

BECOMING SLAV (ARCHAEOLOGICAL EVIDENCE). AGRICULTURAL ANTI-REVOLUTION AND ACCULTURATION IN THE EASTERN ALPS

Benjamin ŠTULAR, Edisa LOZIĆ

Abstract

The chapter examines the acculturation processes in the Eastern Alps during the Early Middle Ages, focusing on the Slavicisation influenced by agricultural transitions. It builds on an earlier research by the authors that confirmed the hypothesis of simultaneous Slavic migration and cultural diffusion and defined the Alpine Slavs as people who spoke Slavic, shared specific common ancestry and migrated to the Eastern Alps in the sixth and seventh centuries. This study focuses on how these immigrant Alpine Slavs significantly impacted the region's social and agricultural systems. Key findings include the transition from the Late Antique population's market-based wheat agriculture to a self-sufficient barley-based system introduced by the Slavs. This shift facilitated successful acculturation and led to a resilient, bicultural society. The transformation underscores the adaptability and efficiency of Slavic agricultural practices and their pivotal role in the socio-economic stability of the region during the Early Middle Ages. The study concludes that the Slavs, rather than precipitating economic decline, introduced an optimized agricultural system that mitigated the effects of the already collapsed market economy, aiding in the survival and integration of the Late Antique population.

Keywords: archaeology, Eastern Alps, Late Antiquity, Early Middle Ages, Slavs, acculturation processes, social impact, agriculture, Slavicisation

1. INTRODUCTION

Ancient Slavs is a complex subject to discuss, and the complexity begins with the definition of the term. To a linguist, ancient means something different than it does to an archaeologist. The designation Slavs can mean everything from an ancestral population traceable to the depths of prehistory (e.g., Dolukhanov 1996), to a mere figment of a Byzantine chronicler's imagination (Curta 2001). Our stance is anchored somewhere in the middle of two extremes and in the hypothesis that we study Slavs rather than "Slavs". We understand the Ancient Slavs from the sixth to the eighth century as a secondary, relational and in-group of people, who horizontally *distincted* themselves from the proverbial others through language, housing culture, dress, sustenance,

and a network of social relations including genetic relatedness (Štular 2025). Specifically, we understand the Alpine Slavs who co-inhabited the Eastern Alps in the Early Middle Ages as people who spoke Slavic, shared specific common ancestry and who immigrated in Eastern Alps in the sixth and seventh centuries (Štular et al. 2022). Furthermore, we maintain that migration was indeed part of Slavicisation in the Eastern Alps, but that the subsequent acculturation processes exerted a more substantial influence.

This article explores the latter: acculturation process. In particular, the article examines how acculturation processes were significantly influenced by the transformation of the agricultural system from a market-based to a self-sufficient system. First, however, the scientific context of the acculturation process also

referred to as Slavisation must be briefly outlined (for more details see Štular 2025).

Until the middle of the 20th century, the study of the ancient Slavs differed little from other studies of Late Antiquity and the Early Middle Ages in Europe. Within the paradigm known as the Grand Narrative, migration was understood as the main process of change (e.g. Ratzel 1909), and peoples and tribes were understood, as MacEcheron (2000, 370) puts it, as “caroming around the continent like culture-bearing billiard balls”. The rest of the Early Medieval history was merely a process of peoples and nations bouncing around until they settled in places where they were still to be found in the 19th century. The Slavs were understood as part of the westward movement known as the Great Migration period. According to this theory, they emigrated from their original homeland, the *Urheimat*, in the fifth and sixth centuries to colonise the lands abandoned by Germanic tribes, who in turn are said to have fled from the Huns and their allies. The Slavs settled the areas between the Oder and the Elbe-Saale line, Bohemia, Moravia, a large part of present-day Austria, the Carpathian Basin and the Balkans in the south, as well as the upper Dnieper basin to the north. In the second half of the sixth century, they appeared in large numbers on the Byzantine borders.

In the second half of the 20th century, still within the paradigm of the Grand Narrative, the Slavic studies focused mainly on the ethnogenesis of the ancient Slavs and the search for the *Urheimat*. There were tremendous advances in terms of archaeological data collected and in terms of methodology (Parczewski 1991; Gojda 1991; Pleterski 1995; Dolukhanov 1996; Kazanski 1999). By the mid-1990s, the immutability of ethnic identity was being questioned, and the field was in the process of moving away from the perception of ancient Slavs as an ethnic group and instead viewing them as a language-based identity group (e.g. Pleterski 1995; Mamzer 1999).

The watershed event for the current state of the art in the study of ancient Slavs was *The Making of the Slavs* by Curta (2001). The book argued that the use of the ethnonym “Slavs” only became common in the contact zone between Byzantium and the Slavs along the lower Danube. Like Pohl (1988, 96–102) before him, he criticised the model of Slavic expansion from the *Urheimat* and insisted on its appearance in the Justinianic period. However, Curta went one step further and claimed that the Slavs were essentially created by Byzantine perception: The creation of the Slavs was less a matter of ethnogenesis than one of invention, imagination and labelling by Byzantine authors. Thus, the Slavic group identity emerged in “the shadow of Justinian’s forts” along the lower Danube. Later Dzino (2010) postmodernised Curta’s approach in his book *Becoming Slav, Becoming Croat*, in which he understood the early Slavs as a process rather than an entity.

In the 21st century, the archaeology of the ancient Slavs, like archaeology in general, made great methodological progress. For example, in the applications of computational (Rihter 2023) and web-based analyses of cemeteries (Eichert 2021), airborne LiDAR (Lozić 2021), geospatial analyses (Magdič 2022), and machine learning (Štular et al. 2022). In addition, a large number of factual errors underlying the hypotheses of Curta and Dzino were exposed (e.g. Fusek 2004; Sokol 2011; Lindstedt, Salmela 2020). Regardless of this, no alternative hypothesis has been proposed that would successfully address the well argued shortcomings of the *Urheimat* hypothesis.

Currently, then, there are three competing hypotheses for the spread of Slavic language between about 400 and 850 CE. The first hypothesis assumes that the Slavs, a people, moved in all directions from their small original habitat, the so-called *Urheimat*, (e.g. Herrmann 1986; Dolukhanov 1996; Timberlake 2013). The second hypothesis assumes the diffusion of the Slavic cultural model among non-Slavic populations or, in its extreme form, the diffusion of language alone, (e.g. Pritsak 1983; Lunt 1997; Curta 2001; 2020). Many archaeologists adhere to the third, hybrid hypothesis. It states that movement, cultural diffusion, and language diffusion occurred simultaneously (Heather 2010; Pleterski 2013a; Pohl 2018; Kazanski 2020) and is supported by recent research in population genetics and linguistics. It seems that the language spread in the West Slavic zone mainly by migration to sparsely populated areas, and in the East Slavic zone by a combination of migration and language shift. The spread in the South Slavic region was triggered by migration, but the main mechanism for further spread was a language shift from local Balkan idioms to Slavic (Lindstedt, Salmela 2020).

Recently, we were able to corroborate the hybrid hypothesis for the Eastern Alps by applying machine learning and spatial analysis to an archaeological Deep Data. We confirmed two separate migrations into the Eastern Alps: the earlier one sometime after 500 CE upstream the Mura and Drava rivers, and the later one sometime before 700 CE upstream the Sava river. We envisaged that the number of immigrants was relatively small and that it was by no means a mass migration like, for example, that of Theodoric’s Ostrogoths or Alboin’s Lombards. Along the Mura and Drava rivers, it likely took the form of a series of near neighbourhood colonisation of mostly uninhabited landscape. Along the Sava it was more akin to a small group infiltration. In the next step of the study we employed the convergence of evidence from archaeology, linguistics, and population genetics. Linguistics and population genetics have, independently from archaeology and from each other, also deduced that there were two separate migrations to the South-eastern Alps (present day Slovenia). Archaeology and genetics validated that acculturation was

the predominant post-migration process. Linguistics confirmed that the migrants spoke Slavic, and genetics proved that they possessed a homogeneous genetic substrate inherited from a single ancestral population common only to today's Slavic-speaking ethnic groups. We were therefore able to define the immigrants as Alpine Slavs (no inverted commas), people who spoke Slavic and shared specific common ancestry (Štular et al. 2022).

Therefore, in the Eastern Alps the migration of people, cultural diffusion, and language shift took place in a single process. The migration was part of the ensuing Slavification, but the acculturation processes that took place afterwards were historically the most important.

However, this does not explain the enduring success of the Slavs in the *longue durée*. Pohl offers a pragmatic explanation: The Slavs, in comparison to the Germani, did not establish stable military based polities. Instead, they embraced decentralised form of social organisation (Pohl 2018, 118–126). This social organisation has been described as a fractal society because not only did all local communities share the same structure, but the same structure was also replicated when these communities, social fractals, joined together in larger social units. These formed an adaptable and efficient network with great power of absorption (Pleterski 2013b, 10–11). Contemporary and modern authors alike perceived this organisation as “primitive”, but in fact it was resilient because it was highly adapted to the socio-economic conditions of the period.

