

anthropozoologica

2022 • 57 • 12

Where are we now? Early Medieval archaeozoology in Slovenia: an overview

Borut TOŠKAN



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Sépulture de canidé de Pristava à Bled. Crédit: Tone Rus / *Canid burial from Pristava at Bled. Credit: Tone Rus.*

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Anthropozoologica est une revue en flux continu publiée par les Publications scientifiques du Muséum, Paris, avec le soutien du CNRS.
Anthropozoologica is a fast track journal published by the Museum Science Press, Paris, with the support of the CNRS.

Les Publications scientifiques du Muséum publient aussi / The Museum Science Press also publish: *Adansonia*, *Zoosystema*, *Geodiversitas*, *European Journal of Taxonomy*, *Naturae*, *Cryptogamie* sous-sections *Algologie*, *Bryologie*, *Mycologie*, *Comptes Rendus Palevol*.

Diffusio. — Publications scientifiques Muséum national d'Histoire naturelle
CP 4. — 57 rue Cuvier F-75231 Paris cedex 05 (France)
Tél.: 33 (0)1 40 79 48 05 / Fax: 33 (0)1 40 79 38 40
diff.pub@mnhn.fr / <https://sciencepress.mnhn.fr>

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ISSN (imprimé / print): 0761-3032 / ISSN (électronique / electronic): 2107-08817

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Submitted on 24 August 2020 | Accepted on 8 June 2022 | Published on 4 November 2022

Toškan B. 2022. — Where are we now? Early Medieval archaeozoology in Slovenia: an overview. *Anthropozoologica* 57 (12): 255-270. <https://doi.org/10.5252/anthropozoologica2022v57a12>. <http://anthropozoologica.com/57/12>

ABSTRACT

In south-eastern Alpine region, archaeozoological research of Early Medieval contexts has for a long time been all but neglected. In recent years, however, a few sites have been systematically investigated providing the opportunity to get deeper insights into some of the most characteristic aspects of the role of various animals in the economy of human communities of the time. Animal husbandry provided most of the consumed meat with caprines, pigs and poultry often significantly outnumbering cattle. Considering also the diminishing body-size and the relatively high average age-at-death values of these animals, the settlements are believed to have been economically autarkic units, existing on subsistence economy. The fairly homogeneous pattern of intra-site spatial distribution of animal finds is indicative of limited social stratification and functional differentiation of the population. The interaction of the first Slavic newcomers of the 6th century AD with indigenous inhabitants in at least some parts of the studied area apparently resulted in a partial modification of animal husbandry strategy of the former, believed to have been traditionally based on pig rearing. The insights into the role of animals in the local mythology of that time are poor. The most prominent find is a canid skeleton from one of the burial sites, where it supposedly represented one of the points of spatial connotations of the area.

KEY WORDS

Early Middle Age,
subsistence economy,
wolf burial.

RÉSUMÉ

Où en sommes-nous ? Archéozoologie médiévale précoce en Slovénie : un aperçu.

Dans le sud-est de la région alpine, la recherche archéozoologique des contextes du Moyen Âge précoce a longtemps été négligée. Ces dernières années cependant, quelques sites ont été systématiquement étudiés, ce qui a permis de mieux comprendre certains des aspects les plus caractéristiques du rôle des différents animaux dans l'économie des communautés humaines de l'époque. L'élevage fournissait alors la majeure partie de la viande consommée, les caprins, les porcs et les volailles étant souvent beaucoup plus nombreux que les bovins. Compte tenu également de la diminution de la taille des animaux et de l'âge moyen relativement élevé à leur mort, on pense que les établissements étaient des unités économiquement autonomes, vivant d'une économie de subsistance. Le modèle assez homogène de la distribution spatiale intra-site des découvertes d'animaux indique une stratification sociale et une différenciation fonctionnelle limitées de la population. L'interaction des premiers arrivants slaves du VI^e siècle après J.-C. avec les habitants indigènes, dans au moins certaines parties de la zone étudiée, a apparemment entraîné une modification partielle de la stratégie d'élevage des premiers, que l'on pense avoir été traditionnellement basée sur l'élevage de porcs. Les informations sur le rôle des animaux dans la mythologie locale sont pauvres. La découverte la plus marquante est un squelette de canidé provenant de l'un des sites funéraires, où il a pu représenter l'un des points de connotation spatiale de la région.

MOTS CLÉS

Moyen Âge précoce,
économie de subsistance,
sépulture de loup.

INTRODUCTION

Archaeozoological research has a long tradition in Slovenia, with the first reports published already in the 19th century (e.g., Deschmann 1875, 1878; Wilckens 1877). Unfortunately, most scholars limited their interests to the mere zoological identification and biological characterization of prehistoric fauna, all but neglecting more complex topics and the classical as well as post-classical periods in general (Toškan 2016a: 83 and references therein; for an exception, see Bökonyi 1968). It was not until the works of Bartosiewicz (1999: table 1) and Turk (Turk & Dirjec 1989; Turk *et al.* 1989, 1990) in the 1980s that more specialized studies of animal bones started to appear, resulting in an increased interest in the archaeozoology of later periods. Even though Early Medieval data continue to be scarce, a few sites have been systematically investigated, both archaeologically and archaeozoologically. This provided the opportunity to obtain preliminary insights into the consumption habits, the geographical variation in animal-keeping strategies, the importance of hunting, the socio-economic structure of the settlement communities as well as the role of individual animal species in the mythology of the time. The purpose of this paper is thus not to offer a detailed review of Early Medieval archaeozoological research in Slovenia (Fig. 1), but to draw some key outlines about the present knowledge of the discussed period.

PROLOGUE

For the convenience of this review, the Early Medieval period is placed between the 6th century, characterized by the settling of the Early Slavic groups on the western fringes of the Pannonian Plain (Pavlović 2017; Pavlović *et al.* 2021), and the 11th century, defined as the beginning of the local High Medieval period (Predovnik & Nabergoj 2010). As will be summarized below, many of the changes in the animal exploitation pattern brought into the studied area by incoming “barbaric” tribes had started to emerge during the preceding Late Antiquity. Indeed, at the few archaeozoologically investigated sites in the interior of present-day Slovenia, an initial decline of the highly evolved husbandry of the Roman Imperial period is known to have occurred in the final part of the 4th century at the latest (e.g., Toškan & Dirjec 2011: 334, 345, 366–368; Toškan 2013a: 42–48, 59, 60; 2020a). Along the coast and possibly in the westerly situated Vipava Valley on the outskirts of the Venetian Plain, the process seems to have started somewhat later (Petrucci 2007: 534, phase 5a; Toškan & Dirjec 2012: 155, 156; Kovač 2013: 66–78; fig. 1; Toškan & Ragolič, in press), as these areas were administratively and in fact very close to the still well-functioning Byzantine world (Milavec 2020: 167).

The most evident of the observed changes is the heavily reduced extent of cattle (*Bos taurus* Linnaeus, 1758) husbandry, with preferences shifting to sheep (*Ovis aries* Linnaeus, 1758)/goat (*Capra hircus* Linnaeus, 1758), pig (*Sus domesticus* Erxleben, 1777) and poultry. Similarly significant is the

notable decrease in animals’ average body size, supposedly triggered by the replacement of large “Roman” breeds with small traditional local forms. Other noteworthy observations include a moderate increase in cattle slaughtering age and possibly a reduction in the number of oxen relative to cows. All these changes are believed to reflect the efforts of making husbandry less demanding as regards animal maintenance, without compromising the expectations of covering the basic needs for both meat and secondary products (e.g., draught power, wool, milk).

