, situated on one of the most important invasion routes to Italy, was comparatively strongly affected by barbarian incursions.⁴³ However, *Virunum* was already abandoned in the earlier 5th century and the administration and church were transferred to Grazerkogel.⁴⁴ The extent to which the southeast of *Noricum* paid tribute to its special geostrategic position is also shown by the fact that the hilltop settlements of Ančnikovo gradišče near Jurišna vas⁴⁵ and Brinjeva Gora above Zreče,⁴⁶ which were established not far from Styria along the Amber Road (*Carnuntum-Aquileia*), but also the Gradišče on the Zbelovska gora,⁴⁷ situated on a road variant from *Poetovio* to *Celeia* (according to S. Ciglencečki, there were still regular Roman troops on them in the first decades of the 5th century), were abandoned around the middle of the 5th century at the latest⁴⁸.

In recent decades, it has been convincingly worked out how much the securing of the incursion routes leading into the Italian heartland from the north and east became the focus of military defensive measures from the second half of the 4th century onwards (presumably related to Valentinian I).⁴⁹ The picture could be made more precise and the underlying concept of a “defence in depth” or “staggered defence” at the transition from Illyrian to Italian territory was undoubtedly

“Restsiedlung”) of poorer population groups reaching into the 5th century (see below).

⁴² See, for example: Ciglencečki 2003, 263–281; 2011a, 183–195, esp. 183–184, 192; 2014, 232–250, esp. 232–234, 238–239, 242–243, 245. – More recently, summarising settlement change in the southernmost part of *Noricum mediterraneum*: Ciglencečki 2017, 143–157. See also recently and comprehensively Ciglencečki 2023, with a view to the southeastern Alps region, specifically concerning us here 25–35, 46–48, 105–107, 173–174, 190, 210–214, 226–240, 340–344 and 22 Fig. 2.1.

⁴³ Dolenz 2016, 122, 48, Fig. 1.

⁴⁴ On the towns of *Noricum mediterraneum* and the possible evidence of late antique settlement, most recently: Gleirscher 2019, 31–46.

⁴⁵ Ciglencečki 2007, 320–321; 2015, 411–412; 2017, 148; Modrijan 2017, 159–174. – Not until the Early Middle Ages (8th/9th century), small traces of settlement are attested again (Ciglencečki, Strmčnik Gulič 2002, 72–74, Fig. 13).

⁴⁶ Ciglencečki 2007, 321; 2015, 416–417.

⁴⁷ Ciglencečki 2007, 321; 2015, 416.

⁴⁸ Ciglencečki 2007, 324–325. In comparison, see Ciglencečki 2008, 483, Fig. 1, 485, Fig. 2. See also: Ciglencečki 2015, 422; Ciglencečki 2016b, 417–418.

⁴⁹ Ciglencečki 2016b, 416.

proven. At the beginning of the 5th century at the latest, this strategic approach replaced the linearly organised defence associated with the *claustra Alpium Iuliarum* (the road via *Ad Pirum*/Hrušica was abandoned in the first half of the 5th century⁵⁰). However, it is questionable whether the *claustra*, which included the forts of Ajdovščina and Vrhnika as well as the city fortifications of *Tarsatica*/Rijeka,⁵¹ were ever based on such a military concept.⁵² In addition, many hilltop settlements located both west and east in the hinterland of the *claustra*, for which a military character is evident from the find material, can be proven to have existed as early as the second half of the 4th century and thus at the same time as the *claustra*.⁵³ Interaction obviously took place here. It was a widespread network of smaller and larger fortifications, positioned either along the roads or in strategically important places with a good field of vision, where they had control, signaling and reconnaissance functions, among others.⁵⁴ According to S. Ciglencečki, the emergence of this network was not so much based on an “overarching strategy” but rather on a “continuous adaptation to individual dangerous military situations that already occurred in the last third of the 3rd century and became more frequent in the second half of the 4th century”.⁵⁵ The staggered defense also included the fortifications situated in the southeast in the lowlands towards Pannonia, surrounded by strong walls, such as Črnomelj or the Gradišče near Velike Malence, which in any case date back to the 4th century. The network of fortifications formed by the hilltop settlements with military components is undoubtedly connected with the part of the defensive system *tractus Italiae circa Alpes* mentioned in the *Notitia Dignitatum*, located in the south-eastern Alps.⁵⁶ The extent to which the secondary roads became more relevant for securing Italy after the abandonment of the Hrušica passage was demonstrated

⁵⁰ Ciglencečki 1985, 267–270; 1997, 186, 188–189; 2005, 273–274; 2011b, 262–263.

⁵¹ Most recently, in detail: Ciglencečki 2015, 385–430; 2016b, 409–424. – The *claustra Alpium Iuliarum* were probably in function from the last third of the 3rd century (Diocletian) until the beginning of the 5th century (Ciglencečki, Milavec 2009, 177; Ciglencečki 2015, 402). It was of importance in the intra-Roman disputes of the second half of the 4th century. However, the effectiveness of the *claustra* has been doubted (Stickler 2002, 146, 146, note 783).

⁵² Ciglencečki (2015, 424) initially assumes the replacement of a linear defence system towards the end of the 4th century, before he clearly and comprehensively argues for a defence in depth that already existed from the second half of the 4th century onwards and included the *claustra* system (Ciglencečki 2016b, 419).

⁵³ Ciglencečki 2016b, 415–418.

⁵⁴ Ciglencečki, Milavec 2009, 177–189; Ciglencečki 2015, 404–424; 2016b, 418–420.

⁵⁵ Ciglencečki 2016b, 419; Milavec 2017, 156–157.

⁵⁶ Ciglencečki, Milavec 2009, 183; Ciglencečki 2016b, 412, 415; Milavec 2017, 157–158.

in particular for the surroundings of the important and excellently researched hilltop settlement of Tonovcov grad near Kobarid.⁵⁷

A final phase in the establishment of fortified hilltop settlements can be observed in the (south-) eastern Alpine region from the 470s onwards; some of these settlements show continuity into the 7th century.⁵⁸ This phase includes – apart from the towns relocated to high ground – numerous fortified hilltop settlements in East Tyrol, Carinthia and Slovenia (e.g. Duell above Feistritz in the Drau/Drava Valley, Hoischhügel near Maglern, Rifnik near Šentjur, Ajdovski gradec above Vranje).⁵⁹ Both their beginning and their end can often only be dated in a frame-like manner with the current state of knowledge about the finds.⁶⁰ At least for some fortifications, construction is only considered to have taken place in the Ostrogothic period. With regard to the construction of the larger fortifications, centrally controlled planning seems likely.⁶¹ Numerous archaeological finds of Germanic character can be linked to the historical sequence of events and penetrations of power within the above-mentioned area in the later 5th and 6th centuries.⁶² Even if – to a territorially varying

⁵⁷ Ciglencečki 2011b, 259–271.

⁵⁸ Gleirscher 2019, 30 (possibly until the 1st half of the 7th century). – Little research has been done on the agricultural environment or, along with the hilltop settlements, on settlement and economic structures in the valleys: Glaser 2006a, 9–17; 2012, 47–55. Milavec (2020, 160) gives a few examples of lowland settlements in northwestern Slovenia. The question arises where the population lived between about 450 and 470/480.

⁵⁹ For Slovenia, Ciglencečki (2008, 485–490, 483, Fig. 1, 485, Fig. 2) chronologically distinguishes three settlement phases; for a classification of the Late Antique hilltop settlements *ibid.* 490–502. See also: Ciglencečki 2014, 242; 2016a, 18, 20 (on the early medieval settlement phase of some hilltop settlements); 2016b, 415–416. On Carinthia: Glaser 2008, 595–642. For an overview of hilltop settlements with military character: Gleirscher 2019, 67–79. – In a comparison with the Late Roman hilltop settlements of the Moselle region, Prien and Hilbich (2013, 104–112), on the other hand, assume for the Late Antique settlements at Rifnik and Ajdovski gradec/Vranje (among others) a construction by the local upper class and consider a representative use (as well as a possible replacement of Roman by Germanic elites).

⁶⁰ Gleirscher 2019, 30; Milavec 2020, 160–162. – For the (re-)occupation of Late Antique hilltop settlements in Slovenia, see: Milavec 2012.

⁶¹ Glaser 2008, 600; Gleirscher 2019, 67; Milavec 2020, 161.

⁶² For Slovenia see, among others: Ciglencečki 2005, 265–280; 2006, 107–122; 2016b, 419; Milavec 2017, 158–159. On the cemetery at Rifnik, see: Bolta 1981 (e.g. grave 57). On Late Antique settlement, generally: Pirkmajer 1994, 46–64. – With regard to the finds in Slovenia associated with Ostrogoths, the location of the sites in Italy or Noricum should be noted (Gleirscher 2020, 34). For Carinthia see, among others: Piccottini 1976 (e.g. grave 1/74); Glaser 2004, 80–101; 2016, 60–63.

extent – there is no doubt about an Ostrogothic as well as a Lombard occupation of the south-eastern Alpine region, an assignment to Germanic people broken down to single individuals is only possible in a few cases.⁶³ Recently, the evidence of ethnic Ostrogoths for Carinthia has been completely denied,⁶⁴ even for the supposed “Ostrogothic/East Gothic period” burial ground east of Globasnitz near the former Roman road station *Iuenna*.⁶⁵ If one follows this assumption, then an Ostrogothic presence, which can be seen in cemeteries at supra-regionally important road connections, is not given for *Iuenna*, but presumably for Dravlje near Ljubljana⁶⁶ and for Miren near Gorizia at the time of Ostrogothic rule, although both already located in Italy.⁶⁷ The burial finds at least speak in favour of burial sites of East Germanic communities. The latter site is probably connected with a yet undiscovered settlement that served to guard the road to *Aquileia*.

In a sense, the interpretation of the term “presence”, which is often used in literature, is at issue. Does it refer to the direct (military) presence of certain ethnic identities in an area defined geographically or by dominion, e.g. in the present case of the Ostrogoths in Carinthia? Or can this also mean an indirectly enforced exercise of power over a certain territory – in the inner *Noricum mediterraneum*, for example, executed by (Germanic) federates or Romanic militia units under the authority of the Ostrogoth king? The inclusion of the today Carinthian part of Noricum in the Italian Ostrogothic Empire is beyond question at any rate.

Regarding the presence of Lombard groups of people, reference should be made above all to the Svetegore above Bistrica ob Sotli and the Rifnik near Šentjur. For both, a Lombard occupation was assumed at last. At least grave 57 from the Rifnik, which contains two S-fibulae of the North Danubian phase (510–540), can be interpreted as a Lombard woman’s grave.⁶⁸

⁶³ Gleirscher 2020, 36, 95.

⁶⁴ See Gleirscher 2019, 86–118; 2020, 17–51 (providing a detailed discussion of the relevant Carinthian find material). Differently, e.g.: Glaser 2004, 86–87, 92, 95; 2016, 60–62, Fig. 63 (Ostrogothic cemetery).

⁶⁵ Glaser 2006a, 9–17; Glaser 2006b, 83–106. – For the remarkable grave 11 of the presumed commander of the road station, a Gallo-Frankish origin was recently considered (Pollak 2020, 91–119), while Gleirscher suspects a Roman. In contrast to Gleirscher (2019, 102; 2020, 37; dating to the end of 4th or, at the latest, the beginning of 5th century to end of 6th/beginning of 7th century) this results in only one Late Antique burial ground attested during the Ostrogothic period). For Pollak (2017, 265; 2020, 93) the necropolis only begins in the second half of the 5th century and ends around 550. For considerations regarding a connection between the local cemetery in Globasnitz and soldiers stationed on the Katharinakogel, see: Gleirscher 2020, 40.

⁶⁶ Slabe 1975.

⁶⁷ Tratnik, Karo 2017; 2023

⁶⁸ Bolta 1981, Pl. 10; Ciglencečki 2005, 269–270; Milavec

Frankish presence in *Noricum mediterraneum* has initially been associated with a group of privileged burials that were discovered in 2009 next to the church dedicated to Saints Hemma and Dorothea on Hemma-berg. However, recent radiocarbon dating now assigns these graves – with the exception of the early modern era grave 16 – to the 8th to 10th centuries (indicating that the buried individuals might be remaining Romans).⁶⁹

Noricum mediterraneum gained defensive importance on the north-eastern flank of Italy at the latest after the voluntary evacuation of *Noricum ripense* (488)⁷⁰ under Odoacer.⁷¹ It was possible to bypass the Amber Road via the Drau/Drava Valley and along the passes and routes to Italy (e.g. Plöcken Pass, Predil Pass, Sella di Camporosso/Canal Valley).⁷² The number of forts and fortifications, often with several phases, which can be proven for the 5th and 6th centuries, partly also in succession to Roman road stations, shows the military-strategic upgrading of the inner-Alpine part of *Noricum mediterraneum* (among other things to secure the Drau/Drava valley route).⁷³

2007, 348, Pl. 3: 4–5; Gleirscher 2019, 111–114, esp. 108.

⁶⁹ Eitler 2009–2010, 69–72; Glaser 2011, 67–69; 2016, 63; Gleirscher 2019, 116–118, 81, Fig. 74; see also Thanados, entity 17596 (Hemmaberg; for the period in question, see, for example, graves 4, 6, 12, 13, 18). – Individual female burials that can be associated with the Franks may be present at *Teurnia* (Gleirscher 2019, 114–115).

⁷⁰ *Vita Severini*, 44, 5. – Mainly the eastern part of the province would have been affected. Régerat 1996, 193–206; Pohl, Diesemberger 2001; Lotter 2003, 25–26, 168–169; Rosenberger 2011, 203–216. The abandonment of *Noricum ripense* was de facto, not de iure (Šašel 1990, 568). The eastern part of *Noricum* was subsequently taken in possession by the Lombards.

⁷¹ This military role probably already applies to *Noricum mediterraneum* in the conflicts with Alaric in the early 5th century (Glaser 2015, 11). See also Glaser 2008, 599 (occupation of the Alpine passes by the Franks after the Ostrogothic surrender of the province). This also becomes clear in the course of the surrender of the *Pólis Norikón* to the Lombards in the context of the Byzantine-Franconian disputes (see, among others, Tomičić 2000, 276).

⁷² Ciglencečki 1997, 188–189; cf. for example the maps in Ciglencečki (2011b, 261, Fig. 5.1) and Milavec, Modrijan 2014 (261, Fig. 1) for northwestern Slovenia.

⁷³ See the recent overview of hilltop settlements with military character in: Gleirscher 2019, 67–79, esp. 67–77. – The possibility of circumventing Italic border barriers by taking possession of *Noricum mediterraneum* may have prompted the Avars to advance into the (south-)eastern Alps towards the end of the 6th century (Daim, Szameit 1996, 319).

2. THE EARLY DECLINE OF LATE ROMAN SETTLEMENTS IN THE AGER SOLVENSIS BASED ON ARCHAEOLOGICAL DATA

Stephan Karl

Over the last decades there has been a revival of archaeological research on Late Antiquity in the south-eastern alpine region, emphasising its specific geographic situation between different political identities and developments in the West and East and trying to account for continuity or changes based on archaeological evidence. After the early investigations on the Early Christian buildings in the Late Roman province *Noricum Mediterraneum*, two main research foci have been established since the 1980s; one on settlement patterns during Late Antiquity, the other on cemeteries.⁷⁴ Only shortly before the turn of the millennium, the processing and evaluation of the small finds were strengthened, leading to numerous specific articles and monographic publications, especially about metal finds and imported as well as local pottery.⁷⁵ In addition, monographic comprehensive examinations of individual late antique hilltop settlements provide deep insights into their archaeological record and the find material.⁷⁶

The recent increase of new archaeological material in combination with methods of natural science and advances in theoretical-methodological considerations enables us to create a more precise and differentiated perception of this period, tackling i.a. ethnic, cultural and social transformation processes. A number of recent conference proceedings and volumes deal with the complex issues of continuity and cultural change from the Late Roman period to the Early Medieval times in the two Norican provinces and particularly in the Pannonian region.⁷⁷

Nevertheless, archaeological evidence from Late Antiquity is scarce in the south-eastern alpine region, especially in the south-eastern part of *Noricum mediterraneum*, compared to former periods and its dating is mostly problematic because of a lack of comparable finds or imports of reliably dated objects. Also the general decrease of a regular coin circulation in the Norican and Pannonian provinces since the end of the 4th century and

⁷⁴ E.g. Egger 1916; Piccottini 1976; Ciglencečki 1987; Glaser 1997; Steinklauber 2002; see also the comprehensive overviews by Ladstätter (2000, 16–20) and Ciglencečki (1999).

⁷⁵ E.g. Pröttel 1996; Ladstätter 2000; Ciglencečki 2000; Ladstätter 2003a; Milavec 2009; Bitenc, Knific 2012; Steinklauber 2013; see also the contributions in: Hebert, Hofer 2015.

⁷⁶ E.g. Ciglencečki 2000 (Tinje); Ciglencečki et al. 2011; Modrijan, Milavec 2011 (Tonovcov grad); Ciglencečki et al. 2020 (Korinjski hrib).

⁷⁷ E.g. Steuer, Bierbrauer 2008; Bemann, Schmauder 2008; Heinrich-Tamáská 2011.

the known plateau in the radiocarbon calibration curve for this period are not really cooperative to approaches using archaeological data for historical statements.

This section is focusing on the decline of the Late Roman settlements in the *ager Solvensis* compared to concurrent Roman settlement patterns in the neighbouring regions, based on archaeological data.⁷⁸ The main question is how long Roman structures could be maintained in the *ager Solvensis* close to the border to *Pannonia prima* and if there are any archaeological hints for changes or even caesuras in the latest phase of a reduced but still regular and operative Roman settlement. It has to be emphasised that this contribution is not initiated by new data from recent excavations, but should give at first an overview of the state of research as a base for the following section in which the few (!) finds from the Late Antique period from the mid 5th century to the early 7th century are presented.

Some new data could be integrated into this contribution with regard to their relevance to the main question: This includes data concerning the imports of African Red Slip Ware (ARSW) in Styria, of which some fragments were reinvestigated in the course of a BA thesis by C. Greiner,⁷⁹ rectifying some erroneous interpretations. Additional new data are coming from a Late Roman well within the cemetery “Spitalsgelände” of *Solva* consisting of some hundreds of *spolia*, excavated in 1982/1983 but published only in short notes.⁸⁰ Still, a massive drawback is that extensive excavation activity in the 1970s and 1980s in Styria has left us with a large quantity of unpublished or not appropriately published find material,⁸¹ stored in depots of different institutions which makes the access more complicated. However, in the course of the task of reinvestigating already published or preliminary mentioned find objects for this study by which we went through some hundreds of boxes in the depots, something has become more and more clear: The obvious sparseness of reliable dated finds from the second half of the 5th to the early 7th century in the *ager Solvensis* can not be explained by a research gap.⁸² The turn to the 5th century and its first decades seem therefore to be crucial for the Roman settlement of the *ager Solvensis*.

⁷⁸ For a general characterisation of the Late Antique period in today’s Styria, see: Steinklauber, Hebert 2001, 275–278; Steinklauber 2002, 182–184; 2018, 798–799.

⁷⁹ Greiner 2019. The thesis was supervised by S. Karl.

⁸⁰ Fuchs 1983; 1985–1986b; 1987, 77–78; Karl 2013, 283. – The findings are currently being processed by S. Karl and P. Bayer.

⁸¹ E.g. the whole archaeological material from the excavations of Late Roman buildings on the northwestern slope of the Frauenberg in 1985 and 1986; on this excavation, see: Steinklauber 2013, 28–31. Furthermore, just as important, the Late Roman strata in the western part (an extension?) of the settlement of *Solva*: Fuchs 1985; Kainz 1989.

⁸² Cf. Steinklauber 2006b, 178.

2.1. LATE ROMAN FIND MATERIAL

The Late Roman find material from the *ager Solvensis* has some specific characteristics compared to neighboring regions like Carinthia and the western part of Slovenia, which were already observed in previous works.⁸³ In the Middle Roman period, African Red Slip Ware (ARSW) reached this area as elsewhere in the Roman provinces in a regular manner, even though at a small scale, from the middle of the 3rd century onwards, mostly in its representative shapes Hayes 45 and 50 of Central Tunisian origin. Most noteworthy is the significant decrease of Mediterranean fine pottery imports in the early 5th century. Up to present there is no evidence for African or Eastern Mediterranean amphorae at all from the area under discussion.⁸⁴ Another aspect is the high proportion of glazed pottery in *Solva* and Frauenberg which arrived probably from Pannonian workshops, but was also produced locally. Glazed pottery became a common feature on most sites, its production peak is generally dated to the second half of the 4th century. Burnished pottery which appears in small quantities along the Norican and Pannonian limes from the middle of the 4th century onwards became popular by the late 4th and early 5th century in the Pannonian provinces. It was frequently found there together with glazed pottery, whereas on sites of the neighbouring *ager Solvensis* burnished pottery is extremely rare. However, coarse pottery represents the majority, as it prevails in any Late Roman pottery assemblage in this region. It shows local characteristics in shapes and tempering, but a distinction of the 5th century coarse pottery from the earlier material based on morphological and decorative features is still a difficult endeavour.⁸⁵ Recent research has nevertheless shown major advances in differentiating this material, defining types and establishing chronological basic frameworks. The most striking feature in the area under discussion is the scarcity of (dateable) finds from the beginning of the 5th century onwards.

Within this presentation of selected categories of Late Roman find material, the spectrum of coins has been completely excluded. As has already been asserted for several sites in *Noricum mediterraneum*, the supply of newly minted coins came to a standstill after 383, at the latest after the division of the Empire in 395.⁸⁶ Only

⁸³ Ladstätter 2000, 105–117, 124–130, 157–159; Steinklauber 2013; Modrijan 2015; 2019; 2020a.

⁸⁴ Ladstätter 2003a, 837–848; Modrijan 2015.

⁸⁵ Cf. Rodriguez 1997. – For a chronological classification of two groups of coarse pottery, an early one from the 4th and first half of the 5th century and a late one from the 6th and first half of the 7th century, see: Modrijan 2020c, 577–580.

⁸⁶ Kos 1986, 218–219; Ladstätter 2000, 82; Schachinger 2006, 124–125; Groh 2021, 257 (contribution of U. Schachinger).

a handful of coins from the first half of the 5th century were recorded in this area, and they are problematic: they are mostly finds from the 19th century without any archaeological context and useful location, like a solidus of Valentinianus III. for Galla Placidia (426–c. 430) from Kranach near Gamlitz⁸⁷ or an unknown numeral of Iohannes (423–425) from the Leibnitz field⁸⁸. Only three coins can be mentioned with more confidence: a tremissis of Honorius (393–423) from the temple plateau of Frauenberg, found 1955 in the heap of the deposited excavation debris,⁸⁹ and two half-centenionales of Arcadius (383–408), not to be dated more precisely,⁹⁰ one from the hilltop settlement of Kugelstein, the other from *Solva*. These are all coin finds up to present belonging to the time range under consideration.

2.2. AFRICAN RED SLIP WARE (INCL. LAMPS)

Stephan Karl, Christian Greiner

African Red Slip Ware (ARSW) and lamps of the same North African origin are significant finds for the south-eastern alpine region, especially for discussing chronological and trade patterns.⁹¹ They have become known at a total of 10 sites in the area of today's Styria. With their occurrence in *municipium*, *vicus*, *villa* and hilltop settlements they cover the common local settlement types of the Late Roman period. The range of ARSW within the region under discussion includes the following seven Hayes forms: 45A and B, 46, 50A and B, 61A and B, as well as the associated lamps Atlante VIII A1, A2 and B. The relatively small number (*Tab. 1*) of only 40 specimens in total of North African sigillata⁹² and 6 lamps can likely be traced back to a decreasing import volume due to the longer distance on overland routes from the main harbour *Aquileia* and other ports on the Adriatic Sea⁹³ and presumably to the absence of a potent customer market. Of course, a certain missing portion may be justified by research history, in particular with regard to the mostly small broken pieces of ARSW

⁸⁷ Schachinger 2006, no. 16790; 2010a, 23, Fig. 13; Peitler 2011a.

⁸⁸ Knabl 1848, 30; Schachinger 2006, no. 16789. – Cf. Staudinger 1978, 37.

⁸⁹ Schachinger 2006, 190 no. 16788. – Cf. Staudinger 1978, 37.

⁹⁰ Schachinger 2006, 124 no. 16794; 171 no. 16795.

⁹¹ For overviews, see Pröttel 1996; Ladstätter 2000, 85–117; Ladstätter 2003a, 834–837; 2003b, 305.

⁹² The calculation of the number of individuals was based on the rim, base and stamped pieces; see Mackensen 2015, 179; additionally, wall pieces that were judged as separate individuals on the basis of the contextual processing or the form type (e.g. in the case of a single wall piece from a site) are also included; see Heimerl 2014, 99.

⁹³ Pröttel 1996, 171.

in layers close to the surface, which were probably not always perceived as such and discarded as modern tile chips on site.

We can assume that ARSW was imported in the *ager Solvensis* from the middle of the 3rd century onwards, as it was already observed in a similar manner for the Pannonian region.⁹⁴ The early forms include the Central Tunesian large bowls with shallow curving body and broad flat rim Hayes 45A and B from the second quarter of the 3rd century and first half of the 4th century,⁹⁵ which are evidenced by single fragments in the *vicus* of Gleisdorf⁹⁶ and in *Solva* (insula XLI or 405 according to the new city map).⁹⁷ A fragment of the more recent form Hayes 46 was also found in this best researched insula of *Solva*.⁹⁸

More important in *Solva*, however, are the long-lasting forms Hayes 50A and B, which – again in insula XLI/405 – are represented with 18 rim or base pieces.⁹⁹ These large plates with broad flat base and high straight wall raising at an angle (A) or curved (B) belong to the standard shape of Central Tunesian Sigillata C which is widely distributed in the Mediterranean. Hayes 50A appears in find contexts from the second quarter of the 3rd century till the first half of the 4th century, the later form Hayes 50B in contexts from the second half of the 4th century till the beginning of the 5th century.¹⁰⁰ Apart from *Solva*, Hayes 50A is also known from the temple plateau of Frauenberg¹⁰¹ as well as from the Roman *villa* of Grünau.¹⁰² In upper Styria (outside the *ager Solvensis*) two fragments of Hayes 50A were found in the mining settlement of Michlhallberg.¹⁰³ From a Late Roman well, which was built in the cemetery “Spitalsgelände” of *Solva*, there are further fragments of the later form Hayes 50B (fabric C^{3/4}).¹⁰⁴ A small wall fragment of Hayes 50B (fabric C^{3/4}) is now also evidenced at the hilltop settlement on the Franziskanerkogel.¹⁰⁵ The relative frequency of the forms

⁹⁴ Gabler 1988, 16, 30; Hárshgyi, Ottományi 2015, 476.

⁹⁵ On the chronology: Heimerl 2014, 26–27.

⁹⁶ Schneeberger 2016, 130, 133, 267, Pl. 12: 5. The original assignment to form Hayes 67 is corrected here.

⁹⁷ Groh 1996, 115, 214 (no. TSA 1–2); Pl. 33: TSA 2; 67: TSA 1. In each case one fragment of form Hayes 45A and B. For the new city map, see Groh 2021, 45–47, Fig. 18.

⁹⁸ Groh 1996, 116, 214 (no. TSA 3); Pl. 31 (TSA 3).

⁹⁹ Groh 1996, 115, 214 (no. TSA 4–8 (50A), no. TSA 9–21 (50B)); Pl. 31: TSA 10, TSA 12–20; Pl. 53: TSA 11; Pl. 64: TSA 9. – According to Groh (1996, 114), most of the wall pieces that cannot be clearly assigned to a form type (57 in total) probably belong to these two main forms.

¹⁰⁰ On the chronology: Heimerl 2014, 28–29. – Cf. Pröttel 1996, 33; Ladstätter 2000, 91–93.

¹⁰¹ Groh, Sedlmayer 2005, 155, 243, Tab. 43; Pl. 25.

¹⁰² Lamm 2011, 66, 226, no. 1992/K3/272; Pl. 73.

¹⁰³ Grabherr 2001, 79, 157, no. C14–C15; Pl. 32.

¹⁰⁴ From the excavation of 1982/1983; unpublished; cf. Fuchs 1983; 1985–1986b; 1987, 77–78; Karl 2013, 283.

¹⁰⁵ From the excavation of 2020; unpublished; cf. Horváth, Koch 2021.

Fabric	Type	Site	Amount	Reference
n.s.	n.s.	Niederschöckl – Cemetery (Tumulus)	1	Hinker 2002, 214, no. 8, note 72; 219, Pl. 1: 8
n.s.	40, 45 or 50	Frauenberg – Settlement/Perl-/Stadläcker	2	Kitz 2008, 195, 212
n.s.	45A	<i>Solva</i> – Settlement	1	Groh 1996, 115, 214 (no. TSA 1); Pl. 67: TSA 1
A/D?	45A	Gleisdorf – <i>vicus</i>	1*	Schneeberger 2016, 130, 133, 267; Pl. 12: 5 (no. 99073-1,-2,-3,-4)
n.s.	45B	<i>Solva</i> – Settlement	1	Groh 1996, 115, 214 (no. TSA 2); Pl. 33: TSA 2
n.s.	46	<i>Solva</i> – Settlement	1	Groh 1996, 116, 214 (no. TSA 3); Pl. 31: TSA 3
A/D?	n.s.	Gleisdorf – <i>vicus</i>	1*	Schneeberger 2016, 130, 133 (no. 99064-2)
n.s.	50A	<i>Solva</i> – Settlement	6	Groh 1996, 115, 214 (no. TSA 4–8); Pl. 31: TSA 4–8 ; Rabitsch 2013, 34, 131; Pl. 40: 10
n.s.	50A	Frauenberg – Temple plateau	1	Groh, Sedlmayer 2005, 155, Tab. 43; 243, Pl. 25 (no. 3/29)
n.s.	50A	Grünau – <i>villa</i>	1	Lamm 2011, 66, 226, no. 1992/K3/272; Pl. 73
n.s.	50A	Michlhallberg – Mining settlement	2	Grabherr 2001, 79, 157, no. C14–C15; Pl. 32
C	50B	<i>Solva</i> – Settlement	13	Groh 1996, 115, 214 (no. TSA 9–21); Pl. 31: TSA 10, TSA 12–20; Pl. 53: TSA 11; Pl. 64: TSA 9
C ^{3/4}	50B	<i>Solva</i> – Cemetery/Spitalsgelände	2*	Karl 2013, 281–283
C ^{3/4}	50B	Franziskanerkogel – Hilltop settlement	1*	unpublished (excavation 2020; SE 27, no. 122)
n.s.	50A/B?	Hasendorf – <i>villa</i>	1	Groh, Sedlmayer 2010, 109, 114 (inv. 111/3)
n.s.	50?	Kugelstein – Hilltop settlement	1	Fuchs, Kainz 1998, 108 (no. Ku29; three wall pieces)
n.s.	61A	Frauenberg – Temple plateau	1	Groh, Sedlmayer 2005, 155, Tab. 43; 246, Pl. 30 (no. 43/2)
D ²	61B/Var.	Kugelstein – Hilltop settlement	1*	Pichler 1887, 107; cf. Ladstätter 2000, 110 note 594; Groh 1996, 115
n.s.	61B/Var.	Kugelstein – Hilltop settlement	1	Fuchs, Kainz 1998, 113, Pl. 3: 21 (no. Ku158)
D ²	61B/(Var?)	Riegersburg – Hilltop settlement	1*	Bauer 1997, 84, 87, no. R 21; Pl. 1
Lamp	VIII A	<i>Solva</i> – Settlement	1*	Hudeczek 1973, 54, note 17; Fig. 30; cf. Hudeczek 1988, Fig. on p. 53
Lamp	VIII A	Frauenberg – Settlement/Öden	1	Steinklauber 2013, 110, 143, no. F 516; colour Pl. 13.
Lamp	VIII A	<i>Solva</i> – Settlement	3	Kainz 1986, 39–40, 117, no. 290–292; Pl. 21: 291–293 (sic)
Lamp	VIII B	<i>Solva</i> – Settlement	1	Kainz 1986, 39–40, 118, no. 293; Pl. 21: 294 (sic)

Tab. 1: Find list of ARSW and lamps in the area of today's Styria (* verified; n.s. not specified).

Hayes 50A and B fits into the supra-regional picture and shows no special features in comparison with the Pannonian¹⁰⁶ and the south-eastern alpine¹⁰⁷ region. These plates were mass imported in the 4th century.

The North Tunisian flat-based dishes Hayes 61A and B with a vertical or slightly incurved rim shaped

¹⁰⁶ Gabler 1988, 9–11, 13–14, 16, 21; Hárshgyi, Otományi 2015, 476.

¹⁰⁷ Pröttel 1996, 32–33, 171; Ladstätter 1998, 51; cf. Kainz 2011, 137.

in a more or less triangular profile represent one of the last major ARSW imports which reached the Norican-Pannonian Danube Limes.¹⁰⁸ The earlier form Hayes 61A (El Mahrine 4.1¹⁰⁹) was produced from the 330s or 340s onwards and distributed till the early 5th century; it

¹⁰⁸ Gabler 1988, 21; Ladstätter 2000, 111; Hárshgyi, Otományi 2015, 478. – ARSW reached *Valeria* no later than the beginning of the 5th century.

¹⁰⁹ Mackensen 1993, 401–402.

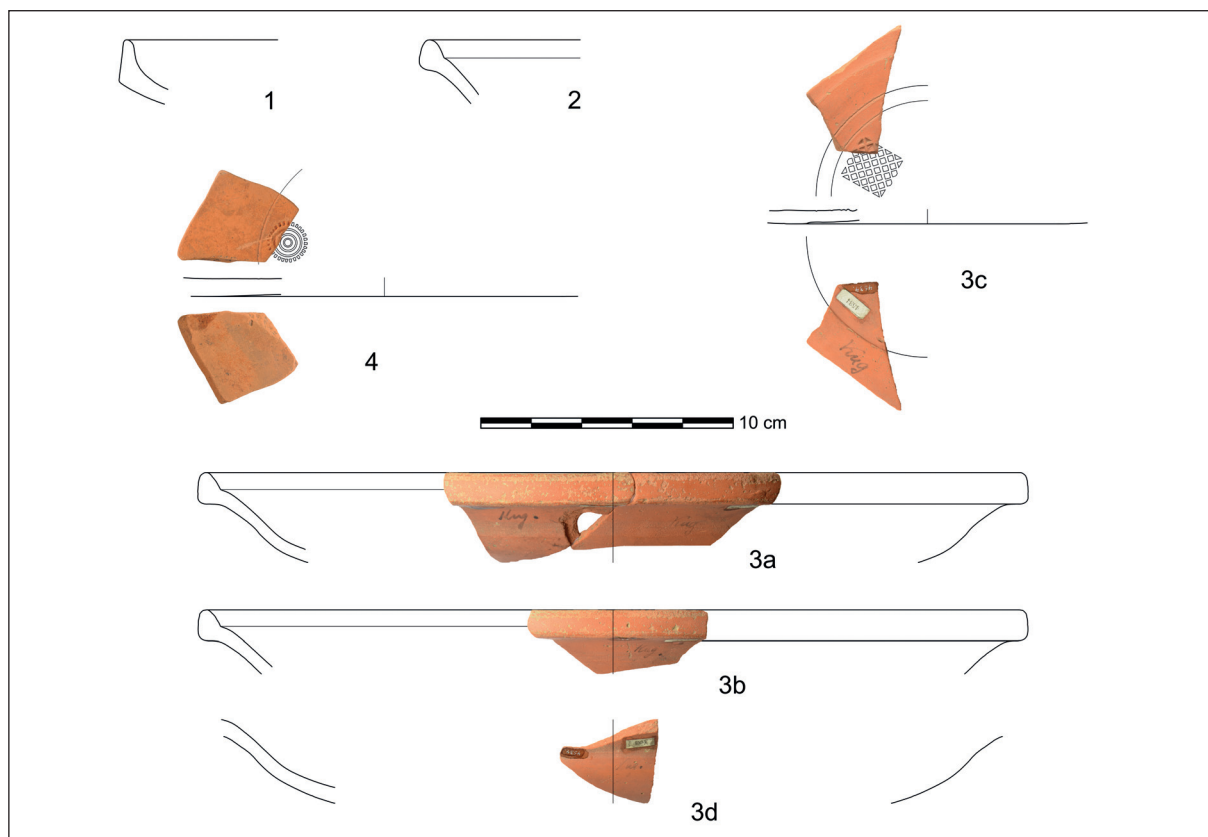


Fig. 1: ARSW of North Tunisian origin found in the area of today's Styria; 1: Hayes 61A from Frauenberg; 2, 3a–d: Hayes 61B/Var. from Kugelstein; 4: Hayes 61B/(Var?) from Riegersburg. Scale 1:3.

is basically a form of the second half of the 4th century.¹¹⁰ Within the *ager Solvensis* Hayes 61A is represented only in a single piece from the temple plateau of Frauenberg (Fig. 1: 1).¹¹¹

For the chronologically slightly overlapping later form Hayes 61B and its variants¹¹², a production period from the end of the 4th century till the second half of the 5th century is assumed, whereas the different variants, their development and dating are widely debated.¹¹³ Whether Hayes 61B reached our area before 400 is not clear. The existence of such finds at *Ad Pirum*/Hrušica – abandoned in the first decades of the 5th century¹¹⁴ –

¹¹⁰ On the chronology: Heimerl 2014, 37–38; cf. Ladstätter 2000, 94; Pröttel 1996, 43–44.

¹¹¹ Groh, Sedlmayer 2005, 155, 246, tab. 43, Pl. 30 (inv. 43/2).

¹¹² Pröttel 1996, 56: variants 61B* and 61B/Var. A new classification of Hayes 61B was undertaken by M. Bonifay (2015, 167–171): Sigillata type 38 Var. B1, B2, B3 (= 61B/Var.) and B3/late.

¹¹³ On the chronology: Heimerl 2014, 39–40. – Cf. Pröttel 1996, 56–57; Ladstätter 2000, 94; Höck 2003, 57–58 (supposing a beginning for 61B and its variants around 390/400).

¹¹⁴ Ciglencečki 2015, 394; Milavec 2017, 156–157. – Cf. Pröttel 1996, 57, 137 (suggesting an end of settlement around 400).

and at Keszthely-Fenekpuszta in a stratigraphic layer together with a coin of Valens from 364/378¹¹⁵ don't help to solve this question. Remarkable for the southern part of *Noricum mediterraneum* is the frequency of the variant Hayes 61B/Var. respectively Sigillata type 38 Var. B3 according to the new classification by M. Bonifay.¹¹⁶ These are dishes with undercut protruding rims and S-shaped wall profiles. This variant is dated by Bonifay from the middle to the end of the 5th century, which is too late in respect of sites like Hrušica (see above) and find complexes of the second quarter of the 5th century in which specimens of this variant are clearly represented.¹¹⁷ However, Hayes 61B and its variants were frequent in the 1st half of the 5th century in *Noricum mediterraneum* (e.g. at Hemmaberg, Lavant).¹¹⁸ In the area of today's Styria the form Hayes 61B/Var. / Bonifay Sig. type 38 Var. B3 (fabric D²) is the youngest documented item of ARSW and indicates an end of ARSW supply before the middle of the 5th century. It occurs here exclusively on the Late Roman hilltop settlements of Kugelstein (Figs.