The succinct characterizations of Pohl and Pleterski thus posit that the *longue durée* success of the Slavification was based on a decentralised, “primitive” social organisation that was highly adapted to the conditions of the period. In this text we build upon, elaborate, and substantiate this stance with objective archaeological evidence. We believe that the key to understanding the adaptations lies in understanding the conditions: the transformation of the agricultural system and its impact on social organisation, as alluded to by Lozić (2021, 15–17). Our discussion draws on the groundbreaking findings of the three micro-regional analyses of agricultural potential in the Eastern Alps published in this volume (Fig. 1).

2. METHODS, MATERIALS, AND RESULTS

Each of the three micro-regional case studies we build upon used state of the art methodology and offered many interesting insights, and each must be consulted in full to get a complete picture. Here we will briefly summarise only those aspects that are relevant to our discussion.

Let us first take a look at the case study of the Bled micro-region (henceforth Bled). It revealed that the Early Medieval immigrants of late seventh century were attracted to light soils with a high water retention capacity. Such soils were particularly suitable for the cultivation of barley, which was known to be one of the most important staple crops of the time, especially in colder climates such as the subalpine. Soils with lower water retention capacity were only colonized in the eleventh century, which could indicate the transition to a wheat as a staple crop and subsequently to a higher degree of agricultural organisation (Lozić 2021; 2024 in this volume).

The immigrant Slavs, who colonised the Drava Plain microregion towards the end of the sixth or beginning of the seventh century, were confronted with a mature forest that had overgrown the long abandoned Roman landscape. The analysis of this microregion demonstrated that the choice of field and settlement locations was largely related to the soils and terrain that were best suited to a particular agricultural system. The settlements established in the seventh century were located on dry patches at the foothills of Pohorje with easy access to loose, sandy, automorphic soils, that were partially gleyed. That is, the soils with the highest water retention capacity among the available light soils. Light sandy soils could be cultivated by hand with a hoe or with a simple plough. The streams running down from the hills provided sufficient moisture for crops to grow. Sometime before the end of the 7th century, the new settlements were established in wetter areas with heavy clay soils. Cultivating these soils required the use of more advanced agricultural technologies, in particular a type of plough that not only cut and crushed the soil but also turned it over. However, the light brown soils with low water retention capacity only gained importance from the tenth century onwards (Magdič 2024 in this volume).

The analysis of the Leibnitzer Feld revealed three types of potential settlement sites. The first type were the sites on well-saturated brown soil, which were interpreted as agricultural settlements. The second type were hilltop settlements which, due to their position, do not have access to sufficient arable land. These settlements were thus not predominantly engaged in agricultural production and were defined as non-agricultural. At least some of them, for example Wildoner Schlossberg, were likely central places that fulfilled administrative and commercial functions. The third type were non-hilltop sites without favourable agricultural hinterland. Some of them were located in small depressions between the hills, others in the area of regular flooding. These sites must have served entirely to non-agricultural activities. Of particular interest is the Weitendorf site, where archaeological evidence suggests a workshop area for iron ore pro-

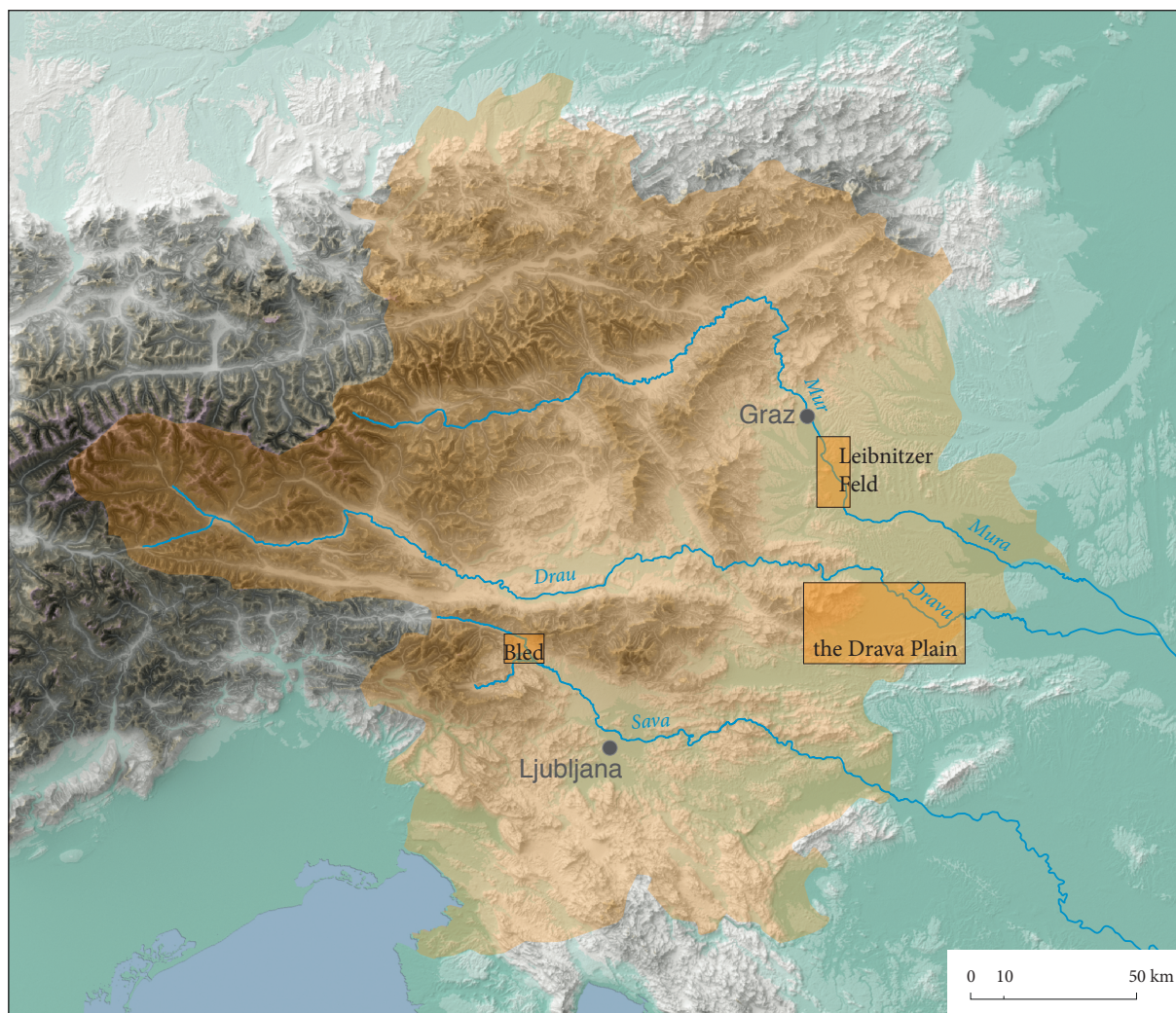


Fig. 1: Location of the three micro-regional analyses of agricultural potential in the Eastern Alps.

cessing and where interpretative mapping of LiDAR data revealed clear evidence of mining. Therefore, the site was interpreted as a mining settlement where iron ore was extracted and processed. This is the only site with demonstrated specialized non-agricultural activities in all three micro-regions (Lozić, Koch 2024 in this volume).

The three micro-regional studies thus resulted in some exciting discoveries, for example, the mining settlement in the Leibnitzer Feld and the evolution of agricultural technology in the Drava Plain. However, we focus here on the fact that all three found that to the immigrant Slavs the most important soil property was its ability to retain water. This property is defined as the soil's effective field capacity or FC. The wider implications of this for Early Medieval agriculture have already been alluded to by Lozić (2021, 15–17). In the following, we build on this by contrasting the agricultural system of the Slavs with the Late Antique one.