The taking place of such a process would not be surprising, since the political instability and insecurity of the time led to a substantial change in the settlement structure. The main novelty consisted of the establishment of numerous hill-top fortifications, often located in more remote regions, which took the place of the perished towns and other settlements in the lowland (Ciglenečki 1999: 290–295; Milavec 2020). The new settlements were economically autarkic units, which existed on subsistence economy (e.g., Toškan & Dirjec 2011; Toškan & Ragolič, in press). Of course, the need for imported Mediterranean goods (including, e.g., olive oil, wine, garum) remained, reflecting a certain civilization level of the inhabitants. The relatively high numbers of imported amphorae (including African and eastern Mediterranean specimens) in virtually all the studied coastal towns, indicate the existence of an organized overseas trade network at least until the mid-7th century. It is highly probable that the hill-top fortifications in the interior were supplied from these coastal settlements. However, the presence of imported vessels is probably no longer attributable to an organized trade, but to individual imports of certain articles, perhaps on special occasions. If organized trade (at least to a certain extent) was still in existence, it must have been performed by the state (military) or church authorities (which were to a great extent in charge of state services in the 6th century). The route used to supply western Slovenia ran through coastal towns, while the settlements in the Eastern part of the country must have been supplied via the so-called Danubian route (Modrijan 2012: 205–212 and references therein; 2020).

IMPORTANCE OF INDIVIDUAL ANIMAL SPECIES: AN INTER-REGIONAL COMPARISON

In Slovenian early medieval archaeozoology, inter-site comparisons are greatly hampered by differences in the recovery techniques, the applied analytical approach, and the depth of presentation/publication of the results (e.g., Pleterski 2008; Hincak 2012, 2013a; Kovač 2013; Toškan 2013b, 2017a, 2019a). This is why the quantitative approach adopted in this study to assess the economic importance of individual animals inevitably limited the analyses to species represented by the greatest number of bones, i.e. the meat purpose cattle, sheep, goat and pig. Bones of beasts of burden (horse [*Equus caballus* Linnaeus, 1758], mule, donkey [*Equus asinus* Linnaeus, 1758]) and of non-meat purpose animals (e.g., dog [*Canis familiaris* Linnaeus, 1758], cat [*Felis catus* Linnaeus, 1758])

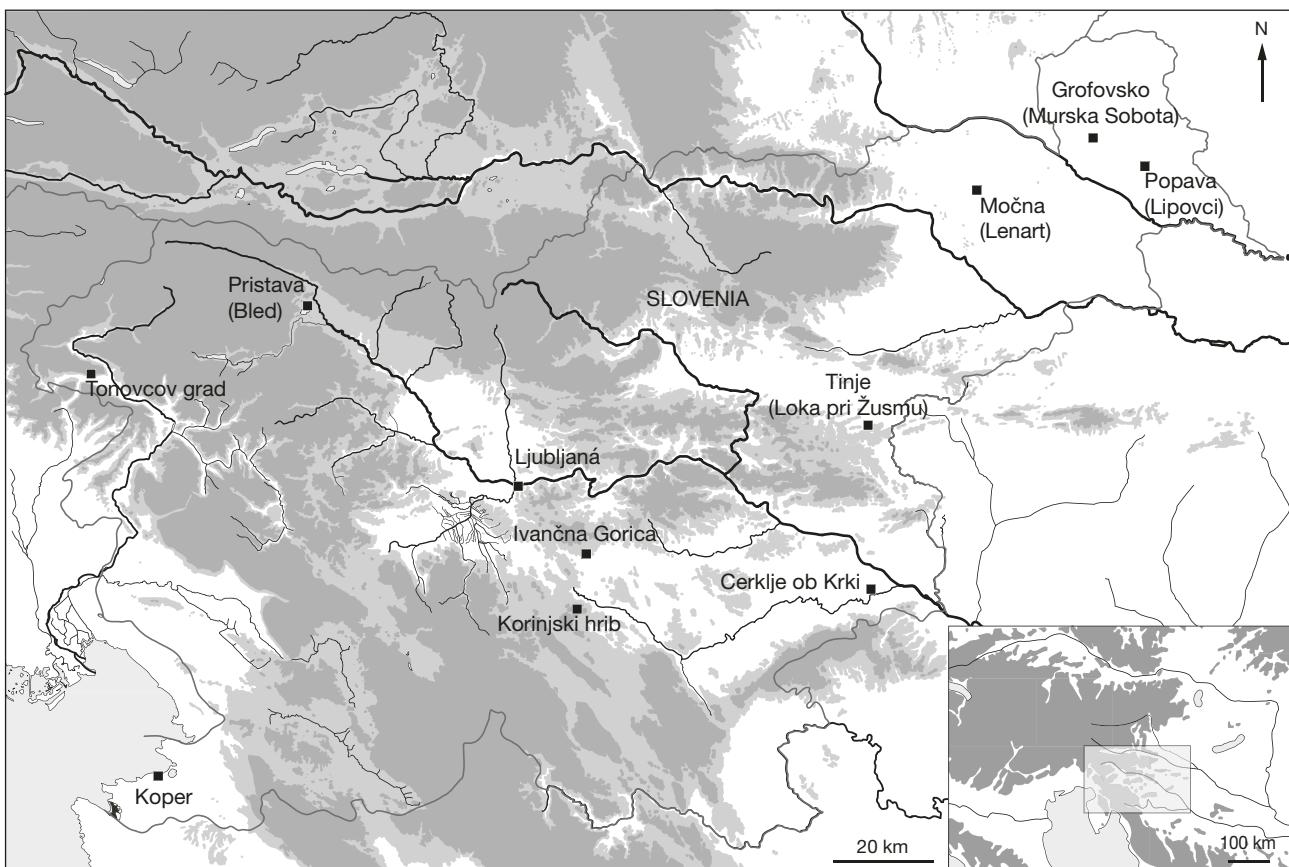


FIG. 1. — Geographical location of the study area. Also shown are the archaeological sites mentioned in the text.

are not to be found systematically in the food waste. Instead, they are often best represented in deposits in marginal locations (e.g., Toškan 2017b) or even in cultic contexts (e.g., Toškan & Štular 2008). Inter-site comparisons in the share of small animals (hare [*Lepus Linnaeus, 1758*], rodents, domestic hen [*Gallus domesticus* (Linnaeus, 1758)]), wild birds, fish; e.g., Boschin 2011; Hincak 2012; Kovač 2013), on the other hand, would be greatly distorted by random recovery bias. This is due to the fact that the occurrence of their fragile remains in hand-collected archaeozoological samples varies significantly from excavator to excavator and are altogether greatly underrepresented since no sieving has been routinely performed (e.g., Toškan 2015a).

Considering the above limitations and the scarcity of the available archaeozoological data in general, the here presented inter-regional comparison of the early medieval husbandry pattern within the territory of the present-day Slovenia includes no more than six sites, yielding less than 1400 taxonomically identified remains altogether (Table 1). Of them, Grofovsko 1 near Murska Sobota (end of 7th-8th century; NISP = 29; Toškan 2021a¹), Močna near Lenart (6th/7th-9th century; NISP = 34; Toškan 2013b, 2019a²) and Popava near Lipovci 1 (6th/7th-9th century; NISP = 56; Hincak 2012³) are all located in the

north-eastern part of the country on the western fringes of the Pannonian Plain. Pristava at Bled (2nd half of 7th-1st half of 10th century; NISP = 372; Toškan & Dirjec 2008⁴) and Tonovcov grad near Kobarid (7th-9th century; NISP = 402; Toškan & Dirjec 2011⁵) are, in contrast, to be found in the mountainous north-western part of the studied area. Koper (location: Kreljeva street 6; 6th-12th century; NISP = 394; Kovač 2013: 91-117⁶) is located in the south-western part of the country on the Adriatic coast. As far as the type of listed sites is concerned, Grofovsko 1, Močna, and Popava are seen as typical Slavic hamlets of the time with several rather dispersed sunken-featured buildings, Pristava served as the central settlement of the local župa (= basic building block of Slavic society; e.g., Pleterski 2013a), Tonovcov grad is believed to have been merely a place of short visits of people among the ruins of the Late Antique settlement, while the location of Kreljeva street 6 in Koper is seen as a ruralizing former urban area on the (then still) island of *Capritana*.

gical information for this site are available in Hincak (2013a; for archaeological data, see Šavel & Knific 2013); however, due to the extreme fragmentation of the material and at times only descriptive presentation of quantitative data (e.g., Hincak 2013a: 121, sample 16), these could not have been considered here.