¹¹⁵ Gabler 1988, 21; Horváth 2011, 601, 643.

¹¹⁶ Pröttel 1996, 56–57; Ladstätter 2000, 94–95; Bonifay 2015, 167–171.

¹¹⁷ Ladstätter 2000, 95.

¹¹⁸ Ladstätter 2000, 105; Kainrath 2011, 139.

I: 2,3a–d)¹¹⁹ and – most likely – of Riegersburg (Fig. 1: 4),¹²⁰ which belongs in all probability to the province of *Pannonia prima*. A stamped decoration in style Hayes A(III) on the Kugelstein and Hayes A(II) or A(III) on the Riegersburg piece is attested. The two contemporary stamped styles Hayes A(II) and A(III) / El Mahrine I.2 and I.3 were set by Mackensen between the mid 4th and the mid 5th century.¹²¹

In addition to ARSW pottery, lamps from North African origin and their regionally produced (Upper Italian?) imitations¹²² reached the *ager Solvensis*, again in very small numbers. An almost completely preserved piece from *Solva* has already been presented in 1973,¹²³ but was only now analysed in more detail.¹²⁴ The lamp was found in 1972 during the excavation of the Insula XXVII-North/102 together with glazed pottery.¹²⁵ It is a lamp of the type Atlante VIII A1a / Bonifay 45 A with a very unusual discus decoration of a standing male person raising the right arm. By wavelength dispersive X-ray fluorescence spectrometry (WD-XRF) the origin from Henchir es-Srira in Central Tunisia has now been proven. A further lamp fragment of the same type (Atlante VIII A1a / Bonifay 45 A) comes from the so-called Öden on the Frauenberg.¹²⁶ Four other “North African”

¹¹⁹ From the excavation of 1885/1886, stored at the Universalmuseum Joanneum at Graz, inv. 4534a–d; see Pichler 1887; cf. Groh 1996, 115; Ladstätter 2000, 110, note 594. – Probably all four fragments (a–d) originate from one vessel. Another rim piece comes from the new excavation of 1997; see Fuchs, Kainz 1998, 113, Pl. 3: 21 (no. Ku158).

¹²⁰ From the excavation of 1989/1990, stored at the Bundesdenkmalamt, inv. Rb V 255-5; see Bauer 1997, 84, 87, no. R 21, Pl. 1. – The ARSW fragment was assigned to form Hayes 67 by I. Bauer. Ladstätter (2000, 110, note 594) had supposed form Hayes 61B. We are following this attribution; most likely it is form 61B/Var. like the piece from Kugelstein. Due to the fabric D², form Hayes 59A/B has to be rather excluded; cf. Mackensen 2013, 349–350; Heimerl 2014, 34–36.

¹²¹ Mackensen 1993, 433; 2013, 349. – Cf. Ladstätter 2000, 98; Heimerl 2014, 44.

¹²² For the general problem of the recognition of imitations in relation to ARSW, see: Ladstätter 2000, 85, 98–99, 104; 2003a, 850–851.

¹²³ Hudeczek 1973, 54, note 17; Fig. 30; cf. Kainz 1986, 39–40, 117, no. 289; Hudeczek 1988, Fig. on p.53. – Since the first publication in 1973, this piece was supposed to be an imitation: Ladstätter 1998, 59, note 55, Fig. 6 (distribution map of lamps of the type Atlante VIII and imitations); Ladstätter 2000, 112; 209, find list 8, Fig. 55; Steinklauber 2013, 110.

¹²⁴ Greiner, C., Karl, S., C. A. Hauenberger, Eine Öllampe der African Red Slip Ware aus Flavia Solva – eine nordafrikanische Sigillata aus dem zentraltunesischen Produktionszentrum von Henchir es-Srira; in preparation

¹²⁵ Pammer-Hudeczek, Hudeczek 2002, 468, note 65.

¹²⁶ Steinklauber 2013, 110, 202 no. F 516, colour Pl. 13. – The lamp was assigned only generally to the type Atlante VIII A; it was classified as an imitation or, according to the assessment of M. Bonifay, as probably originating from Central Tunisia.

lamp fragments from *Solva* have to be mentioned, which are decorated with palm wreaths, ladder band, band of oblique stripes and tendrils on the shoulder. They can be assigned to the types Atlante VIII A2a / Bonifay 45 B, Atlante VIII B / Bonifay 43 and – currently not determined more accurately – generally to the form Atlante VIII A.¹²⁷ Lamps of the type Atlante VIII A and B were produced from the middle of the 4th century onwards; Atlante VIII A2 with ladder band decoration from the end of the 4th century.¹²⁸ The end of these types – significantly no lamps of the late Atlante X type are known from this area (in contrast to *Poetovio*/Ptuj¹²⁹) – is to be set around 500.

The chronologically sensitive North African fineware can best be used to date the persistence of settlements into the 5th century and as a meaningful reference for cross-regional comparative studies; of course we have to keep in mind the small amount of ARSW pieces. In the *ager Solvensis* and the directly adjacent Pannonian part to the east we can recognise a spectrum of finds similar to that of Ptujsko Polje with the main urban centre *Poetovio*/Ptuj¹³⁰ and, in the western parts of *Pannonia Prima*, *Savaria*/Szombathely, *Salla*/Zalalövő, *Iovia*/Ludbreg as well as at the inner fortification of Keszthely-Fenékpuszta.¹³¹ In the whole region the latest dateable ARSW finds are North Tunesian dishes of Hayes 61B or Hayes 61B/Var. / Bonifay Sig. type 38 Var. B3. Two pieces of Hayes 61B are known from the hilltop settlement Ančnikovo gradišče near Jurišna vas, while one piece was found in *Poetovio*/Ptuj.¹³² Two pieces of Hayes 61B were discovered in Keszthely-Fenékpuszta.¹³³ For the area of today's Styria it is notable that they are only found in hilltop settlements (Kugelstein and Riegersburg) and not in the urban centre *Solva* or other settlements in the lowland. The spectrum of finds indicates that the regular supply of ARSW import already terminated at the beginning of the 5th century

¹²⁷ Kainz 1986, 39–40, 117–118, no. 290–293, Pl. 21: 291–294 (the numbers on the plate are not correct). – The lamp with a Christogram (Atlante VIII C2a) in the Universalmuseum Joanneum at Graz published by Pohl (1962, 225, Pl. 24: 3) with the label “Pettau or Leibnitz” comes from *Poetovio*/Ptuj; see also Carandini 1981, 197 (here also erroneously listed in Austria).

¹²⁸ On the chronology: Abspacher 2020, 73–76. – Cf. Heimerl 2014, 57. According to Bonifay (2015, 364), the types Atlante VIII A1 and A2 are characteristic for the first half of the 5th century.

¹²⁹ Pröttel 1996, 201 (Atlante X A1a). – The type Atlante X was produced ca. from 400 onwards; cf. Ladstätter 2000, 102; Heimerl 2014, 59–61; Abspacher 2020, 76.

¹³⁰ Pröttel 1996, 128–130.

¹³¹ Hárshgyi, Ottományi 2015, 477–479.

¹³² Ančnikovo gradišče: Pröttel 1996, 201, no. 1–2; Pl. 3: 7 (61B; D2); Modrijan 2019, 85; 2020a, 324; *Poetovio*/Ptuj: Pröttel 1996, 199, no. 31, Pl. 2: 9 (61B; D²).

¹³³ Gabler 2008, 20–21, 38, no. 43–44, Fig. 5: 2–3 (61B); Horváth 2011, 601.

in this most south-eastern part of *Noricum mediterraneum* and only single imports of fine pottery from the Mediterranean reached the hilltop settlements persisting into the 5th century. The demand for this high-quality tableware was shifted to these remote sites. However, ARSW finds of the 5th century are remarkably scarce in this area between the south-eastern alps and the Pannonian plain. The ARSW import ended already around the mid 5th century (with the latest recorded form Hayes 61B/Var.) in this exposed region. In contrast, the hilltop settlements in Slovenia (Vranje, Tinje, Rifnik) as well as the core area of Carinthia (Ulrichsberg, Hemmaberg) reveal ARSW finds – at least sporadic – until the end of the 6th and the beginning of the 7th century (e.g. Hayes 82, 84 and 109).¹³⁴ This spectrum is additionally supplemented by imports of Late Roman C Ware (LRCW) from the Eastern Mediterranean from the second half of the 5th century onwards.¹³⁵

2.3. GLAZED POTTERY

Lead-glazed pottery is an inherent part of the Late Roman find material at many archaeological sites within the Raetian, Norican and Pannonian provinces, especially along the mid-Danubian limes.¹³⁶ It was produced from the last third of the 3rd till the mid 5th century at several sites across this region. It is mainly tableware, mostly representing open forms like plates or bowls, whereas kitchenware is mainly represented by mortaria. Special forms like glazed lamps are not really abundant in this region. Glazed pottery appears first with mortaria which have additionally a colour-coated surface (LRG 1¹³⁷) in the last third of the 3rd century; it is e.g. a type characteristic for the workshop of *Iustinianus* from *Poetovio/Ptuj*.¹³⁸ At *Favianis/Mautern* this type of mortaria is represented in the Late Roman period 5 of the fort and *vicus* (270/280–360/370).¹³⁹ Occasional finds in layers of this period 5 reveal also other shapes of glazed pottery, like a fragment of a jug with applied crescent- or horseshoe-like ornament¹⁴⁰

or a early variant of plates with sloped rims,¹⁴¹ but they are generally rare.¹⁴²

The organised production and distribution of glazed pottery started within the study area in the second third of the 4th century when the exclusivity of previous glazed vessels was followed by a broad usability, resulting in an expansion of the repertoire on different shapes of tableware by various pottery workshops across the region.¹⁴³ An extensive repertoire of glazed pottery is now frequently found in archaeological contexts that could be dated to the second and third quarter of the 4th century.¹⁴⁴ According to T. Cvjetičanin, a second period of increased appearance can be recognised at the end of the 4th century and the first half of the 5th century.¹⁴⁵ After the mid 5th century, vessels with glazed surfaces appear only sporadically, consisting only of a small number of forms.

In the south-eastern part of *Noricum* and the western part of *Pannonia prima*, the appearance of Late Roman lead-glazed pottery is generally dated to the second half of the 4th century, but it still occurs till the beginning of the 5th century.¹⁴⁶ Within the area of today's Styria, it has been registered at 14 sites, sometimes only as sparse fragments (mostly mortaria). However, the date of the first occurrence of this ware in the *ager Solvensis* can not be confirmed with certainty. A stratigraphic layer with glazed pottery in the insula XLI/405 of *Solva*, dated by a coin of Constantius II into the time after 351/355, can not exclude that the small broken pottery sherds are earlier than the accumulation of this layer.¹⁴⁷ Within the filling of the pit G 7 below this layer there are actually some fragments of tableware, one is obviously the bottom part of a biconical glazed cup (Fig. 3: 5).¹⁴⁸ As for the excavations at the sites "Wallschnitt" and "Öden" on the Frauenberg, there are comparable difficulties in using the stratigraphic layers for conclusions on the appearance of glazed pottery within the *Solva* area.¹⁴⁹ Here nian" fine ware is also known in some examples in Styra, e.g. from Saazkogel, *Solva* or Leutschach.

¹⁴¹ Groh, Sedlmayer 2002, 184–185, Pl. 27: 427.

¹⁴² On the glazed pottery of period 5 in general: Groh, Sedlmayer 2002, 300, 304.

¹⁴³ Cvjetičanin 2006, 137–142, 191–193.

¹⁴⁴ E.g. in period 5 of *Aelium Cetium*/St. Pölten (315/330–375): Bru Calderón 2011, 98–99; for period 6 of *Favianis/Mautern* (370/380–450): Groh, Sedlmayer 2002, 303–304. – For archaeological contexts in the Pannonian area, see: Hárshegy, Ottományi 2015, 489–499.

¹⁴⁵ Cvjetičanin 2006, 141, 191, 198, 207 (on the second phase of intensive production).

¹⁴⁶ Modrijan 2020c, 581. – Cf. Steinklauber 2013, 65; Modrijan 2019, 86 (to the mid 5th century).

¹⁴⁷ Groh 1996, 142–143, 146–148 (Layer 2); cf. Ladstätter 2000, 129; 2003b, 307.

¹⁴⁸ Groh 1996, 141, 192 (no. K 148); Pl. 41: K 148. – The filling of the pit belongs to period III+ (after 278–mid 4th century).

¹⁴⁹ Steinklauber 2013, 13–17 ("Wallschnitt"), 18–24 (ex-

¹³⁴ Ladstätter 2003b, 305.

¹³⁵ Ladstätter 2000, 105–117; 2003a, 834–837; 2003b, 305.

¹³⁶ For overviews, see Ladstätter 2000, 117–130; 2003a, 848–849; 2003b, 307–308; Cvjetičanin 2006; Horváth 2011, 602–606; Hárshegy, Ottományi 2015, 489–499.

¹³⁷ LRG (Late Roman Glazed pottery) according to the typology of Cvjetičanin (2006).

¹³⁸ Bónis 1990, 29; Istenic 1999/2000, 193–194, Fig. 185–186; Cvjetičanin 2006, 21, 188, 191; Horváth 2011, 607–609.

¹³⁹ Groh, Sedlmayer 2001, 182; 2002, 205–206, Fig. 137 (glazed mortarium 3); 303–304, Tab. 178; cf. Bru Calderón 2011, 98 (*Aelium Cetium*/St. Pölten). – For the similar beginning of glazed pottery (mortaria) in the last third of the 3rd century in *Raetia*, see: Reuter 2013, 361–362.

¹⁴⁰ Groh, Sedlmayer 2002, 244, Pl. 28/438; cf. Hárshegy, Ottományi 2015, 493–494, 497. – This brown glazed "Panno-

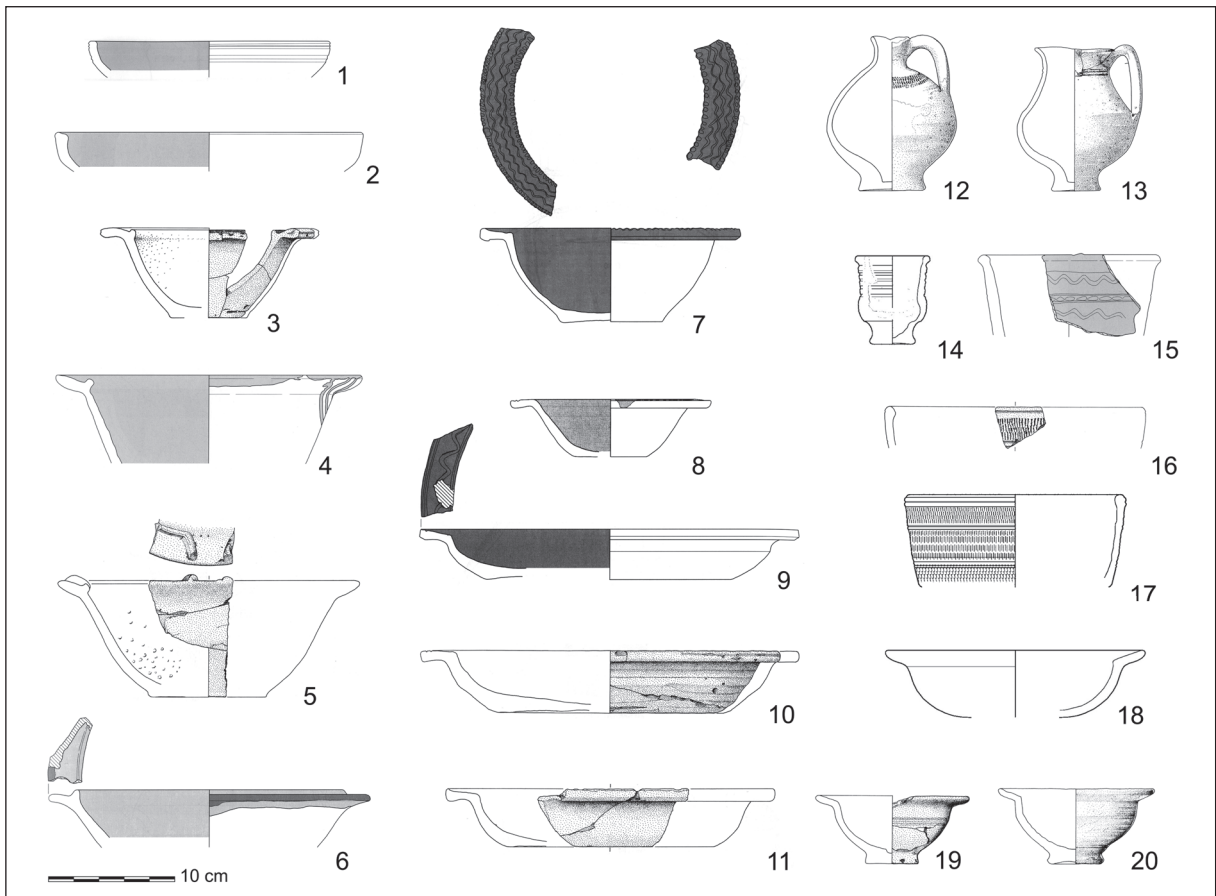


Fig. 2: Spectrum of the main characteristic shapes of Late Roman glazed pottery from Frauenberg. Scale 1:6.

the layers are mostly lying directly upon the bedrock. The coins of Valentinian I (367/375) and Theodosius I (379/383) from these layers can only be used for post-dating the overlying strata or archaeological features (e.g. the kilns); but sherds of glazed pottery were dispersed in all these layers down to the bedrock. Radiocarbon dating of the utilisation time of a heating channel of a Late Roman building within the Frauenberg settlement (excavation “Menhart”) has given the result of 420–600 (2 Sigma); glazed pottery – some of them with burning traces – were found in the filling and overlying layers of this heating channel (Fig. 2: 2,4,8).¹⁵⁰ The Late Roman cemetery Perl-/Stadlacker of Frauenberg yielded only few – expectably completely preserved – vessels: a jug from grave F 224 (Fig. 2: 12) and a mug from grave F 170 (Fig. 2: 19); a third vessel, a three-handled pot, could not be assigned to a grave (Fig. 2: 13).¹⁵¹ Unfortunately

cavation at the locality “Öden” in 2004).

¹⁵⁰ Hinker 2007a, 55; Steinklauber 2013, 25–28 (excavation of 2007, “Menhart”). – For the radiocarbon dating, see also: Lehner 2009, 174; 2011, 54.

¹⁵¹ Steinklauber 2002, 88–89, 225–226, 236, Figs. 132, 136–138; Pl. 39, 53.

no well dateable finds like coins accompanied these grave goods.

The stratigraphical sequence of the filling layers of the recently published deposit pit on the temple plateau gives more valuable information. Glazed pottery occurred here numerous in the upper filling layers (e.g. Figs. 2: 17; 3: 2), especially in SE 169, whereas the lower layers like SE 256 or 258 yielded only a mortarium and a wall piece of undefined shape.¹⁵² Several coins indicate a filling of this pit over a longer period (a closing around 380 is assumed); the filling layers with glazed pottery are dated after 355 according to the numismatic evidence.¹⁵³ Just as important is another context from *Solva* – unfortunately unpublished with the associated pottery – coming from insula VII/802. From the excavation along the so-called Hochweg in the years 2003/2004, several completely preserved glazed vessels (a.o. plates/bowls and mortararia) were found in a pit in room C. The pit itself with these obviously deliberately deposited vessels is dug into the debris layers of the abandoned building – partly destroying the adjacent wall M21 thereby –, from

¹⁵² Schrettle 2019, 92 (contribution of S. Tsironi), 197–202 (contribution of K. Peitler), 281–284.

¹⁵³ Schrettle 2019, 200 (contribution of K. Peitler).

which several coins of Constantine I and, as the latest coin, one of Constantine I from 337/340, were recorded.¹⁵⁴

The time frame of the occurrence also depends on the question of the provenance of the pottery. In relation to the *ager Solvensis*, they are either coming from the Pannonian area or from local workshops of *Solva/Frauenberg*. Local production is evidenced by a test piece of a mortarium on Frauenberg¹⁵⁵ – and probably by another piece, a misfired beaker (Fig. 2: 14), see below –, but the repertoire of the products from this/these workshop/s has still to be defined based on macroscopic or archaeometric analysis. The vanishing of glazed pottery at *Solva* and environment can be assumed to be chronologically similar as in the adjacent western part of Pannonia (*Savaria/Szombathely*, *Scarbantia/Sopron*, *Keszthely-Fenékpuszta*). There, glazed pottery disappears gradually from archaeological contexts of the first third of the 5th century in which burnished pottery becomes more and more dominant.¹⁵⁶

For the *ager Solvensis*, two aspects are noticeable regarding glazed pottery. First, the high amount of this ware in Late Roman layers on the Frauenberg, but also in the adjacent settlement *Solva* itself. The evidence for the latter is only mentioned in several publications by E. Hudeczek, the long-time excavator of this archaeological site (1976–2007).¹⁵⁷ He draws attention to the fact that glazed pottery occurs in layers of the last phase of the regular, planimetric town, in layers below the ground and walking level of the latest (irregular) building phase of *Solva* (the so-called “Restsiedlung”; see below). On the Frauenberg, approximately 2% of the Late Roman pottery finds are glazed.¹⁵⁸ The prevalence of this category of pottery can certainly be traced back to the local production on the Frauenberg. It is also striking that outside the urban area of Frauenberg/*Solva* the distribution of glazed pottery is dramatically falling in number; one exception is the *villa* and *horreum* of Rannersdorf¹⁵⁹, east of *Solva*, which shows strong relations to the municipal city visible in the spectrum of pottery finds (e.g. in the marble tempered coarse ware).

Frauenberg is the site on which the greatest quantity of glazed pottery has been found within the *ager*

Solvensis.¹⁶⁰ The vessels are mostly oxidised and hard fired, made of a well purified clay with inclusions of fine mica and few particles of a quartz-like stone. Grains of crushed bricks are rare. Some have a grey core in section caused by reduced firing.¹⁶¹ This can be observed especially behind the glazed surfaces. The glaze is normally green to olive green, often well preserved and glossy. Few are covered with a brown glaze. The majority of the open shapes are only coated on the inner side, sometimes including the rim zone. Some of the fragments show only glaze splashes, especially on subordinate surfaces.

Mortaria are the most frequent group of glazed pottery on the Frauenberg as elsewhere. They are characterised by a conical wall with a short rounded rim and a wide horizontally or slightly obliquely everted collar which normally overreaches the rim (Fig. 2: 3–6).¹⁶² The rim diameter ranges from 16 to 40 cm with a midspread between 23 and 27 cm. The shape corresponds to the type “glazed mortarium 4” of *Favianis/Mautern* which is only evidenced in period 6 of the fort (370/380–450) respectively to LRG 5 according to new typology of T. Cvjetičanin.¹⁶³ This type is widely spread in the Norican and Pannonian provinces.¹⁶⁴

The tableware of glazed pottery is represented on the Frauenberg by a limited repertoire of shapes. Numerous are plates with a flat base and a wide horizontally or slightly obliquely everted rim. The rim diameter ranges from 13 to 34 cm, with a midspread between 17 and 30 cm and a median at 26/27 cm (Fig. 2: 9–11).¹⁶⁵ The rims are sometimes decorated by concentric grooves, wavy lines, incised notches or feather rouletting. The plates belong to LRG 71, a form which is omnipresent at sites in the south-eastern alpine region.¹⁶⁶ Next to plates, there are calotte-shaped bowls with the same horizontally or slightly obliquely everted rim as the plates but with a deeper body (Fig. 2: 7–8).¹⁶⁷ The base

¹⁶⁰ Steinklauber 2002, 88–89; Schrettle 2014, 92–96 (contribution of S. Tsironi); Steinklauber 2013, 65–70; Schrettle 2019, 91–96 (contribution of S. Tsironi).

¹⁶¹ Cf. Ottományi 2011, 274.

¹⁶² Examples for Fig. 2 are taken from Steinklauber 2013 (3: F 175, 4: F 855, 5: F 161, 6: F 596).

¹⁶³ Cvjetičanin 2006, 26–28. – Cf. Groh, Sedlmayer 2002, 208–210, Fig. 138.

¹⁶⁴ E.g. Korinjski hrib: Ciglencečki et al. 2020, 98–99 (contribution of Z. Modrijan); Hemmaberg: Ladstätter 2000, 118–119; Ančnikovo gradišče near Jurišna vas: Modrijan 2020a, 319, Fig. 3: 6. For similar mortaria from Keszthely-Fenékpuszta see: Horváth 2011, 606–609. A local production of this mortarium type is attested at *Savaria/Szombathely*: Ottományi, Sosztarits 1996–1997, 155–156.

¹⁶⁵ Examples for Fig. 2 are taken from Steinklauber 2013 (9: F 394, 10: F 250, 11: F 160).

¹⁶⁶ Cvjetičanin 2006, 53–55 (with many analogies); Rifnik: Bausovac, Pirkmajer 2012, 1, Fig. 3: 1–5; Korinjski hrib: Ciglencečki et al. 2020, 100, Fig. 4.2: 3–4; Ančnikovo gradišče near Jurišna vas: Modrijan 2020a, 319, Fig. 3: 3.

¹⁶⁷ Examples for Fig. 2 are taken from Steinklauber 2013

¹⁵⁴ Heymans 2004, 516, Fig. 26.

¹⁵⁵ Steinklauber 2013, 65, no. F 29; colour Pl. 1.

¹⁵⁶ Hárshgyi, Ottományi 2015, 498–499, note 164. – Cf. Bónis 1991, 143–144; Ottományi, Sosztarits 1996–1997, 158, Tab. 1 (from the pottery kiln: 10+13% burnished; 5% glazed); Horváth 2011, 643.

¹⁵⁷ E.g. Hudeczek 1973, 54; 1977, 461; 2002, 210; Pammer-Hudeczek, Hudeczek 2002, 468, note 6.5. – Cf. Kainz 1989, 99.

¹⁵⁸ Schrettle 2019, 91 (contribution of S. Tsironi); cf. Steinklauber 2013, 65. – For the site of Hemmaberg with a share of even 6% see: Ladstätter 2000, 118; cf. Magrini, Sbarra 2015, 48.

¹⁵⁹ Schrettle 2010; 2017.

is either flat like that of the plates or is slightly disc-like emphasised. They are usually smaller than the plates with a rim diameter of around 16 to 20 cm. The rims are sometimes richly decorated; e.g. the bowl F 862 from the temple plateau (Fig. 2: 7)¹⁶⁸ shows wavy lines between concentric grooves and cordons of notches on the edges. Such bowls belong to LRG 27, one of the most widespread types in the Danube and neighbouring regions, which are represented in different variants.¹⁶⁹ As a variant of this type we can identify a yellow-brown glazed, calotte-shaped bowl with a stretched and slightly obliquely everted rim (Fig. 2: 18; rdm 20 cm).¹⁷⁰ Another type of a bowl takes over a shape from the local coarse pottery; a calotte-shaped bowl with an inside curved rim (Fig. 2: 1–2).¹⁷¹ The rim edge is either rounded or cut off obliquely inwards. They have rim diameters between 19 and 24 cm. Another group of bowls bears a different kind of relation when regarding its morphology. These calotte-shaped bowls or mugs of small sizes with rim diameter of around 12 cm, have pronounced disc-like bases like small jugs and slightly obliquely everted rims. One mug was found in grave F 170 of the cemetery Perl-/Stadläcker mentioned above (Fig. 2: 20). Another fragment with completely preserved profile comes from the “Wallschnitt” on the Frauenberg (Fig. 2: 19).¹⁷² Another significant group represented on Frauenberg are biconical three- or two-handled cups with dense rouletting decoration. The rim diameter ranges between 17 to 21 cm. They were found during several excavations on the Frauenberg, e.g. in the “Wallschnitt” (Fig. 2: 16)¹⁷³ or on the temple plateau (Fig. 2: 17)¹⁷⁴. On the basis of a recent revision of some fragments from Frauenberg we will address this group at the end of this section separately. Other shapes are only evidenced in single specimens, like the already mentioned jug from grave F 224 (Fig. 2: 12) and the three-handled pot (Fig. 2: 13). A cylindrical beaker with horizontal grooves is exceptional (Fig. 2: 14).¹⁷⁵ It has a height of 7 cm and a rim diameter of 6 cm. Its deformation of the outer wall

(7: F 862, 8: F 854).

¹⁶⁸ Schrettle 2014, 24–25, 57, 80, Fig. 75; same as Steinklauber 2013, 220, no. F 862; Pl. 95.

¹⁶⁹ Cvjetičanin 2006, 34–39 (with many analogies); add Ančnikovo gradišče near Jurišna vas: Modrijan 2020a, 319, Fig. 3: 1–2.

¹⁷⁰ Schrettle 2019, 95, 303, no. F13.71.379-1; Pl. 3: 1 (contribution of S. Tsironi).

¹⁷¹ Examples for Fig. 2 are taken from Steinklauber 2013 (1: F 570, 2: F 853).

¹⁷² Steinklauber 2013, 67, 185; Pl. 16.

¹⁷³ Steinklauber 2013, 66, 185, no. F 174; Pl. 16 (rdm 20 cm).

¹⁷⁴ Schrettle 2019, 95–96, 305, no. F 14.168,172,200.533, Fig. 53, Pl. 7: 3 (contribution of S. Tsironi); see Fig. 3: 2 (after the new assembling).

¹⁷⁵ Schrettle 2019, 96, 305, no. F14.168.534; Fig. 54; Pl. 7: 4 (S. Tsironi)

is noteworthy, as it looks misfired and fused with parts of another vessel in the kiln. It might be of local production. A pot-like vessel (or a deep bowl) with a decoration consisting of wavy-lines separated by a notched band is also unusual (Fig. 2: 15).¹⁷⁶

Decoration with wavy lines and notching appears only at an advanced production stage of glazed pottery which is dated from the late 4th century, from 380 or even 400, onwards.¹⁷⁷ The share of wavy line decorated vessels on the Frauenberg is low compared to other sites like Hemmaberg or *Gardellaca* (*Cardabiaca*)/Tokod (Fig. 2: 7,9,15).¹⁷⁸ In contrast to Frauenberg, glazed pottery with wavy line decoration is up to present unknown from *Solva* itself. This absence and in general the lack of finds securely dated into the 5th century should not be taken as an indication for an end of settlement activities in the lowland already at the end of the Valentinian time, i.e. at the end of the 4th century.¹⁷⁹ It is still an open question how to date and interpret the latest settlement phase of *Solva*, the so-called “Restsiedlung”, as it was named by E. Hudeczek.¹⁸⁰ He has favoured to date its beginning around or shortly after 400.¹⁸¹ During this last period, simple wooden houses were built on foundations made of demolished stone and brick or integrated into individual rooms of the former and already dilapidated buildings of the planimetric town. Sometimes these huts avoided the ruins and were erected directly on the streets.¹⁸² The channel heating systems typical for the Late Roman period are mostly the only archaeological evidence for these buildings; pavement levels or fireplaces are rarely recognised. This last settlement phase of *Solva* shows a pronounced degradation and clearly changes in the residential construction. Similar phenomena of wooden huts built irregularly within the ruins and public spaces are known in *Aelium Cetium*/St. Pölten, *Savaria*/Szombathely or *Sirmium*/Sremska Mitrovica.¹⁸³ At the end of the 4th century a densifica-

¹⁷⁶ Steinklauber 2013, 66, 212, no. F 717; Pl. 77 (rdm 13.8 cm).

¹⁷⁷ Bonis 1991, 144; Ladstätter 2000, 128; Hárshegyi, Ottományi 2015, 490, 494.

¹⁷⁸ *Gardellaca* (*Cardabiaca*)/Tokod: Bonis 1991, 144; Hemmaberg: Ladstätter 2000, 123–124; cf. Korinjski hrib, where wavy line decoration is not attested: Ciglencečki et al. 2020, 101 (contribution of Z. Modrijan); this seems also true for Ančnikovo gradišče near Jurišna vas: Modrijan 2020a, 320.

¹⁷⁹ Cf. Steinklauber 2010a, 25; Groh 2021, 172–173, 313.

¹⁸⁰ Hudeczek 1977, 466–467; 1988, 53; 2002, 211.

¹⁸¹ Hudeczek 1977, 467; 1988, 53; 2002, 210–211; 2008, 275–276. – The assumption that the last building phase of the planimetric town was destroyed during the raids of the Gothic troops led by Radagaisus in 405/406 was purely fictional and has been avoided in later works.

¹⁸² Pammer-Hudeczek, Hudeczek 2002, 470; Hudeczek 2008, 276, Fig. 13.

¹⁸³ *Aelium Cetium*/St. Pölten: Scherrer 2011, 111; *Sa-*

Site	Shapes	Decor	Amount	References
Solva – Settlement	mortarium, plate, bowl, cup, pot	grooving, rouletting	“not at all rare”	Groh 1996, 143, 146–147, 194, no. K 148–149; Pl. 41 (Grube G7); K 288, K 289, K 293, Pl. 56 (Schicht 2); Pammer-Hudeczek, Hudeczek 2002, 468, note 65 (“gar nicht so selten”); Heymans 2004, 516, Fig. 26; Rabitsch 2013, 44, 46–47, 139, 141–142; Pl. 49: 9–10, 51: 16(15), 52: 6
Solva – Cemetery	mortarium, cup	rouletting	3	Schrettle, Tsironi 2007, 249, note 241 (unpublished; from the cemetery Marburgerstraße, formerly in the museum Flavia Solva); unpublished fragments from the Late Roman well within the cemetery “Spitalsgelände”
Frauenberg – Temple plateau	mortarium, plate, bowl, cup, jug, beaker, pot	grooving, rouletting, wavy line, notching	>85	Groh, Sedlmayer 2004, 464, 470; Schrettle 2014, 24–25, 57, 80, Fig. 75; 92, Pl. 47: 5 (contribution of S. Tsironi); Groh, Sedlmayer 2005, 152–155; Tab. 40, 43 ; Pl. 24: 459/2; 29: 38/22; Steinklauber 2013, 220, no. F 862; Pl. 95; Schrettle 2019, 91–96 (contribution of S. Tsironi)
Frauenberg – Settlement/Öden, NW-Slope	mortarium, plate, bowl, cup, mug, jug, three-handled amphora, pot	grooving, rouletting, wavy line, notching	>65	Steinklauber 2013, 65–70; several unpublished fragments exist from the excavation of 1985/1986; see Joanneum Jahresberichte 1985, 117–118; FUCHS 1985–1986a; Fuchs 1986
Frauenberg – Cemetery/Perl-/Stadläcker	bowl, jug, three-handled amphora	grooving, rouletting	3	Steinklauber 2002, 88–89, no. GK.2–4; Fig. 131, 136–137; Pl. 39 (F 170); Pl. 53 (F 224)
Rannersdorf – villa	mortarium, bowl, cup, jug, beaker, pot	grooving, rouletting	>15	Schrettle, Tsironi 2007, 249, 278–279; Pl. 40: 7, 10–11; 43: 4; Schrettle 2017, 42–44, 54, 58, 60, 64; Pl. 2: 2; 3: 1, 17, 20; 4: 10, 17, 23; 6: 4, 10–11 (contribution of S. Tsironi)
Löffelbach – villa	jug	-	1	Marko 2017, 133, no. 610031; Pl. 20
Aichegg near Stallhofen – Farmstead	mortarium, bowl, cup?	-	>10	Bauer, Hebert, Schachinger 1995, 101, no. 474–476, 490–491, 494–495; Pl. on p. 130–131
Schönberg near Hengsberg – Settlement	plate, bowl, cup?	rouletting	4	Oberhofer 2012, 96–97, 324, no. F176–179; Pl. 11
Wildoner Schloßberg – Hilltop settlement	Mortarium, plate?, bowl?	-	4	Bauer 1997, 111, no. W6–7, W11–12; Pl. 42; Tiefengraber 2018, 251, Fig. 271
Kugelstein – Hilltop settlement	plate, bowl	...	>10	Pichler 1887, 123; Fuchs, Kainz 1998, 108 (Ku70, 259, 298), 109 (Ku62), 116 (Ku241); Pl. 6: 55–56
Riegersburg – Hilltop settlement	mortarium	-	1	Bauer 1997, 88, 94, no. R32; Pl. 2
Heiliger Berg near Bärnbach – Hilltop settlement	mortarium, plate	-	9	Bauer 1997, 113–114, no. B1–4, B22–25; Pl. 44–46; Steinklauber 2006a, 248, 253, no. 9; Fig. 2
Eppenstein – Hilltop settlement	mortarium, bowl, cup, jug, pot?	-	5	Unpublished; see Steigberger, Steinegger 2015/2016, 270
Frauenburg – Hilltop settlement	plate, bowl	grooving	2	Unpublished; see Steinegger 2017, 183; Steinegger et al. 2019, 116–117
Knallwand near Ramsau – Hilltop settlement	mortarium, plate	grooving	8	Steinklauber 2005, 150, 167–168, no. K1–K8; Pl. 2

Tab. 2 →

Site	Shapes	Decor	Amount	References
Röthelstein near Wörschach – Hilltop settlement	plate	grooving, notching	2	Steinklauber 2005, 161, 178, no. R1–R2; Pl. 14

Tab. 2: Find list of Late Roman glazed pottery in the area of today's Styria (sites only with fragments of not clearly defined shapes are excluded).

tion of the settlement on the Frauenberg ridge can be observed, similar to Poetovio/Ptuj with the castle hill (Grajski hrib) and the Panorama hill.¹⁸⁴ The observed differences in the find material between Frauenberg and *Solva* are probably due to a social gradient; it seems that a poorer population remained and lived in the lowland settlement, probably together with newcomers. The already observed poverty of the Late Roman graves (also with some barbaric elements) discovered in the *Solva* cemeteries supports this assumption.¹⁸⁵

Most of the sites with glazed pottery in the middle Danubian provinces have a military origin or are characterised by the presence of soldiers. This has resulted in the hypothesis that the increasing need for glazed pottery is connected with the military reorganisation of the Pannonian provinces and the stationing of new troop units.¹⁸⁶ Also for the site of Frauenberg, several militaria are evidenced and even a small garrison is assumed.¹⁸⁷ Glazed pottery was also found in settlements on rural sites (e.g. Aichegg near Stallhofen or Schönberg near Hengsberg, Tab. 2). According to P. Hárshegyí and K. Ottományi, glazed pottery is first of all a feature of romanisation, which soldiers and wealthier members of the middle classes could afford.¹⁸⁸ It is therefore a sign of a certain prosperity and a still functioning economy.¹⁸⁹ For *Solva*, this is obviously still true for the third quarter of the 4th century.

varia/Szombathely: Vida 2011b, 634–635; Scherrer 2003, 63; for the pottery kiln built under the arcades of a street see Ottományi, Sosztarits 1996–1997; for *Sirmium*/Sremska Mitrovica and other sites with remains of such late irregular dwellings see Ciglenecki 2014, 232–238.