3. DISCUSSION

3.1 THE AGRICULTURAL SYSTEM OF THE ALPINE SLAVS

We build our model primarily on the case study of Bled and underpin it with case studies of the Leibnitzer Field and the Drava Plain. In Bled, all settlements founded between the late seventh and tenth centuries were adjacent to stony brown soils with high FC (Fig. 2: Zone 2). In contrast, in the preceding Roman period and after the eleventh century more fertile and less stony soils with low FC were used (Fig. 2: Zone 3). Pleterski (2013b, 156–157) described the latter soils as the area in the plain where the soil was good and he noted that from late seventh to the end of tenth century this was a continuously forested area. However, he was unable to explain why these more fertile soils with lower FC were not cultivated in Early Middle Ages. Why, then, were

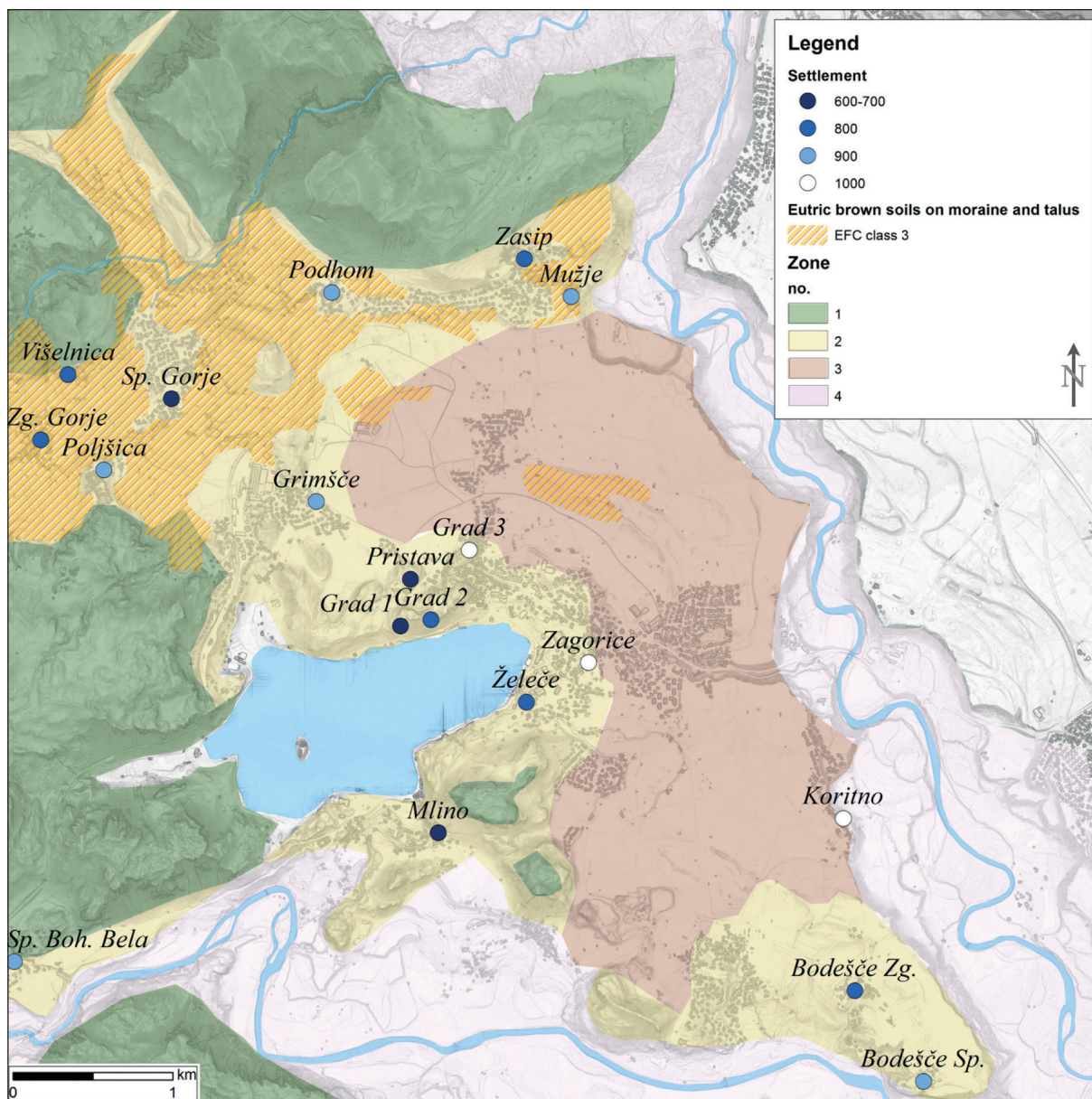


Fig. 2: Bled microregion, brown soils with high capacity to retain water (marked with dashed lines) and physiographic zones. The areas most suitable for barley-based agriculture are located at the intersection of the dashed lines and yellow Zone 2 and the areas suited for wheat-based agriculture are in Zone 3 (after Lozić 2024, Fig. 7).

less fertile soils with high FC that much more attractive for Early Medieval agriculture?

The analysis of land use characteristics suggests that soils with high FC were sought after to minimize the risk of exposing crops to water stress (Lozić 2021, 15–17). This conclusion is noteworthy for two reasons. First, it can be used to predict the landscape contexts suitable for Early Medieval settlement throughout the region. Second, it helps to elucidate the characteristics of Early Medieval agriculture in the Eastern Alps. While the first is the subject of ongoing research that aims to

map suitable soils in the entire region, the latter can be discussed here. What were the characteristics of Early Medieval agriculture in the Eastern Alps?

Early Medieval Slavs had a limited choice of the staple field crops available. Rye (*Secale cereale*), wheat (*Triticum* sp.), oats (*Avena* sp.), barley (*Hordeum* sp.), and millet (*Panicum miliaceum*) were the main cereals in the western Slavic settlement area (present-day eastern Germany) (Brather 2008). In Southern Russia we know of wheat and barley (Korobov 2012). The first Slavic settlers in northwestern Russia brought with them a great variety of cereals and legumes, but only the crops

that guaranteed agricultural success in the colder north were kept in cultivation: barley and rye (Alslebe 2012). Closer to the Bled microregion, wheat, barley and rye were the most common crops at Roztoky (Czech Republic: Profantová 2005; Machaček et al. 2024). In Thunau (Austria), both in the settlement and in one of the graves, the most common cereal remains were wheat, millet, barley, and rye (Teschler-Nicola et al. 2018). In Kleinklein (Austria), the contents of a settlement pit revealed barley, millet, and rye (Heiss, Wiesinger 2019). On Bled Island, the central location in Bled, charred barley and millet grains were recovered, but are C14 dated to the mid-13th century (Bitenc, Knific 2020, 84). Therefore, the Early Medieval Slavs, like other contemporary Europeans, relied mainly on wheat, barley, rye, and millet.

Of these, barley has the greatest ecological amplitude and is able to cope with extreme ecological conditions (Brouwer 1972). It was grown, for example, in Highland Britain (Gillingham, Griffiths 2000), in Scandinavian northwestern Europe (Hamerow 2002), and even in the Faroe Islands (Arge et al. 2005). Regardless of climate, barley was the dominant crop in western Europe and Britain at the beginning of the Early Middle Ages (Brather 2008), where it was important enough to warrant a special barley tax (Wickham 2005). Wheat in western and rye in northwestern Europe had replaced barley as the dominant cereal by the end of the Early Middle Ages (Hamerow 2002).

There are many differences between wheat, millet, barley, and rye. Most pertinent to our discussion is that while millet and rye have exceptional drought tolerance, wheat and barley do not. Under rainfed conditions they suffer from drought resulting in significant yield loss (Hossain et al. 2012; Sveinsson, Hermannsson 2017). Consequently, it is barley and wheat that require soils with high FC. Between the two, barley is better suited to colder climate because it matures earlier. In addition, it has greater tillering capacity and competes better with weeds, but generally yields less (Taylor, Cormack 2002). Wheat can potentially achieve high yields, but for this potential to materialize it requires more labour and more complex cultivation including manuring. The latter requires a complex mixed agriculture that includes sophisticated animal husbandry (Campbell 2000; Hamerow 2002). Thus, wheat cultivation is optimal for a relatively high and barley for relatively low degree of agricultural organization.

In the particular case of Bled from late seventh to the tenth century exclusively light but stony soils with a high FC were cultivated (*Fig. 2: Zone 2*). Due to their high FC, these soils are suitable for both wheat and barley cultivation. However, as wheat requires more intensive cultivation, the stony soils were far more suitable for growing barley. There are two additional pieces of evidence suggesting that barley was indeed the principal field crop. First, barley was the cereal of choice for the

Slavs when they settled in what they perceived as colder climates, such as the above-mentioned colonization of northwestern Russia (Korobov 2012); the subalpine climate of the Bled microregion is colder (under any climatic conditions) than the areas from which the Slavs were arriving, for example, from the western edges of the Pannonian plain that they settled already in the sixth century (Pavlovič 2017). Second, under rain-fed conditions, barley, unlike wheat, prefers high FC to all other soil properties (Hossain et al. 2012; Sveinsson, Hermannsson 2017).

We can therefore infer with high degree of certainty that from the seventh to the tenth century barley was the staple crop in Bled. The analyses of the soils and agricultural potential in the other two microregions, Leibnitzer feld and Dravsko-Ptujsko polje (the Drava Plain), revealed the same adaptations to the local conditions: soils with high FC were preferred over all other characteristics. This tells us two things. First, Early Medieval agricultural systems in all three micro-regions were barley-based. Since the micro-regions were chosen to best represent the different landscape types and historical conditions in the Eastern Alps, we conclude that it is very likely that barley was the staple crop of the period throughout the Eastern Alps. Second, unlike in Bled, in the Leibnitzer feld and Dravsko-Ptujsko polje the Slavs colonised a forested landscape that had been all but abandoned at least a century earlier (Štular et al. 2022, 9–11; Magdič 2024 in this volume). The fact that the “barley fields” were the first to be colonised proves that it was the immigrant Slavs who introduced the barley-based agricultural system in the Eastern Alps and not vice versa.

In conclusion, based on the analyses of the soils worked by the Alpine Slavs we can infer that their staple crop was barley. Barley-based agricultural system is a low-complex one that favours stability over quantity of the yields and is thus suitable for self-sufficient societies.