4. For archaeological data, see Pleterski (2008, 2010).

5. For archaeological data, see Ciglenečki *et al.* (2011) and Modrijan & Milavec (2011).

6. For archaeological data, see Zanier (2011).

1. For archaeological data, see Novšak (2003); Novšak *et al.* (2021).

2. For archaeological data, see Tica (2013).

3. For archaeological data, see Šavel & Karo (2012). Additional archaeozoolo-

TABLE 1. — Abundance of animal remains per taxa and skeletal element at the selected early medieval sites in Slovenia.

Archaeological site	Taxon	Proc. cornualis	Cranium	Maxilla	Mandibula	Dentes	Vertebrae	Coracoideum	Scapula	Humerus	Radius & ulna	Carpalia	Metacarpalia	Ossa coxae (Sin)sacrum	Femur	Patella	Tibia	Tibiotarsus	Tarsalia	Metatarsalia	Tarsometatarsus	Phalanges	Ossa longa indet.	TOTAL
Grofovsko	<i>Bos taurus</i> Linnaeus, 1758	—	—	—	—	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23
	<i>Caprinae</i> Gray, 1821	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	<i>Sus cf. domesticus</i> Erxleben, 1777	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	<i>Equus caballus</i> Linnaeus, 1758	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Močna	<i>Bos taurus</i>	—	—	—	—	4	2	—	—	2	—	—	1	1	—	—	—	—	—	4	—	1	—	15
	<i>Caprinae</i>	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
	<i>Sus cf. domesticus</i>	—	—	1	2	7	—	—	2	1	—	—	—	—	—	—	1	—	—	1	—	1	—	15
Popava	Ruminantia (large)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	<i>Caprinae s. Capreolus</i>	—	—	—	2	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	10
	<i>Sus cf. domesticus</i>	—	—	—	—	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	14
	<i>Cervus elaphus</i> Linnaeus, 1758	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
	Aves	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Pristava	<i>Bos taurus</i>	5	—	—	8	87	1	—	3	3	8	—	7	4	—	—	1	6	—	10	11	—	20	174
	<i>Caprinae</i>	3	—	—	6	78	2	—	—	5	2	—	5	—	—	—	—	—	3	6	—	2	—	112
	<i>Sus cf. domesticus</i>	—	—	2	13	22	—	—	3	7	1	—	1	2	—	—	5	—	2	1	—	1	—	60
	<i>Equus caballus</i>	—	—	—	—	11	—	—	1	1	—	—	—	—	—	—	1	—	—	—	—	—	2	16
	<i>Canis familiaris</i> Linnaeus, 1758	—	—	—	1	5	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	7
	<i>Cervus elaphus</i>	—	—	—	—	—	—	—	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	3
Tonovcov grad	<i>Bos taurus</i>	—	—	—	3	22	9	—	1	6	3	3	3	10	—	3	1	5	—	1	6	—	6	82
	<i>Caprinae</i>	16	2	1	11	54	10	—	12	22	27	2	12	12	2	8	—	16	—	5	2	—	16	230
	<i>Sus cf. domesticus</i>	—	1	6	6	16	6	—	7	3	7	—	2	2	—	4	—	3	—	2	2	—	3	70
	<i>Equus caballus</i>	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	2	5
	<i>Canis familiaris</i>	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	<i>Cervus elaphus</i>	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	<i>Capreolus capreolus</i> (Linnaeus, 1758)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	<i>Ursus arctos</i> Linnaeus, 1758	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	<i>Gallus domesticus</i> (Linnaeus, 1758)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29
Kreljeva street 6	<i>Bos taurus</i>	Skeletal elements representation data not available																			126			
	<i>Caprinae</i>																				187			
	<i>Sus cf. domesticus</i>																				68			
	<i>Felis catus</i> Linnaeus, 1758																				13			
	<i>Gallus domesticus</i>																				9			
	<i>Anas platyrhynchos</i> Linnaeus, 1758																				4			
	Pisces																				65			
	Mollusca																				2081			

Throughout the country, meat consumption was characterized by a rather monotonous exploitation of domestic animals (Table 1). Cattle seem to have been the most important source of meat, irrespective of the region considered – at Tonovcov grad, the number of identified cattle remains falls far behind the number of recovered sheep/goat bones; however, it must be considered that the meat output of the former may has been ten times higher than that of the latter. In addition to providing primary products, this species was also essential as a draught animal and for producing

dung. Milk was also significant. However, considering the small size of early medieval cows (their height at the withers barely exceeded 100 cm), it becomes evident that they gave comparatively little milk. In addition to this, the lactation period was significantly shorter than in present-day cows (Makowiecki 2006: 80). As assumed by Benecke (1994), medieval cows had a lactation period of three to four months, giving about 400–600 kg of milk altogether. Since from this amount, about 250–350 kg was needed by the calf, milk (and even more so cream and butter) could not have represented

a staple but must have been considered more of a luxury item (e.g., Pleterski 2008: 125-137).

The here studied animal bones mostly represent household waste, thus a noticeable degree of butchering is present that is to be interpreted as pot-sizing. Understandably, fragmentation is on average more pronounced in cattle than in smaller ungulates, since larger bones must have been smashed more intensively to enter the kettle (Bartosiewicz 1991). At the eastern Alpine sites, for instance, the rim diameter of medium-size pots in which meat was supposedly prepared ranged between 10 and 20 cm (Pleterski 2010: 28-33, 228-230). Differential fragmentation is a less distorting factor when caprines and pigs are compared. This is a significant circumstance, since such data allow for the characterization of the basic types of animal husbandry (e.g., Bartosiewicz 1985: 117-119). In this respect, the three assemblages from the (flood) plain of Prekmurje stand out for the prevalence of pig over sheep/goat, while the mountainous north-western part of the studied area and the coastal settlement of Koper with Mediterranean-influenced climate show the inverse situation. What might be this indicative of?

Pigs are single-purpose meat animals thriving in temperate, humid, forested habitats. Caprines, in contrast, prefer marginal environments, being more mobile and less dependent on water supplies and high-calorie fodder (Bartosiewicz 2003: 108, 119). Moreover, sheep (which significantly outnumber goats at local early medieval sites; Toškan & Dirjec 2008: 264; 2011: 307; see also Petrucci 2007: 534) provide a surplus of secondary products (milk, wool) and are more easily controlled in flocks much larger than those of pigs (Akkermans 1990: 245-249).

Pork was considered a delicacy in the region both in Roman times and in the Middle Ages. Therefore, faunal assemblages from these two periods, which show a high proportion of pig bones, are often considered as waste from relatively prestigious meals (Dirjec *et al.* 2012; Toškan 2015b, 2016b; Porenta *et al.* 2015: 384, 385). In the Early Medieval Period, however, the association of pork with high status is not at all as evident (e.g., Makowiecki 2006: 79). Instead, the preference for a particular domesticate seems to be more indicative of the way of life of individual human groups. In the Pannonian Basin, for instance, pastoral communities favoured more mobile livestock (i.e. sheep, goat, and horse), while sedentary peoples preferred raising pigs (Bartosiewicz 1993, 2003).