¹⁸⁴ Horvat et al. 2003, 163–165; Ciglenecki 2017, 145.

¹⁸⁵ Pammer-Hudeczek, Hudeczek 2002, 467–470.

¹⁸⁶ Magrini, Sbarra 2005, 72–73; 2015, 43. – Cf. Cvjetičanin 2006, 144–148, 196–197; Horváth 2011, 603; Steinklauber 2013, 65.

¹⁸⁷ Groh, Sedlmayer 2005, 155, 209–210, 241, no. 223/14; Pl. 21; Schrettle 2019, 83–84, Figs. 48 (lorica squamata), 143; Groh 2021, 207. – For the garrison see: Ladstätter 2002, 318, 353–356.

¹⁸⁸ Hárshegyí, Ottományi 2015, 495, 499.

¹⁸⁹ In this context it has to be mentioned that glazed pottery is also supposed to be a substitute or a supplement for the decreasing imported tableware vessels from the Mediterranean: Ladstätter 2000, 125; Cvjetičanin 2006, 139, 195–196; Vida 2011b, 636.

Biconical three- or two-handled glazed cups with rouletting decoration

Biconical glazed cups with dense rouletting decoration are common among the glazed pottery in the Norican and Pannonian regions.¹⁹⁰ The rouletting is executed by two or three circumferential registers of multiple fine rouletting bands separated by grooves. Only the rim and the vertical wall with the rouletting decoration is covered with glaze, while the lower conical wall part and the inside show normally only some glaze splashes. The form exists in two sizes, a smaller variant with two handles and a rim diameter of around 12 cm and a larger, mostly three-handled variant with a rim diameter between 16 and 18 cm.¹⁹¹ The first is sometimes classified as a beaker, the latter as a bowl.¹⁹² This shape is mostly represented in the smaller variant. Noticeably, several specimens of the larger variant were found on the Frauenberg (Fig. 3: 2,3).¹⁹³ Base fragments of this characteristic shape were also evidenced in the insula XLI/405 of *Solva* (Fig. 3: 5)¹⁹⁴ and in the backfilling of a Late Roman well (Fig. 3: 6) in the cemetery of “Spitalsgelände”. In course of a revision of the recently found cups from the temple plateau, two exemplars could be assembled from several fragments.¹⁹⁵ One piece (Fig. 3: 2) has a stacking trace on the lower part.¹⁹⁶ Although both are of similar size (Fig. 3: 2: rdm 17.2 cm; Fig. 3: 3: rdm 19.6 cm) and fabric, they differ in their rouletting decoration. For the yellow-brown-glazed cup (Fig. 3: 3) a broader rouletting tool was used and stronger impressed into the clay. Additionally, the rim zone is higher with two or even three grooves. On the

¹⁹⁰ Hárshegyí, Ottományi 2015, 490–493.

¹⁹¹ Ottományi 2011, 266–267; Pl. 2: 6–8, 6: 3.

¹⁹² Bausovac, Pirkmajer 2012, 1–2.

¹⁹³ Steinklauber 2013, 66, 178, 185, nos. F25–26; 174; Pl. 3, 16; Schrettle 2019, 95–96.

¹⁹⁴ Groh 1996, 141, 192, no. K 148; Pl. 41.

¹⁹⁵ We thank B. Schrettle for the opportunity to study this material. Comparisons for Fig. 3: 2: Schrettle 2019, 91–93, 95–96, 305–308, Fig. 53; Pl. 7: 3 (F14.168/172/200.272/378/533; cf. Fig. 2: 17); Pl. 7: 17 (F14.174.423); not illustrated: F14.196.468; Fig. 52; Pl. 8: 10 (F14.196.469/472/473); Pl. 10: 14 (F15.196.32); Pl. 10: 13 (F15.196.45); Pl. 9: 9 (F15.196.88); Pl. 10: 15 (F15.196.264); Pl. 13: 6 (F15.233.275). Comparisons for Fig. 3: 3: Schrettle 2019, 91–93, 95–96, 319; Pl. 30: 1 (F14.169.540); Pl. 30: 3 (F14.169.536).

¹⁹⁶ Cf. Bru Calderón 2011, 20, Fig. 37.

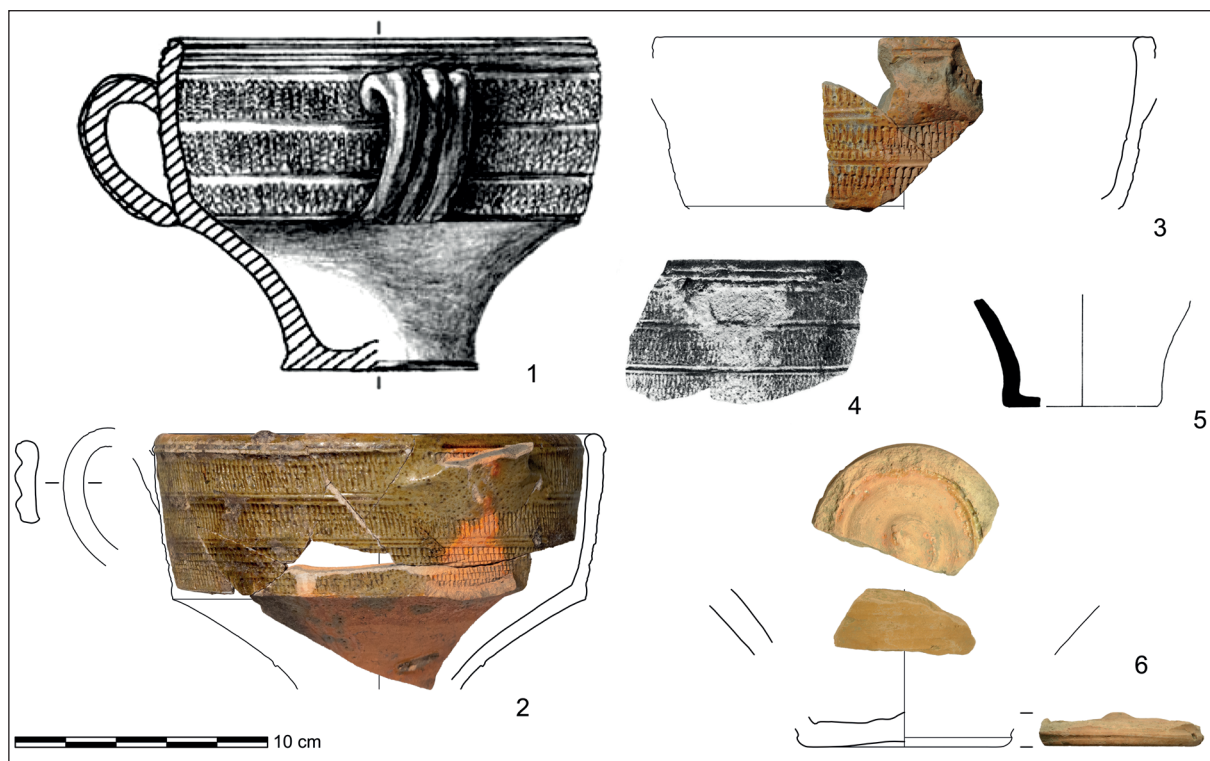


Fig. 3: Biconical three (or two-) handled glazed cups with rouletting decoration; 1: from the cemetery of Budaörs; 2, 3: from the temple plateau of Frauenberg; 4: from *Gorsium-Herculia/Tác*; 5, 6: from *Solva*. Scale 1:3.

green-glazed exemplare (Fig. 3: 2) marks of all three handles are preserved. Both cups have closest parallels in the find material of *Gorsium-Herculia/Tác* (Fig. 3: 4).¹⁹⁷ Some details of the rouletting and some morphological features (also in the combination with the glaze colour) are so closely related that a common origin can be assumed. At *Gorsium-Herculia/Tác* different rouletting motive types could be differentiated, some of them were attributed to a local production based on their frequency on the site.¹⁹⁸ The Frauenberg rouletting decoration belongs to these local motive types. Another parallel of a completely preserved cup was found in grave 427 of the cemetery of Budaörs (Fig. 3: 1).¹⁹⁹ Its outline is almost congruent with the green-glazed cup from Frauenberg. Further cups of this larger size with a rouletting decoration matching these local *Gorsium* types were discovered at *Poetovio/Ptuj*,

¹⁹⁷ For Fig. 3: 2: Fitz, Bánki 1972, 243, Pl. 13: 10; Fitz et al. 1973, 332–333, Pl. 9: 1; 9: 3 (= Fig. 3: 4); 1984–1985, 215, Pl. 33: 605; 1986–1988, 133, Pl. 42: 647; 1994, 366, Pl. 51: 460; cf. also Fitz et al. 1982–1983, 146, Pl. 38: 502. For Fig. 3: 3: Fitz et al. 1984–1985, 238, Pl. 57: 523. For further analogies from *Gorsium-Herculia/Tác* see Bausovac, Pirkmajer 2012, 1, note 15.

¹⁹⁸ Bánki 1992, 42–44, Fig. 6. – For *Gorsium-Herculia/Tác* as a production center of glazed pottery see also Bónis 1990, 29–30; Hárshgyi, Ottományi 2015, 496.

¹⁹⁹ Hárshgyi, Ottományi 2015, 491–493, Fig. 1: 17; Ottományi 2011, 266, Pl. 2: 8 (rdm 16.4 cm).

Hemmaberg and on the hilltop settlements of Rifnik and Ančnikovo gradišče near Jurišna vas.²⁰⁰ It is noticeable that this stylistically close group of vessels of supposed Pannonian (*Gorsium*) origin spread outside of Pannonia only in the western adjacent part of *Noricum Mediterraneum*. Other cups of this larger variant were found at *Favianis/Mautern* and *Aelium Cetium/St. Pölten*, but they differ in details of shape and decoration.²⁰¹

The smaller variant of these biconical glazed cups with rouletting decoration, the proper two-handled skyphos, is widespread in the Pannonian cemeteries and settlements of the second half of the 4th century.²⁰² This variant probably appears shortly before the mid 4th

²⁰⁰ *Poetovio/Ptuj* (from Hajdina): Mikl-Curk 1976, 47, 97, no. 3924, Pl. 6: 17; Hemmaberg: Ladstätter 2000, 122, 245, Pl. 7: 6 (rdm 22 cm); Rifnik: Bausovac, Pirkmajer 2012, 1, Fig. 3: 8 (rdm 21); Ančnikovo gradišče near Jurišna vas: cf. Bausovac, Pirkmajer 2012, 1, note 10 (mentioning Ravnik 2006, 95, Pl. 3: 15–16).

²⁰¹ *Favianis/Mautern*: Friesinger, Kerchler 1981, 199, Fig. 7: 1 (burnt layer of the kiln); Gassner 2000, 251, 280, Fig. 209: D5.19 (rdm 14 cm); Groh, Sedlmayer 2001, 182, note 21; 2002, 304, Pl. 27: 426 (period 5.3); according to Groh, Sedlmayer 2001, 184 the kiln in the area “Viculus West” was active in period 6 (370/380–450); *Aelium Cetium/St. Pölten*: Bru Calderón 2011, 35, Fig. 23; Pl. 28: 4 (rdm 18 cm).

²⁰² Bónis 1991, 131–133.

century as indicated by a cup found in grave 110 of the cemetery Somogyszil together with two coins of Constantine I (one of them 334/335).²⁰³ Two other cups are associated with coins of Valens (364/378), one from grave 132 of the same cemetery of Somogyszil,²⁰⁴ the other from grave 11 of the cemetery of *Gerulata*/Rusovce²⁰⁵. From the settlement of Budaörs fragments of cups of this smaller variant are found in layers together with coins from 351 to 375.²⁰⁶ According to the archaeological contexts, these cups appear from the late second quarter of the 4th century and have a main time of usage in the second half of the 4th century.²⁰⁷ The larger variant starts probably a little bit later than the classical two-handled shape. The deposit pit on the temple plateau of Frauenberg mentioned above may provide a dating of the occurrence of this type in the *ager Solvensis* during the third quarter of the 4th century. How long the larger type was produced and distributed is difficult to determine. Basically, the decoration with dense rouletting motifs, which is typical on these three- or two-handled cups, is a sign for the earlier stage of glazed pottery.²⁰⁸ Another argument for dating these large cups not longer than the third quarter of the 4th century is that according to Z. Bánki the production of glazed pottery at *Gorsium-Herculia*/Tác gradually decreased after the 370s the more *Gardellaca* (*Cardabiaca*)/Tokod swung up to the predominant production centre for the Pannonian region.²⁰⁹

2.4. BURNISHED POTTERY

Coarse pottery with a burnished surface and decoration fired in a reducing atmosphere is characteristic in the Late Roman/late antique find material of the middle Danubian provinces of Noricum and Pannonia and of their bordering regions.²¹⁰ It is mostly found in settlements and forts along the limes and in the Pannonian lowland. In *Noricum mediterraneum*, burnished pottery is only of subordinate importance and evidenced

only in single pieces on a handful of sites (e.g. from Carinthia: Lendorf near Klagenfurt, Kathreinkogel, Hemmaberg²¹¹). This under-representation is probably also aggravated by the fact that this kind of pottery is difficult to recognise, especially in an environment of similar looking Late Latène pottery finds (e.g. on the Frauenberg).

Burnished pottery occurred after some predecessors during the Valentinian time and increased afterwards during the late 4th century and the first third of the 5th century which is confirmed by various archaeological contexts in the provinces of *Pannonia prima* and *Valeria* as well as of *Noricum ripense*.²¹² In *Favianis*/Mautern, burnished pottery is documented from period 5 (270/280–360/370), but does not appear in large numbers until the period 6 (370/380–450).²¹³ According to P. Hárshgyi and K. Ottományi, the appearance of this decorative treatment of the pottery surface in the Late Roman period can be explained by the settlement of peoples from the Barbaricum in the province and the arrival of other newcomers.²¹⁴ Local Roman pottery workshops seem to be influenced by the new arrivals and enriched their repertoire. Glazed and burnished pottery was even produced at a few sites by the same pottery workshop, as at *Favianis*/Mautern, *Savaria*/Szombathely or *Gardellaca* (*Cardabiaca*)/Tokod.²¹⁵ This period of time is mostly dated to the last quarter of the 4th and the beginning of the 5th century.

As mentioned, burnished pottery is extremely rare in *Noricum Mediterraneum*; this is especially true for the *ager Solvensis*. Nevertheless, there are few pieces – currently only in a small number of three items – which bridge the gap between the Pannonian, Carinthian and Slovenian find sites. They are all coming from *Solva* and Frauenberg. The first one, found during the excavation of the Late Roman settlement remains on the northwestern slope of Frauenberg in the years 1985–1986 (excavation “Lippnegg”), belongs to a pot with an outwardly curved rim and a bulge separating the narrow neck zone from the shoulder (*Fig. 4: 1*).²¹⁶ Unfortunately, there was no chance to reexamine this

²⁰³ Burger 1979, 50–51, Pl. 20: 3 (rdm 11.2 cm).

²⁰⁴ Burger 1979, 56, Pl. 23: 1; 34: 1 (rdm 9.3 cm). – Grave 132 contains 3 coins of Constantius II (337/361; 355/361) and one of Valens (364/378).

²⁰⁵ Krekovič 1998, 40, Pl. 31: 2 (rdm 7.4 cm).

²⁰⁶ Ottományi 2011, 266–267, Pl. 2: 7; 6: 3.

²⁰⁷ Ladstätter 2000, 128; Bausovac, Pirkmajer 2012, 1; Reuter 2013, 363–364. – In Ottományi (2011, 267) and Hárshgyi, Ottományi (2015, 493) these cups are dated from the first third of the 4th century until the beginning of the 5th century.

²⁰⁸ Hárshgyi, Ottományi 2015, 494.

²⁰⁹ Bánki 1992, 40; cf. Bru Calderón 2011, 82. – According to Ottományi, Sosztarits (1996/1997, 181) *Gorsium-Herculia*/Tác belongs to the sites where burnished pottery was not produced.

²¹⁰ For overviews see: Groh, Sedlmayer 2002, 313–321; Ladstätter 2003a, 849–850; Groh, Sedlmayer 2013, 504–505; Hárshgyi, Ottományi 2015, 500–509.

²¹¹ Groh, Sedlmayer 2002, 316, note 1030; Ladstätter 2003a, 849–850; Lendorf: Rodriguez 1997, 161, Pl. 11: 111; Kathreinkogel: Rodriguez 1997, 161, Pl. 11: 105; Hemmaberg: Rodriguez 1997, 161, Pl. 9: 86–87.

²¹² Horváth 2011, 628; Groh, Sedlmayer 2013, 504; Hárshgyi, Ottományi 2015, 500–502.

²¹³ Groh, Sedlmayer 2002, 313–314.

²¹⁴ Hárshgyi, Ottományi 2015, 500–501.

²¹⁵ Groh, Sedlmayer 2001, 184; Hárshgyi, Ottományi 2015, 506. 508. – For a compilation of these workshops see: Ottományi, Sosztarits 1996–1997, 181–182.

²¹⁶ Artner 1998–1999, 224, 267, fig. 4; cf. Schrettle 2014, 56, note 189; Gutjahr 2015a, 77, note 30; 2020, 56, note 7. – For this important, but in essence still unpublished excavation see: Joanneum Jahresberichte 1985, 117–118; Fuchs 1985–1986a; 1986; Steinklauber 2013, 28–31.

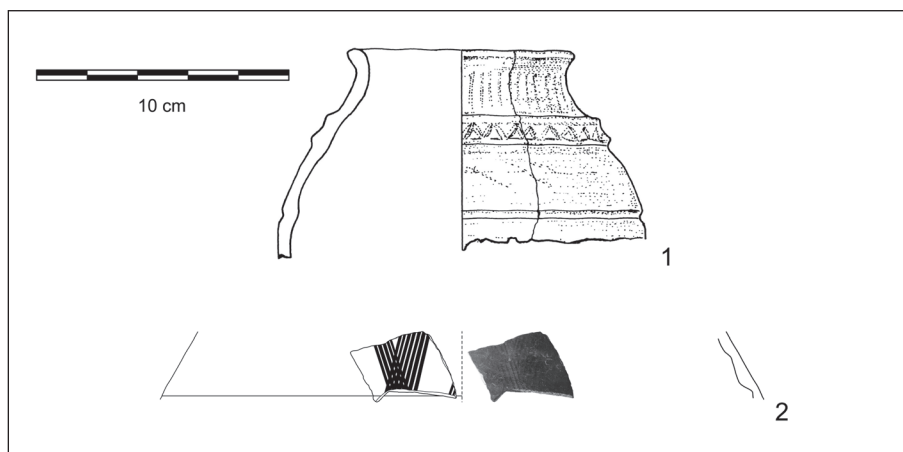


Fig. 4: Burnished pottery from the last quarter of the 4th century to the beginning of the 5th century from Frauenberg. Scale 1:3.

important object in the museum depot, so the classification is based on the published drawing. It has vertical burnished stripes on the neck, a slightly deepened (incised?) zigzag line (wavy line?) on the bulge and diagonal burnished stripes (very faint) on the shoulder, which was framed below by a groove. The shape and decoration features refer this piece to the second group of burnished pottery as it was determined by P. Hárshgyi and K. Ottományi.²¹⁷ The authors are dating this group from the last quarter of the 4th century to the beginning of the 5th century. A comparable pot of similar size (rdm 11 cm) and decoration (with incised wavy line) – with traces of a handle – was found at *Favianis/Mauern* in period 6 (370/380–450).²¹⁸ Another fragment from Frauenberg was discovered during the recent excavation on the temple plateau in 2018.²¹⁹ This wall piece belongs probably to a large jug or even to a pot (Fig. 4: 2; max. pres. diameter 23.4 cm). The black coloured fabric is reduced and medium hard fired without any visible inclusions. The shoulder zone is decorated with a band of alternating diagonal stripe groups (one with 5 and the other with 7 stripes), partly crossing. These stripes are slightly deepened in the polished surface. A fine incised horizontal line is limiting this ornamental band below. It resembles the large jugs with narrow neck and lattice pattern on the shoulder from the *vicus* of Budaörs, which are part of the second group of burnished pottery there (380–430).²²⁰ The decoration of stripe groups is quite common, evidenced also in *Noricum ripense*.²²¹ A third

fragment was recently evidenced in the “city moat” of *Solva*; it is up to date not published but only cursorily mentioned in a recent publication.²²² According to the first report, it comes from the top filling layers of this moat. On this basis, the decay of the moat was dated into the Valentinian time.

This small number of burnished pottery from *Solva* hardly allows any further evaluations. The pieces are certainly imports from the Pannonian area where several workshops were evidenced in the form of pottery kilns, pottery waste and other specifics.²²³ The sites where a production of burnished pottery is argued that are closest to the study area are *Savaria/Szombathely* and *Keszthely-Fenekpuszta*.²²⁴ Exact parallels could not be recognised in the published material from this western Pannonian region. Remarkable for both Frauenberg pieces is the precision and elaboration of the burnished decoration; burnished pottery from the neighbouring sites are more simple, as from the hilltop settlement *Ančnikovo gradišče* near *Jurišna vas* or from *Poetovio/Ptuj*.²²⁵ On *Ančnikovo gradišče* c. 1% of all Late Roman pottery finds belongs to the category of burnished pottery. Parallel to the latter site, the burnished pottery from *Solva* can be dated to the same time frame, from the last quarter of the 4th to the beginning of the 5th century. The most scarce evidence in the *ager Solvensis* – in spite of the closeness to Pannonia – is nevertheless difficult to explain.

²¹⁷ Hárshgyi, Ottományi 2015, 503–507.

²¹⁸ Groh, Sedlmayer 2002, 260–261, Fig. 151; Pl. 41: 759.

²¹⁹ No. F18.457.1 (unpublished); for the excavation see Schrettle 2018.

²²⁰ Ottományi 2009, 416, 437, Fig. 3: 9.

²²¹ E.g. from Vienna-Aspern: Friesinger, Kerchler 1981, 252, Fig. 26: 3; *Favianis/Mauern*: Groh, Sedlmayer 2002, 315, Pl. 31: 526.

²²² Groh 2021, 295.

²²³ Ottományi, Sosztarits 1996–1997, 181–184; Hárshgyi, Ottományi 2015, 506 (workshops of group 2).

²²⁴ Ottományi, Sosztarits 1996–1997, 178; Horváth 2011, 606; Hárshgyi, Ottományi 2015, 506, note 197.

²²⁵ *Ančnikovo gradišče*: Modrijan 2019, 86, Fig. 3: 5; 2020a, 320–321, Fig. 4; 2020b, 359, Fig. 6: 6; *Poetovio/Ptuj*: Mikl-Curk 1966, 56, Pl. 2: 11 (grave 38); 58, Pl. 3: 3 (no. 3514); 1976, 45, 95, Pl. 9: 12 (no. 3514); 12: 14 (no. 3513).

3. THE FINDS FROM THE PERIOD 450–650 AD

Christoph Gutjahr

It has already been stated several times that in Styria, finds from Late Antiquity and, even more so, from the transition to the Early Middle Ages (around 450 to 650 AD), are surprisingly rare.²²⁶ Comprehensive research in the recent past was able to increase the known inventory only insignificantly. Apart from the silver-gilt bird fibula (450–500 or around 500, *Fig. 5*) and the four lead bullae of the Eastern Roman emperor Markianos (450–457)²²⁷ from *Solva*,²²⁸ only very few objects from Styria can be attributed to the Migration Period – furthermore, the circumstances of their discovery often remain unclear.²²⁹ From Kirchbichl near Rattenberg (district of the Mur/Mura Valley), there is a bird fibula (approx. 470–525, *Fig. 6*)²³⁰ and a bronze bow fibula decorated by chip-carving of the Prša-Levice type (450/460–480/490, *Fig. 7*); the latter is a Danubian/East Germanic product. The Kugelstein near Frohnleiten (Graz-Umgebung district), featuring an extraordinary strategic position, is the find spot of an iron crossbow fibula of the Siscia type (second half of the 5th century/first half of the 6th century, *Fig. 8–9*), which was discovered during excavations in 1885–1886. An equal-armed bronze bow brooch was found in Mantscha (Graz-Umgebung, district, second half of the 6th century/first half of the 7th century, *Fig. 10*). In grave 15 of the cemetery of Hohenberg near Aigen (Liezen district), dating to the decades around 800, two late antique pigeon fibulae have been found (5th–7th centuries).²³¹ A hollow armllet (Kolbenarmring) with a pearled rim presumably originates from the vicinity of Leoben (mid 7th century, Leoben district, *Fig. 11*).²³² An openwork disc brooch with an inscribed cross and ring-and-dot ornament made of non-ferrous metal from grave 8 of the early medieval cemetery of Grötsch (Leibnitz district, *Fig. 12*) can also be dated to the early Middle Ages (last two to three decades of the 7th century or around 700).²³³ It is probably an piece that had been in use for a long time for which a broader dating (6th/7th century) including Late Antiquity was initially



Fig. 5: Bird fibula from Solva.

considered.²³⁴ A pin with a bird-shaped head made of non-ferrous metal, a dislocated find from the filling of a Medieval ditch at Wildon/Schlossberg, may also belong to this period (*Fig. 13*).²³⁵ An allegedly Byzantine lead tessera (6th/7th century?) that was found around 2002 in Andritz, Graz-Stadt district, is currently missing.²³⁶ Also untraceable are the pottery fragments mentioned by Schmid from his excavation west of the so-called *Almhäuser* (Altenmarkt, municipality of Vordernberg, Leoben district) below the *Präbichl* saddle (presumably 1929, definitely before 1932), which Schmid classified as late medieval on the basis of their decoration.²³⁷ In 1992, Eibner associated them with fragments of (later) Merovingian biconical vessels because of their decoration technique (latticed triangular and rectangular stamped motifs as well as ring-and-dot ornaments and rouletted decoration).²³⁸ In fact, however, the sherds are the remains of cups/jugs of late medieval to early modern provenance (approximately late 14th to early

²²⁶ Gutjahr 2015a 76–78; 2018, 42–44; 2020, 55–62.

²²⁷ Gutjahr 2015a, 76, 101–102, note 21.

²²⁸ Gutjahr 2015a, 76, 101–102, note 21; 2020, 56, note 8.

For an overview of bird fibulae: Losert 2003, 152–162.

²²⁹ For the finds: Gutjahr 2020, 55–57.

²³⁰ The bird fibula from grave LGG83 (grave 30/2013) of Liefering-Lexengasse (Greussing 2020, 160, 420, *Fig. 5a*; around 500) is very similar.

²³¹ Nowotny 2005, 208–210, pl. 14/45 (grave 15).

²³² Recently, with reference to the difficulties in distinguishing Late Antiquity and the Early Middle Ages: Milavec 2020, 162.

²³³ Koch 2003, 222.

²³⁴ Gutjahr 2018, 43; 2020, 57.

²³⁵ The pin with a bird-shaped head (see Bauer 1997, 110–111, Pl. 43: W28) matches the – in itself very heterogeneous – group of pins with a bird-shaped head of the 4th to 7th century mentioned by Vida (2009, 244–249, 246, *Fig. 5*; 247 *Fig. 6A*. – The main area of distribution of this type of pin is in the eastern territories of the Byzantine Empire: Vida 2009, 245, *Fig. 4*; 2011a, especially 416–418, 417, note 171.

²³⁶ Records of the Bundesdenkmalamt (Federal Monuments Office). The find was handed over to the Bundesdenkmalamt and later transferred to today Universalmuseum Joanneum for identification. It is currently not traceable.

²³⁷ Schmid 1932, 56–58; 57, *Fig. 45*.

²³⁸ Eibner 1992, 26–27.



Fig. 6: Bird fibula from Kirchbichl near Rattenberg.

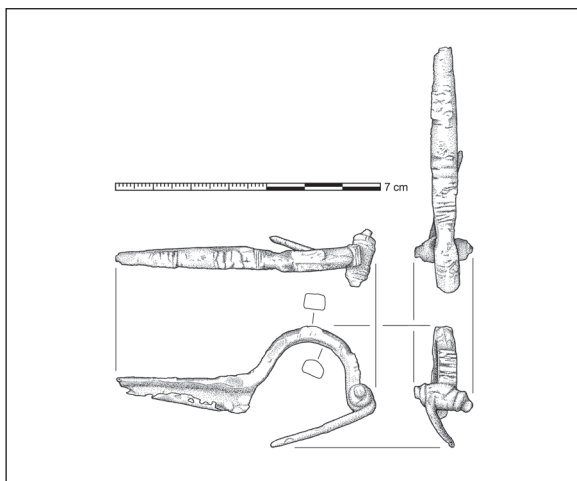


Fig. 9: Crossbow fibula of the Siscia type from Kugelstein near Frohnleiten, drawing.

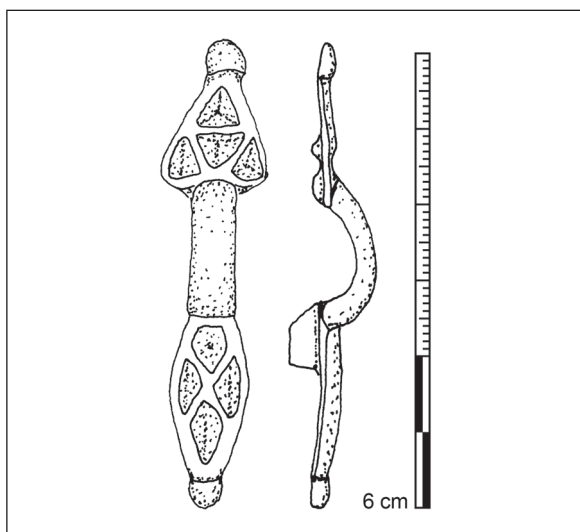


Fig. 7: Bronze bow fibula of the Prša-Levice type from Kirchbichl near Rattenberg.



Fig. 10: Bow fibula from Mantscha.



Fig. 8: Crossbow fibula of the Siscia type from Kugelstein near Frohnleiten.

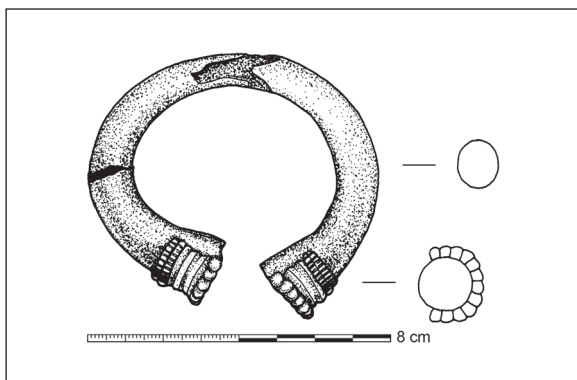


Fig. 11: Hollow armlet (Kolbenarmring) with a pearled rim from the vicinity of Leoben.



Fig. 12: Disc fibula from Grötsch.

16th century),²³⁹ which eliminates them from the find material that is included in this study.²⁴⁰

Two half relief fibulae (bird and deer) made of cast non-ferrous metal from the strategically important castle hill of Eppenstein (Murtal district)²⁴¹ complete the inventory of the late antique and early medieval finds. This includes all of the currently known small

²³⁹ See also: Holl 1963, 391–394; 356, Fig. 46–47; 363, Fig. 63; 364, Fig. 65; Holl, Parádi 1982, 105, Fig. 52; Fig. 165 (esp. 3–8); Kerman 1997, 147; 158, Fig. 6/22.

²⁴⁰ Consequently, they have not been included in compilations of LA/EMA finds in recent years (Gutjahr 2015a, 76–77; 2018, 42–43; 2020, 55–58). I would like to thank my colleagues Iris Koch, Manfred Lehner, Daniel Modl, and especially Johanna Kraschitzer, all from Graz, for their review and hopefully final chronological assignment of the Altenmarkt sherds.

²⁴¹ Steinklauber 2010b, 21, Fig. 2.3; Pl. 2: 2.3; Gutjahr 2015a, 102–103, note 28; Steinklauber 2010b, 24, Fig. 2.4; Pl. 2: 2.4; Martin 1994, 569, 571, Fig. 162. For the bird (dove) fibula, a very similar specimen can be cited from Puštal above Trnje: Bitenc et al. 1991, 75 no. 72 (5th/6th century); Bitenc, Knific 2012, 432, 431 Fig. 1, no. 7.



Fig. 13: Non-ferrous metal pin with a bird-shaped head from the castle hill of Wildon.

finds from more than 160 years of archaeological research in Styria.

If we look at the numismatic data, the situation is not better. Finds of Eastern Roman or Early Byzantine coins between 450 and 700 are equally rare (Tab. 3).²⁴² Except for four coins (Fig. 17), from Annaberg near Leoben, Eppenstein (only the item found 1952), Krottenhof near Sankt Ulrich am Waasen and Graz-Andritz – the latter three with the special fate to become lost after discovery –, they have all no verifiable provenance: they were either found in the 19th century or by modern collectors. In the case of Einhof near Seibersdorf bei St. Veit the coin of Justinianus I was probably lost together with other Roman coins on this find site during modern times.²⁴³ Noticeable are two *solidi* of Leo I from the hilltop settlement of Eppenstein.²⁴⁴ They belong to two different mints *Constantinopolis* and *Roma*, whereby the latter is quite unusual for the Norican and Pannonian area.²⁴⁵ Whether this gold coinage is part of a military pay is unclear.²⁴⁶

²⁴² For the recent assessment of the coin finds in Styria from the period from 450 to 1100 we are grateful to Karl Peitler (Universalmuseum Joanneum Graz). For information and photographic material of relevant coins we thank Andreas Bernhard for the Burgmuseum Deutschlandsberg and Susanne Leitner-Böschzelt from the MuseumsCenter | Kunsthalle Leoben.

²⁴³ Schachinger 2006, 239.

²⁴⁴ Steinklauber 2010a, 14–15.

²⁴⁵ Hahn 1990; Prohászka 2011, 85.

²⁴⁶ Prohászka 2011, 71. – Cf. Milavec 2020, 166.

Site	Ruler	Denomination	Issue	Type	Storage	Key reference
Eppenstein, found 1952	Leo I	Solidus	462/466, <i>Constantinopolis</i>	RIC X 605	lost	Hahn 1990, 243; Steinklauber 2010b, 15; Zbiva ID 10004050
Eppenstein	Leo I	Solidus	467, <i>Roma</i>	RIC X 2518	Burgmuseum Deutschland-berg	Schachinger 2006, cat. 16796; Pl. 16: 16796; Steinklauber 2010b, Fig. on p. 14–15; Zbiva ID 10004050
Leibnitz field, found before 1848	Leo I	Tremissis	(457–474)		lost	Hahn 1990, 244; Schachinger 2006, cat. 16798; Zbiva ID 10004058
Frauenberg	Basiliskos	Solidus	474–476, <i>Constantinopolis</i>	RIC X 1002 or 1003	private property, unknown	Schachinger 2006, cat. 16799; Zbiva ID 10004059
Giesselegg near Wies	Anastasios I	Follis	(491–518), <i>Constantinopolis</i>		Burgmuseum Deutschland-berg	Zbiva ID 10004060
Krottendorf near Sankt Ulrich am Waasen, found in the 1970s		Follis			lost	Mirsch 1994, Fig. on p. 81; Zbiva ID 10004055
Mitterdorf near Voitsberg, found before 1827	Justinus I	Follis	518–522, <i>Thessalonica</i>	MIB 68	UMJ	Hahn 1990, 243; Schachinger 2006, cat. 16839; Zbiva ID 10004061
Einhof near Seibersdorf bei St. Veit, found 1956	Justinianus I	AE	527–565, <i>Ravenna</i>		private property Leutendorf	Schachinger 2006, cat. 16840; Zbiva ID 10004062
Annaberg near Leoben, found 1989	Justinianus I	Follis	538–539, <i>Nicomedia</i>	MIB 114	MuseumsCenter Kunsthalle Leoben	Schachinger 2006, 210, 240 (no. 16841); Pl. 41: 16841; Zbiva ID 10004057
Pichling near Stainz	Justinianus I	Follis	538–539, <i>Nicomedia</i>	MIB 114	Burgmuseum Deutschland-berg	Zbiva ID 10004063
Äußere Kainisch near Bad Mitterndorf (“Goldbichel”), found 1877	Justinianus I	Follis	538–539, <i>Constantinopolis</i>		Krajské muzeum Cheb, Czech Republic	Modl 2010, 162; Zbiva ID 10004066
Großfeiting near Wildon, found before 1879	Justinianus I	Half-follis	552–565, <i>Salona</i>	MIB 250 (similar)	UMJ	Zbiva ID 10004067
Knittelfeld, found before 1819	Phokas	Follis	605–606, <i>Constantinopolis</i>	MIB 61 c	UMJ	Hahn 1990, 244; Schachinger 2006, cat. 16842; Peitler 2011b; Zbiva ID 10001858
Graz-Andritz, found c. 1983/1984	Heraclius	Follis	617		UMJ	Artner 1997, XXXIII, XLVII; Zbiva ID 10003604
Straden, found before 1826	Heraclius	Follis	610–641, <i>Constantinopolis</i>	MIB 164	UMJ	Hahn 1990, 244 (Leo V, 813–820); Schachinger 2006, cat. 16843 (Leo III, 717–741) and cat. 16844 (Constantinus V Copronymus, 741–745); Zbiva ID 10001870

Tab. 3: Coin finds of the LA and the early EMA period from 450 to 700 in the area of today's Styria.

Two more sites that have only been archaeologically investigated in recent years should be mentioned here.

