

# The Transition from Late Antiquity to the Early Middle Ages in the Southeastern Alpine Region from the Perspective of Coarse Ware Ceramic Technology

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## Summary

This paper presents the results of microscopic analysis on 134 thin sections of coarse ware pottery drawn from 24 late antique and early medieval sites (c. 300–900) in southeastern Austria and eastern and central Slovenia. Petrography was used to distinguish three primary fabric groups (carbonate-rich, gneiss-rich, and porous-bodied fabrics) as well as several subgroups in each category. The geographical and chronological distribution of these fabric types reveals a marked shift in ceramic traditions from Late Antiquity to the Early Middle Ages. While almost all late antique vessels were tempered with crushed carbonate materials, a preference for grog temper and gneiss-rich clays is evident in the 6<sup>th</sup> and early 7<sup>th</sup> centuries, especially at new

settlements along the Mura, Sava, and Drava Rivers. Carbonate tempering appears to have continued into the Early Middle Ages but is shown only by distinctively shaped voids produced by the dissolution of calcite inclusions. The widespread emergence of highly porous fabrics across the region also signals other behavioral changes related to pottery manufacture or usage. These dramatic shifts in ceramic technological choice across the region at the onset of the Early Middle Ages may be explained by the arrival of new communities in this region and/or a decline in the sophistication of ceramic production after the collapse of the Western Roman Empire.

**Keywords:** petrography, coarse ware pottery, technological choice, Late Antiquity, Early Middle Ages

## 1. Introduction

The shift from Late Antiquity to the Early Middle Ages is one of the most fascinating yet enigmatic periods in the history of the southeastern Alps. The surviving written sources provide only vague and fragmentary evidence of the events and processes that unfolded in this region between the decline of Roman imperial authority in the 5<sup>th</sup> century and the emergence of a multiethnic society on the frontier of the Carolingian world four hundred years later.<sup>1</sup> Although extensive archaeological work over the past several decades has significantly refined our understanding of settlement patterns<sup>2</sup>, ceramic chronologies<sup>3</sup>, and regional

influences<sup>4</sup> during this era of momentous change, many questions – especially concerning migration, intercultural contact, Christianization, and emergence of new group identities – continue to be hotly contested.<sup>5</sup>

This article examines the birth of the early medieval world in the southeastern Alps through the lens of coarse ware pottery, the most abundant type of material culture recovered from late antique and early medieval settlements in the region. While formal and stylistic analyses of coarse ware have long been standard practice, considerably less attention has been paid to vessel manufacture and usage. This relative neglect of ceramic technology is unfortunate, since potters' technical choices were an essential component of their habitus and can provide valuable insights into socio-economic patterns as well as expressions of identity and ideology.<sup>6</sup> The present study constitutes the most extensive

<sup>1</sup> The most important written sources for the southeastern Alps during this period include the letters of Pope Gregory I (composed in the late 6<sup>th</sup> and early 7<sup>th</sup> century), passages from the Chronicle of Fredegar (composed in the 7<sup>th</sup> century), Book IV of Paul the Deacon's History of the Lombards (composed in late 8<sup>th</sup> century), and the *Conversio Bagoariorum et Carantanorum* (composed in the late 9<sup>th</sup> century).

<sup>2</sup> CIGLENEČKI 2023 provides a comprehensive examination of late antique settlement patterns across southeastern Europe, while WINCKLER 2020; MAGDIĆ 2021, and ŠTULAR et al. 2022 each examine early medieval settlement patterns in the eastern Alpine region.

<sup>3</sup> PLETERSKI 2010; EICHERT 2010; BEKIĆ 2016.

<sup>4</sup> MACHÁČEK/PAVLOVIČ 2018 have argued for a connection between Carniolan and Moravian elites through parallels in horse spurs, while SAGADIN 2018 has identified the influence of Carolingian and Ottonian art in early medieval jewelry in the southeastern Alps.

<sup>5</sup> See especially MILAVEC 2020; CURTA 2021; and contributions in LUX et al. 2018; DIESENBERGER et al. 2020.

<sup>6</sup> There is a long tradition of archaeological and ethnographic scholarship on the connections between ceramic technology, embodied practice, and identity formation; see especially GOSSELAIN 2000; BUDDEN/SOAFER 2009; ROUX 2019.

ŠTULAR et al. 2022

Benjamin ŠTULAR / Edisa LOZIĆ / Mateja BELAK / Jernej RIHTER / Iris KOCH / Zvezdana MODRIJAN / Andrej MAGDIČ / Stephan KARL / Manfred LEHNER / Christoph GUTJAHR, Migration of Alpine Slavs and machine learning: Space-time pattern mining of an archaeological dataset. *PLoS ONE* 17, 2022, 1–19.

TURK et al. 2022

Peter TURK / Vesna SVETLIČIČ / Daša PAVLOVIČ, Dragomelj. *Arheologija na avtocestah Slovenije* 106, Ljubljana 2022.

WHITBREAD 1995

Ian WHITBREAD, *Greek Transport Amphorae: A Petrological and Archaeological Study*. Athens 1995.

WINCKLER 2020

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Fig. 3–14, 16–17, 20–23, 25: K. Patrick FAZIOLI

Fig. 18: Image adapted from FABBRI et al. 2014, fig. 10

Fig. 19: Image adapted from GILSTRAP et al. 2021, fig. 7

## Der Übergang von der Spätantike zum Frühmittelalter im südöstlichen Alpenraum aus der Perspektive der Grobkeramiktechnik

In diesem Artikel werden die Ergebnisse einer mikroskopischen Analyse von 134 Dünnschliffen von Grobkeramik aus 24 spätantiken und frühmittelalterlichen Fundstätten (ca. 300–900) im Südosten Österreichs sowie im Osten und Zentrum Sloweniens vorgestellt. Mithilfe der Petrographie wurden drei primäre Materialgruppen (karbonatreich, gneisreich und porös) sowie mehrere Untergruppen in jeder Kategorie unterschieden. Die geografische und chronologische Verteilung dieser Materialgruppen zeigte einen deutlichen Wandel in der Keramiktradition von der Spätantike zum Frühmittelalter. Während fast alle spätantiken Gefäße mit zerkleinertem Karbonat gemagert wurden, verbreitete sich im späten 6. und frühen 7. Jahrhundert die Schamotte-Magerung und die Verwendung gneisreicher Tone, insbesondere bei neuen Siedlungen in den Tälern der Mur, der Save und der Drau. Die Karbonatmagerung scheint bis ins frühe Mittelalter

angedauert zu haben, lässt sich jedoch nur durch charakteristisch geformte Hohlräume belegen, die durch die Auflösung von Calciteinschlüssen entstanden sind. Das weitverbreitete Auftreten solch hochporöser Keramik in der gesamten Region könnte auf Verhaltensänderungen hinweisen, die mit der Wahl der Technologie oder der Art der in Gefäßen gelagerten Speisen zusammenhängen. Diese raschen Veränderungen in der Keramikherstellung und im täglichen Gebrauch in der gesamten Region zu Beginn des Mittelalters lassen sich möglicherweise durch die Ankunft neuer Gemeinschaften in dieser Region und/oder einen allgemeinen Rückgang der technologischen Entwicklung nach dem Zusammenbruch des Weströmischen Reiches erklären.

**Schlagnote:** Petrographie, Grobkeramik, technologische Wahl, Spätantike, Frühmittelalter

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