3.2 TRANSITION FROM LATE ANTIQUITY TO THE EARLY MEDIEVAL PERIOD

The conclusion that the immigrant Slavs introduced the barley-based agricultural system in the Eastern Alps is important for the Early Medieval agricultural history. But also so much more! It offers a new insight in the acculturation processes taking place during the Early Middle Ages throughout, and possibly beyond, the Eastern Alps.

Let us first look at the transition from Late Antiquity to the Early Medieval period. Late Antiquity was the period when the key achievements of Romanitas were in recession but still present. Putting the art, science, and warfare aside, the key designator of Roman Antiquity was urbanization and its inseparable companion the

market economy. In Eastern Alps both urbanization and market economy have decidedly declined after the middle of the fifth century. However, in limited quantity they persevered at least until the end of sixth century. The small hilltop towns were still integrated in the monetary market economy network including regional and long distance trade as evidenced by archaeological finds of imported pottery and coins (e.g. Kos 2020; Modrijan 2020; Leskovar et al. 2024, 603). *Carnium*, today's Kranj (Sagadin 2020a, 21; Sagadin 2020b, 208–210), was the last urban settlement in the Eastern Alps and thus the only local market accessible to the inhabitants of Bled.

There are limited data on Late Antique agriculture. In the Roman period, the staple agricultural product was undoubtedly wheat. *Panem et circenses* (sic), bread of course being the most common food made from wheat. For this purpose, in Bled the fertile soil with low FC, which was most suitable for wheat but exposed to crop failure due to drought, was cultivated (Fig. 2: Zone 3). This is evidenced by pottery shards in the fields and by the location of the first and second century CE settlements at Zasip and Želeče which are adjacent to these fields (Pflaum 2010; Lozić 2019). But until when were these fields used? Numerous finds of ploughs and other tillage tools in hoards (e.g. Ciglencečki 1983, 50–53; Bitenc, Knific 2001, Nos. 146, 167) clearly indicate that at least some of the residents of the Late Antique hillfort towns of the sixth century were directly involved in field work. Since in Bled the “wheat fields” were adjacent to the hillfort town (Fig. 2) and no other fields were being cultivated at the time, we can infer that they were still in use in the sixth century. The legacy of Romanitas, the existence of the market economy, and the choice of “wheat fields” thus point to a wheat-based agricultural system in the micro-region of Bled in the sixth century.

This is further supported by two linguistic hypotheses. First, in several Balkan Slavic languages the word for bread (“kruh” in Slovenian) was developed at the time when the Slavs were in contact with the Late Antique population (Bezljaj 1964). Second, the terms describing wheat preserved as geographic terms are of Latin origin (Bezljaj 1958, 689). In other words, when the Slavs encountered the Late Antique populations the latter's staple food was bread and their staple crop was wheat. Therefore, there is sufficient evidence to infer that the Late Antique population of Bled practiced highly-complex wheat-based agriculture geared for market economy that favoured high yields (higher profit) and was able to absorb occasional crop failure (imported food could be bought on market).

However, from the middle of the sixth and especially in the seventh century the era of modest market economy was drawing to a close. One aspect of the ensuing changes was the ruralisation of the surviving cities (Bratož 2014, 569–582; Pohl 2018, 149; Ciglencečki 2023, 149–166), including *Carnium*. With its ruralisation the

inhabitants of Bled lost access to the market. The only agricultural system they knew, namely complex wheat-based one geared for the market economy was thus becoming less and less suitable.

As a result, the sixth century Bled population was repeatedly under nutritional stress evidenced by the cemetery of Pristava. Of the 380 graves, 147 were dated to the 6th and early 7th century and belonged to the Late Antique population. 233 graves, dated from the early 7th century to the beginning of the 11th century, belonged to a different population, presumably the Slavic immigrants. The graves of the two population groups were located next to each other, but on separate plots with distinct grave goods and burial customs (Knific 2004; Pleterski 2014, 264, Fig. 3.3.6.34; Belak et al. 2023, ID 10003456). Anthropological analysis has revealed further significant differences between the two populations. The denture analysis of the Late Antique population reveals repeated nutritional stress, but not in the Slavic population. In addition, the life expectancy of the Late Antique population was 18 years and that of the Slavic population 27 years. This is an enormous difference that places the two populations at the extreme ends of the contemporary sites (Leben-Seljak 1996, 30–65 and 232–236). In particular, the life expectancy of the Late Antique population from Bled was the lowest of all. This indicates not only a population in distress, but possibly a population on the verge of collapse (Fig. 3). Recent interdisciplinary analyses of four individuals' skeletal remains from the Late Antique population of the Pristava cemetery, buried in the middle of the sixth century, tentatively confirmed malnutrition for all of them (Leskovar et al. 2024).

Therefore, when the Slavs immigrated in the Bled micro-region they encountered an isolated community in crisis practicing wheat-based agriculture. The immigrants settled amicably which is evidenced by three facts. First, at the beginning the two populations were sharing the Pristava cemetery, respecting each other's space and rituals (Knific 2004). Second, the Slavs colonised new fields in areas not cultivated by existing population and they eventually established new settlements (Pleterski 2013b). Third, there was a bidirectional transmission of agricultural knowledge and tools.

The bidirectional transmission is directly evidenced in Bled by the Sebenje hoard. It was deposited in the first third of the ninth century containing the equipment of a cavalry soldier and the entire set of farm tools. Among the latter were three ploughs, which have complemented each other in terms of utility. One was the Slavic ard and another the Alpine plough (Pleterski 1987). Alpine plough was an unmistakably regional development of the late prehistory (e.g., Bartoli 2017) still in use in Late Antiquity (e.g. Ciglencečki 1983, 50–53; Bitenc, Knific 2001, Nos. 146, 167v), but without Early Medieval paral-

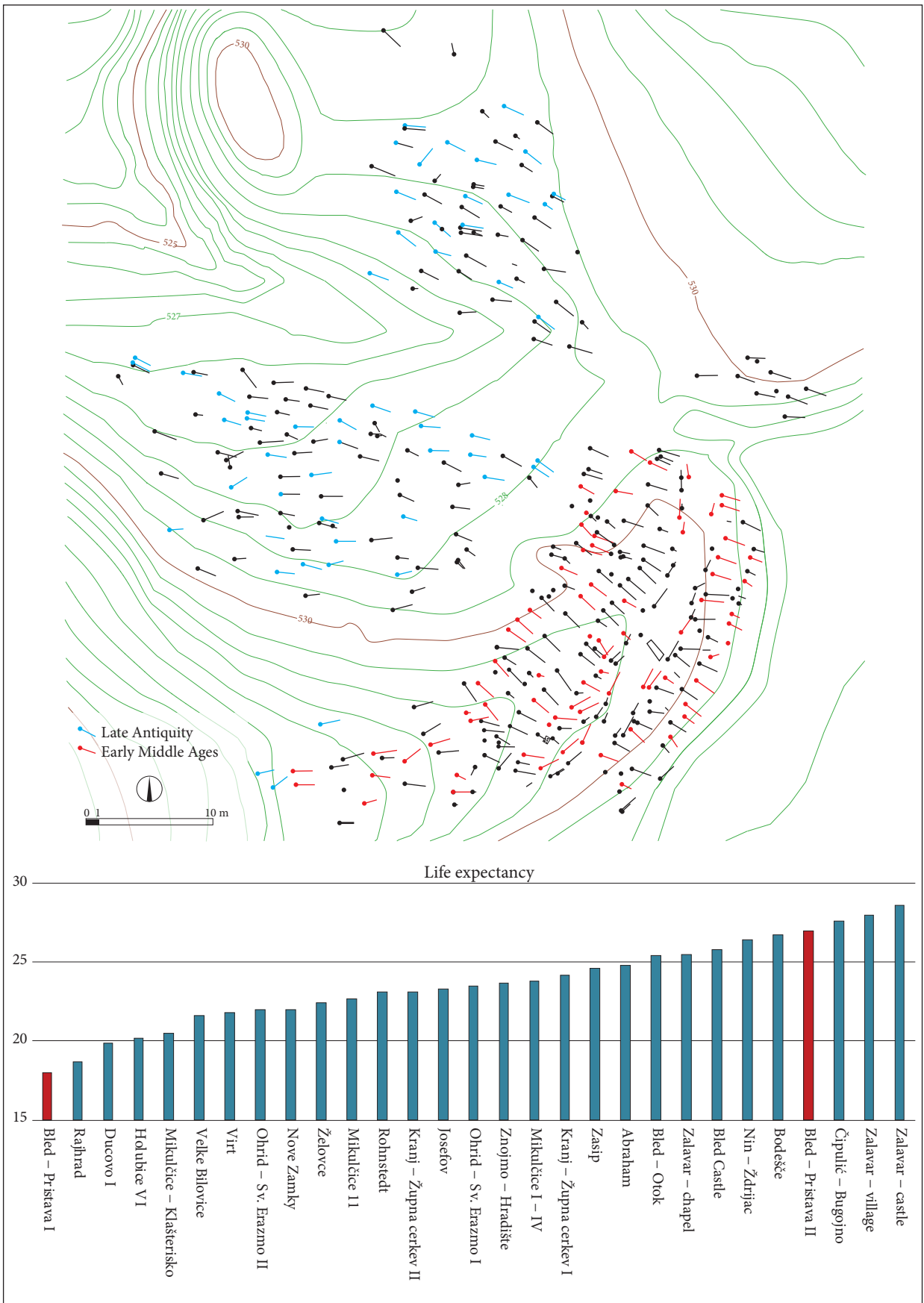


Fig. 3: Bled - Pristava, Late Antique ("Pristava I") and Early Medieval ("Pristava II") cemetery (above; after Knific 2004, Fig. 3) and life expectancy in comparison to the selected contemporary cemeteries (below; after Leben Seljak 1996, Tab. 155).

lels outside of Eastern Alps. Therefore, it could only be transmitted by the Late Antique population to its heirs. The fact that the Sebenje hoard contains both a Slavic ard and an Alpine plough is therefore direct material evidence that the population of Bled in the ninth century were the heirs of a bidirectional transfer of agricultural knowledge between the Late Antique population and the Slavs.