From the ruins of Frauenburg Castle near the village of Unzmarkt-Frauenburg in western Upper Styria (Murtal district), which has been the target of

long-term archaeological investigations since 2012, late Roman and Late Antique radiocarbon dates have been collected from various layers. However, no chronologically correlating finds or (structural) findings have been presented so far that could at best be connected to a Late

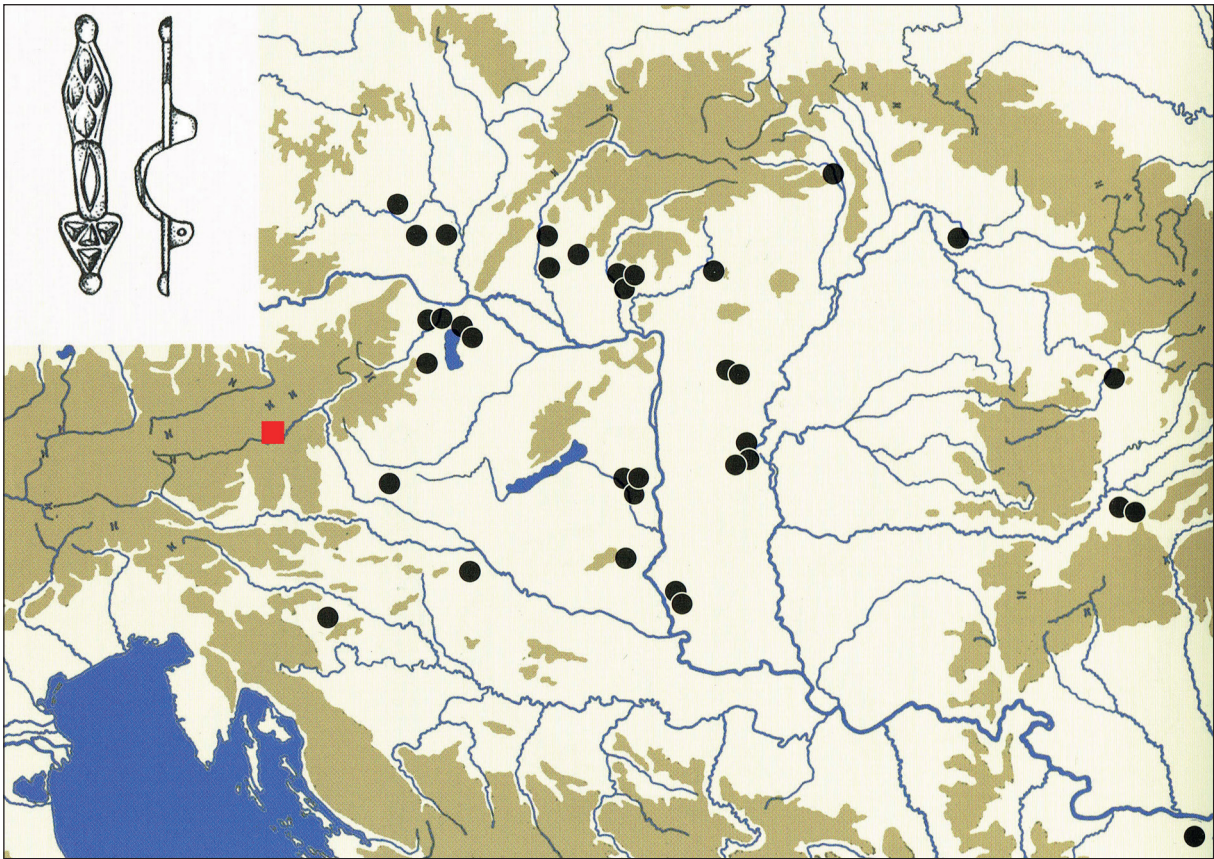


Fig. 14: Distribution of fibulae of the Prša-Levice type in the middle Danube region. Square: Kirchbichl near Rattenberg.

Antique phase (after 450 AD) on the castle hill.²⁴⁷ The finds and findings in question still have to be published. In principle, a late antique settlement persistence of whatever type and intensity cannot be ruled out for the site, which is located close to a Roman *via publica* (“Norische Hauptstraße”).²⁴⁸

Another finding from Riegersdorf in eastern Styria (Hartberg-Fürstenfeld district), which is located close to the border with Burgenland, cannot be classified more precisely on the basis of the excavation results published for the time being. For a kiln discovered there in 2016, an early medieval date is assumed, although only a radiocarbon date pointing to Late Antiquity (5th/6th century) is given.²⁴⁹

In comparison to the extensive finds from Late Antiquity and the Migration period in Carinthia and Slovenia that come from hilltop settlements as well as burial grounds, the almost negligible number of contemporaneous finds from Styria is astonishing. We will deal with this disproportion below.

Most of today’s Styria belonged to the Roman province of *Noricum mediterraneum* and consequently – at

²⁴⁷ Steinegger 2017, 188–190; Steinegger et al. 2019, 117, esp. 120 note 5–6; Steinegger 2020, 97.

²⁴⁸ Hinker 2010; Steigberger, Vrabec 2016.

²⁴⁹ Czubak, Chmielewski 2016, 462, D6910–D6913.

least legally – to the Ostrogoth Empire, even though this is not visible in the archaeological evidence.²⁵⁰ In view of the localisations that have been proposed so far, it can hardly be assumed that the *Pólis Norikón*, which was assigned to the Lombards by the Byzantines, or at least subsequently legitimised by contract, affected the territory of today’s Styria. The interpretation of the Styrian finds remains uncertain. They show no indications of the presence of Ostrogothic or Lombard groups or military troops, nor are there any indications of local militias. Essentially, there are no finds that show any kind of contact (trade, exchange, gifts, dowry etc.) with Ostrogothic, Lombard or Frankish milieus.²⁵¹ The few

²⁵⁰ Wolfram 2001, 315–324; 2003, 62; Bratož 2014, 372–375.

²⁵¹ In contrast to neighbouring Carinthia and Slovenia. The small finds are generally to be assigned to the East Germanic milieu (e.g. the fibula from Rattenberg; cf. Gleirscher 2019, 96) or, like the bird fibulae, are typical of the cemeteries of the western Merovingian circle (westmerowingischer Reihengräberkreis). The earliest occurrences of bird fibulae are almost exclusively associated with Alemannic, Bavarian and Franconian graves (Losert 2003, 154). The bow fibula from Mantscha is usually regarded as an element of the male Roman costume: Ibler 1991, 105–109; Martin 1994, 578–579, Fig. 173, 1012; Thörle 2001, 96–98, 259–266 (group III A); Pl. 60–61; Map 15. – Gleirscher (2019, 96) assumes a derivation

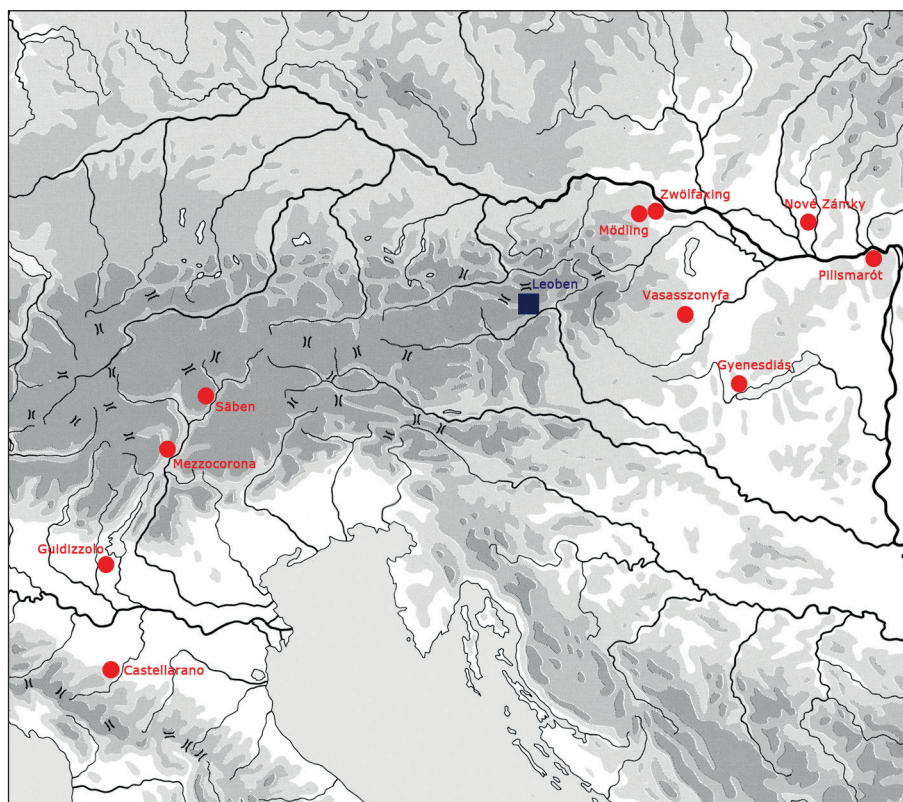


Fig. 15: Distribution of hollow armlets (Kolbenarmringe) with a pearled rim. Square: vicinity of Leoben.

objects of Germanic and Roman origin dating from the Migration period do not give us any reliable indications of ethnic identities, territorial disposition or the affiliation of Styrian regions to any of the various spheres of control during Late Antiquity and at the beginning of the Early Middle Ages.

Only three of the above-mentioned objects can be linked quite safely to a larger geographical and cultural-historical framework: The Prša-Levice type fibula from Rattenberg represents an element of the Danubian female costume from the second half of the 5th century and turns out to be the most western exponent in the mapping of this type's find spots in the central Danube region (Fig. 14). According to J. Tejral, this group of fibulae can be attributed into the central Danubian culture, which was established in the post-Attila period, which originated in indigenous Danubian traditions and bore both an East Germanic/equestrian nomadic and a late antique legacy.²⁵²

The hollow armlets (Kolbenarmringe) with a pearled rim are Italic products that were also used as traditional costume elements in the western part of the

of East Germanic types.

²⁵² Tejral 2008, 268. – See also Heinrich-Tamáška, Straub 2015, 634–635 (as characteristic of Zsibót-Domolopuszta type graves = type 5 graves; phase D3 according to Bierbrauer 2015, 374).

Avar territory – they document contacts beyond the area of the Eastern Alps, between western Pannonia and the Lombard realm.²⁵³ The location given for the Styrian armlet (vicinity of Leoben) suggests routes crossing Styrian territory, connecting these two historically important regions (Fig. 15).

Finally, the crossbow fibulae of the “Siscia” type have a clear focus of distribution in the south-eastern Alps; according to T. Milavec, they were worn here by the Roman or Romanised population (Fig. 16).²⁵⁴

It is noteworthy that the activities of the Lombards, Ostrogoths, the (early) Avars and various other ancient *gentes* in the Eastern Alpine region,²⁵⁵ well documented in the neighbouring areas, seem to have passed by Styria without a trace, and not even a rudimentary persistent *romanitas* can be identified. This is surprising, the more so as evidence increases that the Roman populations of the central and eastern Alpine region, Pannonia, Italy and the Dalmatian coastal landscape were in contact

²⁵³ Distelberger 2004, 20.

²⁵⁴ Milavec 2009, 224, 233–234, 236–237, 229 Fig. 8. – Different: Schulze-Dörrlamm 1986, 686–689 (Germanic), 694, 695, Fig. 110; Gleirscher 2019, 92–93.

²⁵⁵ Winckler (2012a; 2012b) gives an overview of the relevant period. On the 5th and 6th centuries in Noricum and Pannonia see also: Ruchesi 2020, 17–33.

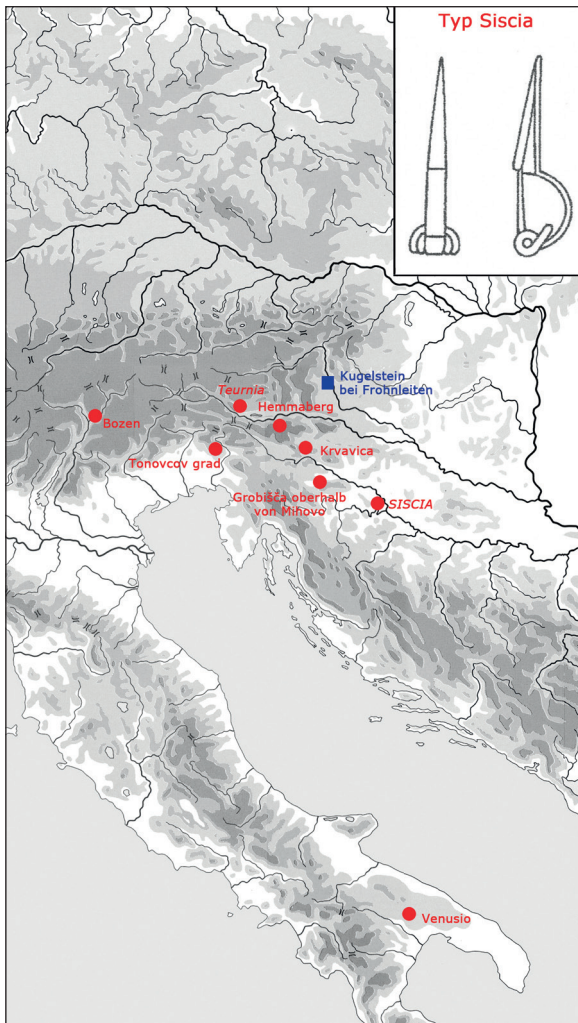


Fig. 16: Distribution of crossbow fibulae of the Siscia type. Square: Kugelstein near Frohnleiten.

with one another well into the 7th century.²⁵⁶ When looking at the disc fibulae of the Christian population of the early Keszthely culture, F. Daim clearly emphasised that the long-distance travel and communication routes (e.g. Amber Road) to Italy and further into the Eastern Mediterranean, running just outside of today's Styria, were still used during the early Avar period.²⁵⁷ Furthermore, for Pannonia in the early Avar period – particularly taking into account the necropoleis of the Keszthely culture and other Pannonian cemeteries – T. Vida postulated an influx of Mediterranean groups from the Byzantine Balkans in addition to a remaining Roman population with ties to the western Mediterranean (northern Italy,

²⁵⁶ See, for example: Glaser, Gugl 1996, 18–24; Bierbrauer 2004, 51–72; Vida 2008a, 422 (surviving *romanitas* also outside the Keszthely culture); 2009, 233–259; 2011a, 397–455.

²⁵⁷ Daim 2002, 119–121 (Keszthely – Poetovio – Celeia – Emona – Aquileia to Italy and the Central Byzantine area and via Keszthely to Aquincum).

Dalmatia, south-eastern Alps).²⁵⁸ T. Milavec interprets finds of Balkan crossbow fibulae with an inverted foot in Slovenia as a sign of an otherwise hardly tangible (and in Styria non-existent) Byzantine presence after the Gothic Wars.²⁵⁹

It is an open research question to what extent and in what form Styria participated in the changes in settlement patterns and economic structures that took place in the Eastern Alps and in the Pannonian region during Late Antiquity/Migration period.²⁶⁰ In addition, it remains unclear whether and, if so, to what extent Styria participated in the above-mentioned supra-regional exchange and was affected by migratory movements of various ethnic groups (Romans, Germans, etc.). At the moment, we can only assume that the existing Roman road network was still in use in Styria. Although this assumption cannot be proven by means of archaeological evidence, it suggests itself in view of the geographical situation of the area within the better researched regions of western *Noricum mediterraneum* (Carinthia, East Tyrol), Pannonia and northeastern Slovenia. The use of the long-distance trade routes and passes (e.g. Pyhrnpass, Triebener Tauern), which mainly went across Styria in a north-south direction, is indicated by the presumed route of the clothing donation episode from the *vita Severini* or – somewhat later – the find spot of the aforementioned bracelet near Leoben in the upper Mur/Mura valley.²⁶¹ Bypassing of former Roman roads due to their lack of maintenance can of course also be expected in Styrian territory.²⁶²

After the middle of the 5th century, Styria must not be thought of as completely deserted – even if in the 6th/early 7th century, there was no situation of persistent Late Antique administration, organisation, order and authority comparable to that of western *Noricum mediterraneum* or the neighbouring Slovenia. Central places and church buildings that can be associated with this type of continuity are missing in Styria. The absence of Roman place names is striking, but – as the example of Carinthia shows – it should not automatically be concluded that there is no *romanitas*.²⁶³ Roman or

²⁵⁸ Vida 2009, esp. 235–237, 244–255 (deported “prisoners of war”; see, for example, the bird-head pin from Wildon, Fig. 13). – Roman continuity in Keszthely-Fenékpuszta and beyond (Lesencetomaj-Piros kereszt) is also assumed by Müller (1992, 259, 274–281). See also Szőke 2000, 490–491.

²⁵⁹ Milavec 2009, 224, 237.

²⁶⁰ Pars pro toto, the construction of hilltop settlements, the ruralisation of the cities, the retreat into regions with potential for mining activities (salt mining in Upper Styria?) or to still prosperous “urban” centres (western *Noricum Mediterraneum*?) as well as the possible continuity of travel routes can be named.

²⁶¹ *Vita Severini* 29; Régerat 1996, 203; Winckler 2012b, 146.

²⁶² Winckler 2012b, 116–117.

²⁶³ Glaser 2008, 595.

indigenous romanised parts of the population remained in the country; last but not least, this is suggested by the tradition of pre-Roman toponyms.²⁶⁴

We can put on record that the rural structures in Styria hardly survived beyond the end of the 4th century. For the only Roman town in Styria, *Solva*, the loss of urban structures is to be expected around 400. There are indications that some remnant settlement activity existed until the first half of the 5th century, but more in the sense of a partial re-use or very limited further use of a settlement area than in the sense of an urban continuity (see above). Overall, based on the findings and finds, it can be assumed that there is a significant reduction in settlement in Styria as early as the first half of the 5th century. Only a few settlement sites like the Frauenberg near Leibnitz²⁶⁵ or the three fortified Upper Styrian hilltop settlements in the Enns valley (Gröbminger Schlossbühel, Knallwand in Ramsau and Röthelstein near Wörschach) existed until the middle of the 5th century. These hilltop settlements came to an end in a fire.²⁶⁶

As mentioned, at present there is no evidence of hilltop settlements or fortifications, church buildings or burial sites from the second half of the 5th and 6th centuries in Styria. An archaeological investigation of the Kirchbichl near Rattenberg, located in the upper Mur/Mura valley near Fohnsdorf, could potentially provide information about Late Antique settlement. From this site, possibly a small *vicus* or an alpine country estate in slightly elevated position (mid-1st to at least 4th century), as mentioned above, two Germanic fibulae from around 500 are recorded.²⁶⁷

²⁶⁴ Recently: Gutjahr 2020, 62 note 39.

²⁶⁵ Steinklauber 2018, 758–759. So far, there is no conclusive evidence of a Christian population living there deep into the 5th century, as recently mentioned by Ciglencečki 2023, 29. The preserved architectural fragments of the early Christian church and the finds from the late antique cemetery do not support this assumption. The Frauenberg would then also represent a kind of “settlement island” at the fringes of the Pannonian Plain, at a time (around 450 at the latest) when people had otherwise long since retreated from exposed landscapes.

²⁶⁶ The Ennstal hilltop sites have been associated with a line of fortification or boundary between *Noricum ripense* and *Noricum mediterraneum*, and questions about their affiliation to a province or city were raised (Steinklauber 2005, 135–198, esp. 164; 2018, 764–765). In order to explain their early abandonment, Gleirscher (2019, 78) recently considered that the Enns valley might have belonged to *Noricum ripense*, which was given up by Odoaker in 488.

²⁶⁷ Ehrenreich et al. 1997, 193–252, esp. 193–195; Steigberger, Vrabec 2016, 187–190, 193; Steigberger, Steinegger 2016, 264–267. – In our opinion, the current evidence is not sufficient to identify a hilltop settlement that was still in use in the 6th century (Gleirscher 2019, 78–79).

It should also be pointed out that, despite its location not far from the Amber Road,²⁶⁸ Styria is apparently outside the distribution of African and Eastern Mediterranean Late Antique types of amphorae.²⁶⁹ In addition, no Late Antique tableware dating to the period after 450 is known from Styria.²⁷⁰ This seems important in view of the fact that North African and Eastern Mediterranean imported goods are crucial for the dating respectively for the setting of the chronological framework of the (south) east Alpine hilltop settlements. In Styria, however, there is not only a lack of datable imports,²⁷¹ but a general lack of pottery, including coarse ceramics, that could be dated reliably later than the middle of the 5th century.²⁷²

The few pieces of Late Antique or Migration period attire and jewellery are, given their character as stray-finds, entirely separated from their original context, and can hardly be associated with hilltop settlements of the 5th/6th centuries. More probably, these finds provide information about supra-regional trade (or just travelling) routes that were still in use (Fig. 17).

If we put the finds from the period from AD 450 to 650 in relation to more than 160 years of archaeological research in Styria,²⁷³ considering the long research traditions in the late Roman/Late Antique core regions such as Kugelstein near Frohnleiten or Frauenberg near Leibnitz, it can be concluded that their small number cannot be explained by the state of research. More likely, a considerable surviving Roman or romanised population has to be ruled out.²⁷⁴ This does not mean that a continuation of Roman settlement in Styria beyond the middle of the 5th century is to be completely denied, but it probably existed to a very modest extent and was restricted in the expression of its material culture. Historical linguistics also assume a sparsely populated area into which the Slavs immigrated.²⁷⁵ The “settlement vacuum” after 450 is not a consequence of an insufficient state of research, but largely depicts historical reality. Almost twenty years ago, U. Steinklauber titled a paper on Late Antiquity in Styria with “Die Römer gehen”.²⁷⁶

²⁶⁸ Ladstätter 2003, 836.

²⁶⁹ Ladstätter 2003, 837–848; Modrijan 2015, 28, Fig. 8; 29, Fig. 9.

²⁷⁰ See, for example, Ladstätter 2003, 834–837.

²⁷¹ Milavec 2002, 160.

²⁷² See, for example, the shapes in: Modrijan 2020, 579, Fig 3.

²⁷³ See Karl, Modl 2018, 67–75 (contribution of D. Modl).

²⁷⁴ Gutjahr 2020, 77–78. – Only the Eppenstein animal fibulae, the above-mentioned Late Antique pieces from early medieval graves and the fibulae from Mantscha and Kugelstein might be associated with a Roman population (see note 235 and 340). Especially in the case of the latter two finds, nothing can be said about the actual ethnic identity of the wearer.

²⁷⁵ Lochner von Hüttenbach 2008, 30.

²⁷⁶ Steinklauber 2006b, 173–179; see also Steinklauber

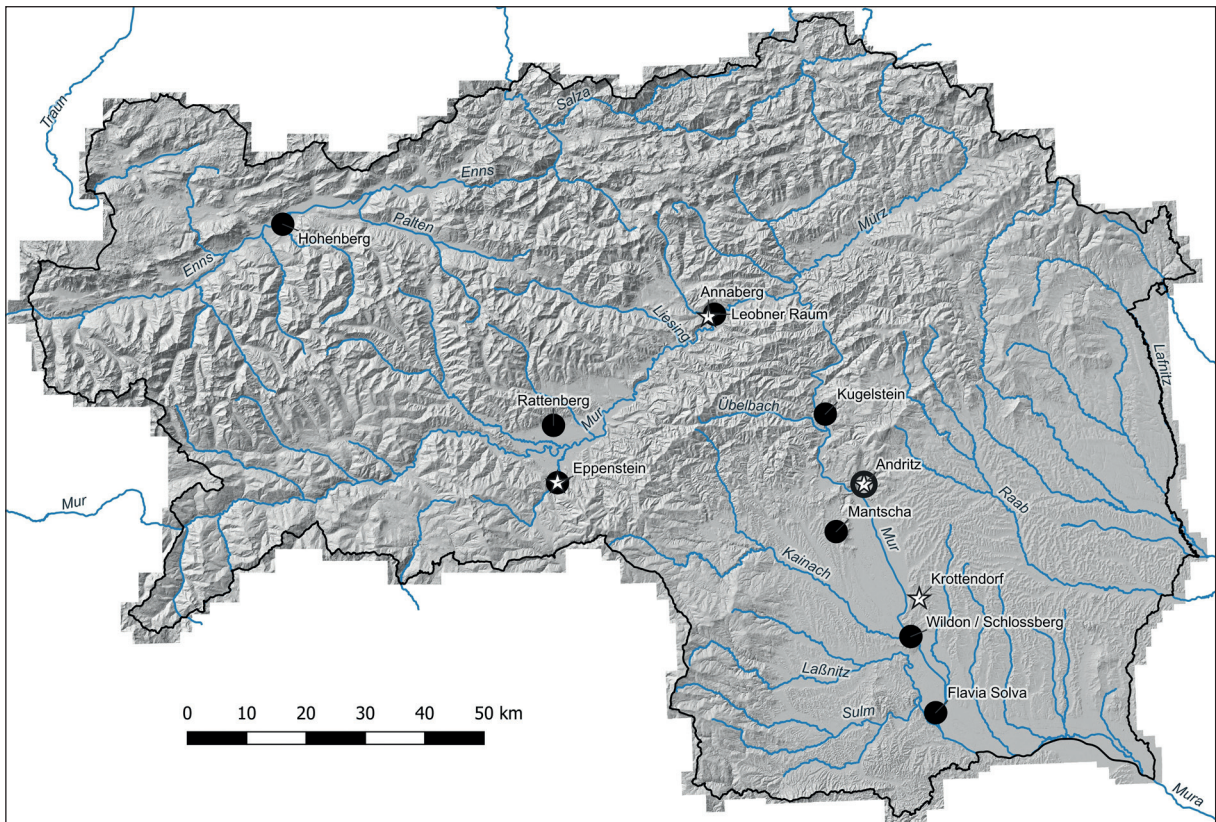


Fig. 17: Distribution of sites in the area of today's Styria with find material from the second half of the 5th century till the first half of the 7th century. Circle: small finds (origin is certain or at least probable). Ring: small find (uncertain; currently not available); star: coin (assured origin).

Based on the above data, this pointedly formulated statement can be agreed with.

It can be stated that, according to archaeological evidence and material culture, Styria remained firmly rooted in the Roman Empire until about the middle of the 5th century.²⁷⁷ However, in our opinion, large parts of Styria were separated from the persisting Roman world and the developing (Germanic) successor states and spheres of control from the second half of the 5th century onwards. The negative result regarding settlement is not limited to Styria²⁷⁸ but also includes neighbouring areas in the east²⁷⁹ as well as in the

2008, 423, note 52. – In a way, the image of Styria around 450 is reminiscent of the one that Milavec (2020, 162) draws of Slovenia regarding the abandonment of the hilltop sites at the end of the 6th and in the 7th century (“shutdown of the region”, “minimal contact ... with the outside world”). However, in Styria even local pottery production seems to be lacking after 450.

²⁷⁷ Best visible using the example of the Late Antique settlement on Frauenberg with the associated cemetery on Perl-Stadlacker (Steinklauber 2002; 2012, 127–132; 2013; 2018, 758–763).

²⁷⁸ Gutjahr 2020, 74 (esp. note 109).

²⁷⁹ West Pannonia (the areas west of the Lombard settlement along the line Savaria – Keszthely – Sopianae) and the

south.²⁸⁰ For parts of this large area a quite numerous remaining Roman population has been considered, which would have seriously opposed the Lombard efforts of expansion.²⁸¹ Recently, however, the thesis of an earlier Slavic occupation was articulated, contradicting the assumption of Roman residual settlement.²⁸² However, neither of the two cultural phenomena is visible for the 6th century in the archaeological finds from Styria. Under the premise of military events in the first half of the 5th century, which exerted pressure on the remaining people, resulting in emigration, the question arises as to the size of the remaining population in the area around the middle of the 5th century. Around 400, only a few hundred people are likely to have lived in *Solva*, and only a few hundred inhabitants are assumed for the settlement on Frauenberg,²⁸³ which persisted longer. The Hunnic campaign of 452 presumably led to further waves of emigration. Hunnic attacks

south of today Austrian province of Burgenland.

²⁸⁰ Flat areas of the Drau/Drava valley in the vicinity of *Celeia* and *Poetovio* as well as the Prekmurje (Ciglenečki 2008, 485, Fig. 2).

²⁸¹ Vida 2008b, 76.

²⁸² Pavlovič 2017, 383–385, 364, Fig. 9.

²⁸³ Steinklauber 2002, 45–46, note 107 (200 to 350 people).

on today's Styrian territory may also have taken place earlier (from around the 430–440s). The Raab valley is the ideal route for Hunnic raids into eastern Styria.

In conclusion, much speaks in favour of Styria being largely void of settlement for more than 200 years. In this context it should be remembered that the hill-top settlements with regular Roman troops in the area of south-east Noricum along the Amber Road (e.g. Ančnikovo gradišče near Jurišna vas) were abandoned after the middle of the 5th century. After 450, they apparently no longer could be held in this relatively open terrain, and their repopulation began only in the Early Middle Ages. In addition, the situation in neighbouring Pannonia after the Battle of Nedao (454–455) was characterized by continuous armed conflicts. Under these circumstances, the further colonisation of open terrain could not appear desirable – like everywhere else, people withdrew to better protected, elevated sites. It is possible that the remaining Roman parts of the population, as F. Ruchesi recently suggested for the Romans in Pannonia of the second half of the 5th century, also joined the military contingents of Germanic peoples.²⁸⁴

The question arises whether Styria,²⁸⁵ then sparsely populated and economically irrelevant, was of direct military or strategic importance for the dominating powers in the later 5th and 6th centuries. It was probably of little importance for the Ostrogoths, who dominated the region at the end of the 5th and during the first decades of the 6th century. With the affiliation of the regions of Slovenia and Carinthia to the Ostrogothic kingdom (beforehand belonging to Italia and *Noricum mediterraneum*), there was protection against the east and northeast – Noricum had to protect both Italy and the flank of Gothic Dalmatia and Pannonia.²⁸⁶

Also on the part of the Lombards, who became a powerful factor in Pannonia in the 6th century, there is no evidence of any interest in colonising the area of Styria. The occupation of the fertile Pannonia at the beginning of the 6th century took place well-regulated by the military along the central Danube Limes and was based on important places of Roman settlement, which were still of strategic importance despite their ruinous state.²⁸⁷ The settlement activities of the Pannonian Lombards did not extend beyond the western end of Lake Balaton. It is possible that the Lombards did not envisage any further settlement – probably due to their limited number; the failure to reach out to the west would therefore have demographic causes and nothing to do with Roman or early Slavic groups being an obstacle. For the Lombards – with clever military tactics and supported by well-chosen marriage alliances – it was in any case much more tempting to venture south

into economically potent areas along the former central Danube Limes (Pannonia prima and Valeria). The opportunities resulting from the support of the Byzantines were cleverly used; in 547–548 the south-east area of Noricum (Pólis Norikón) and the south Pannonian Savia were taken over. It is well known that this policy ended (and succeeded) in 568 with the entering and takeover of Northern Italy.

Apparently, only the early Slavs, who, in the historical evidence, appear in the south-eastern Alps in the course of the Avar expansion to the west around 600, had an interest in the occupation and settlement of Styria. However, evidence of Slavic settlement activity in Styria does not exist before the middle or the last third of the 7th century (see below).

In conclusion, it should be noted that Styria was only reintegrated into a larger political entity in the second half of the 8th century in the course of the Frankish-Carolingian expansion towards the east, when a new political order was established.²⁸⁸ For Styria (including Slovenian Lower Styria) it should also be noted that from Late Antiquity to the High Middle Ages it was always located on the periphery of larger spheres of power or in overlapping zones of influence.²⁸⁹

4. THE EARLY SLAVIC SETTLEMENT (AROUND 650–750 AD) – THE MOST IMPORTANT SITES

Christoph Gutjahr

The Slavic settlement of what was to become Styria during the Early Middle Ages presumably started before 600, after the Lombards had left the southeastern Alpine region for Italy in 568. This dating seems plausible if one assumes, like the majority of researchers does, that the Bavarian-Slavic conflicts mentioned by Paulus Diaconus²⁹⁰ for 592 and 595 took place in the upper Drau/Drava valley in today's Carinthia.²⁹¹ A Slavic

²⁸⁸ As possible exceptions to that rule, the upper Enns and Mur/Mura valleys and the Styrian Salzkammergut (with the important burial sites of Krungl near Bad Mitterndorf and Hohenberg near Aigen) can be named, where the furnishing of the elite burials shows a clear connection to the core of Carantania. See e.g. Nowotny 2005, 177–250; Breibert 2011, 441–452; for Carantania, recently: Eichert 2014, 61–78; Eichert 2020, 101–128; Eichert 2020, 101–128.

²⁸⁹ Spreitzhofer 2000, 628, 636.

²⁹⁰ *Historia Langobardorum* IV 10, 39.

²⁹¹ Considering recent research on the early Slavs in the southeastern Alpine region, a (temporary?) Slavic settlement in southern central Styria would also be possible from the end of the 5th or the first half of the 6th century onwards (Pavlovič 2015, 59–72; 2017, 349–386; 2020, 175–197). Gleirscher (2019, 138) is sceptical about this, referring to the uncertainty factor in radiocarbon dating of charcoal fragments.

²⁸⁴ Ruchesi 2020, 19–25, esp. 20–22.

²⁸⁵ Nothing is known about mining in Upper Styria.

²⁸⁶ Wolfram 2001, 320–323, esp. 323.

²⁸⁷ Vida 2008b, 76.

settlement horizon in Styria can be assumed not only because of historical considerations, but also because of the toponyms,²⁹² in its oldest cultural occurrence in Central Europe (“Prague culture”),²⁹³ this Slavic settlement horizon is currently not archaeologically tangible in Styria, neither by settlement²⁹⁴ nor by graves. Characteristic early Slavic cremation burials with urns of the so-called Prague type are missing from Styria so far. Only a cremation grave (urn) from Wohlsdorf (Wettmannstätten) in western Styria, which has been recovered several decades ago and thought to be from the Early Middle Ages, could make an exception.²⁹⁵ On the other hand, several cremation graves of the 7th and 8th century are known from neighbouring Slovenian regions (Drau/Drava valley, Prekmurje).²⁹⁶ There are no early Slavic cremation graves from Carinthia either, but at least pottery of the Prague type has been found in the settlement material from the Hemmaberg near Globasnitz.²⁹⁷ Either cremation graves of early Slavic date have not been recognized by archaeological research in Styria so far, or the population of that time practiced a burial rite hardly to be proven archaeologically.²⁹⁸ Nevertheless, in Styria there is an early Slavic settlement horizon with ceramic finds from the time around 700, which is limited in terms of material and finds and spatially restricted to western and central Styria.²⁹⁹ This is primarily determined by the pit finds

²⁹² Lochner von Hüttenbach 2004, 151–158; 2008, 30–43.

²⁹³ Recently summarized in: Pavlovič 2017, 373–374, 379–389.

²⁹⁴ In contrast to Slovenia. See, among others: Guštin, Tiefengraber 2002, 47–62; Pavlovič 2008, 49–52.

²⁹⁵ Lehner 2009, 201 (esp. note 1323). – The find, handed over to the Landesmuseum Joanneum by W. Artner about 40 years ago, has been missing ever since. Perhaps a rim piece from the area of the Roman *villa* in Kleinklein is to be assigned to a pot of the Prague type (Großklein, Leibnitz district; Gutjahr, Roscher 2004, Taf. 3: 15; cf. *Pl.* 9: 56). Charred material from another allegedly Early Medieval cremation burial, unearthed 2016 in the vicinity of the Roman *villa* in Grünau (Groß St. Florian, Deutschlandsberg district) was radiocarbon-dated recently, yielding a Late Bronze Age date.

²⁹⁶ Tomanič Jevremov 2002, 65–66 (7th century); Pleterški 2008, 39; Šavel 2008, 65–70 (2nd half of 7th to first half of 8th century). – A cremation burial dug into a Hallstatt burial mound was found in Novo mesto (Dolenjska, second third of 7th century, see Belak 2014, 397–403); on northwestern Slovenia, for example: Mlinar 2002, 111–112 (Most na Soči, 7th/8th century).

²⁹⁷ Ladstätter 2000, 159–164. – A decorated rim sherd from the second half of the 7th century comes from the HA building complex at *Teurnia* (Bekić 2016, 44, Fig. 19; *Pl.* 72: 11).

²⁹⁸ For example, Gutjahr 2020, 64, note 48.

²⁹⁹ Partly persisting into the 8th century. The attribution to the Slavs is made exclusively based on the archaeological material in Central European comparison, their actual identity and/or ethnicity as well as the language these people spoke are not known.

from Komberg, municipality of Hengsbreg (Leibnitz district), St. Ruprecht an der Raab (Weiz district) and Enzelsdorf, municipality of Fernitz-Mellach (Graz-Umgebung district), which will be briefly presented in the following; a short description of the find material is included.

4.1. KOMBERG (*Pl.* 1: 1–5)

The sherds from Komberg come from a settlement pit that was excavated during pipeline construction (TAG II) in 1987.³⁰⁰ It is the oldest quite comprehensive complex of early medieval finds in Styria, located on a northern slope, a little below the hilltop, of a ridge following the valley of the Kainach river (390 m above sea level).

The roughly rectangular pit (2.20 by 1.40 meters) yielded fragments of a few pots with simply-formed rims and a fragment of a disc-shaped spindle whorl. The porous fragments *Pl.* 1: 1–2 are heavily tempered with coarse, possibly carbonate material. The tempering of the fragments *Pl.* 1: 3–4, both belonging to the same pot, consists, aside from a few possibly carbonate elements, of individual and partly larger pebbles. The surfaces of the sherds are dominated, in a strongly nuanced way, by the colors reddish brown (*Pl.* 1: 1, 3–4) and light brown (*Pl.* 1: 2). The fracture of the sherds is gray to dark gray, in some parts with the tendency to almost black.

The ceramic shows an unsteady shaping and surface treatment and appears to have been manufactured merely freehand. Only the clumsy decoration of a band of wavy lines on the larger pot fragment *Pl.* 1: 1 may hint to the yet inexperienced use of a very simple turntable.³⁰¹ The pit assumingly yielded a few more ceramic fragments but these are currently missing in the owner’s depot.³⁰²

An older radiocarbon analysis of a charcoal sample dates the Komberg pit to the years 663 to 881 AD (OxCal 4.4, 1260 ± 50, 95,4% probability). The ceramic fragments can be – with a certain amount of caution – dated to the middle of the 7th or possibly to the second quarter of the 7th century – in particular if compared, for instance, to the pottery from Enzelsdorf, which seems typologically more developed and can be dated as far back as the mid-7th century by recent radiocarbon data (see below).

From their appearance, the fragments from Komberg correspond with phase-2 ceramics of the Slovakian chronology according to G. Fusek (first half of the 7th

³⁰⁰ Hebert 1996, 67–70; Gutjahr 2018, 44; Gutjahr 2020, 64–65.

³⁰¹ For illustrations of the ceramics see: Hebert 1996, 67, Fig. 1; 69, Fig. 4a–c, e.

³⁰² We thank the Burgmuseum Archo Norico, Deutschlandsberg for permission to publish the Komberg sherds.

century/turn from 6th to the 7th centuries up to the second third of the 7th century)³⁰³ and with horizon I of the Moravian chronology according to J. Macháček (second half of the 6th century to first half of the 7th century)³⁰⁴ – so there are consistencies as far as chronology is concerned.

The discrepancy between the archaeological dating and the dating by means of natural sciences can be explained by the largely unknown stratigraphy of the Komborg pit assemblage. It is possible that the ceramic sherds originated from a layer at the bottom of the pit, while the charcoal sample was taken from a layer connected with the subsequent filling of the pit at a later time.³⁰⁵

4.2. ST. RUPRECHT AN DER RAAB (Pl. 1: 6; 3: 13)

In 1989, during the construction of a gas pipeline, two features – later named SR 5 and SR 12 – were discovered near St. Ruprecht an der Raab (Weiz district). The site is located on a flood-protected terrace approximately 650 m southeast of the confluence of the Weizbach and Raab rivers, some 1200 meters from today's village center.

SR 5 was an oblong pit, 4.00 by 1.50 meters, 0.20 meters deep, with rounded edges, and east-northeast/west-southwest oriented. A charcoal analysis from 1990 dates the filling 640 to 779 AD (OxCal 4.4, 84.2%, 610–618 AD, 0.7%, 786–832 AD, 8.2%, 852–875 AD, 2.4% probability, 1315 ± 55; Fig. 18).

SR 12 was a roughly oval-shaped pit (4.00 by 1.70 meters), a little deeper than SR 5 (0.40 meters maximum) and almost exactly west/east oriented. A charcoal analysis from 1990 dates the pit 772 to 1024 AD (OxCal 4.4, 95.4% probability, 1125 ± 60; Fig. 19).