The fact that at Popava, Grofovsko 1 and Močna, all located on the edge of the Pannonian Basin, the remains of pigs predominate over those of sheep and goats seems to be consistent with the characteristics of the natural environment in which these communities lived. After all, the predominance of pig over caprine remains has also been noted in virtually all other early mediaeval sites investigated archaeozoologically in the same area. Unfortunately, these could not be included in the present study because only a handful of taxonomically identified animal remains from the discussed period have been found at these sites (the list includes: Pod Kotom – cesta near Krog [7th-8th century; Toškan 2015c], Malečnik near Maribor [7th-8th century; Toškan 2021b]; Zatak near Lendava [10th-

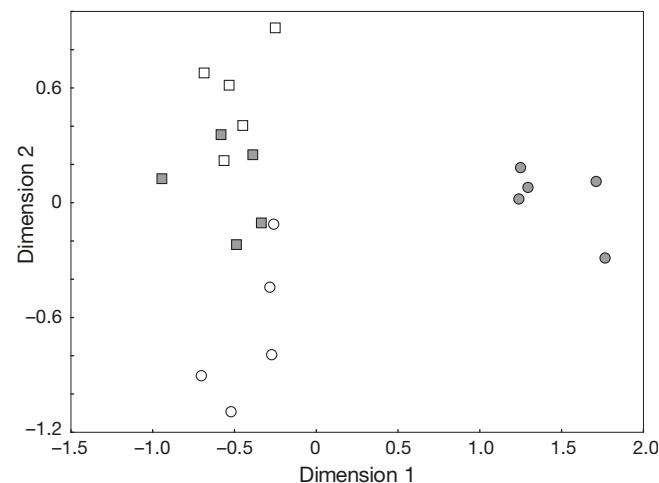


Fig. 2. – Final distribution of the matrix derived from multidimensional scaling of Euclidean distances among 20 early medieval mammal assemblages from Slovenia (stress = 0.0268). Each assemblage is a random subsample of the total available archaeozoological data from the sites of: ○, Popava (N = 5); ■, Pristava (N = 5); □, Tonovcov grad (N = 5); ○, Koper (N = 5). Subsample size is constant (NISP = 30).

14th century; Kovač 2016] and Dolge njive near Dolga vas [10th-13th century; Dirjec 2008; Hincak 2013b]). The same holds true for the Late Antique to Early Medieval settlement of Tinje above Loka pri Žusmu in the hilly eastern part of present-day Slovenia (Fig. 1; [NISP = 59; Turk 2000]). Due to the small sample size, it is also difficult to assess whether the high proportion of pig finds in this part of the study area reflects, at least in part, the presumed Slavic preference for pork (cf. Bartosiewicz 1993, 2003).

At Pristava and Tonovcov grad, located in the mountainous north-western part of present-day Slovenia, caprines are much more abundant than pig. This fits well with the habitats of the said area, which are characterized by open grasslands and predominantly coniferous forests (e.g., Toškan & Dirjec 2011: 361-363; Andrič *et al.* 2011). In fact, in Slovenia, the general trend of a westerly increasing proportion of caprines at the expense of pigs has been observed throughout prehistory (Velušček 2005; Toškan & Dirjec 2010: 206; Toškan 2011: table 9.1) and the Roman Age (Bartosiewicz 1986; Toškan & Dirjec 2011, 2012, 2013; Dirjec *et al.* 2012), demonstrating the very important role of the natural environment in shaping the husbandry pattern. The latter is to be assumed also for Koper and the local coastal area in general (e.g., the nearby site of Trieste, location Corsada; Petrucci 2007: table 50).

Notably, the results in Table 1 are believed not to be significantly distorted by the differential size of the compared bone assemblages. Indeed, when five subsamples of 30 identified animal remains were randomly produced from each of the larger studied assemblages (i.e. Popava, Pristava, Tonovcov grad, Koper), a great resemblance to the respective original samples emerged. The similarity of the subsamples was assessed using Multidimensional scaling, which is a means of visualising the level of similarity of individual cases of a dataset. It refers to a set of related ordination techniques used in informal visualisation, in particular to display the

TABLE 2. — A selection of metric data for cattle teeth and bones from Prekmurje (i.e. the sites of Močna and Popava; written in regular text), Pristava (written in **bold**) and Tonovcov grad (written in *italics*). The data were recorded after von den Driesch (1976). Abbreviations: **Bd**, breadth of the distal end; **BG**, breadth of the glenoid cavity; **Bp**, breadth of the proximal end; **DC**, depth of the Caput femoris; **Dd**, depth of the distal end; **GLI**, greatest length of the lateral half; **GLm**, greatest length of the medial half; **LG**, length of the glenoid cavity; **SD**, smallest breadth of the diaphysis.

Skeletal element	Dimension	Measurements (in mm)							
Dens (M_3)	Length	35.0	32.0	—	—	—	—	—	—
	Breadth	15.0	13.5	—	—	—	—	—	—
Scapula	LG	52.0	—	—	—	—	—	—	—
	BG	45.5	—	—	—	—	—	—	—
Humerus	Bd	62.5	—	—	—	—	—	—	—
Metacarpus	Bp	54.0	54.0	46.5	—	—	—	—	—
	SD	—	—	—	—	—	31.0	—	—
	Bd	—	—	—	50.0	58.5	59.5	—	—
Femur	DC	44.0	—	—	—	—	—	—	—
Tibia	Bd	60.0	58.0	—	—	—	—	—	—
	Dd	42.0	39.0	—	—	—	—	—	—
Astragalus	GLI	57.0	58.0	—	—	—	—	—	—
	GLm	54.5	52.0	62.0	47.5	—	—	—	—
	Bd	34.5	38.0	42.0	31.5	—	—	—	—
Calcaneus	GL	122.0	—	—	—	—	—	—	—
Metatarsus	Bp	—	—	—	—	—	40.0	42.5	—
	SD	25.6	21.5	21.5	22.5	21.5	—	—	25.5
	Bd	47.0	—	—	—	—	—	—	49.5
									53.5

information contained in a distance matrix. The goodness-of-fit, i.e. the level a configuration reproduces the observed distance matrix, is expressed as the stress measure (StatSoft 2001). The results indicate the influence of chance and bias on the observed east-west dichotomy in pig/caprine numbers to be minimal (Fig. 2).

Remains of other domesticates are generally scanty, which is attributable to both the sampling error due to the sole hand collecting of finds (e.g., domestic hen; Boschin 2011: 389) and their role as (generally) non-edible species (e.g., horse; Toškan & Dirjec 2011: 308). The either economic or symbolic value of some of these animals, however, might still have been prominent. Within Slovenian Early Medieval sites, this is indicated by the presence of at least one canid and several domestic hen skeletons, as well as riding spurs in association with some of the local burial sites (Toškan & Štular 2008; Magdić 2018; Toškan 2018: 63, 64). Similarly remarkable is an almost one-third share of horse finds among the animal remains from Layer 5 at the location of Novi center – Gruča 2 in Ivančna Gorica, if the tentative dating of a significant part of this material to the Early Middle Ages were correct (Fig. 1; NISP = 204; Toškan & Dirjec 2013: 86, 87). In fact, since the archaeozoological assemblage from the layer in question largely originates from alluvial sediments, its chronological assignment is questionable at best (Plestjenjak 2013: 45-52; Toškan & Dirjec 2013).

ANIMAL BODY SIZE

As noted above, early medieval animal husbandry in the studied area differed from the Roman Age pattern by heavily relying on self-sufficient, local production within individual economically autarkic settlement communities. Taxonomically, this is

evident by the diminishing role of cattle and the concomitant rise in the importance of sheep, goat, pig, and poultry (Table 1; see also Boschin 2011; Toškan 2013a). An additional indication of the same process is believed to be represented by the declining body-size of most important domesticates. Not surprisingly, the greatest drop was observed in cattle (Turk 2000: 169; Toškan & Dirjec 2008: 140-142, 264; 2011: 334-342; Toškan 2013a: 103-105). In this species, the available metric data for early medieval specimens fall significantly behind the average Roman Age values, resembling instead the data observed at local Iron Age sites (Table 2; compare with e.g., Bökonyi 1994; Toškan & Dirjec 2010; see also Toškan 2013a: 45-47 and references therein). Similar, although less pronounced, diachronic variations were detected in caprines (Toškan & Dirjec 2008: 142-145, 264, 265; 2011: 342-350) and possibly also domestic hen (Boschin 2011: 390-393). These changes are all reasonably explainable by the replacement of large “Roman” breeds by smaller and therefore less demanding “primitive” forms after the crumbling of the Empire triggered the already mentioned pronounced political, economic and settlement changes (Boschin & Toškan 2012). At least in cattle, such a process is further confirmed by the existence of diachronic differences in the size of cheek-teeth (Table 2; cf. Bökonyi 1994; Toškan & Dirjec 2010; Toškan 2020b). The latter are much more conservative in their structure than bones, making the observed size decrease in these skeletal elements more likely related to the introduction of a genetically different type of livestock than to environmental changes (Payne & Bull 1988; Schlumbaum *et al.* 2003; Albarella *et al.* 2008; Colominas 2014, 2017).

