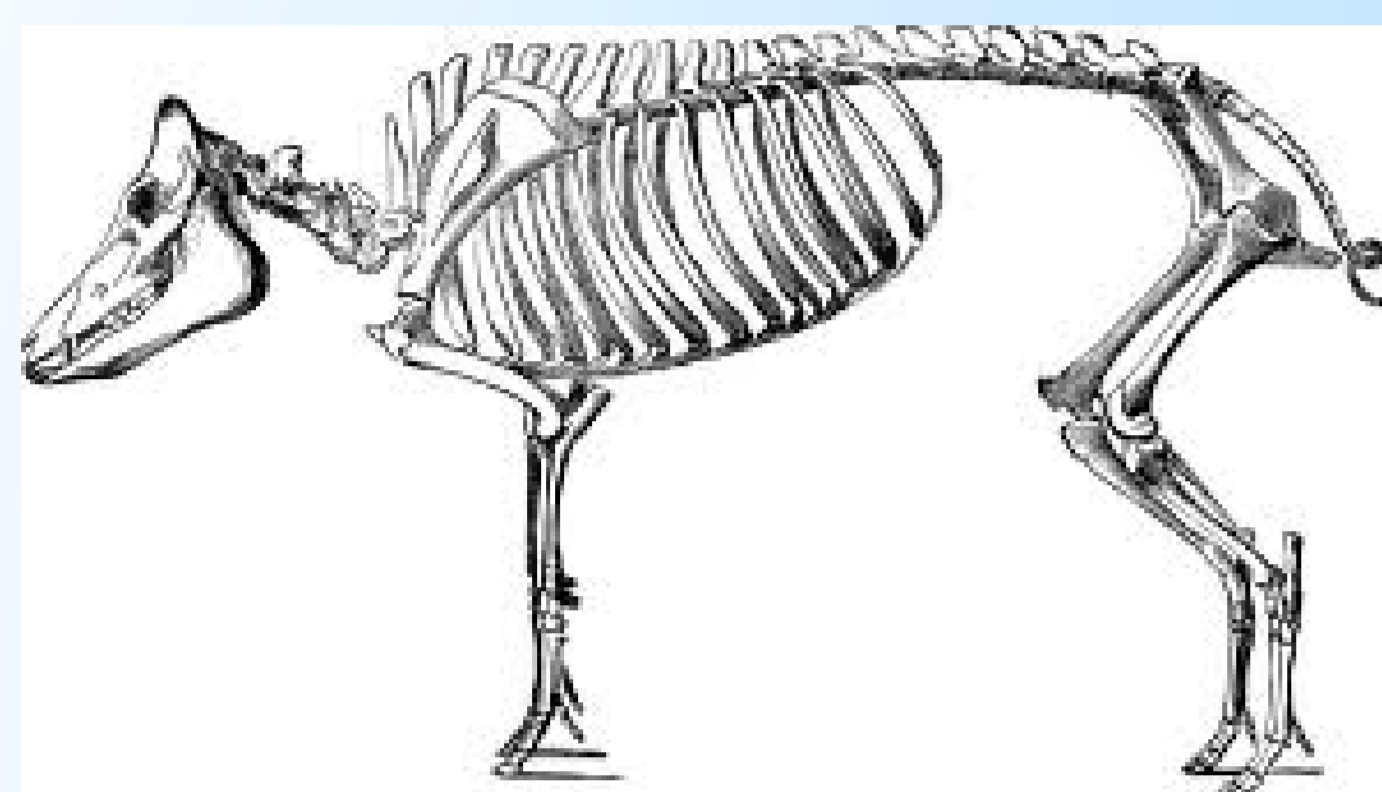


Pig exploitation during Chalcolithic-Bronze Age transition in Romania

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Introduction

Pig (*Sus scrofa domestica*) skeletal remains of the transition sites from Chalcolithic to Bronze Age in Romania are described in terms of their frequencies based on the number of identified specimens (NISP). A summary of previous studies on Chalcolithic and Bronze Age samples in the area shows that among the animal resources, the domestic mammals constitute the majority, and the pig remains have both regional and diachronical variation.