The amicable settlement of the Slavs in the Eastern Alps is not a new discovery. In addition to the above archaeological evidence, there is also linguistic and historiographical evidence. Linguistic evidence comes from an antiquated Slovenian term “krščnica” (translation: baptised woman) for a female farmhand. The word dates back to the time when the servants were Christians but not yet their masters (Kos 1902, XXV). Such a situation is described in the late eighth century anecdote from the Eastern Alps about the priest Ingo and his feast. Ingo called the true believing servants (Latin *vere servos credentes*) to his table. He left those who ruled over them, the unbelievers (Latin *qui eorum dominabantur infideles*), sitting outside “like dogs”. This inspired the latter, believed to be the Slavs, to rush to the baptism (Kos 1902, No. 336; Wolfram 1979, 96–102). The term “krščnica” and Ingo’s anecdote are often cited as an indication of lower social status of the Christian population living among the Slavs (Štih 2010a, 165; Pohl 2018, 144). Importantly, from the perspective of agricultural system, this is also evidence that the two populations cohabited within households.

Two further contemporary sources from the Balkan region provide additional context for the cohabitation of Slavs with “others”. The *Strategikon* of Maurice and the *Miracles of St Demetrius* (*Miracula Demetrii*) report that the Slavs did not keep prisoners in eternal captivity. Rather, they sold them back or allowed them to live among them as equals after a certain period of time (Pleterski 2013b, 27; Pohl 2018, 151). Even if there were no prisoners in the example of Bled, these sources account that the Slavs were accustomed to fully accommodate outsiders into their community.

In summation, the Late Antique community of Bled was forced into a self-sufficient economy due to external global factors, the decline of market economy. Its wheat-based agricultural system became increasingly unsustainable and it was on the verge of collapse. However, the relatively small and isolated community apparently lacked the knowledge and/or resources to decisively alter the agricultural system. The much-needed new barley-based agricultural system optimised for self-sufficiency was introduced by the immigrant Slavs.

The new agricultural system was crucial to the ensuing acculturation process that can be explained in four successive steps.

First, since the wheat-based and barley-based agricultural systems utilised different resources, the Slavs

were able to colonise the required fields amicably because they were of marginal interest to the Late Antique population (as evidenced by archaeological analyses by Pleterski and Lozić and indirectly by the word for bread). For a limited period of time, the two communities coexisted peacefully as equals (as evidenced by the brief overlap of the two populations in the Pristava cemetery).

Second, the barley-based system was much more successful in feeding the population (as evidenced by the anthropological analysis of the human remains in the Pristava cemetery).

Third, the Late Antique community switched to barley-based system (as evidenced by the abandonment of fields with low FC); it seems that it experienced a downward social mobility during this phase (as evidenced by written sources and linguistic evidence).

Fourth, sharing resources and knowledge as well as cohabitating in same settlements (as evidenced by the archaeology of Bled) and even same households (as evidenced by written sources and linguistic evidence) led to intensive acculturation.

Specifically, the type of acculturation can be described as an inverse integration: individuals from host population (Late Antique community) adopted the cultural norms of the dominant immigrant culture (Slavs) while maintaining their culture of origin. This led to biculturalism, co-existence of two originally distinct cultures, also termed polyethnic society by modern historiographers (Pohl 1998, 42; Eichert 2011) and evidenced by the anecdote about Ingo from the eighth century. The bicultural society had mixed material culture (evidenced by a distinctive material culture (e.g. Eichert 2012) including agricultural tools) but eventually the Slavic language (as evidenced by the modern Slovenian language, which is Slavic) and religion prevailed (as evidenced in numerous cemeteries, e.g. Štular 2022).

The new society was known to the contemporary observers as *Carniola Sclavorum patria*. The name itself encoded the biculturalism. *Carniola* designated the location by using a pre-Latin word derived from *kar, which recurs in various place names of rocky or stony landscapes and was used in a name of a pre-Roman tribe Carni. (e.g. Vedaldi Iasbez 1994, 239; Winckler 2012, 333); this was the legacy of Late Antique population. *Sclavorum patria* signified an externally imparted Slavic identity which was most likely due to the Slavic language and subsistence economy (which also determined other external markers, e.g., dress, dress accessories, housing).

3.3 TRANSITION FROM EARLY TO HIGH MEDIEVAL PERIOD

The community of Bled from the seventh to tenth centuries was therefore a successful self-sufficient one that practised uncomplex barley-based agriculture

on the “barley fields” with a high FC. However, in the eleventh century they expanded into areas of soil with lower FC. Why? We believe that this too was caused by an external impetus, a global process of transition to a feudal society.

In 1004 CE, parts of the Bled microregion were bestowed to the bishops of Brixen by the emperor Henry II (Štih 2004, 2011). This deed was much more than a routine exchange of ownership. It signified the assertion of direct control over Bled by the Kingdom of Germany for the first time in more than a century (for the historical context, see Arnold 1997; Štih 2010a). The Brixen came into possession of a small estate and all lands in Bled that were not directly farmed by existing owners (Štih 2004), including the then forested area with low FC soils.

The agricultural organisation of the new owners was based on the complex manorial system. The manorial system was a subsistence economy geared towards stability, based on strategies of risk avoidance through diversification of resources and redistribution through storage and transport (Meier 2011). Wheat was the most important staple crop in this system (Hamerow 2002). In other words, still in the absence of significant market economy and monetary circulation, this complex agricultural system was optimised for the cultivation of wheat and designed to routinely cope with local crop failures by resupplying from distant estates. For example, the see of the bishops of Brixen, today’s Bresanssone in north Italy, is located some 200 kilometres west of Bled (as the crow flies). Remote enough to avoid concurrent local crop failures, but close enough to transport supplies.

Wheat-based agriculture was likely first introduced to Bled in the eleventh century in the two settlements that colonised the previously forested “wheat fields”, i.e., the soils that are most fertile and most easily accessible in the microregion, but have a low FC (Fig. 2: Zone 3). The complexity of the new system also involved changes in animal husbandry, which included an increasingly complex system of summer pastures in the mountains (Štular 2006b). This is evidenced by the fact that since the eleventh century the Brixen estate was eager to take control of Bled’s mountain pastures (Pleterski 2013b, 147).

As already indicated, complex wheat cultivation on fertile soils with low FC produced high yields on average, but under rainfed conditions it was exposed to occasional drought. Under the new manorial system, which enabled resilience through redistribution, growing wheat was on average more fruitful than growing barley. Thus, eventually wheat-based supplanted the barley-based system at the latest when, in the eleventh and twelfth centuries, farm by farm, much of the land passed into the direct ownership of the bishops of Brixen (Gornik 1990; Štih 2004; 2011; Pleterski 2013b). It is not inconceivable that the efficiency of the wheat-based farming was one of the driving forces behind this change

in ownership. Although the first two settlements that practiced wheat-based agriculture were not founded directly by the bishops of Brixen (Pleterski 2013b) it was the newly introduced manorial agricultural system that enabled the transition to the wheat-based agriculture.

3.4. LONG-TERM SUCCESS OF SLAVICISATION

The agricultural shifts described above in the seventh century and the eleventh century are seemingly the same process in reverse. The shift from a high- to a low-complexity agricultural system is followed by the shift from a low- to high-complexity system, both facilitated by external factors. However, from the perspective of acculturation the results of the two processes were not the reversal, but the opposite. As a result of the first shift, the identity of the Late Antique population melded into the cultural melting pot in a very short time, effectively all but erasing its original form. The shift in the eleventh century had no such consequence despite the political and economic dominance of the newly arrived German-speaking landlords, that persisted for almost the entire second millennium (e.g., Štih 2010a) and was accompanied by a noteworthy and long lasting immigration of German-speaking agrarian population (Štih 2010b, 63–65). The question arises: why? Comprehending the distinctions between the seventh and eleventh century agricultural shifts leads to a deeper insight into the nuances of Slavicisation and the acculturation dynamics of the seventh century.