An interesting exception to the above rule was recently recorded at Cerkle ob Krki in the south-eastern part of the study area (Fig. 1), where a sunken feature was excavated with

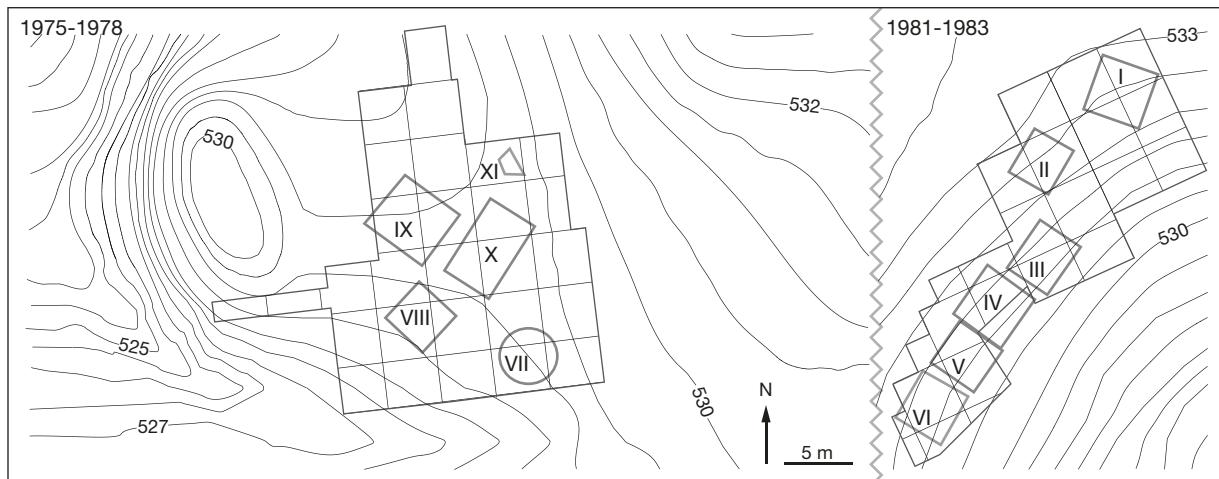


FIG. 3. — Individual building areas at Pristava as defined by Pleterski (2010: 165–167, 245, figs. 5.4, 5.5).

sherds of the Early Slavic Prague-type pottery dated between the 6th and the first half of the 7th century (Pavlovič *et al.* 2021). Of several dozen unearthed animal finds, 22 were taxonomically identified. They were ascribed to pig (N = 2), sheep/goat (N = 2) and cattle (N = 18). Among the latter, several remains of a minimum of three large, Roman-like specimens were found (Pavlovič *et al.* 2021: 151–156, 174, 175, table 5), two of which were dated at 14C to the first half of the 7th century (Pavlovič *et al.* 2021: 149–151, 174). Is this a signal of a local cohabitation of the newly settled Slavs and the indigenous population, which may have led to the exchange of ideas, practices, and material (including livestock)?

The answer could indeed be positive, considering that a pottery sherd with a typical Longobard stamp decoration was found in another sunken feature at the same site. Even more so if we take into account the 14C date obtained from a charcoal sample taken from one of its fillings and whose 2 σ -range ends with the year 565 AD (Pavlovič 2017: 385; Pavlovič *et al.* 2021: 150, 174). Large cattle is known to have remained in the area at least until the second half of the 6th century, as evidenced by data from the Late Antique hilltop post of Korinjski hrib, located 60 km west of Cerkle ob Krki (Fig. 1; Toškan 2020a)⁷. A further, although indirect indication of the same process might be seen in the early Slavs taking over the arable land, farming tools, filed cultivation techniques, animal husbandry pattern and, for example, the building culture from the indigenous inhabitants (the Vlachs) in the north-western part of the studied area (Toškan & Dirjec 2008: 265, 266; Pleterski 2013b: 177–179 and references therein).

Alternatively, the Slavic newcomers to Cerkle ob Krki could have already acquired large livestock while passing through one of the centres of the territories under the administration of the Eastern Roman Empire, within the Empire itself, or from the Avars on the territory of the Khaganate. A similarly likely explanation would be that they obtained it on one of

7. The same was observed at the already mentioned nearby site of Novi center – Gruča 2 at Ivančna Gorica (Toškan & Dirjec 2013: 86–88).

their rides through the territories under Byzantine control. In fact, such plundering campaigns of the Slavs are mentioned several times in the texts of Byzantine authors from the middle of the 6th century onward. In these texts, plundering is even considered the main activity of the Slavs (Pavlovič *et al.* 2021: 153–156, 158–160, 179).

INTRASITE SPATIAL HETEROGENEITY

Analyses of intra-site spatial distribution of animal bones are known to be one of the most telling approaches when investigating social behaviour patterns, functional and possibly ethnic differentiation of the population, norms or religious prohibitions, cultural/symbolic meanings of individual animals and many other manifestations of socio-economic stratification of past societies (e.g., Kent 1987; Göbel 1993; Hugh-Jones 1995; Becker 1998; Marciak 2005; Toškan & Dirjec 2010; Wilkins & Nadeau 2015; Toškan & Bartosiewicz 2018). There are, however, a few indispensable prerequisites for such analyses to be feasible, including a large enough archaeozoological sample and precise dating information for individual basic space units (e.g., buildings, pits, graves, etc.). Even though none of the few archaeozoologically studied Early Medieval sites in Slovenia can be regarded as meeting these requirements entirely, the settlement of Pristava at Bled might be close enough for such an attempt to be meaningful.

Pristava is located in the mountainous north-western part of the studied area (Fig. 1). It is believed to have been established at the beginning of the 7th century and was occupied until its complete destruction by fire in the mid-10th century. It served as the central settlement of the local basic building block of Slavic society (the so called župa); however, its inhabitants included both newly arrived Slavic and the indigenous Vlach families (Pleterski 2008, 2010, 2013a, b). The site was excavated in several campaigns between 1943 and 1985, with animal bones

TABLE 3. — Abundance of taxonomically identified animal remains per building area at Pristava. *, Assemblages believed to be mostly (or entirely) composed of the remains of a single animal. Dating source: Pleterski 2010: fig. 5.22.

Building	<i>Bos taurus</i> L.	<i>Caprinae</i>	<i>Sus</i> sp.	<i>Equus caballus</i> L.	<i>Canis familiaris</i> (L.)	<i>Cervus elaphus</i> L.	Dating
I						1	617 ± 5-676
II	58	19	26	1	—	1	676-960 ± 11
III	7	7	1	—	1	—	end of 7 th century-960 ± 11
IV							617 ± 5-mid-9 th century
V							mid-9 th century-end of 9 th century
VI							end of 9 th century-960 ± 11
VII	13*	3	1	1	—	—	possibly end of 7 th century-960 ± 11
VIII	9	17*	3	9*	1	—	possibly beginning of 8 th century-end of 9 th century
X	15	6	9	3	1	—	end of 7 th century-960 ± 11

mostly originating from the campaigns of 1975-1978 and 1981-1983 (Fig. 3; Pleterski 2008: 27-32, 241). Altogether, 410 archaeozoological remains have been studied, of which more than 90% allowed for the taxonomic identification. Such a high value is explainable by the material having been collected by hand and thus selectively. This almost certainly resulted in small fragments – as well as complete bones and teeth of relatively small bodied species in general – being somehow underrepresented. Fortunately, the fieldwork methods and techniques in 1975-1978 were comparable to those used in 1981-1983, thus negating the possibility of the two samples being biased by inconsistent sampling (Toškan & Dirjec 2008).