Figure 1. Map of Romania showing the geographical zones.

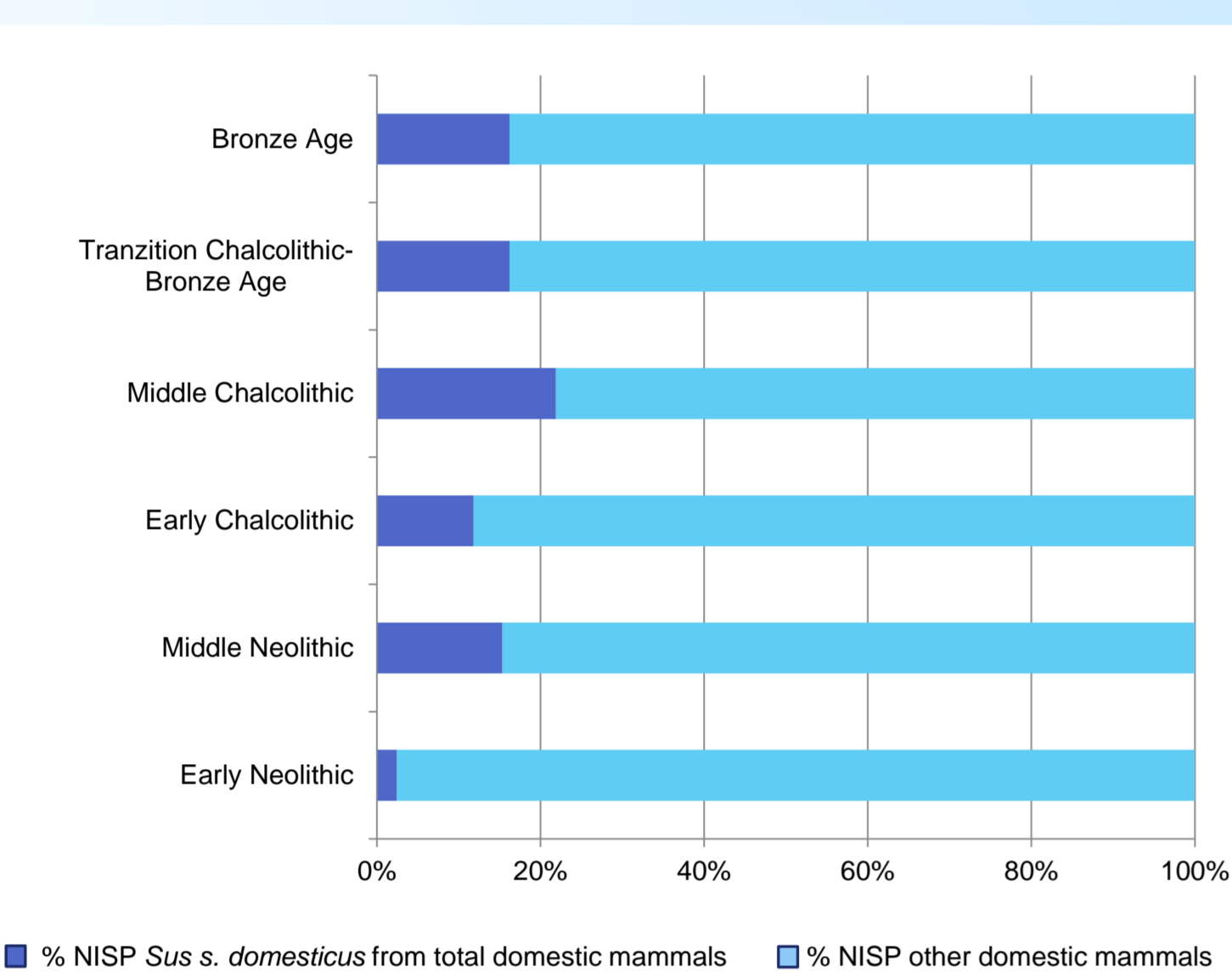


Figure 2. Frequency (%) distribution of pig remains (NISP) from archaeozoological samples.