As typical of most self-sustaining agricultural societies, the Slavs’ agricultural practices were all encompassing. The interconnected subsystems of economy, law, religion, and governance coalesced into a unified belief system (Pleterski 2014, 236–286). Why a belief system rather than a knowledge system? Abundant anthropological evidence suggests that in pre-industrial societies, knowledge is imparted during childhood through involvement in daily tasks. In adulthood, this is internalized not as learned knowledge but as an innate truth of life (Leroi-Gourhan 1990, 24–27; Gosselain, Livingstone Smith 2005, 41–43; Štular 2009, 113–114). Thus, it’s not a matter of *learning* that “for optimal yield the crops are sown in spring when the median daily temperature reaches 15 degrees Celsius,” but *believing* that “when Perun vanquishes Veles, it’s time to return to the fields”. The vestiges of this belief system, albeit modified by new agricultural technologies and Christianity, persisted into the 20th century in the form of *pratika*, small books (almanacs) that combined calendar with proverbs mixing religious and farming advice (Makarovič 1995, 47–52).

Thus for the seventh century Bled population the shift to barley as a staple crop entailed far more than merely acquiring novel tools and seeds. It dictated the

entire culinary system, which, in turn, was deeply entwined with the broader household culture (Pleterski 2008). Similarly, the positioning of the household was determined by the proximity to the fields (Štular 2006a). The shift to barley represented a comprehensive, profound, and immediate transformation of nearly every facet of life: the location of the household, the cuisine and its apparatus (including pottery), dietary habits, the annual cycle of activities, and most significantly, adopting the agricultural knowledge embedded within the belief system. In essence, a successful harvest was intricately and indissolubly linked to the notion of god(s).

However, the eleventh century shift was a transition to a high-complexity agricultural system that was not embedded in an all-encompassing structure, but rather in separate subsystems. Religion (Christianity) was transmitted concurrently, but separately from the agricultural system. Economics (landlords with financial ambitions), law (which later culminated in *Sachsenspiegel*) and governance (King) were separated from religion and to a certain degree from each other; not as separated as in post-Medieval states, but far more than in Early Medieval subsistence societies. Therefore, the agricultural shift in the eleventh century Bled did not lead to a profound change in identity that would remould the identity and undo the Slavicisation. Such a process did, however, take place in the north-eastern Alpine region, but that is another topic we will explore elsewhere (see the project Religiopolitics – the Imperium Christianum and its Commoners).

4. CONCLUSION

The foregoing discussion may seem to have predominantly encompassed the historical evolution of agriculture. The agricultural shift in the seventh century, transitioning from a more complex wheat-based to a rudimentary barley-based agricultural system ostensibly manifested as an agricultural anti-revolution. It was necessitated by the externally induced decline of market economy and was enabled by the introduction of know-how by the immigrant Slavs. The eleventh-century transformation almost mirrored that. To render the estates lucrative, the new landlords implemented

the manorial system, a sophisticated wheat-based agricultural framework. This transition was also facilitated by emergent external factors: incorporation into the Kingdom of Germany and the access to a network for the efficient redistribution of agricultural produce.

However, understanding the agricultural anti-revolution enabled us to elucidate the process of acculturation that took place after the immigration of the Slavs, i.e., Slavicisation. We inferred that in the Bled case it was a four-stages process. First, the Slavs colonised the fields that were of marginal interest to the Late Antique population thus facilitating amicable co-existence. Second, the agricultural system of the Slavs was more successful in feeding the population. Third, the Late Antique community switched to the new system and likely experienced a downward social mobility in the process. Fourth, sharing resources and knowledge as well as cohabiting led to intensive acculturation which we described as an inverse integration. Individuals from the host population adopted the cultural norms of the dominant immigrant culture while maintaining their culture of origin. This led to biculturalism, co-existence of two originally distinct cultures, preserved in historical sources as *Carniola Sclavorum patria*.

Based on this our comprehension of the “becoming Slav” process in the Eastern Alps has significantly improved. Central to this understanding is discerning the cause and effect in the transition from Late Antiquity to the so-called Dark Ages – the classic chicken or egg dilemma. Previously, it was presumed that the Slavs precipitated the final collapse of the remnants of the Late Antique Roman world, subsequently relegating themselves to a proverbial state of poverty, characterized by a low-technology society devoid of monetary systems and market economies. However, our findings suggest the contrary. They portray the Slavs as rescuers, who introduced an agricultural system optimized for the pre-existing conditions of dramatic economic decline. They potentially saved the remaining Late Antique population from a dire existence or even extinction by starvation. For several ensuing centuries, existing on the fringe of empires, the new society, forged by both indigenous and immigrant populations, appears to have offered a desirable life, marked by high life expectancy and minimal famine occurrences.

- ALSLEBEN, A. 2012, The plant economy of northern medieval Russia. – In: M. A. Brisbane, N. Makarov, E. Nosov (eds.), *The Archaeology of Medieval Novgorod in Context: A Study of Centre/Periphery Relations*, 321–350, Oxford.
- ARGE et al. 2005 = ARGE, S. V., SVEINBJARNARDOTTIR, G., EDWARDS, K. J., BUCKLAND, P. C. 2005, Viking and Medieval Settlement in the Faroes: People, Place and Environment. – *Human Ecology*, 33(5), 597–620.
- ARNOLD, B. 1997, *Medieval Germany, 500-1300: A Political Interpretation*. – Houndmills, London.
- BARTOLI, P. 2017, Were some late Roman forms of scythes really created by the Celts in the Eastern Alpine region and in western Hungary. – In: J. Kysela, A. Danielisová, J. Militký (eds.), *Stories that made the Iron Age: Studies in Iron Age archaeology dedicated to Natalie Venclová*, 317–337.
- BELAK et al. 2023 = BELAK, M., PLETERSKI, A., RIHTER, J. 2023, Zbiva v4.1. – Ljubljana. [http://zbiva4.zrc-sazu.si/]
- BEZLAJ, F. 1964, *Blišč in beda slovenskega jezika*. – Tovariš, XX/5, 7. II. 1964.
- BITENC, P., KNIFIC, T. (eds.) 2001, *Od Rimljanov do Slovanov. Predmeti*. – Ljubljana.
- BITENC, P., KNIFIC, T. 2020, Interpretacija grobišča in najdb / Interpretation of burial ground and finds. – In: B. Štular (ed.), *Srednjeveški Blejski otok v arheoloških virih / Medieval archaeology of Bled Island*, Opera Instituti Archaeologici Sloveniae 42, 45–91. DOI: <https://doi.org/10.3986/9789610502609>
- BRATHER, S. 2008, *Archäologie der westlichen Slawen*. – Berlin, New York.
- BRATOŽ, R. 2014, *Med Italijo in Ilirikom. Slovenski prostor in njegovo sosodstvo v pozni antiki*. – Zbirka zgodovinskega časopisa 46, Ljubljana.
- BROUWER, W. 1972, *Handbuch des speziellen Pflanzenbaues. Band 1*. – Berlin, Hamburg.
- CAMPBELL, B. M. S. 2000, *English Seigniorial Agriculture, 1250–1450*. – Cambridge. DOI: <https://doi.org/10.1017/CBO9780511522215>
- CIGLENEČKI, S. 1983, Die Eisenwerkzeuge aus den befestigten Höhensiedlungen Sloweniens aus der Völkerwanderungszeit. – *Balcanoslavica* 10, 45–54.
- CIGLENEČKI, S. 2023, *Between Ravenna and Constantinople. Rethinking Late Antique Settlement Patterns*. – Opera Instituti Archaeologici Sloveniae 46. DOI: <https://doi.org/10.3986/9789610507369>
- CURTA, F. 2001, *The Making of the Slavs: History and Archaeology of the Lower Danube Region, c. 500-700*. – Cambridge.
- CURTA, F. 2020, Migration Histories of the Medieval Afro-Eurasian Transition Zone: Aspects of mobility between Africa, Asia and Europe, 300-1500 CE. – In: F. Curta, *Slavs in the Making: History, Linguistics, and Archaeology in Eastern Europe (ca. 500-ca. 700)*, Leiden, Boston. DOI: <https://doi.org/10.4324/9780203701256>
- DOLUKHANOV, P. 1996, *The early Slavs: Eastern Europe from the initial settlement to the Kievan Rus*. – London.
- DZINO, D. 2010, *Becoming Slav, Becoming Croat. Identity Transformations in Post-Roman and Early Medieval Dalmatia*. – Leiden, Boston.
- EICHERT, S. 2011, Karantanische Slawen – Slawische Karantanen. Überlegungen zu ethnischen und sozialen Strukturen im Ostalpenraum des frühen Mittelalters. – In: F. Biermann, Th. Kersting, A. Klammt (eds.), *Der Wandel um 1000*, Beiträge Zur Ur- und Frühgeschichte Mitteleuropas 60, 433–440.
- EICHERT, S. 2012, *Frühmittelalterliche Strukturen im Ostalpenraum. Studien zu Geschichte und Archäologie Karantaniens*. – Aus Forschung und Kunst 39.
- EICHERT, S. 2021, Digital Mapping of Medieval Cemeteries. – *Journal on Computing and Cultural Heritage* 14(1), 1–15.
- FUSEK, G. 2004, 'Slawen' oder Slawen? Eine polemische Auseinandersetzung über eine wertvolle Monographie. – *Slovenská Archeológia* 52(1), 161–186.
- GILLINGHAM, J., GRIFFITHS, R. A. 2000, *Medieval Britain. A very short introduction*. – Oxford.
- GOJDA, M. 1991, *The Ancient Slavs. Settlement and Society*. – Edinburgh.
- GORNIK, F. 1990, *Zgodovina blejske župnije*. – Celje.
- GOSSELAIN, O. P., LIVINGSTONE SMITH, A. 2005, The source: Clay selection and processing practices in sub-Saharan Africa. – In: A. Livingstone Smith, D. Bosquet, R. Martineau (eds.), *Pottery manufacturing processes: Reconstruction and interpretation*, BAR International Series 1349, 33–47.
- HAMEROW, H. 2002, *Early Medieval Settlements: The Archaeology of Rural Communities in North-West Europe 400-900*. – Oxford. DOI: <https://doi.org/10.1093/oso/9780199246977.001.0001>
- HEATHER, P. 2010, *Empires and barbarians: The fall of Rome and the birth of Europe*. – Oxford.
- HEISS, A. G., WIESINGER, S. 2019, 6.1 Appendix: Archaeobotanical reports. – In: M. Črešnar, S. Kiszter, M. Mele, K. Peitler, A. Vintar (eds.), *Plants – Animals – People. Lively archaeological landscapes of Styria and Northeastern Slovenia*, Graz, Ljubljana, 291–292.
- HERRMANN, J. (ed.) 1986, *Welt der Slawen. Geschichte, Gesellschaft, Kultur*. – München.
- HOSSAIN et al. 2012 = HOSSAIN, A., LOZOVSKAYA, M. V., ZVOLINSKY, V. P., TEIXEIRA DA SILVA, J. 2012, Effect of soil and climatic conditions on yield-related components performance of spring wheat (*Triticum aestivum* L.) varieties in the northern Bangladesh. – *Natural Sciences: Journal of Fundamental and Applied Researches* 2012/2, 69–78.