A general overview of the spatial distribution of animal remains at Pristava, more specifically in the area excavated in the campaigns of 1981-1983, evidenced a concentration of finds within and even more so between individual buildings, where refuse areas are assumed to have been located (Pleterski 2008: fig. 2.56). A very similar pattern was observed with ceramics (Pleterski 2008: fig. 2.5), confirming that the great majority of animal bones are to be considered household waste. An exception is likely represented by the few horse and dog finds, even though the practices of hippophagy and cynophagy were not yet completely abandoned at the time (Bartosiewicz 2003: 117; Horard-Herbin 2014: 72). Not surprisingly, the area of the village road and of individual paths leading to the buildings is mostly waste-free, with small concentrations of bones found along the roadsides (Pleterski 2008: 55-56).

The comparison of the faunal assemblages from the north-western (1975-1978 excavation campaign) and the north-eastern part of the site (1981-1983 excavation campaign) failed to show any substantial differences in the share of

individual taxa, the size of the animals, and the age at death. It has, however, evidenced a much lesser representation of the skeletal elements from the least meaty cattle body parts in the latter case. This discrepancy is believed not to be related to inconsistent sampling or differential preservation of the bones. Instead, other taphonomic factors, including more intense butchering, have been proposed as a possible reason for a 75% share of isolated teeth and feet bones in the assemblage from the north-western part of the site relative to a mere 45% in the north-eastern area (Toškan & Dirjec 2008).

For the convenience of this review, the spatial analysis was taken further by comparing the material originating from individual building areas. Data for nine such buildings are available (Table 3); however, a reliable differentiation between neighbouring buildings was not always possible. We thus took advantage of the results of the spatial analysis of archaeological finds, which showed Building II to have replaced Building I after the latter was destroyed by a cataclysm in 676 AD. A similar diachronic process is believed to have taken place with Buildings IV to VI (Pleterski 2010: 167-171, 245, 246). Consequently, we pooled the available archaeozoological data for each of the two groups of buildings, reducing the number of considered subsamples to six.

The results failed to indicate any significant differences between individual households' consumption habits. Even by focusing on the richest and more representative subsamples, no outlier deviating from the beef-dominated diet with the addition of some mutton/goat and pork can be observed. The possibility of different dishes having been prepared for individual family members at the same time should not be excluded (e.g., Pleterski 2010: 23, 24, 228); however, evident socially motivated diet discrepancies as observed in local Late Antique settlements (e.g., Bartosiewicz 1999: 315; Toškan & Dirjec 2011: 325-333; Toškan 2020a: 164-167; Hofman & Toškan 2021: 35-37) seem to have been absent at Pristava. Interestingly, Turk (2000: 169) had a similar impression while studying the faunal remains from the Late Antique to Early Medieval site of Tinje above Loka pri Žusmu in eastern Slovenia. He concluded that individual households must have acted as independent economic units, highly resembling each other in both food habits and economic power.

At Pristava, the supposed diet uniformity is even more noteworthy than at Tinje due to the coexistence of the indigenous Vlachs and the newly arrived Slavs. As indicated by the study of ceramics, Building I is to be associated with an indigenous family or at least an indigenous⁸ housewife, while the contemporaneous Building IV must have been occupied by Slavic newcomers entirely (Pleterski 2010: 139-143, 167-177, 238, 239, 245, 246), as in this case differences in ceramic forms are less evident and not necessarily linkable to the differential ethnicity of individual household members. Likewise, Building II is most probably to be associated with Vlachs and Building VI with Slavs.

8. According to Pleterski (2013b: 87), the Slavs living at Pristava mostly married indigenous women.

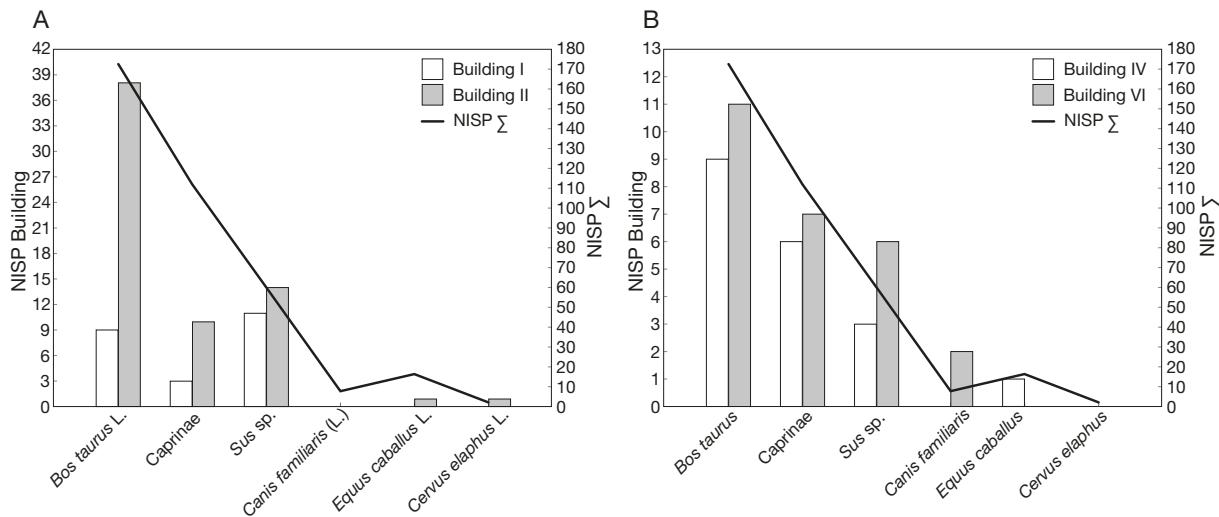


FIG. 4. — Abundance of taxonomically identified animal remains per building area for: **A**, Buildings I, II; **B**, Buildings IV, VI at Pristava. Also given is the total abundance of taxonomically identified animal remains per taxa for the whole site (NISP Σ). The lists of micro-squares included in each building area are as follows (Pleterski 2010: fig. 5.5): Building I (micro-squares Su, Dr, Ni, Mo); Building II (micro-squares He, Po, Ba, RO); Building IV (micro-squares Mi, Al) and Building VI (micro-squares Šp, Pš, Ir, Ri). Only those specimens that could be reliably assigned to individual buildings are considered, which is why the data shown here differ slightly from those in Table 3.

Nevertheless, even when attempting to compare the animal remains that can be reliably associated with each of the mentioned buildings, none of the subsamples substantially diverge from the pattern shown by the pooled archaeozoological assemblage for the whole site (Fig. 4). Interestingly, the subsample to show the highest share of porcine remains originates from the area of the “indigenous” Building I, which is in contrast with what one might have expected considering the putative preferences of Slavic peoples towards pork observed in Pannonian Basin (e.g., Bartosiewicz 1993, 2003; Hincak 2012; 2013b; Toškan 2013b). However, the number of remains per subsample are very small and thus of limited reliability.

As it turned out, the only – though rather slight – observed divergence in the studied bone material seem to be of diachronic nature. When comparing the faunal remains from the earliest Building I and – to a much lesser degree – Building IV to those originating from the latter Buildings II and VI, an increase in the share of cattle emerges (Fig. 4). Notably, this is in line with the results for Buildings VII, VIII and X, which are all datable to the 8th and the 9th centuries and show cattle to be the best represented species in that part of the settlement (Table 3). It has to be said that the 13 bovine remains from Building VII might all belong to the same subadult animal, however, a similar situation is assumed for the majority of the caprine and horse remains from Building VIII. Taking everything into account, the increase in the share of cattle does not seem to be fortuitous. Instead, it might be seen as the first sign of the renewed rise in the significance of this animal, which in the Medieval period regained its place as the quantitatively most important domesticate in the local economy (e.g., Bartosiewicz 2006; Toškan 2015b: fig. 7.4; 2016b: table 1; 2019b; Porenta *et al.* 2015: table 2).