The purpose of these pits is unknown. They may have been pit houses,³⁰⁶ judging from the layout, but no hearths or furnaces were found. There is also no evidence for craft activities (with the exception of some spindle whorls). So, in a neutral way, they may be just called settlement pits.

Among the finds are a few spindle whorls, a grinding stone (currently missing, material unknown), and possibly, a fragment of a rubbing stone (currently missing, material unknown), five glass beads, a few animal remains from cattle and sheep or goat, as well as fragments of approximately 30 ceramic pots, differing in wall thickness and treatment, but similar to each other in terms of fabric (temper, surface, fracture) and burning.

The fragments are tempered – very rare in Styria, at least in the early medieval context – with grog (mostly evenly sorted) and possess carefully smoothed surfaces



Fig. 18: St. Ruprecht an der Raab, pit SR 5.



Fig. 19: St. Ruprecht an der Raab, pit SR 12.

with a few holes. They show signs of very low temperature and poorly controlled firing environments.³⁰⁷

Technologically, two kinds of ceramics can be distinguished. The minority was simply handmade without any mechanical aid, while the majority was formed with a pivoted turntable (possibly an early version of a hand-operated potter's wheel). On a base fragment in SR 5, the imprint of a pivot can still be seen, suggesting the use of some mechanical device.

The ceramic finds of St. Ruprecht consist entirely of pots. Most of them are not decorated, but there are – on the shoulders and, possibly, the bellies of some vessels – a few uneven horizontal and vertical grooves as well as a band of flat and steep wavy lines. Parallels can be found in Slavic pottery primarily east and northeast of Styria. Judging from analogies with Slovakian, Moravian, Lower Austrian and Western Hungarian finds, the St. Ruprecht sherds can be dated to the second half or the last third of the 7th century. The fragments correspond with phase-3 ceramics of the Slovakian chronology ac-

³⁰³ Fusek 1994, Fig. 71–72; Pl. 2.

³⁰⁴ Macháček 2000, 37, 39–41.

³⁰⁵ Gutjahr 2020, 65, note 55.

³⁰⁶ Bekić 2016, 34, 73; 2018.

³⁰⁷ Based on recent ceramic analyses by Patrick Fazioli, Mercy University, New York City (USA, 2023).

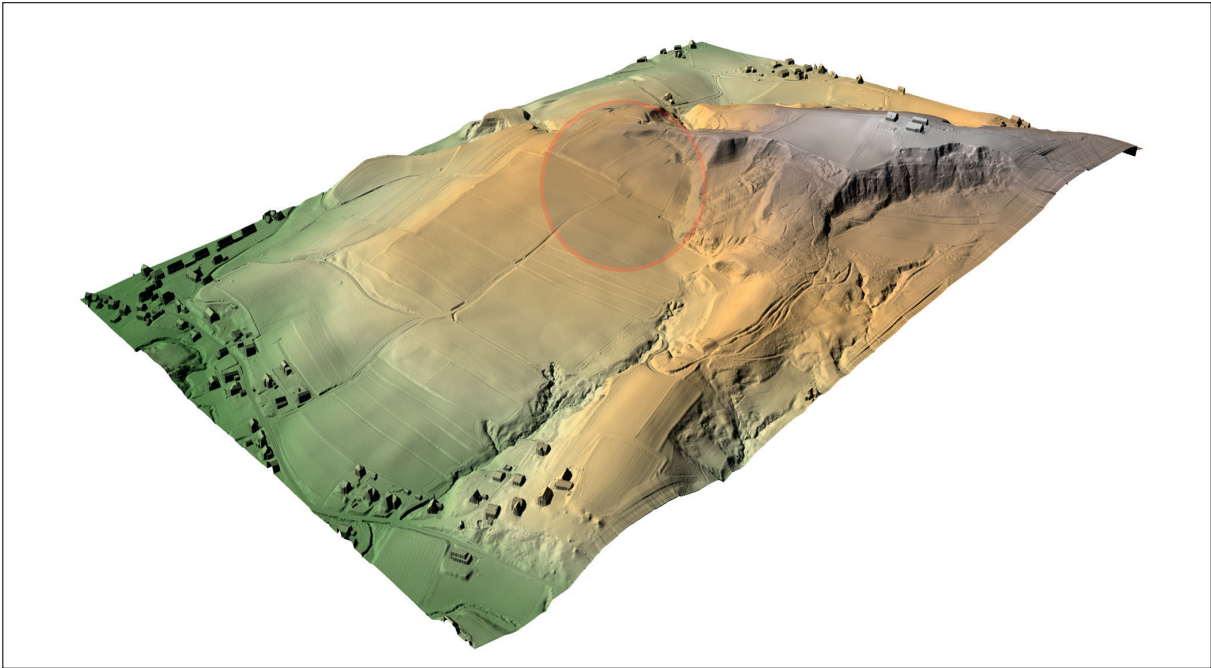


Fig. 20: 3D model of the Enzelsdorf plateau. The circular area refers to the excavation area.

according to G. Fusek³⁰⁸ and horizon II (interpolated) of the Moravian chronology according to J. Macháček,³⁰⁹ which in absolute chronology means approximately the second half of the 7th century. The mixed inventory (ornamented and plain), the appearance of archaic ornaments (the vertical grooves, see *Pl. 1: 6; 2: 7*) and the presence of only very few entirely handmade vessels also support this theory. Furthermore, the two pots *Pl. 1: 6* and *Pl. 2: 7* reveal in their body shape similarities with the oldest Slavic ceramics of the Prague type, so the last third of late 7th century (at the latest the turn of the 8th century) is a fairly safe bet.

The five glass beads from pit SR 12 – four millet seed beads (“Hirsekornerperlen”) made of opaque black glass and half a twin-eye bead made of grey-greenish brown, spotted glass, applied with three yellow dots – fit quite well in this time frame. According to A. Pasztor,³¹⁰ the twin-eye beads were fashionable from the second half of the 6th to the first third of the 8th century, with their heyday between 570 and 680 AD. Some lead residue in the pit suggests that there may have also been one or more small lead beads.³¹¹

³⁰⁸ Fusek 1994, Fig. 73–74; Pl. 2.

³⁰⁹ Macháček 2000, 37, 39–41.

³¹⁰ Pasztor 1995, Pl. 1: 18; 87, Tab. 1; 88, diagram 1; 89, diagram 2 (duration: about 2nd half of 6th century to 1st third of 8th century).

³¹¹ We thank the Universalmuseum Joanneum, Graz, for permission to publish the St. Ruprecht findings; for more detail about St. Ruprecht an der Raab see the preliminary reports by: Schipper 1996, 71–76; Gutjahr 2018, 44–45; 2020, 65–67.

4.3. ENZELSDORF (*Pl. 3: 14; 7: 47*)

Enzelsdorf, part of the municipality of Fernitz-Mellach (Graz-Umgebung district), is located on the left bank of the Mur/Mura river, some 20 kilometers south of Graz.

The archaeological site (390 m above sea level) is situated on a spacious terrace of 500 by 400 meters, with a panoramic view to the southwest and west, 80 meters above the Mur/Mura river and 70 meters above the village of Enzelsdorf (*Fig. 20*).³¹²

In 1998, a waste pit on the terrace was thoroughly examined, revealing ceramics of the 10th century and a lot of archaeobotanical samples like beans, rye seeds, peach stones etc.³¹³

In spring and late summer 2014, three early medieval objects were excavated by the association Kulturpark Hengist (*Fig. 21*). Object/pit 1 was rectangular with rounded edges, 3.65 by 2.05 meters, with a maximum depth of 0.33 meters, west/east oriented.³¹⁴ Object/pit 2, to the south of object 1, was also rectangular with rounded edges, but significantly smaller (2.00 by 0.45 to 0.70 meters) with a maximum depth of 0.36 meters, northwest/southeast oriented (*Fig. 22*). A few months after the discovery of these pits, a third early medieval assemblage was found on a lot west of the original excavation site (excavation Kulturpark Hengist, *Fig. 23*). It

³¹² Gutjahr 2018, 45–46; 2020, 68–70.

³¹³ Gutjahr 2003; Thanheiser, Walter 2004, 183–190.

³¹⁴ Bekić (2018, 70) identifies the remains of pit 1 as a former “Grubenhäuser”.

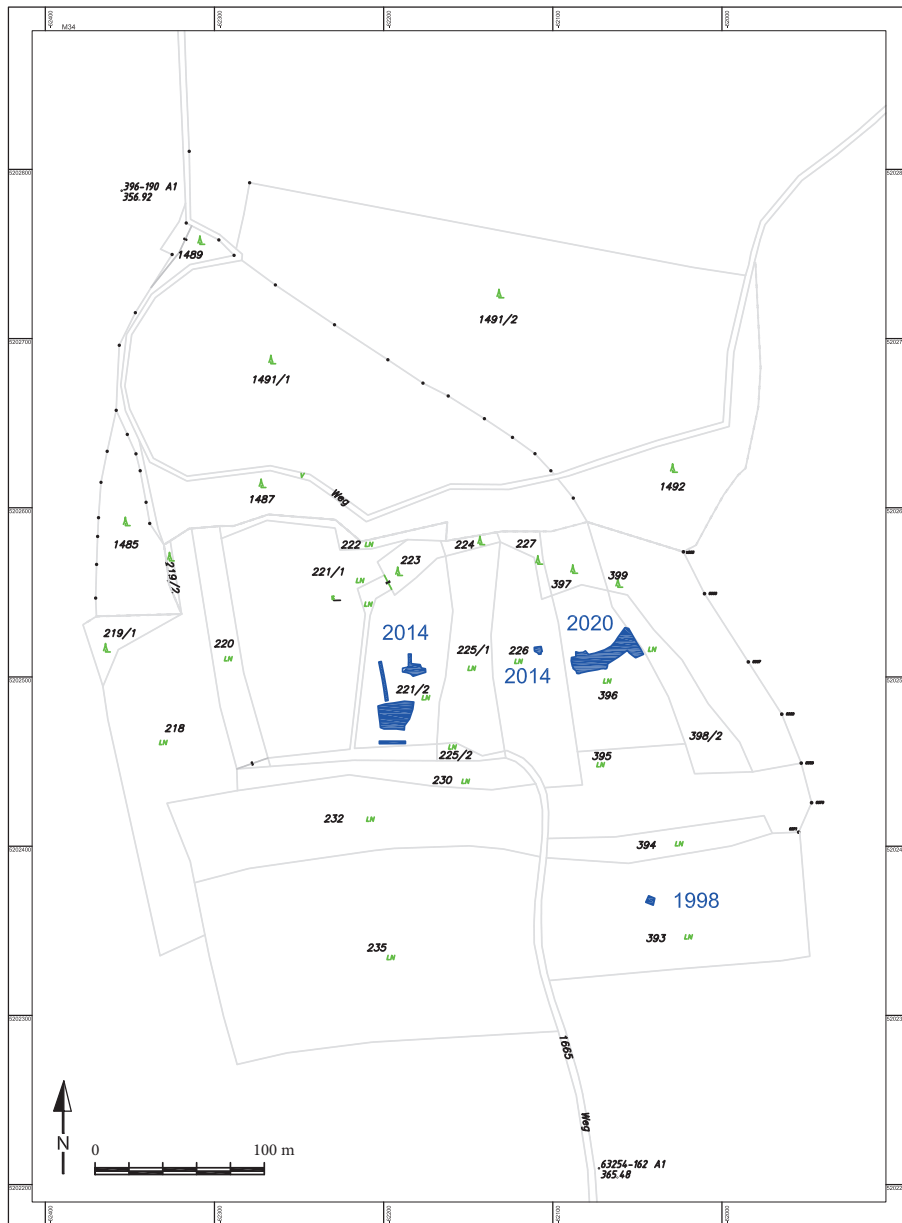


Fig. 21: Overview of the excavation areas 1998–2020.



Fig. 22: Enzelsdorf, pits 1 and 2, DOF 1.



Fig. 23: Enzelsdorf, object 3, DOF 2.

was a natural pan, filled with erosion layers (7.50 by 6.00 meters, maximum depth 0.47 meters). The uncovered layers SE 35, SE 20 and SE 11 were subsumed under the name object 3. It can be assumed that these layers are washed-away sediment from higher terrain, which successively filled a formerly existing trough-shaped depression.

In pits 1 and 2, fragments of two disc-shaped spindle whorls and more than 200 ceramic fragments were found; 31 of them could be used for reconstruction drawings and were included in the finds catalogue (3 of them from object 2; *Pl. 3: 14 – 4: 23*). The complex consists entirely of pots, with the exception of a Late Antique lid fragment. The pottery is tempered with coarse and fine gneiss sand, sometimes carbonate was added. It is difficult to determine whether gneiss was added as temper or was an original component of the clay.³¹⁵ Technologically, all pots were built up freehand, but with some turntable usage at least concerning the rims. Entirely handmade vessels without any mechanical aid were absent in this small find complex. Decoration consists of bands of wavy lines and horizontal grooves, sometimes combining the two motifs (*Pl. 4: 21*), which is quite common in the Early Middle Ages.

The Enzelsdorf sherds fit well into the range of 7th century Slavic pottery. Their rim profiles correspond with phases 2 and 3 of G. Fusek's Slovakian chronology (approximately 7th century) and with horizon II according to J. Macháček's so-called middle-Danubian ceramic chronology (second half of the 7th century). They can also be connected to the groups S2 and V2 of the Eastern Alpine region according to A. Pleterski³¹⁶ – analogies to the Enzelsdorf sherds are also to be found in the geographical vicinity, for instance at Prekmurje and in Štajerska (Slovenian Styria).³¹⁷

The archaeological dating of the Enzelsdorf findings to the second half of the 7th century, based on formal analogies, is confirmed by radiocarbon data from pit 1, which covers the period 637 to 691 AD (OxCal 4.4, 76.2%, 607–623, 3.4%, 697–702, 0.9%, 741–774, 14.9% probability, 1360 ± 30).³¹⁸

In object 3³¹⁹ (stratigraphic units 11 and 20 plus scattered finds) early medieval ceramic fragments from more than 20 vessels were found, quite similar to the finds in objects 1 and 2 (compare *Pl. 3: 14* with *Pl. 4: 24*) in temper, form, style, surface, color and ornament (*Pl. 4: 24; 5: 32*). They can therefore probably be dated to the second half of the 7th century as well. Additionally, the

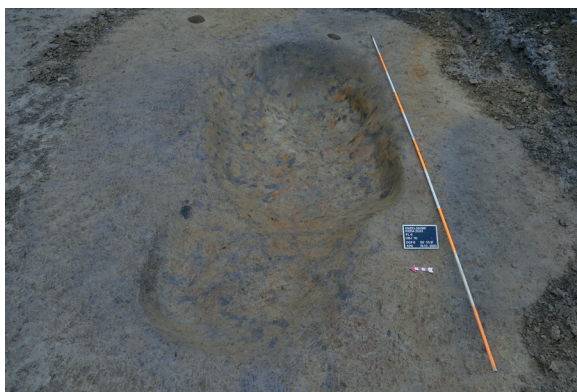


Fig. 24: Enzelsdorf, object 10, DOF 8.

stratigraphical units of object 3 yielded archaeobotanical finds (particularly rye seeds, cone wheat grains, spelt grains, emmer grains) and some animal bones (mainly small ruminants). A recent radiocarbon analysis of a charred grain kernel yielded the periods of 674 to 779 AD (61.3 % probability), 785 to 837 AD (26.0 % probability) and 846 to 877 AD (8.1 % probability, 1250 ± 30, OxCal 4.4). The latter periods are clearly irrelevant to the dating of our material. The radiocarbon date supports the above-cited assumption of dating the finds to the decades around 700. However, taking account of a certain consistency in the shapes of vessels, a temporal expansion into the first half of the 8th century seems possible.

In autumn 2020, a fourth excavation campaign took place on the Enzelsdorf field, triggered by the feared destruction of features superficially torn by the plow. Of the total excavation area of 438 m², objects 10 and 11 as well as a post construction to be inferred from eight post pits are of particular interest.

Object 10 was an oval-shaped pit (4.80 x 2.50 m) oriented approximately east-west, which can be divided into two areas (*Fig. 24*). Their transition was defined by a slight constriction in the ground plan. The smaller western section was slightly off-axis to the north. In the west, the bottom was shallow and the pit was about 0.40 m deep, whereas the area in the east had a concave bottom with a depth of 0.60 m. The youngest backfill (SE 54) consisting of a very dark gray-brown sandy silt with some ceramic fragments and broken river gravels was deposited long after the end of the settlement.

The older backfills SE 72, 73 and 104 of dark gray silt contained large quantities of pottery fragments, broken river debris, sandstones, limestones, and some animal bones. Characteristic of these layers were the large quantities of charcoal, with the average size of the charcoal pieces being three centimeters. All the stones showed signs of heat exposure. The three backfills could be distinguished from each other by their different charcoal content. In the southeast, the floor contained

³¹⁵ Based on recent ceramic analyses by Patrick Fazioli, Mercy University, New York City (USA, 2023). Temper still assumed differently in Gutjahr 2015, 76.

³¹⁶ Pleterski 2010, 158, 238–239, 247–248.

³¹⁷ Bekić 2016, 34–142, esp. 105–125.

³¹⁸ For pits 1 and 2 see: Gutjahr 2015b, 73–91, 80 (radiocarbon date).

³¹⁹ Gutjahr 2025, in print; Heiss et al. 2025, in print.

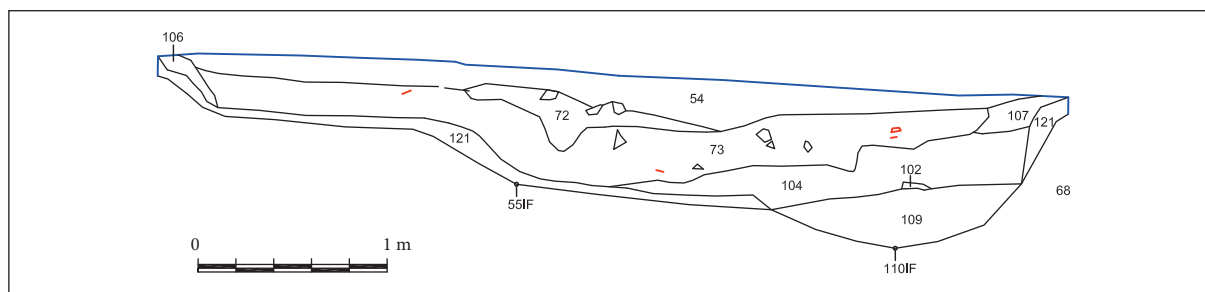


Fig. 25: Enzelsdorf, object 10, west-east profile. View to the north.

a depression (1.50 x 1.00 x 0.25 m) that was oval in plan with a steep sloping wall and concave floor. Its uppermost backfill (SE 102) was composed mainly of densely bedded, broken river gravels and pottery fragments, plus some animal bones and a few sandstones and limestones. On top of and between the stones, which were also exposed to heat, charcoal and ash were found. Under the stone concentration, larger pieces of charcoal (up to 10 cm; wood species identification revealed oak) and some pottery fragments were found in a dark brown silty matrix (SE 109).

The original function of the pit is not clear. A pit house in the sense of a dwelling can be excluded due to the lack of a furnace.³²⁰ Neither an occupation layer nor any building structures inside and outside the pit could be found. One posthole on each of the narrow sides could at best be associated with a roof construction. Individual postholes in the north and east of the object were probably not directly related to the pit.

At present, it is most likely that the pit was used as a cellar within an above-ground (block) house, but a sunken workshop area cannot be ruled out. It is certain that after the loss of its original function the pit was filled deliberately and most likely in rapid succession. The ceramic fragments, some of which are quite large, speak for a secondary deposit.³²¹

To the west of object 10 was an oval pit oriented fairly exactly north-south (object 11,

SE 75/76 IF) with a length of just under 4 and a maximum width of 1.70 m. Here, too, the pit was divided into two sections and showed a slight constriction in the southern third. While the southern section was only eight centimeters deep, the depth in the north was as much as 0.23 m. Most of the pottery fragments occurred in the northern section, the broken fluvial debris and also the remaining stone material were exposed to heat.

Eight post pits (Obj. 16, 18–19, 21–22, 25–27) in the west of the excavation area resulted in a square ground plan of about 3.70 x 3.70 meters. Originally, the construction consisted of three rows of three post

pits each. The three northern pits were located in the area of object 11, with one of the post pits disturbing the interface of the pit. Unlike the other post pits, they exhibited wedge stones of fluvial debris. The backfills contained either no or very few finds. It is possible that this was once a storage hut.

The processing of the find material is not yet completed, but a brief summary can be given here (*Pl.* 5: 33; 7: 47): Particularly from object 10 there is a large number of larger pottery fragments, which are to be connected predominantly with barrel-shaped to slightly bulbous pots. Occasionally, more bulbous vessel forms also occur. The quality of the fabric (grain, surface, fracture) largely corresponds to the ceramic material from objects 1–3, but the vessels predominantly show a somewhat lighter surface color (nuances from light brown to gray-brown). Based on the scientific analysis, most of the pottery fragments can be assumed to be tempered with possible carbonate inferred from voids.³²² Conformance with the material from objects 1–3 is found in the design of the rim zones as well as the protruding and non-reinforced rims; however, the very lip is often rounded. The ceramic material is characterised by a high degree of decoration, mainly wavy band ornaments and horizontal grooves typical for the Early Middle Ages. Furthermore, a spindle whorl, a bone awl and two small yellow millet grain beads (“Hirsekornerperlen”), which came to light by sediment flotation, originate from object 10. With reference to the ceramic finds from the Enzelsdorf objects 1–3 and the early medieval ceramic material otherwise known from Styria, as well as supra-regional comparisons,³²³ a dating to the decades around 700 seems plausible for the ceramic material recovered in 2020; given the abundant decoration, the first half of the 8th century is also conceivable. This archaeological dating approach also finds support in several radiocarbon dates. One of them, a sample from object 10 (SE 73, cf. Fig. 25) is pre-

³²² Based on recent ceramic analyses by Patrick Fazioli, Mercy University, New York City (USA, 2023).

³²³ See, for example: Wawruschka 1998–1999, 347–411; Wawruschka-Firat 2009 (e.g., Baumgarten an der March); Pleterski 2010, 158–160; Bekić 2016, 95, 94, Fig. 51 (cf. Dra-va-Mura-Sava 1b and 2a).

³²⁰ According to Bekić, 2018, however, such structures are associated with the remains of small pit houses.

³²¹ Nowotny 2015, 123–134.

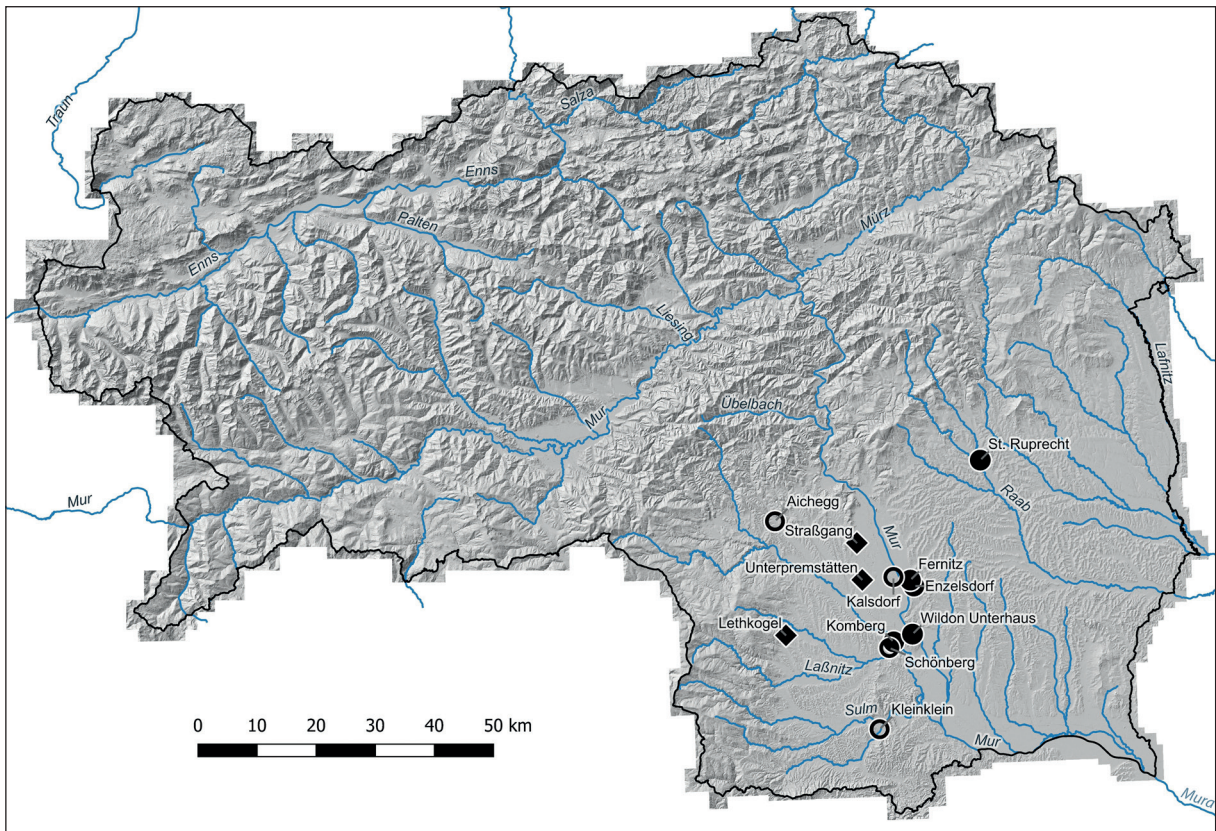


Fig. 26: Distribution of Early Medieval sites with pottery of the second half of the 7th and first half of the 8th century in the area of today's Styria. Circle: Ample proof. Ring: Sufficient proof. Rhombus: Probable, but currently only limited evidence.

sented here: OxCal 4.4, 1270 ± 30, 664 to 778 AD (84.8% probability) and 788 to 827 AD (10.4% probability).³²⁴

The Enzelsdorf ceramic complexes excavated in 1998, 2014 and 2020 may be small in quantity, but they are significant nonetheless, since pottery from the second half of the 7th century has not been found very often so far in Styria.³²⁵

It is fair to assume that there was a settlement on the terrace above modern-day Enzelsdorf from the 7th century onwards, possibly continuing until the early 11th century. However, due to the relatively small portion excavated, it is impossible to say anything about the true size, structure and dynamics of the settlement. Modern-day Enzelsdorf evolved, in any case, in the early high-medieval period on the banks of the Jakobbach, a creek a little further downhill.³²⁶

³²⁴ The sample was taken from charcoal residues on a ceramic fragment.

³²⁵ Gutjahr 2015b, 80–82; 82, note 51.

³²⁶ Purkharthofer [1984], 10–23, 29–30, Fig. on p. 17; Gutjahr 2003, 171–174 (contributions of O. Kustrin, C. Gutjahr).

4.4. INTERPRETATION

As briefly mentioned above, a settlement horizon with ceramic find material from the second half of the 7th and the first half of the 8th century in Styria, which is for the time being small and spatially limited to western and central Styria,³²⁷ is emerging (Fig. 26).³²⁸ At the present time the sites Komberg, St. Ruprecht an der Raab, Enzelsdorf and Fernitz represent this horizon.³²⁹ Most probably also a part of the ceramic material from Unterhaus (“Rasental”, municipality of Wildon) can be assigned to this settlement horizon (Pl. 7: 48 – 8: 55). Already in 2006, at the beginning of the rescue excavation, the remains of a pit object (Obj. 2, preserved

³²⁷ The fact that Upper Styria and the Mürz valley are not represented here may be due to the state of research.

³²⁸ Recently presented several times, see Gutjahr 2015b, 82–83; 2018, 46; 2020, 70–72. At that time predominantly associated with the 7th century. Recalibrations of older as well as more recent radiocarbon dates suggest an extension of the material into the first half of the 8th century.

³²⁹ Gutjahr 2002, 156, Figs. 16; 18. – The sherds shown in Gutjahr 2002, 156, Figs. 21–23 probably also belong to the 7th century.

length 1.20 m, preserved width 0.82 m, depth 0.44 m) could be documented in an excavation profile. The pit was densely backfilled with large Leithakalk limestone rubble and boulders (to about 0.20 m) and contained some decorated early medieval sherds and a base fragment with the imprint of a pivot. Via incarbonated remains attached to one of the sherds, a radiocarbon date pointing to the second half of the 7th/first half of the 8th century is available for the pit (OxCal 4.4, 1320 ± 30, 652 to 709 AD, 51.9% probability and 723 to 775 AD, 41.6% probability).³³⁰ The remaining ceramic material from the Unterhaus Early Medieval settlement belongs predominantly to the 8th century according to a first review.³³¹ On the basis of the sparse ceramic find material - to be interpreted with caution as an indication of at least short-term settlement - the affiliation to the settlement horizon characterized by this oldest early medieval pottery from Styria is to be considered at least for some other sites. These include Kleinklein (municipality of Grossklein, *Pl.* 9: 56–57, stray finds)³³², Aichegg near Stallhofen (*Pl.* 9: 58–62)³³³ and Graz-Straßgang (*Pl.* 9: 63)³³⁴. It should be noted that from all these sites no metallica are known so far.³³⁵ It is possible that further sites

³³⁰ Beta Analytic, 1320 ± 30.

³³¹ The Early Medieval findings are currently being processed. However, there are also some younger early medieval sherds in the pottery material from Unterhaus.

³³² Gutjahr 2002, 150–151, 151, Fig. 1 (from the area of a Roman *villa*). – In Kleinklein, Early Medieval features and finds already came to light on the occasion of the excavations at the Hallstatt princely grave Kröllkogel in 1995. In addition, a larger number of surface finds are available from surveys which were carried out by the author as a participant in the excavations at that time. Some of the ceramic finds from the 1995 excavations date back to the 8th century. Further excavation campaigns aiming at Early Medieval settlement took place in 2017 and 2018 (Kiszter et al. 2019, 132–134). The suggested dating (10th century) of the pottery seems rather late, more likely the forms are to be connected with the 8th/9th century. The attribution of the two bowls to the Early Middle Ages is questionable, they are rather Late Roman/Late Antique forms, see: Steinklauber 2013, Fig. 29–30. However, we cannot completely rule out an early medieval attribution without an autopsy.

³³³ Bauer et al. 1995, 86, 87, Fig. 18; 124 cat. 343. – It was possible to sort out the sherds shown here from the mainly Roman pottery. In addition to the pieces listed above, several other wall fragments, some of them undecorated, probably belong to the Early Middle Ages. We thank Eva Steigberger, Vienna/BDA, for the possibility to autopsy the Aichegg pottery.

³³⁴ For some sherds from Graz-Straßgang a *terminus ante quem* of 550 to 660 AD is given by stratigraphy and a radiocarbon date (Hinker 2007b, 729, 730, Fig. 67: 1–5; Pleterški 2010, 92, 92, Fig. 4.9., group S1).

³³⁵ Actually, the hollow armlet from the vicinity of Leoben already belongs to the early Middle Ages (see above). Due to the few small finds in Styria between 450 and 650, however, it was included in the distribution map of Late An-

can be added to this early Styrian settlement horizon, primarily Schönberg,³³⁶ but also Unterpremsstätten and Kalsdorf, but the number of sherds currently available, especially from the latter two, is very small and the pottery cannot be precisely categorised without an autopsy. It is remarkable that early medieval pottery is not infrequently known at the sites of Roman *villae* (for example Kleinklein) or *vici* (Haslach,³³⁷ Kalsdorf, Saazkogel³³⁸). However, it is unclear whether there was a deliberate recourse to Roman-period structures or whether just the same topographical locations were appreciated.³³⁹

In addition to the sites of Komberg, St. Ruprecht an der Raab and Enzelsdorf, the mentioned, albeit small, settlement traces of the 7th century are to be seen in the context of Slavic immigration. The possible impact of a remnant late Romanic or Romanised population on settlement activity and early medieval pottery production, however, can hardly be evaluated.³⁴⁰ We could also consider a merging process between Romans and Slavs for Styria, but hardly anything is known about it due to the lack of literary traditions and the meager archaeological sources.

It is unclear from which direction the Slavic settlement of Styria in the early Middle Ages came. L. Bekić assumes, based on the distribution of sites, a Slavic immigration to Croatia at the end of the 6th century through the Moravian Gate via Burgenland, the Hungarian counties of Eisenburg (Vas) and Zala into the Prekmurje region and Međimurje.³⁴¹ It seems not too far-fetched that

tiquty/Migration Period (see Fig. 17).

³³⁶ Oberhofer 2012, 76, 115, 381, Pl. 50: K1 K2; see Fig. 7).

³³⁷ Gutjahr 1999, 879–880. Contrary to the assumptions of the time, the rim fragment shown in Gutjahr 1999, 880, Fig. 674 can be dated to the 8th century, and for the sherd ib. 880, Fig. 675, a dating to the 7th century does not seem improbable.

³³⁸ Tiefengraber 2005, 197.

³³⁹ Gutjahr 2020, 71, 71 note 93. – It remains open, also on the basis of the Kleinklein findings, whether a (conscious) “early medieval after-use of the *villa rustica*” took place here or simply a “reuse” or “early medieval use.” Basically, the location on a (flood-proof) terrace is not unusual for early Slavic settlements (Kiszter et al. 2019, 132–133).

³⁴⁰ Regarding the genesis of Slavic pottery, for which a Late Antique/Roman influence is assumed in several respects, this cannot be ruled out. Exemplary: Macháček 1997, 355–358; Ladstätter 2000, 159–164; Eichert 2010, 131–134; on the interaction: Pleterški, Belak 2002, 98–103. – Evidence of a remaining Roman population element is generally extremely rare in Styria (see also note 274). Possibly grave 73 from Krungl with an iron ring fibula can be referred to here. As comparable fibulae from Gusen (grave 162) or Schwanenstadt (grave 73, both Upper Austria), they can be associated with a survival of Roman traditions (Breibert 2022, 118). In both cases, the fibulae were found in a position on the shoulder, which is typical for late Roman costume.

³⁴¹ Bekić 2012, 34–35; see also Fusek 2008, 645–646, 646 Fig. 1; Pavlovič 2015, 69. – For the western incursion route

Styrian territory was also touched in this setting. For the settlement of St. Ruprecht an der Raab an immigration from the east (upstream from Pannonia) seems most probable. In the light of very early radiocarbon dates (first half of the 6th century) of early Slavic settlement findings from Prekmurje, however, it cannot be ruled out³⁴² that individual Slavic migration movements ran upstream from the south and subsequently affected the side valleys.³⁴³ From the second half of the 7th century onwards, an increase in settlement density at the edge of the southeastern Alps is clearly noticeable.³⁴⁴

It should be emphasized once again that an early Slavic settlement (6th and first half of the 7th century) in today's Styria has not yet been proven by archaeological finds.³⁴⁵ On the one hand, this is surprising in view of the geographical proximity to Carantania, on the other hand, relevant find material in Carinthia and East Tyrol³⁴⁶ has only become known to a very small extent so far. Up to this day, early medieval valley or lowland settlements have hardly been uncovered in Styria.³⁴⁷ In the chronological sequence or partial overlapping (with Kleinklein and Wildon-Unterhaus) only the settlement

site in Weitendorf from the second half of the 8th and the 9th century, located a few kilometers west of the Wildon Schlossberg, is close to the sites listed above.³⁴⁸ For all these sites, burials are not yet available. Early medieval burial grounds do not begin in Styria until the middle of the 8th century (Hohenberg, Krungl);³⁴⁹ after the abandonment of the Late Roman/Late Antique cemetery on the Frauenberg near Leibnitz around 430–450,³⁵⁰ burial evidence in Styria is missing for striking 300 years. As late as in the Carolingian-Ottonian period – thus outside this overview – there are finds from early medieval settlements at high altitudes, which belong to the context of early medieval fortifications/castles/*curtes* (e.g. Kirchberg near Deutschfeistritz, Graz-Umgebung district,³⁵¹ Wildon Schlossberg, Leibnitz district, Ulrichsberg near Deutschlandsberg³⁵² or Georgiberg near Kindberg, Mürzzuschlag district³⁵³). For some of them, such as the Schlossberg next to Wildon³⁵⁴ and the Kirchberg next to Deutschfeistritz, there are indications of use already in the later 8th century; however, further archaeological investigations are necessary for a more precise account.³⁵⁵

of the southern Slavs see: Udolph 2016, 105. According to Udolph (2016, 83–107, esp. 93) southern Poland and western Ukraine are assumed to be the home and starting point of the Slavic expansion.

³⁴² Guštin, Pavlovič 2013, 217–221, esp. 219–220; Pavlovič 2015, 59–72; Pavlovič 2017, 349–386. – Pavlovič (2020, 189) suspects Slavic groups settled as federates of the Byzantine Empire to have left the very early findings in Nova tabla near Murska Sobota and in Cerklje ob Krki. See most recently in detail on Cerklje ob Krki Pavlovič, et al. 2021: They assume that these Slavic groups were used to protect the border of the Eastern Roman Empire or were recruited as mercenaries in the Byzantine army. Cremation burials, some of which were almost contemporaneous with the settlements in Enzelsdorf and St. Ruprecht an der Raab, were found in the Popava II cemetery near Lipovci (Šavel 2008, 70).

³⁴³ Admittedly, it cannot be ruled out that immigration occurred simultaneously or staggered both from the east and from the south.

³⁴⁴ Guštin, Pavlovič 2013, 218; Pavlovič 2020, 190.

³⁴⁵ However, its existence could perhaps be hinted at by the two stray finds from Kleinklein, which are visually reminiscent of Prague types (*Pl.* 9: 56–57).

³⁴⁶ Stadler 2011, 471–472; 470, Fig. 4: 1; 471, Fig. 5 (Slavic cremation burial ground?).

³⁴⁷ Gutjahr 2015a, 94.

³⁴⁸ Gutjahr 2011, 137–191. In addition to archaeological analogies in the ceramic material, also well corroborated by radiocarbon dates (Object 128: OxCal 4.4, 1270 ± 40, 661–779 calAD, 74.7%, 786–834 calAD, 15.8%, 849–876 calAD, 4.9% probability; Object 121: OxCal 4.4, 1190 ± 30, 709–722 calAD, 1.6%, 771–897 calAD, 88.0%, 923–952 calAD, 5.8% probability).

³⁴⁹ Gutjahr 2015a, 87–93. There is only one recently discovered burial from Unzmarkt-Frauenburg (grave 5/SE 72), which could date to the 7th century based on the radiocarbon date. (Steinegger, 2020, 100, Murtal district). At best, the radiocarbon-dated bones of “saint” Beatrix from Mariahof (1st half of the 8th century, Murtal district) could also be cited here (Hebert 2004).

³⁵⁰ Steinklauber 2002, 187–188; 2018, 789.

³⁵¹ Gutjahr 2006.

³⁵² Lehner 2004.

³⁵³ Artner, Hampel 1999, 62–68.