- KAZANSKI, M. 1999, *Les Slaves. Les origines (Ier-VIII siècle après J.-C.)*. – Paris.
- KAZANSKI, M. 2020, Archaeology of the Slavic Migrations. – In: M. L. Greenberg, L. A. Grenoble (eds.), *Encyclopedia of Slavic Languages and Linguistics*, New York.
- KNIFIC, T. 2004, Arheološki sledovi blejskih prebivalcev iz pozne antike in zgodnjega srednjega veka. – In: J. Dežman (ed.), *Bled 1000 let*, Blejski zbornik 2004, 93–117, Bled.
- KOROBOV, D. 2012, Early Medieval Settlement in Southern Russia: Changing Directions. – *Medieval Archaeology* 56(1), 34–59. DOI: <https://doi.org/10.1179/0076609712Z.0000000002>
- KOS, F. 1902, *Gradivo za zgodovino Slovencev v srednjem veku (501-800)*, Vol. 1. – Ljubljana.
- KOS, P. Numizmatične najdbe / Numismatic Finds. – In: S. Ciglenečki, Z. Modrijan, T. Milavec (eds.), *Korinjski hrib in poznoantične vojaške utrdbe v Iliriku / Korinjski hrib and Late Antique military forts in Illyricum*, Opera Instituti Archaeologici Sloveniae 39, 123–140. DOI: <https://doi.org/10.3986/9789610502555>
- LEBEN-SELJAK, P. 1996, Antropološka analiza poznoantičnih in srednjeveških grobišč Bleda in okolice. – Unpublished PhD thesis, University of Ljubljana, Ljubljana.
- LEROI-GOURHAN, A. 1990, Gib in beseda II [Slovenian translation]. – Ljubljana.
- LESKOVAR et al. 2024 = LESKOVAR, T., KNIFIC, T., ZUPANIČ PAJNIČ, I., POTOČNIK, D., ČREŠNAR, M. 2024, Potencial interdisciplinarnih raziskav človeških skeletnih posmrtnih ostankov: četverni grob s poznoantičnega grobišča Bled – Pristava (The Potential of Interdisciplinary Research of Human Skeletal Remains: Quadruple Grave from the Late Antique Cemetery at Bled – Pristava). – *Arheološki vestnik*, 75, 323–354.
- LINDSTEDT, J., SALMELA, E. 2020, Language Contact and the Early Slavs. – In: T. Klír, V. Boček, N. Jansens (eds.), *New perspectives on the Early Slavs and the rise of Slavic*, 275–299, Heidelberg.
- LOZIČ, E. 2019, Archaeological interpretation of the ALS data. The Bled micro-region. – Zenodo. DOI: <https://doi.org/10.5281/zenodo.10355968>
- LOZIČ, E. 2021, Application of Airborne LiDAR Data to the Archaeology of Agrarian Land Use: The Case Study of the Early Medieval Microregion of Bled (Slovenia). – *Remote Sensing* 13(16), 3228. DOI: <https://doi.org/10.3390/rs13163228>
- LOZIČ, E. 2024, Agricultural Dynamics of Bled Micro-region (Slovenia). – In: Štular et al. 2024, 53–72. DOI: https://doi.org/10.3986/9789610508786_04
- LOZIČ, E., KOCH, I. 2024, Soil, Water, and Topography: Decoding Settlement Location Preferences in Early Medieval Leibnitzer Feld (Austria) – In: Štular et al. 2024, 25–52.
- LUNT, H. G. 1997, Common Slavic, Proto-Slavic, Pan-Slavic: What Are We Talking About? – *International Journal of Slavic Linguistics and Poetics* 41(1), 7–67.
- MACEACHERN, S. 2000, Genes, tribes, and African history. – *Current Anthropology* 41(3), 357–384.
- MACHÁČEK et al. 2024 = MACHÁČEK, J., DUNNE, J., PRICHYSTALOVA, R., ZEMAN, T. 2024, The subsistence shift between Late Antiquity and Middle Ages in Central Europe: the dating and explaining by a transdisciplinary approach. – In: S. Tylšová, M. Karabáš (eds.), *30th EAA Annual Meeting (Rome, Italy 2024). Abstract Book*, Rome, 323. (online 23 August 2024)
- MAGDIČ, A. 2022, O župah, župnijah in narečjih. Primerjalna prostorska analiza rezultatov zgodnje-srednjeveške arheologije, zgodovinopisja in regionalne geolingvistike na primeru Dravske ravnin in okoliških vzpetin. – In: A. Hellmuth Kramberger, V. Vidrih Perko (eds.), *Za človeka gre: Digitalna transformacija v znanosti, izobraževanju in umetnosti*, 69–92. Maribor.
- MAGDIČ 2024, The Dynamics of the Early Medieval Settlement Development in the Drava Plain in Connection with the Pedological Analysis of Arable Land. – In: Štular et al. 2024, 73–83. DOI: https://doi.org/10.3986/9789610508786_05
- MAKAROVIČ, G. 1995, *Slovenci in čas: Odnos do časa kot okvir in sestavina vsakdanjega življenja*. – Ljubljana.
- MAMZER, H. 1999, Problem etniczny w archeologii. *Slavia Antiqua*. – *Slavia Antiqua* 40, 169–201.
- MEIER, T. 2011, A farewell to the market! Constructing a Carolingian subsistence economy east of the Rhine. – *Ruralia* 8, 285–300.
- MODRIJAN, Z. 2020, Late antique settlements in Slovenia and their position in the broader trade network of late antiquity: (a case of pottery). – In: E. Cavada, M. Zagermann (eds.), *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 2018, Münchner Beiträge zur Vor- und Frühgeschichte 68, 575–594.
- PARCZEWSKI, M. 1991, Origins of early Slav culture in Poland. – *Antiquity* 65(248), 676–683.
- PAVLOVIČ, D. 2017, Začetki zgodneslovenske poselitve Prekmurja / Beginnings of the Early Slavic settlement in the Prekmurje region, Slovenia. – *Arheološki vestnik* 68, 349–386.
- PFLAUM, V. 2010, Rimskodobne najdbe s Pristave ter druga sočasna najdišča in posamične najdbe v Blejskem kotu (Römische Funde von Pristava und