ANIMALS IN LOCAL MYTHOLOGY

The non-economic role of individual animal species within a given society is often most easily attested by studying the faunal material from burial sites. Unfortunately, as far as the Early Middle Ages in Slovenia are concerned, these data are very scanty. Consequently, no in-depth quantitative analyses are possible, allowing instead for a mere qualitative comment of this material to be put forward. The available data on possible grave goods indicate a clear predominance of cattle, caprines and pig, which are mostly represented by isolated teeth (Kastelic & Škerlj 1950: 26; Ciglenečki & Knific 1979: 476, 477; Stare 1980: 15; Knific & Pleterski 1981: 488; 1993: 249; Pleterski 1990: 483-498; 2008: 52; Štular & Belak 2012a: 98, 181; 2012b: 361, 262; Pleterski *et al.* 2016: 44, 51, 203-205, 260-262; 2017: 157, 162, 178, 179, 195, 261, 288). Less frequent finds include the remains of wild animals (Korošec 1999: 131; Sagadin 2014: 31; Pleterski *et al.* 2016: 71; 2017: 288), fish (Štular & Belak 2012b: 399), molluscs (Hadži 1953; Pleterski *et al.* 2016: 38) and birds, with the latter represented by both bones and eggs (Korošec 1999: 131; Pleterski 2008: 51; Pleterski *et al.* 2016: 260-262). It must be underscored, however, that animal finds are often impossible to reliably ascribe to individual graves due to suboptimal sampling techniques and/or complex stratigraphic frameworks (e.g., Ciglenečki & Knific 1979: 476, 477; Pleterski 1990: 483-498; Pleterski *et al.* 2016: 21, 22).

In fact, most of the published animal remains from early medieval graves are believed to be intrusive (Korošec 1950: 107; Kastelic 1960: 12, 13; Pleterski 2008: 52-54; Pleterski *et al.* 2016: 22; 2017: 135-137, 143, 157, 159, 162, 172, 178, 179, 184, 195, 261, 288; Toškan 2017a). The few exceptions include individual isolated teeth placed under the body of the deceased or, for instance, on his/her chest



FIG. 5. — The canid skeleton from Pristava. Photo: Library of the National Museum of Slovenia (No. 5453).

(e.g., Pleterski 2008: 52; Pleterski *et al.* 2016: 167, 260; 2017: 148), amulets, pendants and similar drilled specimens (Korošec 1999: 130), as well as avian remains. The latter represent the bulk of reliably defined grave goods in the study area and are frequently also found in comparable contexts in neighbouring regions (e.g., Tovornik 1985; 1986; Kyselý 2010; Tomegea 2012; Bartosiewicz 2015), as well as in other type of cultic contexts (Profantová 2018: 111, 112). Within the here-studied area, a recently discovered example of bird deposition in early medieval graves is represented by four partially preserved domestic hen skeletons at the small burial site of Litijska cesta on the eastern outskirts of Ljubljana, dated to the final part of the 8th and the 9th centuries (Toškan 2018: 63, 64). Interestingly, the evidently pagan funerary ritual consisted of placing the corpses into hollowed out tree trunks, probably representing symbolic dugout boats (cf. Montgomery 2000). Bird skeletons were found next to the legs of the deceased.

A similar pattern was observed in four of the eight known contemporary graves at Brezje above Zreče, located about 50 km north-east of Ljubljana (Pahič 1967). Bones of domestic hen, probably the remains of deposited carcasses, were found either next to the legs (in three cases) or near the head of the deceased. In one of the graves, in addition to a nearly complete skeleton of an adult animal, two long bones that were not completely ossified were recovered (own unpublished data). Only one of the sacrificed animals can be clearly identified as male; three were subadult in age. Interestingly, all three of the discussed burials where the sex of the deceased could be determined were male (Pahič 1967: 358).

The importance of fowl in local early medieval mythology is further evidenced by them supposedly playing a noteworthy role in building offerings. At the site of Pristava, for instance, two such findings were reported (Pleterski 2008: 122, 260).

The first consists of a pair of bird bones discovered lying on the bottom of a post-hole related to Building II. In the second case, a circular pile of stones covering a partially preserved cattle skull complete with a horn core and an isolated bird bone have been found, marking the northern corner of Building III. Similar examples are known from many other early Slavic contexts in Europe (e.g., Hensel 1988: 205; Schmidt 2001).

Also interesting are the observations on the burial ground on Bled Island, located 1 km south-east of the already discussed site of Pristava. Here, a small community began to bury their dead at the beginning of the 10th century (Štular 2020a). Of the more than 120 graves excavated, a single one (i.e. Grave 67; dating: 1st decade of the 11th century) reportedly contained animal remains. These were found in the lower part of the mortar pavement that covered the pit. Although the bones were not taxonomically identified, Štular (2020b: 192) interprets them as the remains of a funerary feast. The only other grave that provides presumptive evidence of such a feast is Grave 71, where numerous pottery fragments were found instead of animal remains. A remarkable peculiarity of Graves 67 and 71 within the burial ground on Bled Island is that they were placed immediately in front of – probably near the entrance to – churches. Grave 71 is associated with the first small wooden church built on the island in the first decade of the 11th century, while Grave 67 is associated with its slightly larger and several decades younger successor. Accordingly, the two graves should not be considered as part of the contemporary cemetery, but as the graves of the so-called “guardians of the entrance” to each of the two churches mentioned (Štular 2020b: 192–199). It can therefore be assumed that the organisation of a (sumptuous) funerary feast with meat dishes have not been common for the community of that time. Instead, such a tribute must have been reserved only for special funerals.

The final comment is dedicated to possibly the most interesting animal find from Early Medieval burial sites in Slovenia: the canid skeleton⁹ excavated at the necropolis of Pristava over 70 years ago (Fig. 5; Gabrovec 1960: 47, 80). Unfortunately, the bones have since apparently become lost; however, an attempt to taxonomically identify the find to the level of species has been performed on the basis of the available photos (Toškan & Štular 2008). Metrically, the skeleton conforms to either a wolf (*Canis lupus* Linnaeus, 1758) or a large dog, much larger than the few known specimens originating from local Early Medieval sites (Toškan & Štular 2008: 154–157, 270, 271; pers. comm.; see also Bökonyi 1974: 326; Vörös 1999; Bartosiewicz 2009; Baranowski 2010 *vs.* Okarma & Buchalczyk 1993; Morris & Brandt 2014: table S2).

At first glance, the option of ascribing the skeleton to the wolf seems to be contradicted by the fact that ritual deposits of carcasses of this species in historic Europe seem to be all

9. Considering certain stratigraphic specifics related to the canid grave, the possibility of it being of Late Antique Age can not be ruled out completely (Pleterski 2008: 100–106, 253).