³⁵⁴ Tiefengraber 2018, 252–254, Pl. 193–196.

³⁵⁵ For the site Schwanberg-Tanzplatz, the publication of the find material is in preparation by S. Kiszter as part of her PhD thesis; for the moment, see Kiszter, Schrettle 2020, 31–37.

Illustrations:

- Fig. 1–4: University of Graz (S. Karl).
 Fig. 5: Naturhistorisches Museum, Prähistorische Abteilung, Wien.
 Fig. 6, 10: Federal Monuments Authority Austria (BDA).
 Fig. 7: Heymans 1997, 760, Fig. 1000.
 Fig. 8–9, 12: Universalmuseum Joanneum, Archäologie & Münzkabinett, Graz (J. Kraschitzer).
 Fig. 11: Fuchs, Obereder 1999, Pl. 28: 5.
 Fig. 13: Universalmuseum Joanneum, Archäologie & Münzkabinett, Graz (D. Modl).
 Fig. 14: source: Terjal 2008, 260, Fig. 6; map: StAF-Kulturpark Hengist, Wildon (supplemented by Ch. Gutjahr).
 Fig. 15: Kulturpark Hengist, Wildon (Ch. Gutjahr), after Wührer 2000, 44, 44 note 171, Distelberger 2004, 20 and Müller 2008, 296, Fig. 8: 3–4.
 Fig. 16: source: Milavec 2009, 229, Fig. 8; map: Kulturpark Hengist, Wildon (Ch. Gutjahr).
 Fig. 17: Map: I. Koch (using QGIS®); data source: Open Data Österreich (www.data.gv.at), hill shading – 5m from ALS.
 Fig. 18–19: Universalmuseum Joanneum, Archäologie & Münzkabinett, Graz.
 Fig. 20: E. Lozić; data source: GIS-Steiermark (gis.stmk.gv.at), point cloud.
 Fig. 21, 25: Kulturpark Hengist, Wildon (M. Arneitz-Gutjahr).
 Fig. 22: Kulturpark Hengist, Wildon (Ch. Gutjahr).
 Fig. 23: Kulturpark Hengist, Wildon (M. Trausner).
 Fig. 24: Kulturpark Hengist, Wildon (M. Mandl).
 Fig. 26: Map: I. Koch (using QGIS®); data source: Open Data Österreich (www.data.gv.at), hill shading – 5m from ALS.
 Pl. 1: 1–5: Burgmuseum Archeo Norico, Deutschlandsberg (J. Kraschitzer, Graz).
 Pl. 1: 6; 3: 13: Universalmuseum Joanneum, Archäologie & Münzkabinett, Graz (J. Kraschitzer).
 Pl. 3: 14; 9: 57: Kulturpark Hengist, Wildon (J. Kraschitzer).
 Pl. 9: 58–62: Federal Monuments Authority Austria (J. Kraschitzer).
 Pl. 9: 63: Federal Monuments Authority Austria (Hinker 2007, 730, Fig. 67:1).

Databases

- Thanados = The Anthropological and Archaeological Database of Sepultures; <https://thanados.net/entity/175496> (21 March 2024)
 ZBIVA = Zbiva 3 database: <https://as.parsis.si/zbiva/> (2019–2022), upgraded to Zbiva 4: <https://zbiva4.zrc-sazu.si/> (2023→) (21 March 2024)

Sources

- Eugippius, *Vita Sancti Severini*. Das Leben des heiligen Severin. – *Lateinisch/Deutsch*, Theodor Nüsslein (ed.). Reclam Nr. 8285, Stuttgart, 1986.
 Paulus Diaconus, *Historia Langobardorum*. Geschichte der Langobarden. – hrsg. und übersetzt von Wolfgang F. Schwarz (ed. and transl.), Darmstadt 2009.

- ABSPACHER, I. 2020, *Italische und nordafrikanische Lampen des 1. bis 5. Jahrhunderts*. *Römische Lampen der Sammlung K. Wilhelm*. – Münchner Beiträge zur Provinzialrömischen Archäologie, Ergänzungsband 2.
 ARTNER, W. 1997, Archäologische Übersicht. Urgeschichte, Römerzeit und Frühmittelalter im Bereich der Stadt Graz. – In: W. Resch, *Die Kunstdenkmäler der Stadt Graz. Die Profanbauten des I. Bezirkes, Altstadt*, Österreichische Kunsttopographie 53, XIX–LIII.

- ARTNER, W. 1998–1999, Der Frauenberg bei Leibnitz in der Spätlatènezeit und in der vorclaudischen Kaiserzeit. Ausgrabungen des Landesmuseums Joanneum 1979–1985. – *Archaeologia Austriaca* 82/83, 221–341.
 ARTNER, W., U. HAMPEL 1999, Die Ausgrabungen des Landesmuseums Joanneum in Kindberg-St. Georg 1995–1998. Ein Vorbericht. – *Archäologie Österreichs* 10/1, 62–68.
 BÁNKI, Z. 1992, Beiträge zum pannonischen spät-römischen glasierten Siedlungsmaterial. – In: Z. Bánki (ed.), *Glasierte Keramik in Pannonien*, Székesfehérvár, 36–44.
 BAUER, I. 1997, Römerzeitliche Höhensiedlungen in der Steiermark, mit besonderer Berücksichtigung des archäologischen Fundmaterials. – *Fundberichte aus Österreich* 36, 71–192.
 BAUER et al. 1995 = BAUER, I., B. HEBERT, U. SCHA-CHINGER 1995, Das römerzeitliche Gehöft von Aichegg bei Stallhofen (unter Einbeziehung des nachantiken Fundmaterials). – *Fundberichte aus Österreich* 34, 73–136.
 BAUSOVAC, M., D. PIRKMAJER 2012, Late Roman glazed pottery from Rifnik near Celje. – *Rei Creatariae Romanae Fautorum Acta* 42, 1–7.
 BEKIĆ, L. 2012, Keramika praškog tipa u Hrvatskoj. – *Zbornik Stjepan Gunjača i hrvatska srednjovjekovna povijesno – arheološka baština II*, Split, 21–35.

- BEKIĆ, L. 2016, *Rani srednji vijek između Panonije i Jadrana. Ranoslavenski keramički ostali arheološki nalazi od 6. do 8. stoljeća / The early medieval between Pannonia and the Adriatic. Early slav ceramic and other archaeological finds from the sixth to eighth century.* – Monografije i katalozi 27, Arheološki muzej Istre.
- BEKIĆ, L. 2018, Early pit houses in the area of the Mura, Drava and Sava river and attempt to their reconstruction (Zgodneslovanske zemljanke v Pomurju, Podravju ter Posavju in poskus njihove rekonstrukcije). – In: Lux et al. (eds.) 2018, 69–76.
- BELAK, M. 2014, Staroslovanski žarni grob s Kapiteljske njive v Novem mestu / Early Mediaeval cremation grave from Kapiteljska njiva in Novo mesto, Slovenia. – In: S. Tecco Hvala (ed.), *Studia praehistorica in honorem Janez Dular*, Opera Instituti Archaeologici Sloveniae 30, 397–403.
- BEMANN, J., M. SCHMAUDER (eds.) 2008, *Kulturwandel in Mitteleuropa. Langobarden – Awaren – Slawen.* – Akten der Internationalen Tagung in Bonn vom 25. bis 28. Februar 2008. Kolloquien zur Vor- und Frühgeschichte 11, Bonn.
- BIERBRAUER, V. 2004, Die Keszthely-Kultur und die romanische Kontinuität in Westungarn (5.–8. Jh.). Neue Überlegungen zu einem alten Problem. – In: H. Seibert, G. Thoma (eds.), *Von Sachsen bis Jerusalem. Menschen und Institutionen im Wandel der Zeit* = Festschrift für Wolfgang Giese zum 65. Geburtstag, München, 51–72.
- BITENC, P., T. KNIFIC 2012, Poznoantične fibule v podobi ptičev iz Slovenije. – In: I. Lazar, B. Županek, L. Plesničar-Gec (eds.), *Emona med Akvilejo in Panonijo / Emona between Aquileia and Pannonia*, Koper, 429–446.
- BITENC et. al. 1991 = BITENC, P., J. I. VRŠČAJ, B. JERIN, T. KNIFIC, T. NABERGOJ, M. SAGADIN, A. ŠEMROV 1991, Katalog razstavljenega gradiva / Catalogue of exhibited material. – In: Knific, T., M. Sagadin (eds.), *Pismo brez pisave. Arheologija o prvih stoletjih krščanstva na Slovenskem*, Ljubljana, 47–95.
- BOLTA, L. 1981, Rifnik pri Šentjurju. – *Katalogi in monografije* 19.
- BONIFAY, M. 2015, *Études sur la céramique romaine tardive d’Afrique* (e-pdf ver. 2004. – British Archaeological Reports, International Series 1301.
- BÓNA, I. 1991, *Das Hunnenreich.* – Budapest.
- BÓNIS, E. B. 1990, A mázas kerámia Pannoniában. Előzmények és gyártási központok. – *Archaeologiai értesítő* 117, 24–38.
- BÓNIS, E.B. 1991, Glasierte Keramik der Spät Römerzeit aus Tokod. – *Acta Archaeologica Academiae Scientiarum Hungaricae* 43, 87–150.
- BRANDT, H. 2017, *Das Ende der Antike. Geschichte des spät römischen Reiches.* – ⁵München.
- BRATOŽ, R. 1996, Christianisierung des Nordadria- und Westbalkanraumes im 4. Jahrhundert. – In: R. Bratož (ed.), *Westillyricum und Nordostitalien in der spät römischen Zeit / Zahodni Ilirik in severovzhodna Italija v poznorimski dobi*, Situla 34, 299–366.
- BRATOŽ, R. (ed.) 2000, *Slovenija in sosednje dežele med antiko in karolinško dobo. Začetki slovenske etnogeneze / Slowenien und die Nachbarländer zwischen Antike und karolingischer Epoche. Anfänge der slovenischen Ethnogenese.* – Situla 39/1 = Razprave / Dissertationes 18.
- BRATOŽ, R. 2007, Izselseljevanje prebivalstva iz zahodnega Ilirika v 5. in 6. stoletju. Vojni ujetniki in begunci v pozni antiki. – In: T. Šenk (ed.), *Arhivistika – Zgodovina – Pravo. Vilfanov spominski zbornik / Archivistik – Geschichte – Recht. Gedenkschrift für Sergij Vilfan / Archives – History – Law. Vilfan’s Memorial Volume* (Die Auswanderung der Bevölkerung Westillyricums im 5. und 6. Jahrhundert. Kriegsgefangene und Flüchtlinge in der Spätantike). Gradivo in razprave / Zgodovinski arhiv 30, 247–284.
- BRATOŽ, R. 2011, Die Auswanderung der Bevölkerung aus den pannonischen Provinzen während des 5. und 6. Jahrhunderts. – In: M. Konrad, C. Witschel (eds.), *Römische Legionslager in den Rhein- und Donauprovinzen, Nuclei spätantik-frühmittelalterlichen Lebens?*, Abhandlungen der Bayerischen Akademie der Wissenschaften, phil.-hist. Klasse, N. F. 138, 589–614.
- BRATOŽ, R. 2014, *Med Italijo in Ilirikom. Slovenski prostor in njegovo sosedstvo v pozni antiki.* – Zbirka Zgodovinskega časopisa 46.
- BRATOŽ, R. 2017, Zur Präsenz und Mobilität ethnischer Kleingruppen im Alpen-Adria-Raum während der Ostgotenherrschaft. – In: Dörfler et al. (eds.) 2017, 215–248.
- BREIBERT, W. 2011, Grabfunde aus Krungl in der Steiermark (Österreich) – Überlegungen zur Chronologie und Wirtschaft des Frühmittelalters im Ostalpenraum. – In: F. Biermann, T. Kersting, A. Klammt (eds.), *Der Wandel um 1000.* Beiträge der Sektion zur slawischen Frühgeschichte der 18. Jahrestagung des Mittel- und Ostdeutschen Verbandes für Altertumforschung in Greifswald, 23. bis 27. März 2009, Beiträge zur Ur- und Frühgeschichte Mitteleuropas 60, Langenweissbach, 441–452.
- BREIBERT, W. 2022, *Das frühmittelalterliche Gräberfeld von Krungl, Gem. Bad Mitterndorf, Bez. Liezen, Steiermark. Studien zum Frühmittelalter im Ostalpenraum.* – Forschungen zur geschichtlichen Landeskunde der Steiermark 97 = Schild von Steier, Beiheft 12/22.
- BURGER, A.S. 1979, *Das spät römische Gräberfeld von Somogyzil.* – Fontes Archaeologici Hungariae, Budapest.

- BRU CALDERÓN, M. 2011, *Spätantike glasierte Keramik aus der Grabung St. Pölten-Rathausplatz*. – Unpublished PhD thesis, University of Vienna, Wien.
- CARANDINI, A. 1981 (ed.), *Atlante delle forme ceramiche I. Ceramica fine romana nel bacino mediterraneo (medio e tardo impero)*. – Enciclopedia dell'Arte Antica, Rome.
- CAVADA, E., M. ZAGERMANN (eds.) 2020, *Alpine Festungen 400–1000, Chronologie, Räume und Funktionen, Netzwerke, Interpretationen / Fortezze alpine (Secoli V–X), cronologia, spazi e funzioni, sistemi, interpretazioni*. – Akten des Kolloquiums in München am 13. und 14. September 2014, Münchner Beiträge zur Vor- und Frühgeschichte 68.
- CIGLENEČKI, S. 1985, Potek alternativne ceste Siscija-Akvileja na prostoru zahodne Dolenjske in Notranjske v času 4. do 6. stoletja. Preliminarno poročilo o raziskovanjih Korinjskega hriba in rekonstrukcijah zahodne Dolenjske (Der Verlauf der Alternativstrasse Siscia-Aquileia im Raum von Westdolenjsko und Notranjsko in der Zeitspanne vom 4. Bis zum 6. Jh. Präliminarbericht über die Erforschung des Korinjski hrib und die Rekonstruktionen von Westdolenjsko). – *Arheološki vestnik* 36, 255–284.
- CIGLENEČKI, S. 1987, *Höhenbefestigungen aus der Zeit vom 3. bis 6. Jh. im Ostalpenraum (Višinske utrdbe iz časa 3. do 6. st. v vzhodnoalpskem prosotoru)*. – Dela 1. razreda SAZU 31, Ljubljana.
- CIGLENEČKI, S. 1992, *Pólis Norikón, Poznoantične višinske utrdbe med Celjem in Brežicami*. – Podstreda.
- CIGLENEČKI, S. 1997, Die wichtigsten völkerwanderungszeitlichen Einfallstrassen von Osten nach Italien im Licht der neuesten Forschungen. – In: *Peregrinatio Gothica, Jantarová stezka*, Supplementum ad Acta Musei Moraviae, Scientiae sociales 82, Brno, 179–191.
- CIGLENEČKI, S. 1999, Results and Problems in the Archaeology of the Late Antiquity in Slovenia / Izsledki in problemi poznoantične arheologije v Sloveniji. – *Arheološki vestnik* 50, 287–309.
- CIGLENEČKI, S. 2000, *Tinje nad Loko pri Žusmu. Poznoantična in zgodnesrednjeveška naselbina / Tinje oberhalb von Loka pri Žusmu. Spätantike und frühmittelalterliche Siedlung*. – Opera Instituti Archaeologici Sloveniae 4.
- CIGLENEČKI, S. 2003, The basic characteristics of the Late Antique settlement pattern within the Eastern Alpine Region and Dalmatia. – *Histria Antiqua* 11, 263–281.
- CIGLENEČKI, S. 2005, Langobardische Präsenz im Südostalpenraum im Lichte neuer Forschungen. – In: W. Pohl, P. Erhart (eds.), *Die Langobarden, Herrschaft und Identität*. Forschungen zur Geschichte des Mittelalters 9, Denkschriften der Österreichischen Akademie der Wissenschaften, phil.-hist. Klasse 329, 265–280.
- CIGLENEČKI, S. 2006, Insediamenti Ostrogoti in Slovenia. – In: M. Buora, L. Villa (eds.), *Goti nell'arco alpino orientale*, Archeologia di frontiera 5, 107–122.
- CIGLENEČKI, S. 2007, Zum Problem spätrömischer militärischer Befestigungen im südlichen Teil von Noricum mediterraneum. – *Schild von Steier* 20, 317–328.
- CIGLENEČKI, S. 2008, *Castra* und Höhensiedlungen vom 3. bis 6. Jahrhundert in Slowenien. – In: Steuer, Bierbrauer 2008, 481–532.
- CIGLENEČKI, S. 2009, Justinijanovo utvrđivanje Ilirika. – *Archaeologia Adriatica* 3/1, 205–222.
- CIGLENEČKI, S. 2011a, Von römischen Städten zu spätantiken Höhensiedlungen zentralörtlichen Charakters. – In: J. Macháček, Š. Ungerman (eds.), *Frühgeschichtliche Zentralorte in Mitteleuropa*, Internationale Konferenz und Kolleg der Alexander-von-Humboldt-Stiftung zum 50. Jahrestag des Beginns archäologischer Ausgrabungen in Pohansko bei Breclav, 5.–9. 10. 2009, Breclav, Tschechische Republik. Studien zur Archäologie Europas 14, 183–196.
- CIGLENEČKI, S. 2011b, Vloga in pomen naselbine Tonovcov grad / The role and importance of the settlement Tonovcev grad. – In: Ciglenečki et al. (eds.) 2011, 257–287.
- CIGLENEČKI, S. 2014, The changing relations between city and countryside in Late Antique Illyricum. – *Hortus Artium Medievalium* 20, 232–250.
- CIGLENEČKI, S. 2015, Late Roman army, Claustra Alpium Iuliarum and the fortifications in the south-eastern Alps. – In: J. Istenič, B. Laharnar, J. Horvat (eds.), *Evidence of the Roman Army in Slovenia*, Catalogi et monographiae 41, 385–430.
- CIGLENEČKI, S. 2016a, Kontinuität oder Diskontinuität? Höhenbefestigungen von der La-Tène-Zeit bis zum Frühmittelalter. – In: M. Lehner, B. Schrettle (eds.), *Zentralort und Tempelberg. Siedlungs- und Kultentwicklung am Frauenberg bei Leibnitz im Vergleich*, Studien zur Archäologie der Steiermark 1, Akten des Kolloquiums im Schloss Seggau am 4. und 5. Mai 2015, Graz, 11–23.
- CIGLENEČKI, S. 2016b, Claustra Alpium Iuliarum, tractus Italiae circa Alpes and the Defence of Italy in the Final Part of the Late Roman Period / Claustra Alpium Iuliarum, tractus Italiae circa Alpes in problem obrambe Italije v zaključnem poznorimskem obdobju. – *Arheološki vestnik* 67, 409–424.
- CIGLENEČKI, S. 2017, Überlegungen zum Verständnis des Siedlungswechsels im südlichsten Teil der Provinz Noricum mediterraneum. – In: Dörfler et al. (eds.) 2017, 143–157.

- CIGLENEČKI, S. 2023, *Between Ravenna and Constantinople. Rethinking Late Antique Settlement Patterns*. – Opera Instituti Archaeologici Sloveniae 46.
- CIGLENEČKI, S., T. MILAVEC 2009, The defence of North-Eastern Italy in the first decennia of the 5th century. – *Forum Iulii* 33, 177–184.
- CIGLENEČKI, S., M. STRMČNIK GULIČ 2002, Sledovi slovanske poselitve južno od Maribora / Spuren frühslawischer Besiedlung südlich von Maribor. – In: Guštin (ed.) 2002, 67–75.
- CIGLENEČKI et al. (eds.) 2011 = CIGLENEČKI, S., Z. MODRIJAN, T. MILAVEC 2011, *Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu. Naselbinski ostanki in interpretacija. / Late Antique fortified settlement Tonovcov grad near kobarid. Settlement remains and interpretation*. – Opera Instituti Archaeologici Sloveniae 23.
- CIGLENEČKI et al. (eds.) 2020 = CIGLENEČKI, S., Z. MODRIJAN, T. MILAVEC 2020, *Korinjski hrib in poznoantične vojaške utrdbe v Iliriku / Korinjski hrib and late antique military forts in Illyricum*. – Opera Instituti Archaeologici Sloveniae 39.
- CVJETIČANIN, T. 2006, *Late Roman glazed pottery. Glazed pottery from Moesia Prima, Dacia Ripensis, Dacia Mediterranea and Dardania*. – Archaeological Monographies 19.
- ČREŠNAR et al. 2019 = ČREŠNAR, M., S. KISZTER, M. MELE, K. PEITLER, A. VINTAR (eds.) 2019, *Plants – Animals – People. Lively archaeological landscapes of Styria and Northeastern Slovenia / Pflanzen – Tiere – Menschen. Lebendige archäologische Landschaften der Steiermark und Nordostsloweniens / Rastline – živali – ljudje. Žive arheološke krajine avstrijske Štajerske in severovzhodne Slovenije*. – Schild von Steier 10, Graz, Ljubljana.
- DAIM, F. 2002, Pilgeramulette und Frauenschmuck? Zu den Scheibenfibeln der frühen Keszthely-Kultur. – *Zalai Múzeum* 11, 113–124.
- DAIM, F., E. SZAMEIT 1996, Frühe Slawen im oberen Donau- und Ostalpenraum. – In: *Reitervölker aus dem Osten. Hunnen und Awaren*. Begleitbuch und Katalog zur burgenländischen Landesausstellung 1996, Eisenstadt, 317–320.
- DEMANDT, A. 1996, Römische Entscheidungsschlachten. – In: Bratož (ed.) 1996, 31–44.
- DEMANDT, A. 2008, *Die Spätantike. Römische Geschichte von Diocletian bis Justinian, 284–565 n. Chr.* – Handbuch der Altertumswissenschaft III, 6, ²München.
- DISTELBERGER, A. 2004, *Österreichs Awarinnen. Frauen aus Gräbern des 7. und 8. Jahrhunderts*. – Archäologische Forschungen in Niederösterreich 3.
- DIESENBERGER et al. (eds.) 2020 = DIESENBERGER, M., S. EICHERT, K. WINCKLER (eds.) 2020, *Der Ostalpenraum im Frühmittelalter. Herrschaftsstrukturen, Raumorganisation und archäologisch-historischer Vergleich*. – Forschungen zur Geschichte des Mittelalters 23, Denkschriften der Österreichischen Akademie der Wissenschaften, phil.-hist. Klasse 511.
- DOLENZ, H. 2016, Der Bischofssitz und die spätantike Stadt Virunum. – *Römisches Österreich* 39, 47–172.
- DÖRFLER et al. (eds.) 2017 = DÖRFLER, I., P. GLEIRSCHER, S. LADSTÄTTER, I. PUCKER (eds.) 2017, *Ad Amussim, Festschrift zum 65. Geburtstag von Franz Glaser*. – Kärntner Museumsschriften 85.
- EGGER, R. 1916, *Frühchristliche Kirchenbauten im südlichen Norikum*. – Sonderschriften des Österreichischen Archäologischen Institutes 9.
- EHRENREICH et al. 1997 = EHRENREICH, S., B. HEBERT, H. HEYMANS, U. SCHACHINGER, H. WEIDENHOFFER 1997, Funde vom Kirchbichl bei Rattenberg in der Steiermark aus den Sammlungen Mayer und Stadlober in Fohnsdorf. – *Fundberichte aus Österreich* 36, 193–252.
- EIBNER, C. 1992, Der Beginn der Radwerksorganisation am steirischen Erzberg aus archäologischer Sicht. – *Beiträge zur Mittelalterarchäologie* 8, 25–29.
- EICHERT, S. 2010, *Die frühmittelalterlichen Grabfunde Kärntens. Die materielle Kultur Karantaniens anhand der Grabfunde vom Ende der Spätantike bis ins 11. Jahrhundert*. – Aus Forschung und Kunst 37.
- EICHERT, S. 2014, “Great Men,” “Big Men” und “Chiefs” in Karantaniens? Ein etwas anderer Blickwinkel auf frühmittelalterliche Herrschafts- und Organisationsstrukturen. – *Carinthia I* 204/I, 61–78.
- EICHERT, S. 2020, Herrschafts- und Sozialstrukturen im frühmittelalterlichen Ostalpenraum. – In: Diesenberger et al. (eds.) 2020, 101–128, 404–412.
- EITLER, J., J. REITER 2009–2010, Neue Forschungen am Hemmaberg – überraschende Ergebnisse der Grabung am Gipfelplateau. – *Rudolfinum* 2009/2010, 69–72.
- FITZ, J., Z. BÁNKI 1972, Kutatások Gorsiumban 1972-ben. – *Alba Regia* 13, 195–243.
- FITZ et al. 1973 = FITZ, J., V. LÁNYI, Z. BÁNKI 1973, Kutatások Gorsiumban 1973-ban. – *Alba Regia* 14, 289–333.
- FITZ et al. 1982–1983 = FITZ, J., G. FÜLÖP, V. LÁNYI, Z. BÁNKI, B. JUNGBERT 1982–1983, Forschungen in Gorsium in den Jahren 1981/82. – *Alba Regia* 22, 109–160.
- FITZ et al. 1984–1985 = FITZ, J., V. LÁNYI, Z. BÁNKI 1984–1985, Forschungen in Gorsium in den Jahren 1983/84. – *Alba Regia* 23, 179–240.
- FITZ et al. 1986–1988 = FITZ, J., V. LÁNYI, Z. BÁNKI 1986–1988, Forschungen in Gorsium in den Jahren 1985/86. – *Alba Regia* 24, 93–136.
- FITZ et al. 1994 = FITZ, J., J. FEDÁK, B. JUNGBERT, V. LÁNYI, Z. BÁNKI 1994, Forschungen in Gorsium in den Jahren 1987–1989. – *Alba Regia* 25, 321–403.
- FRIESINGER, H., H. KERCHLER 1981, Töpferöfen der Völkerwanderungszeit in Niederösterreich. Ein

- Beitrag zur völkerwanderungszeitlichen Keramik (2. Hälfte 4.–6. Jahrhundert n. Chr.) in Niederösterreich, Oberösterreich und dem Burgenland. – *Archaeologia Austriaca* 65, 193–266.
- FUCHS, G. 1983, Ein spätantiker Brunnen aus Flavia Solva. – *Pro Austria Romana* 33, 7–9.
- FUCHS, G. 1985, Spätantike Siedlungsschichten am westlichen Stadtrand von Flavia Solva. – *Pro Austria Romana* 35, 3.
- FUCHS, G. 1985–1986a, KG Seggau, OG Seggau, VB Leibnitz. – *Fundberichte aus Österreich* 24/25, 313–314.
- FUCHS, G. 1985–1986b, KG Wagna, MG Wagna, VB Leibnitz. – *Fundberichte aus Österreich* 24/25, 314–315.
- FUCHS, G. 1986, Fortsetzung der Notgrabung am Nordwesthang des Frauenbergs (Gem. Seggau, BH Leibnitz). – *Pro Austria Romana* 36, 22–23.
- FUCHS, G. 1987, Die römerzeitlichen Gräberfelder von Flavia Solva. – In: E. Pochmarski, G. Schwarz, M. Hainzmann (eds.), *Berichte des 2. Österreichischen Archäologentages im Schloss Seggau bei Leibnitz vom 14. bis 16. Juni 1984*, Mitteilungen der Archäologischen Gesellschaft Graz, Beiheft 1, Graz, 74–82.
- FUCHS, G., I. KAINZ 1998, Die Grabung des Jahres 1997 am Kugelstein (KG Adriach, MG Frohnleiten) in der Steiermark mit Berücksichtigung älterer Forschungsergebnisse. – *Fundberichte aus Österreich* 37, 101–136.
- FUCHS, G., J. OBEREDER 1999, Archäologische Untersuchungen am Kulm bei Trofaiach 1997. – *Fundberichte aus Österreich* 38, 107–162.
- FUSEK, G. 1994, *Slovensko vo včasnoslovanskom obdobi*. – *Archaeologica Slovaca Monographiae* 3.
- FUSEK, G. 2008, Frühe Slawen im Mitteldonauegebiet. – In: Bemann, Schmauder (eds.) 2008, 645–656.
- GABLER, D. 1988, Spätantike Sigillaten in Pannonien. Ein Nachtrag zu den nordafrikanischen Sigillaten. – *Carnuntum Jahrbuch*, 9–40.
- GASSNER, V. 2000, Die Keramik mit Ausnahme der Terra Sigillata. – In: V. Gassner, S. Groh, S. Jilek, A. Kaltenberger, W. Pietsch, R. Sauer, H. Stiglitz, H. Zabehlicky, *Das Kastell Mautern – Favianis*, Der Römische Limes in Österreich 39, 184–314.
- GLASER, F. 1997, *Frühes Christentum im Alpenraum. Eine archäologische Entdeckungsreise*. – Graz, Wien, Köln.
- GLASER, F. 2004, Christentum zur Ostgotenzeit in Noricum (493–536): die Kirchen auf dem Hemmberg und das Gräberfeld im Tal. – *Mitteilungen zur christlichen Archäologie* 10, 80–101.
- GLASER, F. 2006a, Die frühchristliche Kirche in der antiken Straßenstation Iuenna. – *Mitteilungen zur christlichen Archäologie* 12, 9–17.
- GLASER, F. 2006b, *L'epoca ostrogota nel Norico (493–536). Le chiese sull'Hemmberg e la necropoli nella valle*. – In: M. Buora, L. Villa (eds.), *Goti nell'arco alpino orientale*, *Archeologia di frontiera* 5, 83–106.
- GLASER, F. 2008, *Castra* und Höhensiedlungen in Kärnten und Nordtirol. – In: Steuer, Bierbrauer (eds.) 2008, 595–642.
- GLASER, F. 2011, Kirchenbau als Spiegel des frühen Christentums im Alpenraum. – In: G. Christian, H. Kaindl, B. Schrettle (eds.), *Tempel und Kirche. Zur Kult- und Kulturgeschichte des Frauenberges bei Leibnitz*, Graz, 61–74.
- GLASER, F. 2012, Landwirtschaftliche Basis spätantiker Höhensiedlungen in Noricum Mediterraneum. – *Rudolfinum* 2012, 47–55.
- GLASER, F. 2013, Landwirtschaftliche Basis spätantiker Höhensiedlungen in Noricum Mediterraneum. – *Rudolfinum*, 47–55.
- GLASER, F. 2015, *Teurnia – civitas Tiburnia*. – In: O. Heinrich-Tamáška, H. Herold, P. Straub, T. Vida (eds.), *“Castellum, Civitas, Urbs”, Zentren und Eliten in frühmittelalterlichen Ostmitteleuropa / Centres and Elites in Early Medieval East-Central Europe*, Budapest, Leipzig, Keszthely, Rahden/Westf, 11–26.
- GLASER, F. 2016, Architektur und Kunst als Spiegel des frühen Christentums in Noricum. – *Mitteilungen zur christlichen Archäologie* 22, 33–66.
- GLASER, F., C. GUGL 1996, Ausgrabungen westlich der frühchristlichen Kirche *extra muros* in Teurnia. – *Mitteilungen der frühchristlichen Archäologie in Österreich* 2, 9–27.
- GLEIRSCHER, P. 2019, *Karantanien. Slawisches Fürstentum und bairische Grafschaft*. – ²Klagenfurt, Ljubljana, Wien.
- GLEIRSCHER, P. 2020, Ostgoten in Norikum? Zum Gang und Stand der Diskussion. Heimo Schinnerl zum 65. Geburtstag. – *Rudolfinum*, 17–51.
- GRABHERR, G. 2001, *Michlhallberg. Die Ausgrabungen in der römischen Siedlung 1997–1999 und die Untersuchungen an den zugehörigen Straßentrasse*. – Schriftenreihe des Kammerhofmuseums Bad Aussee 22, Liezen.
- GRABHERR, B., B. KAINRATH (eds.) 2011, *Die spätantike Höhensiedlung auf dem Kirchbichl von Lavant. Eine archäologische und archivalische Spurensuche*. – Ikarus 5, Innsbruck.
- GRAČANIN, H. 2003, The western Roman embassy to the court of Attila in A. D. 449. – *Byzantinoslavica* 61, 53–74.
- GRASSL, H. 1996, Der Südostalpenraum in der Militärgeschichte des 4./5. Jahrhunderts. – In: Bratož (ed.) 1996, 177–184.
- GREUSSING, I. 2020, Kulturelle Grenzen – Forschungsgrenzen? Fragen zu frühmittelalterlichen Identitäten am Beispiel von Salzburger Grabfunden. – In: Diesenberger et al. (eds.) 2020, 153–162, 418–421.

- GROH, S. 1996, *Die Insula XLI von Flavia Solva. Ergebnisse der Grabungen 1959 und 1989 bis 1992.* – Sonderschriften des Österreichischen Archäologischen Institutes 28.
- GROH, S. 2021, *Ager Solvensis (Noricum). oppidum – municipium – sepulcra – territorium – opes naturales.* – Forschungen zur geschichtlichen Landeskunde der Steiermark 92.
- GROH, S., H. SEDLMAYER 2001, *Favianis – Civitas Mutarensis – Mautern: Spätantikes Kastell und frühmittelalterliche Stadt. Neue Evidenzen zur Stadtgeschichte von Mautern an der Donau, NÖ.* – *Beiträge zur Mittelalterarchäologie in Österreich* 17, 179–193.
- GROH, S., H. SEDLMAYER 2002, *Forschungen im Kastell Mautern-Favianis. Die Grabungen der Jahre 1996 und 1997.* – Der römische Limes in Österreich 42.
- GROH, S., H. SEDLMAYER 2004, *Neue Aufschlüsse zur Bebauungsgeschichte am Frauenberg bei Leibnitz, Steiermark. Baustellenbeobachtungen und Notbergungen des Österreichischen Archäologischen Instituts 2003.* – *Fundberichte aus Österreich* 43, 459–473.
- GROH, S., H. SEDLMAYER 2005, *Der norisch-römische Kultplatz am Frauenberg (Österreich).* – *Protohistoire Européenne* 9, Montagnac.
- GROH, S., H. SEDLMAYER 2010, *Die Villa von Hasendorf bei Leibnitz (Steiermark). Geophysikalische Messungen und Surveys 2009. Unter Mitarbeit von Volker Lindinger.* – *Jahreshefte des Österreichischen Archäologischen Institutes* 79, 87–118.
- GROH, S., H. SEDLMAYER 2013, *Contextual Archaeology: the Late Antique Fort and Vicus Favianis/Mautern. Methods and Results.* – In: L. Lavan, M. Mulryan (eds.), *Field Methods and Post-Excavation Techniques in Late Antique Archaeology*, Late Antique Archaeology 9, Leiden, Boston, 483–509.
- GUŠTIN, M. (ed.) 2002, *Zgodnji Slovani. Zgodnje-srednjeveška lončenina na obrobju vzhodnih Alp / Die frühen Slawen. Frühmittelalterliche Keramik am Rand der Ostalpen.* – Ljubljana.
- GUŠTIN, M. (ed.) 2008, *Srednji vek. Arheološke raziskave med Jadranskim morjem in Panonsko nižino / Mittelalter. Archäologische Forschungen zwischen der Adria und der Pannonischen Tiefebene.* – Ljubljana
- GUŠTIN, M., G. TIEFENGRABER, 2002, *Oblike in kronologija zgodnesrednjeveške lončenine na Novi tabli pri Murski Soboti / Formen und Chronologie frühmittelalterlicher Keramik in Nova tabla bei Murska Sobota.* – In: Guštin (ed.) 2002, 47–62.
- GUŠTIN, M., D. PAVLOVIČ 2013, *Die slawische Einwanderung ins Prekmurje-Mura-Gebiet (Pannonischer Südostrand) auf Grund der ¹⁴C Daten.* – In: M. Dulnicz, S. Moździoch (eds.), *The early slaviv settlement in Central Europe in the light of new dating evidence*, *Interdisciplinary Medieval Studies* 3, Wrocław, 217–221.
- GUTJAHR, C. 1999, *KG Haslach, OG Ragnitz, VB Leibnitz.* – *Fundberichte aus Österreich* 38, 879–880.
- GUTJAHR, C. 2002, *Ein Überblick zur frühmittelalterlichen Keramik in der Steiermark / Pregled raziskav zgodnesrednjeveške keramike na Štajerskem.* – In: Guštin (ed.) 2002, 146–160.
- GUTJAHR, C. 2003, *Eine mittelalterliche Grube aus Enzelsdorf, OG Mellach, VB Graz-Umgebung, Steiermark.* – *Fundberichte aus Österreich* 42, 165–182.
- GUTJAHR, C. 2006, *Der Kirchberg von Deutschfeistritz, Bezirk Graz-Umgebung, Steiermark – eine frühmittelalterliche Burgstelle? (Kirchberg pri Deutschfeistritzi, okraj Graz/Gradec – okolica, Štajerska – zgodnesrednjeveško gradišče?)* – *Arheološki vestnik* 57, 277–344.
- GUTJAHR, C. 2011, *Frühmittelalterliche Siedlungsbe-funde.* – In: G. Fuchs (ed.), *Archäologie Koralm-bahn 1: Weitendorf. Siedlungsfunde aus Kupferzeit, Bronzezeit und Frühmittelalter*, *Universitätsforschungen zur prähistorischen Archäologie* 198, Bonn, 137–191.
- GUTJAHR, C. 2013, *Der “Teufelsgraben” im Leibnitzer Feld. Archäologisch-historische Forschungen zu einem außergewöhnlichen Bodendenkmal im Bezirk Leibnitz, Steiermark.* – *Römisches Österreich* 36, 193–294.
- GUTJAHR, C. 2015a, *Archäologische Quellen der Steiermark aus der Karolinger- und Ottonenzeit.* – In: R. Härtel, B. Hebert, M. Lehner, G.P. Obersteiner (eds.), *Markgraf Leopold, Stift Rein und die Steiermark. Archäologisch-historische Aspekte*, Beiträge einer interdisziplinären Tagung der Historischen Landeskommission für Steiermark in Stift Rein am 24. und 25. Oktober 2012, *Forschungen zur geschichtlichen Landeskunde der Steiermark* 70, 75–118.
- GUTJAHR, C. 2015b, *Zwei Gruben des 7. Jahrhunderts aus Enzelsdorf, Steiermark.* – In: Hebert, Hofer (eds.) 2015, 73–92.
- GUTJAHR, C. 2018, *Early medieval Slavs in Styria – A first archaeological search for traces.* – In: Lux et al. (eds.) 2018, 42–54.
- GUTJAHR, C. 2020, *Neue Funde und Siedlungsbefunde aus der Steiermark zur Thematik der frühmittelalterlichen Slawen.* – In: Diesenberger et al. (eds.) 2020, 55–79.
- GUTJAHR, C. 2025, *Ein weiterer frühmittelalterlicher Siedlungsbeleg aus der Zeit um 700 n. Chr. aus Enzelsdorf, Steiermark.* – *Schild von Steier* 30, in print.
- GUTJAHR, C., M. ROSCHER 2004, *Spätromische und spätantike Keramik aus dem Bereich einer Villa rustica in Kleinklein, Steiermark.* – *Fundberichte aus Österreich* 43, 475–498.