- andere zeitgleiche Funde aus Blejski kot), – In: A. Pleterški (ed.), *Zgodnjesrednjeveška naselbina na blejski Pristavi. Tafonomija, predmeti in čas. / Frühmittelalterliche Siedlung Pristava in Bled. Taphonomie, Fundgegenstände und zeitliche Einordnung*, Opera Instituti Archaeologici Sloveniae 19, 189–212 (259–261).
- PLETERŠKI, A. 1987, Sebenjski zaklad (Der Hortfund von Sebenje). – *Arheološki vestnik* 38, 237–330.
- PLETERŠKI, A. 1995, Model etnogeneze Slovanov na osnovi nekaterih novejših raziskav. – *Zgodovinski časopis* 49(4), 537–556.
- PLETERŠKI, A. 2008, *Kuhinjska kultura v zgodnjem srednjem veku (Küchenkultur im frühen Mittelalter)*. – Ljubljana.
- PLETERŠKI, A. 2013a, Etnogeneza slavena – metode i proces (The ethnogenesis of the slavs, the methods and the process). – *Starohrvatska prosvjeta* 40, 8–32.
- PLETERŠKI, A. 2013b, *The invisible Slavs. Župa Bled in the prehistoric Early Middle Ages*. – Opera Instituti Archaeologici Sloveniae 28.
- PLETERŠKI, A. 2014, *Kulturni genom. Prostor in njegovi ideogrami mitične zgodbe*. – *Studia Mythologica Slavica – Supplementa, Supplementum* 10.
- POHL, W. 1988, *Die Awaren. Ein Steppenvolk in Mitteleuropa 567-822 n. Chr.* – München.
- POHL, W. 1998, Introduction: Strategies of distinction. – In: W. Pohl, H. Reimitz (eds.), *Strategies of Distinction: The construction of the Ethnic Communities, 300-800*, Transformation of the Roman World 12, 1–15, Leiden, Boston, Köln.
- POHL, W. 2018, *The Avars: A steppe empire in Europe, 567-822*. – Ithaca.
- PRITSACK, O. 1983, The Slavs and the Avars. – In: *Gli slavi occidentali e meridionali nell'alto medioevo (15-21 Aprile 1982)*, Settimane di Studio del Centro Italiano di Studi Sull'Alto Medioevo 30, 353–435, Spoleto.
- PROFANTOVÁ, N. 2005, Nové objekty kultury s keramikou pražského typu z Roztok u Prahy. – *Památky Archeologické* 96, 127–164.
- RATZEL, F. 1909, *Anthropogeographie*. Bd. 1. *Grundzüge der Anwendung der Erdkunde*. – Stuttgart.
- RIHTER, J. 2023, Stratigrafsko najstarejši zgodnjesrednjeveški grobovi in začetek pokopavanja na grobišču Župna cerkev v Kranju (Stratigraphically lowest early medieval graves and beginnings of burial in the Župna cerkev cemetery in Kranj (Slovenia)). – *Arheološki vestnik* 74, 263–308. DOI: <https://doi.org/10.3986/AV.74.08>
- SAGADIN, M. 2020a, Kranjska grobišča in problem kontinuitete med pozno antiko in zgodnjim srednjim vekom. – *Kranjski zbornik* 2020, 13–24.
- SAGADIN, M. 2020b, *Carnium* – Kranj. – In: J. Horvat, I. Lazar, A. Gaspari (eds.), *Manjša rimska naselja na slovenskem prostoru / Minor Roman settlements in Slovenia*, Opera Instituti Archaeologici Sloveniae 41, 201–212. DOI: <https://doi.org/10.3986/9789610502586>
- SOKOL, V. 2011, Drugo shvačanje hrvatskog identiteta. – *Radovi Zavoda za hrvatsku povijest* 43, 459–474.
- ŠTIH, P. 2004, Prva omemba Bleda v pisnih virih. Listina kralja Henrika II. za briksenškega škofa Albuina z dne 10. aprila 1004 (D.H.II.67). – In: J. Dežman (ed.), *Bled 1000 let*, Blejski zbornik 2004, 7–34, Bled.
- ŠTIH, P. 2010a, The Middle Ages between the Eastern Alps and the Northern Adriatic. Select Papers on Slovene Historiography and Medieval History. – *East Central and Eastern Europe in the Middle Ages* 11, 450–1450, Leiden, Boston.
- ŠTIH, P. 2010b, Migracije in oblikovanje kompleksnega kulturnega prostora med vzhodnimi Alpami in severnim Jadranom v srednjem veku. – In: P. Štih, B. Balkovec (eds.), *Migracije in slovenski prostor od antike do danes*, Zbirka zgodovinskega časopisa 39, 59–77, Ljubljana.
- ŠTIH, P. 2011, Tisoč let od prve omembe Blejskega gradu (1011-2011) in začetki blejskega gospostva škofov iz Briksna. – In: M. Vidic (ed.), *Blejski grad. 1000 let prve omembe*, 9–27, Bled, Ljubljana.
- ŠTULAR, B. 2006a, Analiza gospodarskega zaledja v arheologiji krajin. – In: D. Perko (ed.), *Geografski informacijski sistemi v Sloveniji 2005-2006*, 199–210, Ljubljana.
- ŠTULAR, B. 2006b, Prostor Blejskih planin v srednjem veku (Raum der Bleder Almen im Mittelalter). – In: T. Cevc (ed.), *Človek v Alpah*, 230–241, Ljubljana.
- ŠTULAR, B. 2009, Uporaba etnoloških primerjav v visokosrednjeveški arheologiji. Primer lončenine s kamniškega Malega gradu (The Use of Ethnological Analogies in High Medieval Archaeology. The Case Study of the Pottery from Kamnik Castle (Mali grad)). – *Arheo* 26, 109–123.
- ŠTULAR, B. 2022, *Grave Orientation in the Middle Ages. A Case Study from Bled Island*. – E-Monographiae Instituti Archaeologici Sloveniae 14. DOI: <https://doi.org/10.3986/9789610506331>
- ŠTULAR, B. 2025, Rethinking Ethnic Identity in the Archaeology of the Ancient Slavs. – *Arheološki vestnik*, 76, in preparation.
- ŠTULAR et al. 2022 = ŠTULAR, B., LOZIĆ, E., BELAK, M., RIHTER, J., KOCH, I., MODRIJAN, Z., MAGDIČ, A., KARL, S., LEHNER, M., GUTJAHR, Ch. 2022, Migration of Alpine Slavs and machine learning: Space-time pattern mining of an archaeological data set, *Plos One* 17(9, e0274687). DOI: <https://doi.org/10.1371/journal.pone.0274687>
- ŠTULAR et al. 2024 = ŠTULAR B., M., LEHNER M., BELAK (eds.) 2024, *Settlement of the Eastern Alps in the Early Middle Ages*. – Opera Insti-

- tuti Archaeologici Sloveniae 48, DOI: <https://doi.org/10.3986/9789610508786>
- SVEINSSON, S., HERMANNSSON, J. 2017, *A Farmer's Handbook for Cereal Cultivation in the Northern Periphery and Arctic Region*. – Project report, Deliverable T2.1.3, Reykjavík. [https://cereal.interreg-npa.eu/subsites/CEREAL/Cereal_cultivation-Farmers_handbook-Report-NPA-Cereal-DT213-Version2.pdf]
- TAYLOR, D., CORMACK, B. 2002, Choice of cereal and pulse species and varieties. – In: D. Younie, B. R. Taylor, J. P. Welsh, J. M. Wilkinson (eds.), *Organic Cereals and Pulses*, 9–28, Edinburgh.
- TESCHLER-NICOLA et al. 2018 = TESCHLER-NICOLA, M., F. NOVOTNY, M. SPANNAGL-STEINER, E. HARING, J. IRRGEHER, A. ZITEK, K. RUMPELMAYR, E. M. WILD, B. TAUTSCHER, Th. PROHASKA 2018, Die frühmittelalterlichen Fundstellen von Thunau am Kamp (NÖ) und ihre bioanthropologischen Evidenzen – eine Zusammenfassung. – In: E. Nowotny, M. Obenaus, S. Uzunoglu-obenaus (eds.), *50 Jahre Archäologie in Thunau am Kamp. Festschrift für Herwig Friesinger*, Archäologische Forschungen in Niederösterreich, N. F. 5, 219–239.
- TIMBERLAKE, A. 2013, Culture and the spread of Slavic. – In: B. Bickel, L. A. Grenoble, D. A. Peterson, A. Timberlake (eds.), *Language Typology and Historical Contingency. In honor of Johanna Nichols*, Typological Studies in Language 104, 331–356.
- VEDALDI IASBEZ, V. 1994, *La Venetia orientale e l'Histria: le fonti letterarie greche e latine fino alla caduta dell'Impero Romano d'Occidente*. – Studi e ricerche sulla Gallia Cisalpina 5, Roma.
- WICKHAM, C. 2005, *Framing the Early Middle Ages. Europe and the Mediterranean 400–800*. – Oxford.
- WINCKLER, K. 2012, *Die Alpen im Frühmittelalter. Die Geschichte eines Raumes in den Jahren 500 bis 800*. – Wien, Köln, Weimar.
- WOLFRAM, H. 1979, *Conversio Bagoariorum et Carantanorum. Das Weißbuch der Salzburger Kirche über die erfolgreiche Mission in Karantanien und Pannonien mit Zusätzen und Ergänzungen*. – Wien, Köln, Graz.