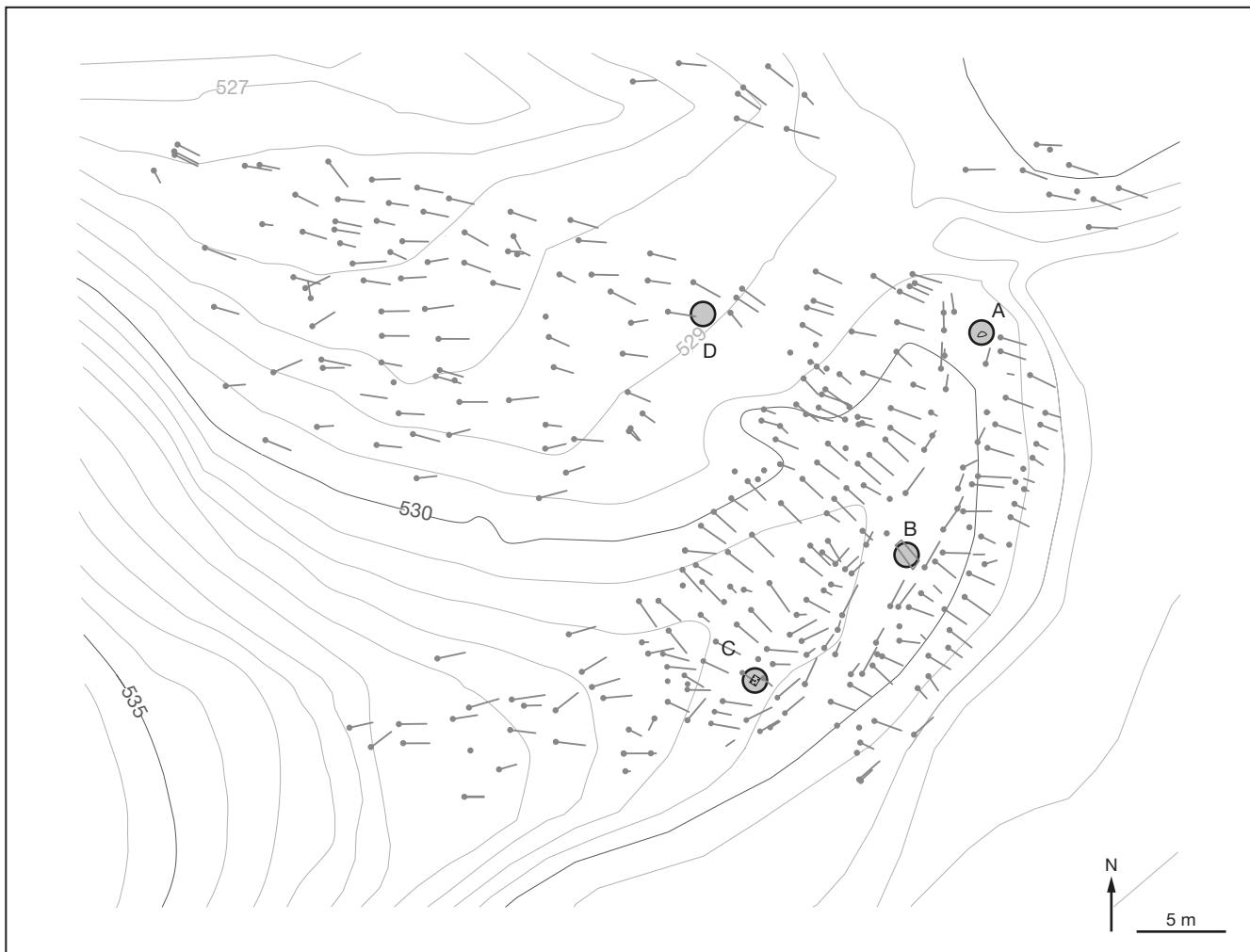


FIG. 6. — Plan of the burial site at Pristava with the four points of spatial connotations of the area (A-D). Also shown is the orientation of individual graves.

but absent (Boessneck & von den Driesch 1966; Prummel 1992; Darócz-Szabó 2006; Pluskowski 2006). Moreover, there are indications that, at least with the Germanic people of the time, a preference for larger-than-average dogs as sacrificial animals was in place (Prummel 1992: 143; Bartosiewicz 1999: 166). It has to be said, however, that the observed scarceness of wolf records might be in part linked to the problem of identification. Indeed, distinguishing between the archaeozoological remains of dogs and wolves is rather difficult and, particularly where the evidence is fragmentary and individual elements cannot be clearly identified, virtually impossible. Consequently, in cases of doubt, analysts tend to identify dog over wolf, which is what they expect to find (Pluskowski 2006: 270–280, 286, 287). This is not to say, of course, that the published lists of canid remains from European Early Medieval burial sites, which to the author's best knowledge include a single reliable record of wolf (Boessneck & von den Driesch 1966), should be considered *a priori* erroneous. It is a mere introductory observation to the following brief presentation of the archaeological context of the Pristava canid find.

The burial site of Pristava at Bled, which is one among the three largest excavated Early Medieval burial sites in Slovenia, was in use between the 6th and the 10th century (Fig. 6). It was established by the indigenous people, only to be joined by the newly arrived Slavs towards the end of the 7th century (Pleterski 2008: 160, 161, 273, 274 and references therein). A detailed analysis of the burial site led to the discovery of four points of spatial connotations of the area, which are not ordinary graves, nor are they associative with the nearby settlement. They are represented by a group of three stones (Fig. 6: point A), one of them being a large triangular carved specimen (Pleterski 2008: fig. 3.76), an empty grave-like pit, located in the middle of the passage between the graves (Fig. 6: point B), an area of tightly stacked stones with concentrations of ochre fragments and green pebbles (Fig. 6: point C) and a pit with the mentioned canid skeleton, carefully surrounded by stones (Fig. 6: point D). Points A, B and D might have been established in Late Antiquity, but also remaining “in function” in the Early Medieval times. The fourth point (i.e. Fig. 6: point C) is seen as being somewhat younger. It probably dates to the end of the 7th century, having been presumably established to replace

point D after its destruction by a natural cataclysm in the year 676 AD (Pleterski 2008: 98-106, 252, 253; 2014: 265-274).

According to Pleterski (2008: 273, 274), these four points are an expression of the age-old belief in three fundamental forces of nature: heaven/sun/fire, earth, and water. They are known as “tročan”, the principle of a triad. They may also represent the three areas of activity of the Slavic three-headed god Triglav: skies, earth and water/underground. Interestingly, the presence of an empty grave pit, gravel and three stones – of which one of triangular shape – has been also attested at the nearby partially coeval burial site of Dlesc near Bodešče. Here, however, all three elements were to be found together (Pleterski 2014: 257-263).

In such a mythical landscape, extensively discussed in Pleterski (2014), the Pristava wolf – having been surrounded by water-rolled pebbles/cobbles – is to be associated with water and/or underground. The context is linkable to scenes from Russian poems, in which people invoke the spring character Jurij (George) to chase away the mean beast by throwing pebbles at it. Considering the highly significant role of the wolf in Slavic (e.g., Mencej 2001; Plas 2011; Pleterski 2014; Kajkowski 2015) as well as coeval German mythology (Prummel 1992; Gralak 2012; Salvadori 2015: 240-244), the identification of the Pristava canid as wolf might gain credibility.

The only other (possibly) canid skeleton known to have been found at Slovenian (Early?) Medieval burial sites was excavated at Župna cerkev in Kranj (Štular & Belak 2012a: 91, 195). It lay under the human leg bones in grave “sk 46”, covered by a 2 to 3 cm thick layer of humus. Considering the stratigraphic separation, the find is most probably not associative with the mentioned human burial, which in any case seems to be of Mediaeval Age (Pleterski, pers. comm.).

CONCLUSIONS

This review of archaeozoological results related to the Early Medieval period in present-day Slovenia is significantly limited by the scarcity of available data and, as such, in many ways hardly comparable with similar syntheses presented for the neighbouring regions (e.g., Bartsiewicz 1993, 2003; Riedel 1994). Nevertheless, by focusing on a few key questions without pretending to find all the conclusive answers, the presented results may still provide interesting insights into the way of life at that time in this part of Europe. We thus seem justified in mentioning the people’s efforts to focus on more flexible and easily mobilized sources of animal protein. After all, such a scenario fits well into the framework of a largely subsistence-oriented economy of the time as manifested by the rise in the importance of sheep, goat, pig, and poultry. Early Slavic groups that moved into the Eastern Alps are believed to have adapted their animal husbandry to the mountainous topography of the area by shifting from traditional pig-raising to a more pronounced sheep and goat keeping, copying the husbandry pattern – and the diet – of the indigenous Vlachs. At Cerkle ob Krki in the south-eastern part of the study area, the interaction between the two peoples might have gone even further, resulting in an (occasional?) exchange of livestock itself.

Acknowledgements

My sincere thanks go to Mateja Belak and Dragutin Valoh for arranging the figures, and to reviewers László Bartosiewicz & Louis Chaix for their information and insights. This work was supported by the Slovenian Research Agency (Grant number P6-0064).

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*Submitted on 24 August 2020;
accepted on 8 June 2022;
published on 4 November 2022.*