- GUTJAHR, C., E. STEIGBERGER 2018, The “Devil’s Ditch” – A Late Roman Limes in the Middle of Noricum? – In: C.S. Sommer, S. Matešić (eds.), *LIMES XXIII. Proceedings of the 23rd International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongress in Ingolstadt 2015*, Beiträge zum Welterbe Limes, Sonderband 4, Mainz, 454–461.
- HAHN, W. 1990, Die Fundmünzen des 5.–9. Jahrhunderts in Österreich und den unmittelbar angrenzenden Gebieten. – In: H. Friesinger, F. Daim (eds.), *Typen der Ethnogenese unter besonderer Berücksichtigung der Bayern*, Teil 2, Berichte des Symposiums der Kommission für Frühmittelalterforschung, 27. bis 30. Oktober 1986, Stift Zwettl, Niederösterreich, Veröffentlichungen der Kommission für Frühmittelalterforschung 13, Denkschriften der Österreichischen Akademie der Wissenschaften, phil.-hist. Klasse 204, 235–251.
- HÁRSHEGYI, P., K. OTTOMÁNYI 2015, Imported and local pottery in late roman Pannonia. – In: L. Lavan (ed.), *Local Economies? Production and Exchange of Inland Regions in Late Antiquity*, Late antique archaeology 10, Leiden/Boston, 471–528.
- HEATHER, P. 2017, *Der Untergang des Römischen Weltreichs*. – 4^{Stuttgart}.
- HEBERT, B. 1996, Zu Neufunden frühmittelalterlicher Siedlungskeramik aus der Steiermark. – In: A. Krenn-Leeb (ed.), *Österreich vor eintausend Jahren. Der Übergang vom Früh- zum Hochmittelalter*, Archäologie Österreichs 7, Sonderausgabe, 67–70.
- HEBERT, B. 2004, Die Gebeine der “heiligen” Beatrix. – In: W. Brunner, B. Hebert, S. Lehner, *Ein neuer Flechtwerkstein und die Gebeine der “heiligen” Beatrix*, Überlegungen zum Frühmittelalter in Mariahof, Mitteilungen des Steiermärkischen Landesarchivs 52/53, 87–91.
- HEBERT, B., HOFER, N. (eds.) 2015, *Fachgespräch “Spätantikes Fundmaterial aus dem Südostalpenraum”*, 7. April 2014, Graz (Steiermark). – Fundberichte aus Österreich, Tagungsband 1, Wien.
- HEIMERL, F. 2014, *Nordafrikanische Sigillata, Küchenkeramik und Lampen aus Augusta Vindelicum/Augsburg*. – Münchner Beiträge zur Provinzialrömischen Archäologie 6.
- HEINRICH-TAMÁSKA, O. (ed.) 2011, *Keszthely-Fenekpuszta im Kontext spätantiker Kontinuitätsforschung zwischen Noricum und Moesia*. – Castellum Pannonicum Pelsonense 2, Budapest, Leipzig, Keszthely, Rahden/Westf.
- HEINRICH-TAMÁSKA, O., P. STRAUB 2015, Zur Datierung und Deutung der Gräber und Gräberfelder des 5. Jahrhunderts n. Chr. in *Pannonia prima* und *Valeria*. – In: Vida (ed.) 2015, 617–651.
- HEISS et al. 2025 = HEISS, A. G., U. THANHEISER, B. ECKL, Die verkohlten Pflanzenreste aus einer weiteren mittelalterlichen Fundstelle in Enzelsdorf (Fernitz-Mellach, Steiermark). – *Schild von Steier* 30, in print.
- HEYMANS, H. 2004, Abschließender Bericht zur Notgrabung des Bundesdenkmalamtes am südlichen Stadtrand von Flavia Solva, Steiermark. – *Fundberichte aus Österreich* 43, 507–525.
- HINKER, C. 2002, Ein norisch-pannonisches Hügelgrab mit Dromos in Niederschöckl bei Graz, Steiermark. – *Fundberichte aus Österreich* 41, 203–221.
- HINKER, C. 2007a, KG Seggauberg, OG Seggauberg, VB Leibnitz. – *Fundberichte aus Österreich* 46, 55–56.
- HINKER, C. 2007b, Stadt Graz, KG Straßgang. – *Fundberichte aus Österreich* 46, 729.
- HINKER, C. 2010, Die Norische Hauptstraße in der Steiermark unter besonderer Berücksichtigung der Neufunde im Bezirk Judenburg. – In: G. Grabherr, B. Kainrath (eds.), *conquiescamus! longum iter fecimus. Römische Raststationen und Straßeninfrastruktur im Ostalpenraum*, Akten des Kolloquiums zur Forschungslage zu römischen Straßenstationen, Innsbruck 4. und 5. Juni 2009, Ikarus 6, Innsbruck, 306–336.
- HÖCK, A. 2003, *Archäologische Forschungen in Teriolla 1. Die Rettungsgrabungen auf dem Martinsbühel bei Zirl von 1993–1997. Spätromische Befunde und Funde zum Kastell*. – Fundberichte aus Österreich, Materialheft A 14, Horn.
- HOLL, I. 1963, Középkori cserépedények a budai várpalotából (XIII–XV. század). – *Budapest Régiségei* 20, 335–394.
- HOLL, I., N. PARÁDI 1982, *Das mittelalterliche Dorf Sarvaly*. – *Fontes Archaeologici Hungariae*.
- HORVAT et al. 2003 = HORVAT, J., M. LOVENJAK, A. DOLENC VIČIČ, M. LUBŠINA-TUŠEK, M. TOMANIČ-JEVREMOV, Z. ŠUBIĆ 2003, Poetovio. Development and Topography. – In: M. Šašel Kos, P. Scherrer (eds.), *The Autonomous Towns of Noricum and Pannonia. Pannonia I*, Situla 41, 153–189.
- HORVÁTH, F. 2011, Das spätantike Keramikspektrum in Keszthely-Fenekpuszta – erste Ergebnisse. – In: Heinrich-Tamáška (ed.) 2011, 597–652.
- HORVÁTH, L., I. KOCH 2021, Aktuelle Forschungen zur “Primaresburg” am Franziskanerkogel bei Maria Lankowitz – Ein Zwischenbericht. – *Beiträge zur Mittelalterarchäologie in Österreich* 37, 86–126.
- HUDECZEK, E. 1973, *Ausgrabungen im nördlichen Stadtbezirk von Flavia Solva, Neue Ausgrabungen in der Steiermark*. – Schild von Steier, Kleine Schriften 14.
- HUDECZEK, E. 1977, Flavia Solva. – In: H. Temporini (ed.), *Principat. Politische Geschichte (Provinzen und Randvölker: Lateinischer Donau-Balkanraum)*, Aufstieg und Niedergang der Römischen Welt II, 6, 414–471.

- HUDECZEK, E. 1988, Flavia Solva. – In: G. Christian (ed.), *Leibnitz 75 Jahre Stadt. Festschrift zum Jubiläum der Stadterhebung am 27. April 1913*, Leibnitz, 21–53.
- HUDECZEK, E. 2002, Flavia Solva. Entwicklung und Topographie. – In: M. Šašel Kos, P. Scherrer (eds.), *The autonomous towns of Noricum and Pannonia: Noricum*, Situla 40, 203–212.
- HUDECZEK, E. 2008, Die Insula XXII von Flavia Solva. Kommentierter Zwischenbericht über die Grabungen 1980–1988. – *Schild von Steier* 21/2008, 257–290.
- IBLER, U.G. 1991, *Studien zum Kontinuitätsproblem am Übergang von der Antike zum Mittelalter in Nord- und Westjugoslawien*. – Bonn.
- KAINRATH, B. 2011, Die Spuren der Römer auf dem Kirchbichl von Lavant. Fiktion und Wirklichkeit. – In: Grabherr, Kainrath (eds.) 2011, 13–438.
- KAINZ, I. 1986, *Die römischen Lampen aus Flavia Solva*. – Unpublished Diploma thesis, University of Graz, Graz.
- KAINZ, I. 1989, Flavia Solva in der Spätantike. – In: P. Scherrer (ed.), *Akten des 3. Österreichischen Archäologentages Innsbruck, 3.–5. April 1987*, Wien, 99–102.
- KARL, S. 2011, Überlegungen zur frühen Baugeschichte des Alten Turmes. – In: S. Karl, G. Wrolli (eds.), *Der Alte Turm im Schloss Seggau zu Leibnitz. Historische Untersuchungen zum ältesten Bauteil der Burgenanlage Leibnitz in der Steiermark*, Forschungen zur geschichtlichen Landeskunde der Steiermark 55, Wien, Berlin, 117–126.
- KARL, S. 2013, *Turris antiqua in castro Leybentz. Zur frühesten Baugeschichte der Burgenanlage Leibnitz/Seggau im Kontext der spätantiken Ostflanke der Provinz Noricum mediterraneum*. – Unpublished PhD thesis, University of Graz, Graz.
- KARL, S., D. MODL 2018, Forschungsgeschichtliche Einführung: Die Entwicklung von Altertumskunde und Archäologie in der Steiermark. – In: B. Hebert (ed.), *Urgeschichte und Römerzeit in der Steiermark*, Geschichte der Steiermark 1), ²Wien, Köln, Weimar, 69–77.
- KERMAN, B. 1997, Srednjeveška kovačnica in talilnica pri Gradu na Goričkem / Die mittelalterliche Schmiede und Schmelzhütte von Grad in Goričko. – In: M. Guštin, K. Predovnik (eds.), *Drobci nekega vsakdana / Bruchstücke eines Alltags*, Archeologia Historica Slovenica 2, 141–151.
- KISZTER, S., SCHRETTLE, B. 2020, *Archäologie der Burg Schwanberg*. – Retznei.
- KISZTER et al. 2019 = KISZTER, S., A.G. HEISS, S. WIESINGER 2019, Die frühmittelalterlichen Befunde von Kleinklein (Leibnitz, Steiermark, Österreich). – In: Črešnar et al. 2019, 132–134.
- KITZ, I. 2008, Die Terra Sigillata aus den Grabungen des Bundesdenkmalamtes auf den Perl-/ Stadtläckern am Frauenberg bei Leibnitz. – *Schild von Steier* 21/2008, 195–250.
- KNABL, R. 1848, Wo stand das “Flavium Solvense” des C. Plinius? – *Schriften des Historischen Vereines für Innerösterreich* 1, 1–108.
- KNIFIC, T. 1993, Hunski sledovi v Sloveniji? (Traces of the hunns in Slovenia?). – In: *Ptujski arheološki zbornik, ob 100-letnici muzeja in Muzejskega društva*, Ptuj, 521–542.
- KOCH, R. 2003, Eine durchbrochene Scheibenfibel mit Kreuz aus Uppåkra bei Lund. – In: *Fler fynd i centrum. Materialstudier i och kring Uppåkra*, Uppåkrarstudier 9, Acta Archaeologica Lundensia Series in 8°, No 45, 215–225, Lund.
- KONCZ, I., J. G. ÓDOR 2016, Einfach oder anspruchlos? Über das Punktkreisornament im 6. Jahrhundert anhand dreier Fibeln aus dem Komitat Tolna. – *Archaeologiai Értesítő* 141, 145–156.
- KOS, P. 1986, *The monetary circulation in the south-eastern Alpine Region. ca. 300 B.C. – A.D. 1000*. – Situla 24.
- KREKOVIČ, E. 1998, *Römische Keramik aus Gerulata*. – Studia Archaeologica et Mediaevalia 4, Bratislava.
- KREMPUŠ et al. 2005 = KREMPUŠ, R., B. MUŠIČ, M. NOVŠAK 2005, Celeia (Noricum). Topographische Erkenntnisse 1992–2002. – In: L. Borhy, P. Zsidi (eds.), *Die norisch-pannonischen Städte und das römische Heer im Lichte der neuesten archäologischen Forschungen*, II. Internationale Konferenz über norisch-pannonische Städte, Budapest-Aquincum, 11.–14. September 2002, Aquincum Nostrum II.3, Budapest, 201–216.
- LADSTÄTTER, S. 1998, Afrikanische Sigillaten und Lampen aus Ovilava/Wels. – *Carnuntum Jahrbuch* 1998, 51–63.
- LADSTÄTTER, S. 2000, *Die materielle Kultur der Spätantike in den Ostalpen. Eine Fallstudie am Beispiel der westlichen Doppelkirchenanlage auf dem Hemmaberg*. – Mitteilungen der Prähistorischen Kommission der Österreichischen Akademie der Wissenschaften 35.
- LADSTÄTTER, S. 2002, Die Spätantike. – In: V. Gassner, S. Jilek, S. Ladstätter, *Am Rande des Reiches. Die Römer in Österreich*, Österreichische Geschichte 15 v. Chr. – 378 n. Chr., Wien, 285–368.
- LADSTÄTTER, S. 2003a, Zur Charakterisierung des spätantiken Keramikspektrums im Ostalpenraum. – In: H.R. Sennhauser (ed.), *Frühe Kirchen im östlichen Alpengebiet. Von der Spätantike bis in ottonische Zeit, Teil 2: Abhandlungen*, Berichte der Bayerischen Akademie der Wissenschaften, phil.-hist. Klasse, N. F. 123, 831–857.
- LADSTÄTTER, S. 2003b, Handelsbeziehungen der Provinz Noricum in der Spätantike am Beispiel

- des keramischen Fundmaterials. – In: C. Bakirtzis (ed.), *Actes du VIIe Congrès International sur la Céramique Médiéval en Méditerranée*, Thessaloniki, 11–16 Octobre 1999, Athens, 303–312.
- LAMM, S. 2011, *Die römische Villa von Grünau. Funde und Befunde der Grabungssaisonen 1991, 1992, 2001 und 2002*. – Unpublished PhD thesis, University of Graz, Graz.
- LEHNER, M. 2004, Die frühe Burg auf dem Deutschlandsberger Ulrichsberg (KG Hörbing, SG und VB Deutschlandsberg, Weststeiermark). – *Beiträge zur Mittelalterarchäologie in Österreich* 20, 99–148.
- LEHNER, M. 2009, *Binnennoricum – Karantanien zwischen Römerzeit und Hochmittelalter. Ein Beitrag zur Frage von Ortskontinuität und Ortsdiskontinuität aus archäologischer Sicht*. – Unpublished Postdoctoral thesis, University of Graz, Graz.
- LEHNER, M. 2011, Zur Siedlungskontinuität zwischen Antike und Mittelalter. – In: G. Christian, H. Kaindl, B. Schrettle (eds.), *Tempel und Kirche. Zur Kult- und Kulturgeschichte des Frauenberges bei Leibnitz*, Graz, 49–60.
- LIPPOLD, A. 1996, Westillyricum und Norditalien in der Zeit zwischen 364 und 455 unter besonderer Berücksichtigung Theodosius I. – In: Bratož (ed.) 1996, 17–28.
- LOCHNER VON HÜTTENBACH, F. 2004, *Frühmittelalterliche Namen in der Steiermark*. – Graz.
- LOCHNER VON HÜTTENBACH, F. 2008, Zum Namensgut des Frühmittelalters in der Steiermark. – *Zeitschrift des Historischen Vereines für Steiermark* 99, 23–69.
- LOSERT, H. 2003, *Teil 1: Das frühmittelalterliche Gräberfeld von Altenerding in Oberbayern und die "Ethnogenese" der Bajuwaren*. – In: Losert, H., A. Pleterski, *Altenerding in Oberbayern. Struktur des frühmittelalterlichen Gräberfeldes und "Ethnogenese" der Bajuwaren*. – Berlin, Bamberg, Ljubljana.
- LOTTER, F. 1976, *Severinus von Noricum. Legende und historische Wirklichkeit: Untersuchungen zur Phase des Übergangs von spätantiken zu mittelalterlichen Denk- und Lebensformen*. – Monographien zur Geschichte des Mittelalters 12.
- LOTTER, F. 2003, unter Mitarbeit von Rajko Bratož und Helmut Castritius, *Völkerverschiebungen im Ostalpen-Mitteldonau-Raum zwischen Antike und Mittelalter (375–600)*. – Berlin, New York.
- LUBŠINA TUŠEK, M. 2004, Izročilo Preteklosti med Potrčevo in Volkmerjevo cesto na Ptuj (Überlieferung der Vergangenheit zwischen der Potrč und Volkmer Straße). – *Zbornik splošne bolnišnice dr. Jožeta Potrča Ptuj*, Ptuj, 73–79.
- LUX, J., ŠTULAR, B., ZANIER, K. (eds.) 2018, *Slovani, naša dediščina / Our heritage: the Slavs*, Vestnik 27, Ljubljana.
- MACHÁČEK, J. 1997, Studie zur Keramik der mitteldanubischen Kulturtradition. – *Slovenská Archeológia* 45/2, 353–418.
- MACHÁČEK, J. 2000, K absolutní a relativní chronologii keramiky středodunajské kulturní tradice na jižní Moravě. – *Sborník prací Filozofické fakulty Brněnské univerzity M 5, Řada archeologická* 49, 25–55.
- MACKENSEN, M. 1993, *Die spätantike Sigillata- und Lampentöpfereien von El Mahrine (Nordtunesien). Studien zur nordafrikanischen Feinkeramik des 4. bis 7. Jahrhunderts*. – Münchner Beiträge zur Vor- und Frühgeschichte 50.
- MACKENSEN, M. 2013, Terra Sigillata aus Nord- und Zentraltunesien. – In: M. Mackensen, F. Schimmer (eds.), *Der römische Militärplatz Submuntorium/Burghöfe an der oberen Donau. Archäologische Untersuchungen im spätrömischen Kastell und Vicus 2001 bis 2007*, Münchner Beiträge zur Provinzialrömischen Archäologie 4, 347–360.
- MACKENSEN, M. 2015, Spätrömische nordafrikanische Keramik vom Lorenzberg bei Epfach. Eine Neubewertung der Funde aus den Ausgrabungen 1953–1957. – *Bayerische Vorgeschichtsblätter* 80, 169–188.
- MAGRINI, C., F. SBARRA 2005, *Le ceramiche invetriate di Carlino. Nuovo contributo allo studio di una produzione tardoantica*. – *Ricerche di Archeologia altomedievale e medievale* 30, Firenze.
- MAGRINI, C., F. SBARRA 2015, Late Roman Glazed Pottery production and distribution in North-Eastern Italy and the Eastern Alpine area: an update. – In: Hebert, Hofer (eds.) 2015, 43–58.
- MARKO, P. 2017, *Römische Villen der Steiermark und ihr Fundmaterial. Die Altgrabungen von Forst-Thalerhof (1937–39) und Löffelbach (1961–63/1992–2002) und ihre Kleinfunde*. – Unpublished PhD thesis, University of Graz, Graz.
- MARTIN, M. 1994, s. v. Fibel und Fibeltracht. – In: J. Hoops, *Reallexikon der germanischen Altertumskunde* 8, 131–172 (Späte Völkerwanderungszeit und Merowingerzeit auf dem Kontinent).
- MIKL-CURK, I. 1966, Poznoantično grobišče na Zgornjem Bregu v Ptuj. – *Časopis za zgodovino in narodopisje, Nova vrsta* 2, 46–62.
- MIKL-CURK, I. 1976, *Poetovio I*. – Katalogi in monografije 13.
- MILAVEC, T. 2007, Prispevek h kronologiji S-fibul v Sloveniji / A contribution to the chronology of S-fibulae in Slovenia. – *Arheološki vestnik* 58, 333–355.
- MILAVEC, T. 2009, Crossbow fibulae of the 5th and 6th centuries in the southeastern Alps / Samostrelne fibule 5. in 6. stoletja na jugovzhodnoalpskem prostoru. – *Arheološki vestnik* 60, 223–248.
- MILAVEC, T. 2012, Late antique settlements in Slovenia after the year 600. – In: V. Ivanišević, M. Kazanski

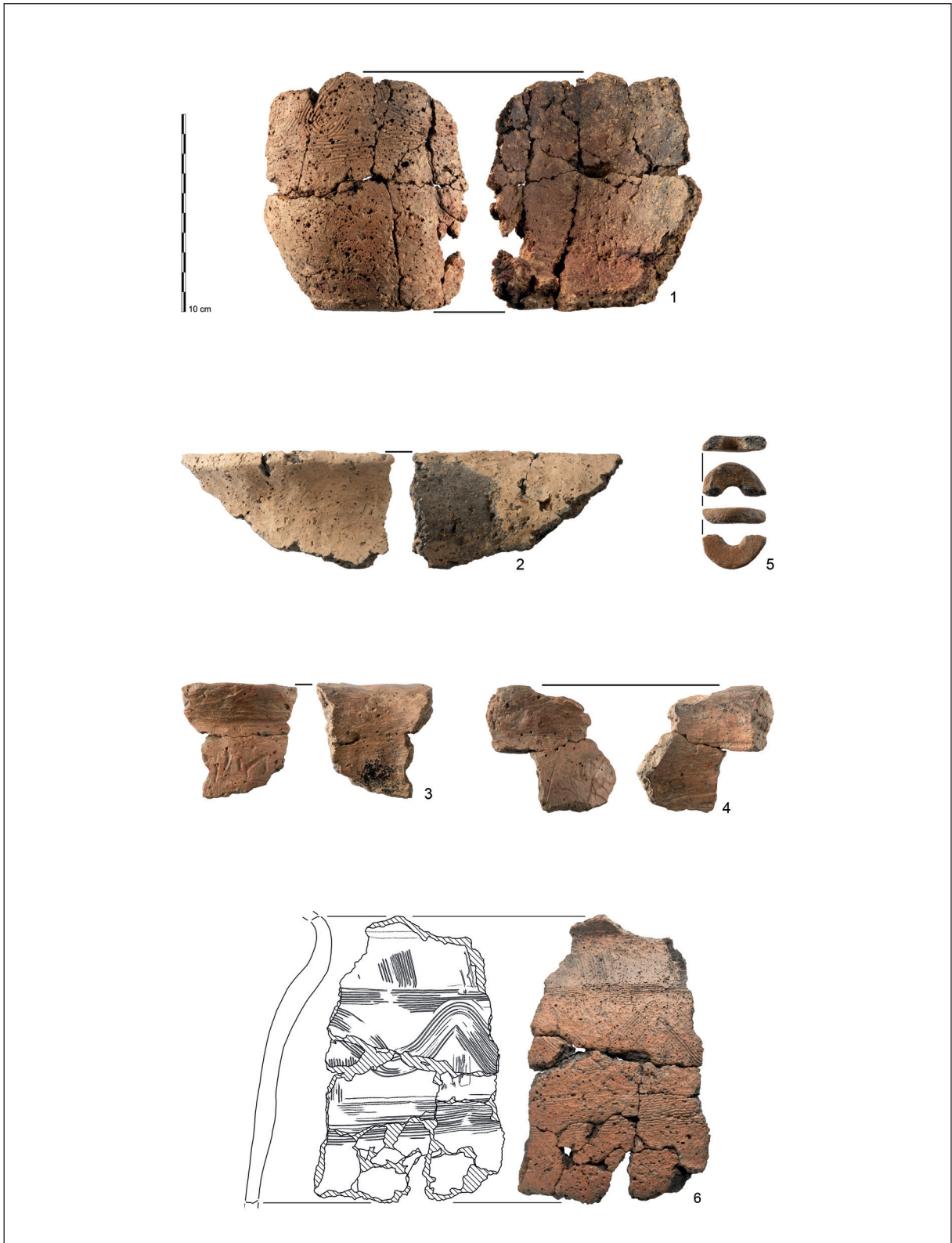
- (eds.), *The Pontic-Danubian Realm in the Period of the Great Migration*, Arheološki institut, Posebna izdanja 51 = Centre de recherche d'histoire et civilisation de Byzance, Monographies 36, 71–88.
- MILAVEC, T. 2017, Defending Italy from the north-east: Claustra Alpium Iuliarum and its interpretations. – In: M. Bohr, M. Teska (eds.), *Extra limites*, Poznań, Wrocław, 149–162.
- MILAVEC, T. 2020, Late antique fortified hilltop settlements in Slovenia: fifteen years later. – In: Cavada, Zagermann (eds.) 2020, 159–174.
- MILAVEC, T., Z. MODRIJAN 2014, The transition between Late Antiquity and Early Middle Ages in western Slovenia and Friuli. – *Hortus Artium Medievalum* 20, 260–271.
- MIRSCH, I. 1994, *Die Geschichte der Marktgemeinde Kalsdorf*. – Kalsdorf.
- MLINAR, M. 2002, Zgodnjerednjeveški posodi z Mosta na Soči, ledina Repelc / Zwei frühmittelalterliche Gefäße aus Most na Soči, Flur Repelc. – In: Guštin (ed.) 2002, 111–112.
- MODL, D. 2010, 180 Jahre archäologische Forschungen im Steirischen Salzkammergut. – In: F. Mandl, H. Stadler (eds.), *Archäologie in den Alpen. Alltag und Kult*, Forschungsberichte der ANISA 3, Nearchos 19, 157–166, Haus im Ennstal.
- MODRIJAN, Z. 2015, Amphorae from Late Antique Hilltop Settlements in Slovenia. – In: Hebert, Hofer (eds.) 2015, 21–32.
- MODRIJAN, Z. 2017, New Military Finds from Ančnikovo gradišče. – In: Dörfler et al. (eds.) 2017, 159–174.
- MODRIJAN, Z. 2019, Changes Along the Slovenian Part of the River Drava (Drau) in the Late Roman Period. – In: M. Auer (ed.), *Roman Settlements along the Drava River*, Wiesbaden, 81–90.
- MODRIJAN, Z. 2020a, Pottery from the Late Roman hilltop settlement at Ančnikovo Gradišče (Slovenia). – *Rei Cretariae Romanae Fautorum Acta* 46, 317–326.
- MODRIJAN, Z. 2020b, Ančnikovo gradišče. – In: J. Horvat, I. Lazar, A. Gaspari (eds.), *Manjša rimska naselja na slovenskem prostoru / Minor Roman settlements in Slovenia*, Opera Instituti Archaeologici Sloveniae 40, 349–362.
- MODRIJAN, Z. 2020c, Late Antique settlements in Slovenia and their position in the broader trade network of Late Antiquity (a case of pottery). – In: Cavada, Zagermann (eds.) 2020, 575–594.
- MODRIJAN, Z., T. MILAVEC 2011, *Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu. Najdbe. / Late antique fortified settlement Tonovcov grad near Kobarid. Finds*. – Opera Instituti Archaeologici Sloveniae 24.
- MÜLLER, R. 1992, Neue archäologische Funde der Keszthely-Kultur. – In: F. Daim (ed.), *Awarensfor-*
- schungen 1*, Archaeologia Austriaca Monographien 1 = Studien zur Archäologie der Awaren 4, 251–307.
- MÜLLER, R. 2000, Der Untergang der Antike und ihr Nachleben im nördlichen Pannonien (Transdanubien). – In: Bratož (ed.) 2000, 241–253.
- MÜLLER, R. 2008, Die früh- und mittelawarischen Bestattungen des Gräberfeldes von Gyenesdiás. – *Antaeus* 29/30, 279–300.
- NOWOTNY, E. 2005, Das frühmittelalterliche Gräberfeld von Hohenberg mit Exkursen zur historischen und archäologischen Situation im Ostalpenraum. – *Archaeologia Austriaca* 89, 177–250.
- NOWOTNY, E. 2016, Entsorgungspraktiken in (früh-)mittelalterlichen ländlichen Siedlungen. – In: C. Theune, S. Eichert (eds.), *Wert(e)wandel – Objekt und kulturelle Praxis in Mittelalter und Neuzeit*, Beiträge der internationalen Tagung im MAMUZ Museum Mistelbach, 23. Bis 26. September 2014, Beiträge zur Mittelalterarchäologie in Österreich 31, 123–134.
- OBERHOFER, K. 2012, *Die römerzeitliche Holzbausiedlung von Schönberg (MG Hengsberg, VB Leibnitz). Ein neuer Siedlungstyp in der Kulturlandschaft des Laßnitztales*. – Unpublished PhD thesis, University of Innsbruck, Innsbruck.
- OTTOMÁNYI, K. 2009, Eingeglättete Gefäße aus der letzten Periode der Siedlung von Budaörs. – In: S. Bíró (ed.), *Ex officina... Studia in honorem Dénes Gabler*, Győr, 411–442.
- OTTOMÁNYI, K. 2011, Késő római mázas kerámia a budaörsi telepen / Late Roman Age pottery in the Budaörs settlement. – *Arrabona* 49, 263–290.
- OTTOMÁNYI, K., O. SOSZTARITS 1996–1997, Spät-römischer Töpferofen im südlichen Stadtteil von Savaria. – *Savaria* 23, 145–216.
- PAMMER-HUDECEK, Y., E. HUDECZEK 2002, Neue Befunde aus der Gräberstraße von Flavia Solva. – *Fundberichte aus Österreich* 41, 448–471.
- PAVLOVIČ, D. 2008, Novi izsledki arheoloških terenskih raziskav na Novi tabli pri Murski Soboti. – In: Guštin (ed.) 2008, 49–52.
- PAVLOVIČ, D. 2015, The beginning of Slavic settlement in north-eastern Slovenia and the relation between “Slavic” and “Lombard” settlement based on new interpretations of the archaeological material and radiocarbon dating. – In: Hebert, Hofer (eds.) 2015, 59–72.
- PAVLOVIČ, D. 2017, Začetki zgodnjelovanske poselitve Prekmurja / Beginnings of the Early Slavic settlement in the Prekmurje region, Slovenia. – *Arheološki vestnik* 68, 349–386.
- PAVLOVIČ, D. 2020, Who were the lowland neighbours? Late Antique lowland settlement in Slovenia. – In: Cavada, Zagermann (eds.) 2020, 175–197.

- PAVLOVIČ et al. 2021 = PAVLOVIČ, D., P. VOJAKOVIĆ, B. TOŠKAN 2021, Cerklje ob Krki: Novosti v poselitvi Dolenjske v zgodnjem srednjem veku / Cerklje ob Krki: new findings on the early medieval settlement of Dolenjska. – *Arheološki vestnik* 72, 137–186.
- PEITLER, K. 2011a, Valentinianus III. für Gallia Placidia. Solidus 426 – ca. 430 n. Chr. Münzstätte Ravenna. – In: Peitler et al. (eds.) 2011c, 144–145.
- PEITLER, K. 2011b, Phokas (reg. 602–610 n. Chr.) / 40 Nummia 605–606 n. Chr. / Münzstätte Konstantinopel. – In: Peitler et al. (eds.) 2011c, 146–147.
- PEITLER et al. 2011c = PEITLER, K., M. MELE, B. POROD, D. MODL (eds.) 2011, *Lebensspuren. Die bedeutendsten Objekte der Archäologischen Sammlungen und des Münzkabinetts*. – Schild von Steier 24.
- PICHLER, F. 1887, Römische Ausgrabungen auf dem Kugelsteine. – *Mitteilungen des Historischen Vereins für Steiermark* 35, 107–127.
- PICCOTTINI, G. 1976, *Das spätantike Gräberfeld von Teurnia St. Peter im Holz*. – Archiv für vaterländische Geschichte und Topographie 66, Klagenfurt.
- PIRKMAJER, D. 1994, *Rifnik. Archäologischer Fundort. Führer*. – Celje.
- PLETERSKI, A. 2008, Zgodnjesrednjeveški žgani grobovi v vzhodnih Alpah. – In: *Frühmittelalterarchäologie in der Steiermark*, Beiträge eines Fachgesprächs anlässlich des 65. Geburtstags von Diether Kramer, Schild von Steier, Beiheft 4, 33–39.
- PLETERSKI, A. 2010, *Zgodnjesrednjeveška naselbina na Blejski Pristavi. Tafonomija, predmeti in čas / Frühmittelalterliche Siedlung Pristava in Bled. Tafonomie, Fundgegenstände und zeitliche Einordnung*. – Opera Instituti Archaeologici Sloveniae 19.
- PLETERSKI, A., M. BELAK 2002, Lončenina z Gradu na Gorenjem Mokronogu in vprašanje prevzema lončarskih znanj / Keramik vom Grad am Gorenji Mokronog und die Frage der Übernahme von Töpferwissen. – In: Guštin (ed.) 2002, 98–103.
- POHL, G. 1962, Die frühchristliche Lampe vom Lorenzberg bei Epfach, Landkreis Schongau: Versuch einer Gliederung der Lampen vom mediterranen Typus. – In: J. Werner (ed.), *Aus Bayerns Frühzeit: Friedrich Wagner zum 75. Geburtstag*, München, 219–228.
- POHL, W. 1996, Die Langobarden in Pannonien und Justinians Gotenkrieg. – In: D. Bialeková, J. Zábojník (eds.), *Ethnische und kulturelle Verhältnisse an der mittleren Donau vom 6. bis zum 11. Jahrhundert*, Symposium Nitra 6. bis 10. November 1994, Bratislava, 27–36.
- POHL, W. 2008, Migration und Ethnogenesen der Langobarden aus Sicht der Schriftquellen. – In: Bemann, Schmauder (eds.) 2008, 1–12.
- POHL, W., M. DIESENBERGER 2001 (eds.), *Eugippius und Severin, Der Autor, der Text und der Heilige*. – Forschungen zur Geschichte des Mittelalters 2.
- POLLAK, M. 2017, Spätantike und Merowingerzeit in den beiden norischen Provinzen. Ein erster Blick auf den ostgotenzeitlichen Friedhof von Globasnitz/Globasnica, Kärnten. – In: Dörfler et al. (eds.) 2017, 249–276.
- POLLAK, M. 2020, Ein gallo-fränkischer Offizier im Alpenraum? Neues vom Amtsträger der Straßenstation Juenna/Globasnitz. – *Carinthia I* 210, 91–119.
- PRIEN, R., P. HILBICH 2013, Zur Rolle von Höhensiedlungen in der spätantiken Siedlungslandschaft der Moselregion. – In: O. Heinrich-Tamáska (ed.), *Rauben, Plündern, Morden – Nachweis von Zerstörung und kriegerischer Gewalt im archäologischen Befund*, Tagungsbeiträge der Arbeitsgemeinschaft Spätantike und Frühmittelalter, Zerstörung und Gewalt im archäologischen Befund (Bremen, 5.–6.10. 2011), Studien zur Spätantike und Frühmittelalter 5, Hamburg.
- PROHÁSZKA, P. 2011, Bemerkungen zum spätrömischen und frühvölkerwanderungszeitlichen Goldmünzverkehr in Pannonia I und Valeria. – In: Heinrich-Tamáska (ed.) 2011, 61–86.
- PRÖTTEL, P. M. 1996, *Mediterrane Feinkeramik des 2.–7. Jahrhunderts n. Chr. im oberen Adriaaraum und in Slowenien*. – Kölner Studien zur Archäologie der römischen Provinzen 2, Espelkamp.
- PURKARTHOFER, H. J. [1984], *Mellach. Geschichtsbilder* – Deutschlandsberg.
- RABITSCH, J. 2013, *Die Insula XXIII von Flavia Solva: Kleinfunde und Befunde aus den Grabungen des Universalmuseums Joanneum von 2009 und 2010*. – Unpublished Diploma thesis, University of Graz, Graz.
- RAVNIK, M. 2006, *Zaščitne raziskave Ančnikovega gradišča pri Jurišni vasi v letih od 1986 do 1994*. – Unpublished Diploma thesis, University of Ljubljana, Ljubljana.
- RÉGERAT, P. 1996, Italien in der *Vita Severini*: Sein Erscheinungsbild und sein Verhältnis zu Norikum. – In: Bratož (ed.) 1996, 193–206.
- REUTER, S. 2013, Glasierte Keramik. – In: M. Mackensen, F. Schimmer (eds.), *Der römische Militärplatz Submuntorium/Burghöfe an der oberen Donau. Archäologische Untersuchungen im spätrömischen Kastell und Vicus 2001 bis 2007*, Münchner Beiträge zur Provinzialrömischen Archäologie 4, 360–372.
- RODRIGUEZ, H. 1997, Die Zeit vor und nach der Schlacht am Fluvius Frigidus (394 n. Chr.) im Spiegel der südostalpinen Gebrauchskeramik. – *Arheološki vestnik* 48, 153–177.
- ROSEN, K. 2009, *Die Völkerwanderung*. – ⁴München.
- ROSENBERGER, V. 2011, The Saint and the Bishop. Severinus of Noricum. – In: J. Leemans (ed.),

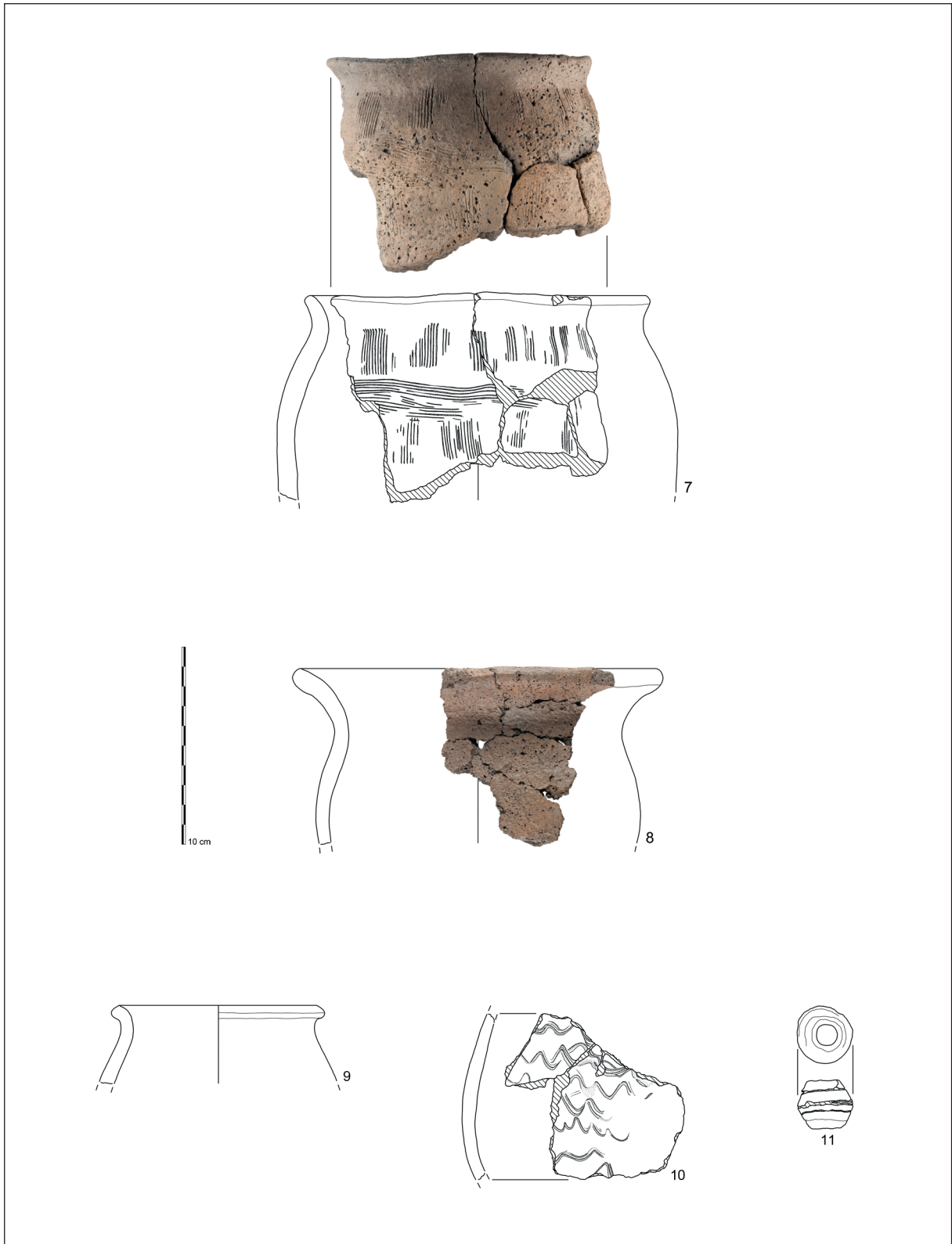
- Episcopal elections in late antiquity*. Arbeiten zur Kirchengeschichte 119, Berlin, 203–216.
- RUCHESI, F. 2020, Noricum and Pannonia during the 5th and 6th centuries. The Eastern Alps as a Recruitment Ground. – In: Diesenberger et al. (eds.) 2020, 17–33.
- SCHACHINGER, U. 2006, *Der antike Münzumschlag in der Steiermark*. – Die Fundmünzen der römischen Zeit in Österreich, Abt. 6, Steiermark, Forschungen zur geschichtlichen Landeskunde der Steiermark 49, Veröffentlichungen der Numismatischen Kommission 43, Denkschriften der Österreichischen Akademie der Wissenschaften, phil.-hist. Klasse 341.
- SCHERRER, P. 2003, Savaria. – In: M. Šašel Kos, P. Scherrer (eds.), *The Autonomous Towns of Noricum and Pannonia. Pannonia I*, Situla 41, 53–80.
- SCHERRER, P. 2011, Noricum in der Spätantike – Zu den Forschungen des vergangenen Jahrzehnts, mit einem Beitrag von Bernhard Schrettle. – In: Heinrich-Tamáska (ed.) 2011, 103–127.
- SCHIPPER, F. 1996, Ad rapam? Frühgeschichtliche Siedlungsspuren bei St. Ruprecht an der Raab/Steiermark. – In: A. Krenn-Leeb (ed.), *Österreich vor eintausend Jahren. Der Übergang vom Früh zum Hochmittelalter*, Archäologie Österreichs 7, Sonderausgabe, 71–76.
- SCHMID, W. 1932, *Norisches Eisen*. – Beiträge zur Geschichte des österreichischen Eisenwesens, Abteilung 1, Heft 2.
- SCHNEEBERGER, D. 2016, *Der Vicus von Gleisdorf. Vorlage von Befunden und Funden. Ein Vicus zwischen zwei Grenzen? Fragen der Kontinuität und Diskontinuität*. – Unpublished MA thesis, University of Graz, Graz.
- SCHRETTLE, B. 2010, Balneum, Horreum, Granarium. Zur Interpretation eines Gebäudes in Rannersdorf (Steiermark). – *Archäologisches Korrespondenzblatt* 40/2, 227–241.
- SCHRETTLE, B. 2014, *Der römische Tempelbezirk auf dem Frauenberg bei Leibnitz*. – Fundberichte aus Österreich, Materialheft A 21, Wien.
- SCHRETTLE, B. 2017, Das spätantike Horreum von Rannersdorf (Oststeiermark) – Neue Grabungsergebnisse und offene Fragen. – *Römisches Österreich* 40, 35–69.
- SCHRETTLE, B. 2018, KG Seggauberg, SG Leibnitz – *Fundberichte aus Österreich* 57, 402.
- SCHRETTLE, B. 2019, *Neue Forschungen im römischen Heiligtum auf dem Frauenberg bei Leibnitz. Grabungsergebnisse 2013 bis 2016*. – Studien zur Archäologie 2, Vienna.
- SCHRETTLE, B., TSIRONI, S. 2007, Die Ausgrabungen der Jahre 2005 bis 2007 in der Villa Rannersdorf. Kaiserzeitliche und spätantike Funde und Befunde. – *Fundberichte aus Österreich* 46, 225–338.
- SCHULZE-DÖRRLAMM, M. 1986, Romanisch oder germanisch? Untersuchungen zu den Armbrust- und Bügelknopffibeln des 5. und 6. Jahrhunderts n. Chr. Aus den Gebieten westlich des Rheins und südlich der Donau. – *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 33/2, 593–720.
- SCHWARCZ, A. 1996, Die Goten. – In: F. Daim (ed.) *Hunnen und Awaren. Reitervölker aus dem Osten*, Begleitbuch und Katalog zur burgenländischen Landesausstellung 1996, Eisenstadt, 123–126.
- SCHWARCZ, A. 2000, Der Nordadria- und Westbalkanraum im 6. Jahrhundert zwischen Goten und Byzantinern. – In: Bratož (ed.) 2000, 59–71.
- SLABE, M. 1975, *Dravljje. Grobišče iz časov preseljevanja ljudstev*. – Situla 16.
- STADLER, H. 2011, Der Lavanter Kirchbichl im Frühmittelalter und Mittelalter. – In: Grabherr, Kainrath (eds.) 2011, 461–485.
- STAUDINGER, E. 1978, Wo lag die “Civitas Zuib”. – *Blätter für Heimatkunde* 52, 33–44.
- STEIGBERGER, E., A. STEINEGGER 2015–2016, Ein weites Feld – Die römischen Siedlungsstellen Rattenberg und Eppenstein am Rand des Beckens Aichfeld-Murboden in der westlichen Obersteiermark. – *Schild von Steier* 27, 264–274.
- STEIGBERGER, E., H. VRABEC 2016, Vicus oder Villa? – Die “norische Hauptstraße” im oberen Murtal anhand ihrer Fundorte. – In: M. Pfeil (ed.), *Römische Vici und Verkehrsinfrastruktur in Raetien und Noricum*. Colloquium Bedaium, Seebruck 26.–28. März 2015, Schriftenreihe des Bayerischen Landesamts für Denkmalpflege 15, München, 186–195.
- STEINEGGER, A. 2017, Frauenburg. Archäologische Befunde, Bauforschung und naturwissenschaftliche Untersuchungsmethoden in und unter der Pfarrkirche hl. Jakobus der Ältere. – In: S. Eichert, T. Kühtreiber, M. Lehner, C. Theune (eds.), *Laufzeit/Zeitlauf. Zeitkonzepte – Datierung – Chronologie in der Mittelalter- und Neuzeitarchäologie*, Beiträge der internationalen Tagung in Graz, 20. bis 23. September 2016, Beiträge zur Mittelalterarchäologie in Österreich 33, 179–195.
- STEINEGGER, A. 2020, Grab – Friedhof – Kirche. Archäologische Untersuchungen an drei Friedhöfen in der westlichen Obersteiermark. – *Beiträge zur Mittelalterarchäologie in Österreich* 36, 95–116.
- STEINEGGER et al. 2019 = STEINEGGER, A., A. HEISS, S. WIESINGER 2019, Untersuchungen unter der Pfarrkirche Hl. Jakobus d. Ältere auf der Frauenburg bei Unzmarkt (AT). – In: Črešnar et al. 2019, 116–121.
- STEINKLAUBER, U. 2002, Das spätantike Gräberfeld auf dem Frauenberg bei Leibnitz, Steiermark. – In: U. Steinklauber, *Das spätantike Gräberfeld auf dem Frauenberg bei Leibnitz, Steiermark*, Fundberichte aus Österreich, Materialheft A 10, 17–284.

- STEINKLAUBER, U. 2005, Inneralpine spätantike Höhensiedlungen im steirischen Ennstal. – *Schild von Steier* 18, 135–198.
- STEINKLAUBER, U. 2006a, Überlegungen zur Einordnung spätantiker Höhensiedlungen in der Steiermark. – In: A. Krenn-Leeb (ed.), *Wirtschaft, Macht und Strategie. Höhensiedlungen und ihre Funktionen in der Ur- und Frühgeschichte*, Archäologie Österreichs, Spezial 1, 247–255.
- STEINKLAUBER, U. 2006b, Die Römer gehen. – In: G. Koiner, M. Lehner, T. Lorenz, G. Schwarz (eds.), *Akten des 10. Österreichischen Archäologentages in Graz am 7.–9. November 2003*, Veröffentlichungen des Instituts für Archäologie der Karl-Franzens-Universität Graz 6, 173–179.
- STEINKLAUBER, U. 2008, Ein kleines spätantikes Kapitell vom Kugelstein bei Frohnleiten. – *Schild von Steier* 21, 415–424.
- STEINKLAUBER, U. 2010a, Das Ende von Flavia Solva. Flavia Solva in der Spätantike. – In: B. Porod (ed.), *Flavia Solva. Ein Lesebuch*, Schild von Steier, Kleine Schriften 22, 22–27.
- STEINKLAUBER, U. 2010b, Der Burgberg von Eppenstein als archäologischer Fundort der Römerzeit und der Spätantike. – *Zeitschrift des Historischen Vereines für Steiermark* 101, 9–34.
- STEINKLAUBER, U. 2012, Die Akkulturation endet im Grab? Zum Gräberfeld am Frauenberg bei Leibnitz. – *Archaeologia Austriaca* 96, 127–132.
- STEINKLAUBER, U. 2013, *Fundmaterial spätantiker Höhensiedlungen in Steiermark und Kärnten. Frauenberg im Vergleich mit Hoischhügel und Duel*. – *Forschungen zur geschichtlichen Landeskunde der Steiermark* 61, Graz.
- STEINKLAUBER, U. 2018, Römerzeit (und Spätantike) von der Zeitenwende bis ins 5. Jahrhundert. – In: B. Hebert (ed.), *Urgeschichte und Römerzeit in der Steiermark*, Geschichte der Steiermark 1, ²Wien, Köln, Weimar, 699–807.
- STEINKLAUBER, U., B. HEBERT 2001, Ad Viruni limina – An den Grenzen des Virunenser Territoriums. – In: F.W. Leitner (ed.), *Carinthia Romana und die römische Welt. Festschrift für Gernot Piccottini zum 60. Geburtstag*, Aus Forschung und Kunst 34, 271–278.
- STEUER, H., V. BIERBRAUER 2008, (eds.), *Höhensiedlungen zwischen Antike und Mittelalter von den Ardennen bis zur Adria*. – Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde 58.
- STICKLER T. 2002, *Aëtius. Gestaltungsspielräume eines Heermeisters im ausgehenden Weströmischen Reich*. – Vestigia. Beiträge zur Alten Geschichte 54.
- SZŐKE, B.M. 2000/2001, Das archäologische Bild der Slawen in Südwestungarn. – In: Bratož (ed.) 2000, 477–500, Ljubljana
- ŠAŠEL, J. 1979, *Antiqui Barbari*, Zur Besiedlungsgeschichte Ostnoricums und Pannoniens im 5. und 6. Jahrhundert nach den Schriftquellen. – In: J. Werner, E. Ewig (ed.), *Von der Spätantike zum frühen Mittelalter. Aktuelle Probleme in historischer und archäologischer Sicht*. Vorträge und Forschungen 25, Sigmaringen, 125–139.
- ŠAŠEL, J. 1990, Alpenregionen. – In: F. Vittinghoff (ed.), *Europäische Wirtschafts- und Sozialgeschichte in der Römischen Kaiserzeit, Handbuch der Europäischen Wirtschafts- und Sozialgeschichte I*, Stuttgart, 556–571.
- ŠAŠEL KOS, M. 1994a, The embassy of Romulus to Attila. One of the last citations of Poetovio in classical literature. – *Tyche* 9, 99–111.
- ŠAŠEL KOS, M. 1994b, Romulovo poslanstvo pri Atilu (Ena zadnjih omemb Petovonie v antični literaturi). – *Zgodovinski časopis* 48, 285–295.
- ŠAŠEL KOS, M. 1996, The Defensive Policy of Valentinian I. in Pannonia – A Reminiscence of Marcus Aurelius? – In: Bratož (ed.) 1996, 145–175.
- ŠAŠEL, I. 2008, Staroslovansko grobišče Popava II pri Lipovcih (Das altslawische Gräberfeld Popava II bei Lipovci). – In: Guštin (ed.) 2008, 65–70.
- TEJRAL, J. 2008, Ein Abriss der frühmerowingerzeitlichen Entwicklung im mittleren Donaauraum bis zum Anfang des 6. Jahrhunderts. – In: Bemann, Schmauder (eds.) 2008, 249–283.
- TEJRAL, J. 2010, Zur Frage der frühesten hunnischen Anwesenheit in donauländischen Provinzen am Beispiel des archäologischen Befundes. – *Slovenská Archeológia* 58/1, 81–122.
- TEJRAL, J. 2015, Spätantike Körperbestattungen mit Schwertbeigabe in römisch-barbarischen Grenz-zonen Mitteleuropas und ihre Deutung. – In: Vida (ed.) 2015, 129–236.
- THANHEISER, U., J. WALTER 2004, Pflanzliche Großreste aus einer mittelalterlichen Grube von Enzelsdorf, OG Mellach, VB Graz-Umgebung, Steiermark. – *Fundberichte aus Österreich* 42, 183–190.
- TIEFENGRABER, G. 2005, *Ur- und frühgeschichtliche Funde aus Kalsdorf bei Graz. Siedlungstopographische Untersuchungen im zentralen Grazer Becken*. – Unpublished PhD thesis, University of Vienna, Wien.
- TIEFENGRABER, G. 2018, *Der Wildoner Schlossberg. Die Ausgrabungen des Landesmuseums Joanneum 1985–1988*. – Schild von Steier, Beiheft 7, Forschungen zur geschichtlichen Landeskunde der Steiermark 80.
- TOMANIČ JEVREMOV, M. 2002, Zgodnjesrednjeveški grob iz Brstja pri Ptuju / Ein frühmittelalterliches Grab aus Brstje bei Ptuj. – In: Guštin (ed.) 2002, 65–66.

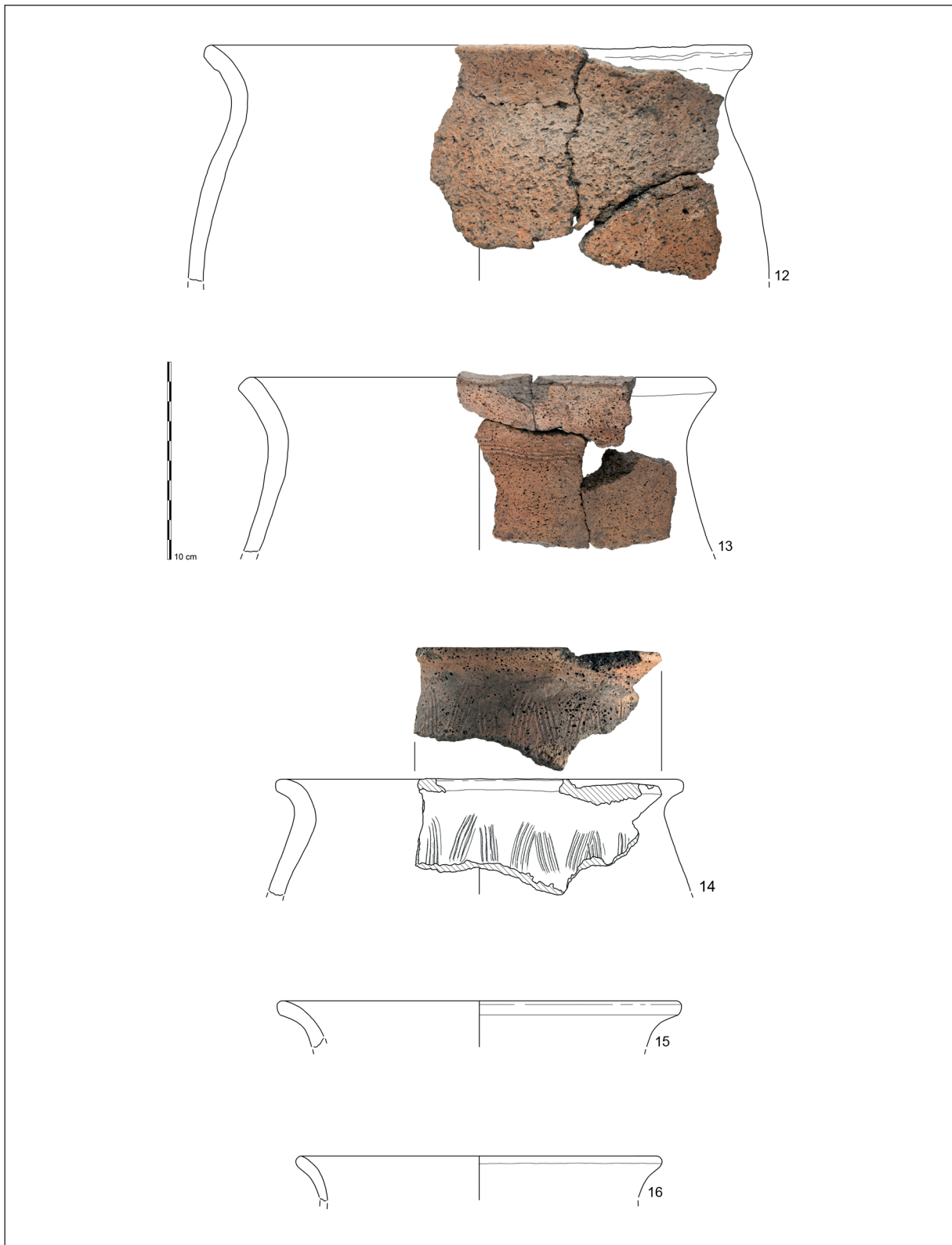
- TOMIČIĆ, Ž. 2000, Der Untergang der Antike und deren Nachlebensformen in Südbanien (Nordkroatien). – In: Bratož (ed.) 2000, 255–297.
- TRATNIK, V., Š. KARO 2017, *Miren. Grobišče iz obdobja preseljevanja ljudstev*. – Monografije CPA 3.
- TRATNIK, V., Š. KARO 2023, Ostrogoths in Slovenia? Case study of a Late Antique cemetery in Miren, western Slovenia / Vzhodni Goti v Sloveniji? Raziskave grobišča iz obdobja pozne antike v Mirnu, zahodna Slovenija. – *Arheološki vestnik* 74, 201–240.
- UDOLPH, J. 2016, Heimat und Ausbreitung slawischer Stämme aus namenkundlicher Sicht. – In: F. Biermann, T. Kersting, A. Klammt (eds.), *Die frühen Slawen – von der Expansion zu gentes und nationes*, Beiträge der Sektion zur slawischen Frühgeschichte des 8. Deutschen Archäologiekongresses in Berlin, 06.-10. Oktober 2014. Beiträge zur Ur- und Frühgeschichte Mitteleuropas 81/1, Langenweissbach, 83–107.
- VIDA, T. 2008a, Germanic peoples and Romans in the Avar Kingdom. – In: J.-J. Aillagon (ed.), *Rome and the Barbarians: The birth of a new world*, Milano, 421–427.
- VIDA, T. 2008b, Die Langobarden in Pannonien. – In: *Die Langobarden. Das Ende der Völkerwanderung*, Katalog zur Ausstellung im Rheinischen Landesmuseum Bonn 22. 8. 2008–11. 1. 2009, Darmstadt, 73–89.
- VIDA, T. 2009, Local or foreign Romans? The problem of Late Antique population of the 6th–7th centuries AD in Pannonia. – In: D. Quast (ed.), *Foreigners in Early Medieval Europe*, Thirteen International Studies on Early Medieval Mobility. Monographien des Römisch-Germanischen Zentralmuseums 78, Mainz, 233–259.
- VIDA, T. 2011a, Das Gräberfeld neben dem Horreum in der Innenbefestigung von Keszthely-Fenekpuszta. – In: Heinrich-Tamáská (ed.) 2011, 397–455.
- VIDA, T. 2011b, Die Zeit zwischen dem 4. und dem 6. Jahrhundert im mittleren Donauraum aus archäologischer Sicht. – In: M. Konrad, C. Witschel (eds.), *Römische Legionslager in den Rhein- und Donau-provinzen – Nuclei spätantik-frühmittelalterlichen Lebens?*, Abhandlungen der Bayerischen Akademie der Wissenschaften, phil.-hist. Klasse, N. F. 138, 615–648.
- VIDA, T. (ed.) 2015, *Romania Gothica II. The Frontier World. Romans, Barbarians and Military Culture*. – Proceedings of the International conference at the Eötvös Loránd University (Budapest 1–2 October 2010), Budapest.
- VON PETRIKOVITS, H. 1985, *Duel*. – In: *Reallexikon der Germanischen Altertumskunde* 6, Berlin, New York, 226–238.
- WARD-PERKINS, B. 2006, *The fall of Rome and the end of civilization*. – Oxford.
- WAWRUSCHKA, C. 1998–1999, Die frühmittelalterliche Siedlung von Rosenberg im Kamptal, Niederösterreich. – *Archaeologia Austriaca* 82–83, 347–427.
- WAWRUSCHKA-FIRAT, C. 2009, *Frühmittelalterliche Siedlungsstrukturen in Niederösterreich*. – Mitteilungen der Prähistorischen Kommission der Österreichischen Akademie der Wissenschaften 68.
- WEBER, E. 2004, Der letzte Statthalter von Noricum. – *Jahrbuch des oberösterreichischen Musealvereins* 149, 277–283.
- WEILER, I. 1995, Von den Adoptivkaisern bis zum Ende des Weströmischen Reichs. – In: I. Weiler (ed.), *Grundzüge der politischen Geschichte des Altertums*, ²Wien, Köln, 145–167.
- WEILER, I. 1996, Zur Frage der Grenzziehung zwischen Ost- und Westteil des Römischen Reiches in der Spätantike. – In: Bratož (ed.) 1996, 123–143.
- WINCKLER, K. 2012a, Die Alpen als Grenze und Grenzen in den Alpen. – In: *Archaeologia Austriaca* 96, 147–161.
- WINCKLER, K. 2012b, *Die Alpen im Frühmittelalter. Die Geschichte eines Raumes in den Jahren 500 bis 800*. – Vienna, Cologne, Weimar.
- WOLFF, H. 2000, Vermutungen zum Ende antiker Lebensformen im südöstlichen Alpenraum. – In: Bratož (ed.) 2000, 27–40.
- WOLFRAM, H. 2001, *Die Goten. Von den Anfängen bis zur Mitte des sechsten Jahrhunderts. Entwurf einer historischen Ethnographie*. – ⁴München.
- WOLFRAM, H. 2003, Grenzen und Räume, Geschichte Österreichs vor seiner Entstehung. – In: H. Wolfram (ed.), *Österreichische Geschichte 378–907. Grenzen und Räume. Geschichte Österreichs vor seiner Entstehung*, Wien.
- WÜHRER, B. 2000, *Merowingerzeitlicher Armschmuck aus Metall*. – Europe Médiévale 2.



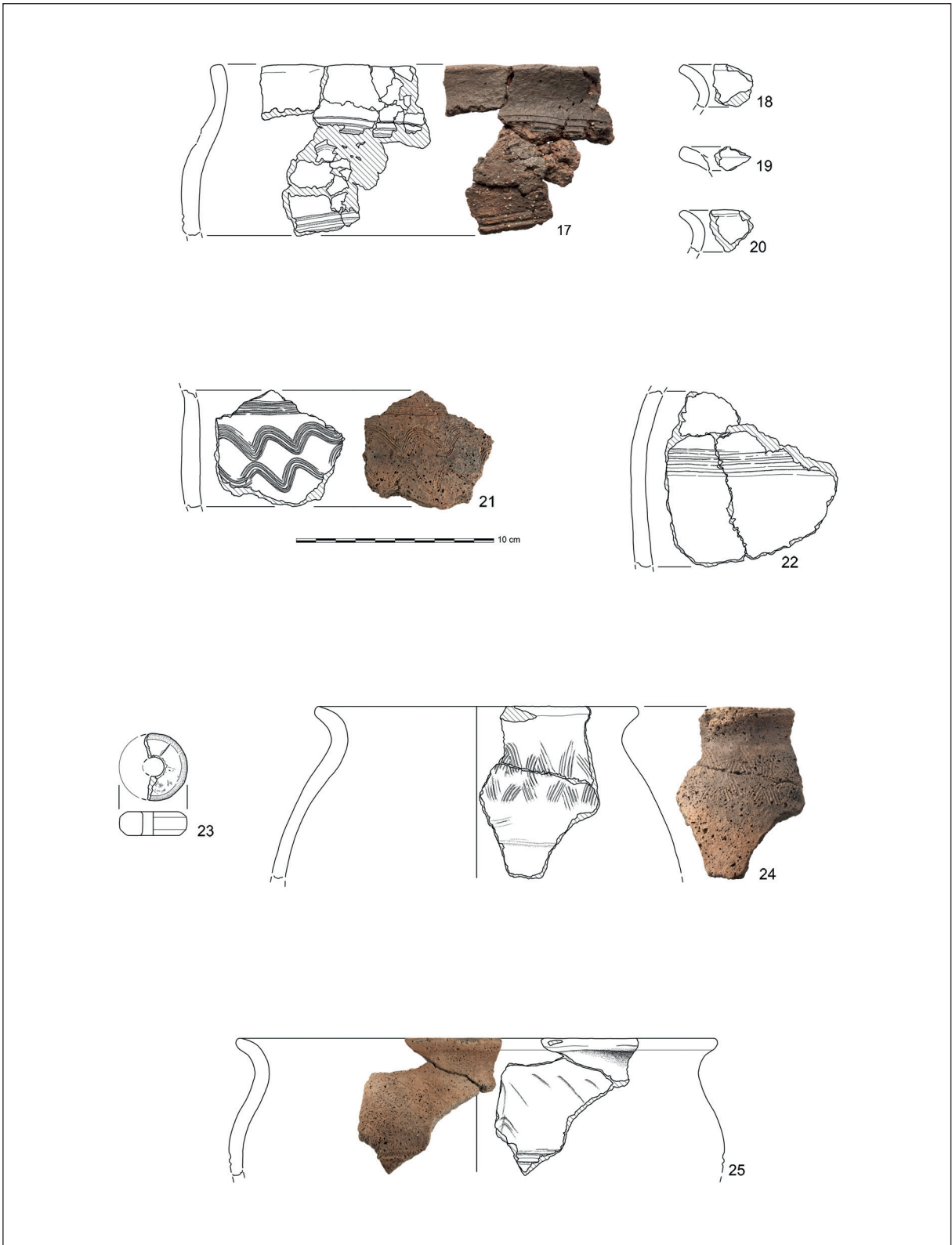
Pl. 1: Komberg, 1-5. St. Ruprecht an der Raab, pit SR 5, 6. Pottery. Scale 1:3.



Pl. 2: St. Ruprecht an der Raab, pit SR 5, 7–8, pit SR 12, 9–11. Pottery. Scale 1:3.



Pl. 3: St. Ruprecht an der Raab, pit SR 12, 12-13. Enzelsdorf, pit 1, 15-16, pit 2, 14. Pottery. Scale 1:3.



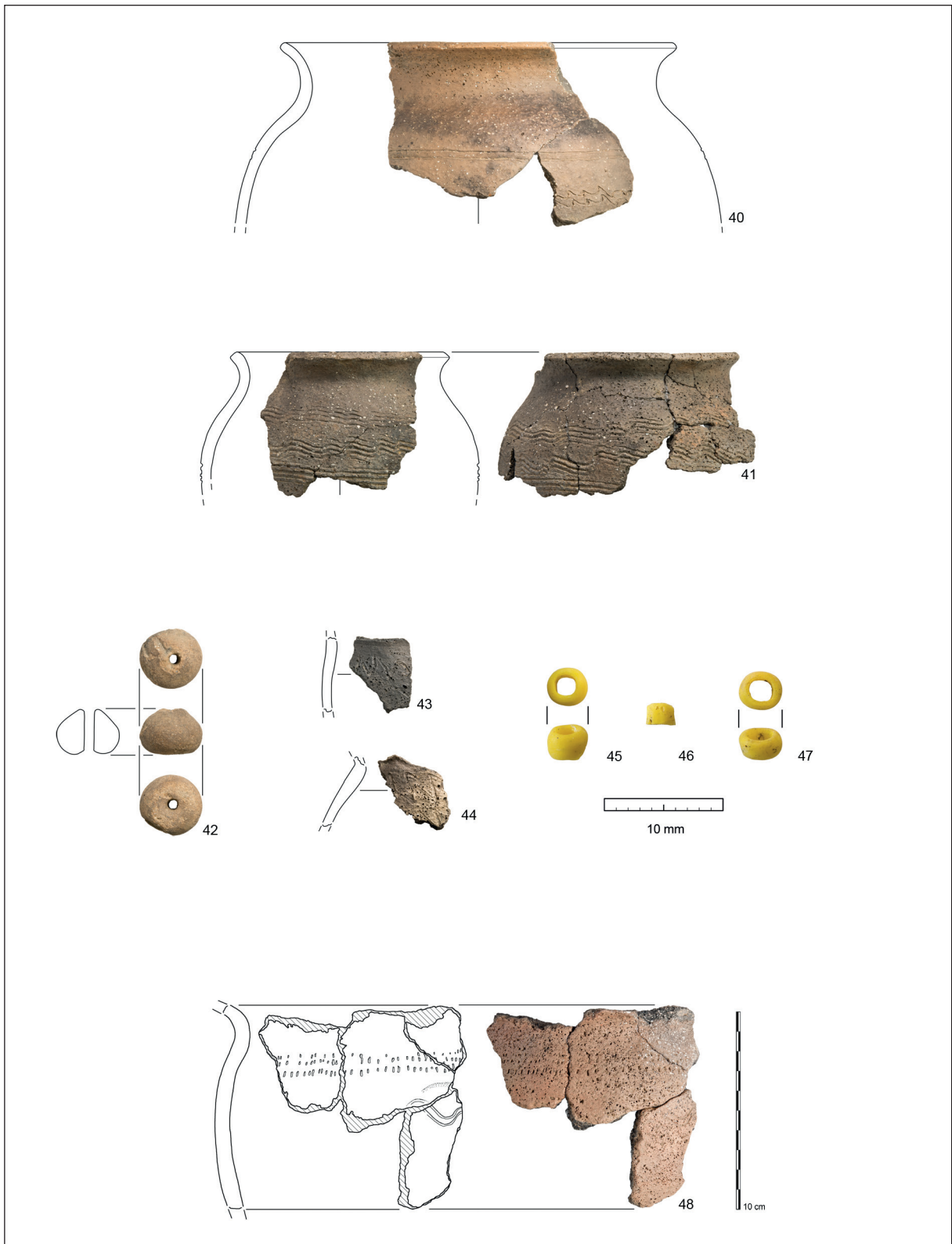
Pl. 4: Enzelsdorf, pit 1, 17–21, 23, pit 2, 22, object 3, 24–25. Pottery. Scale 1:3.



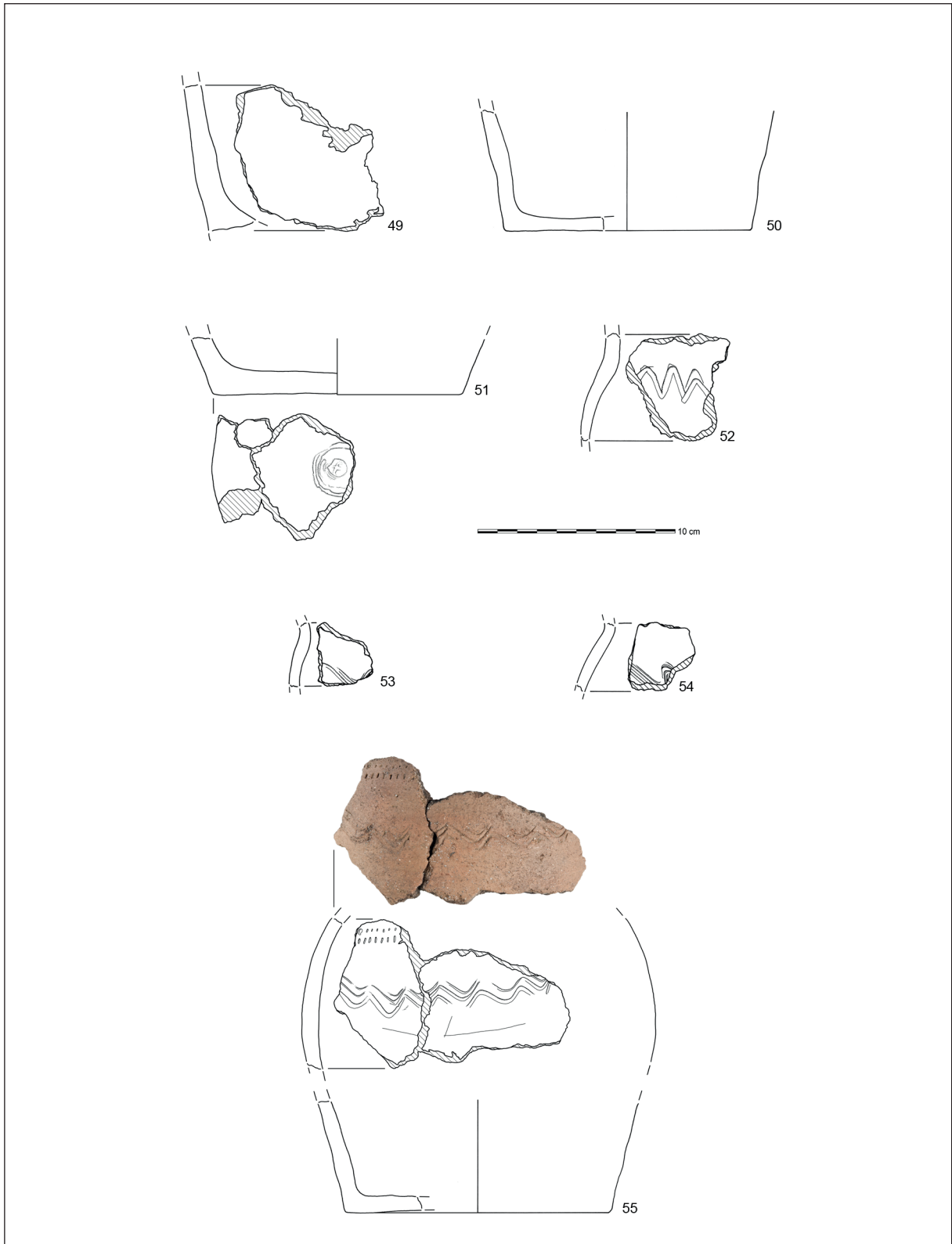
Pl. 5: Enzelsdorf, object 3, 26–32, object 10, 33–35. Pottery. Scale 1:3.



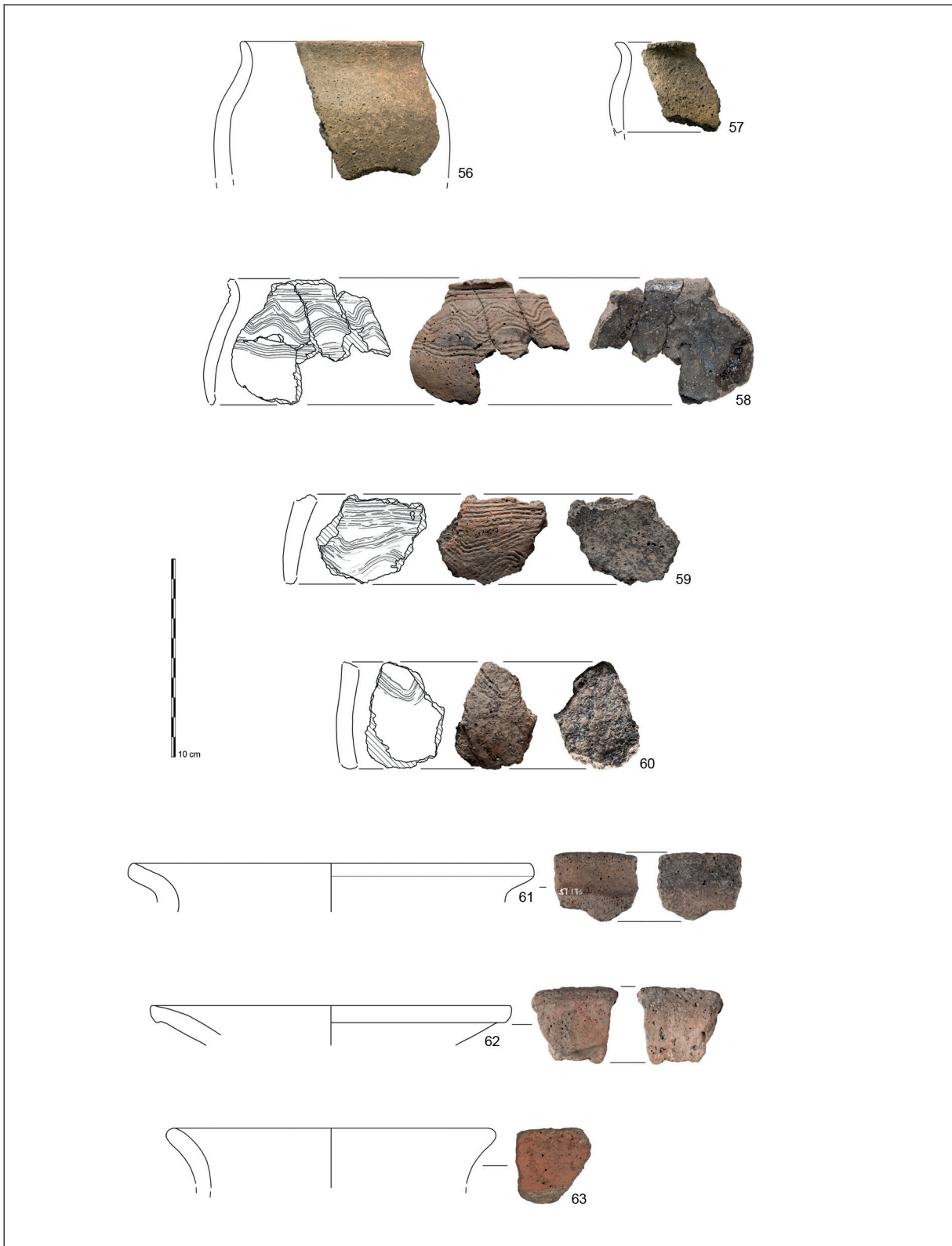
Pl. 6: Enzelsdorf, object 10, 36–39. Pottery. Scale 1:3.



Pl. 7: Enzelsdorf, object 10, 40–44. Pottery. 45–47. Beads. Scale 2:1. Wildon-Unterhaus, object 2, 48. Pottery. Scale 1:3.



Pl. 8: Wildon-Unterhaus, object 2, 49–55. Pottery. Scale 1:3.



Pl. 9: Kleinklein, 56–57. Aichegg, 58–62. Graz-Straßgang, 63. Pottery. Scale 1:3.