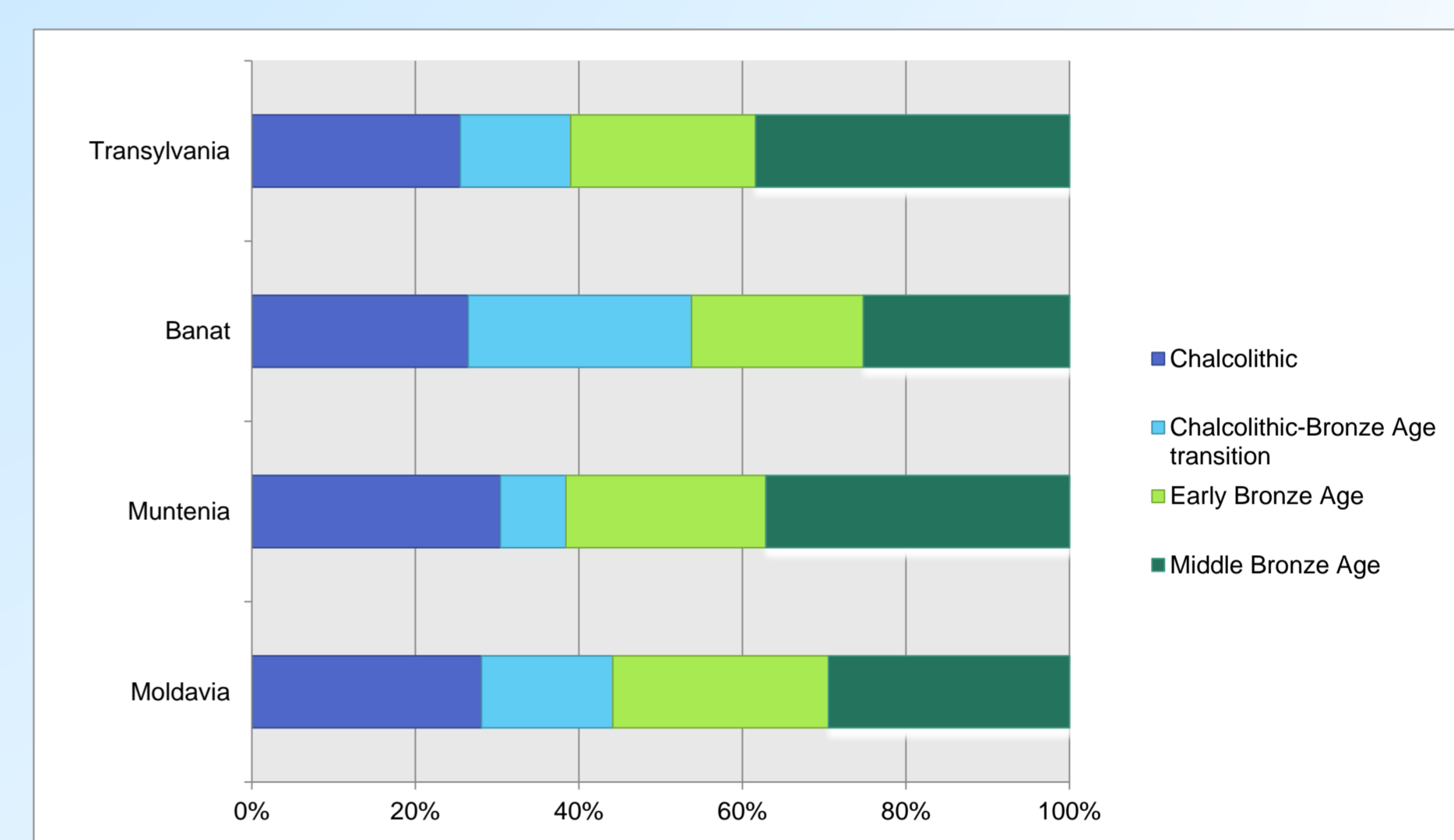
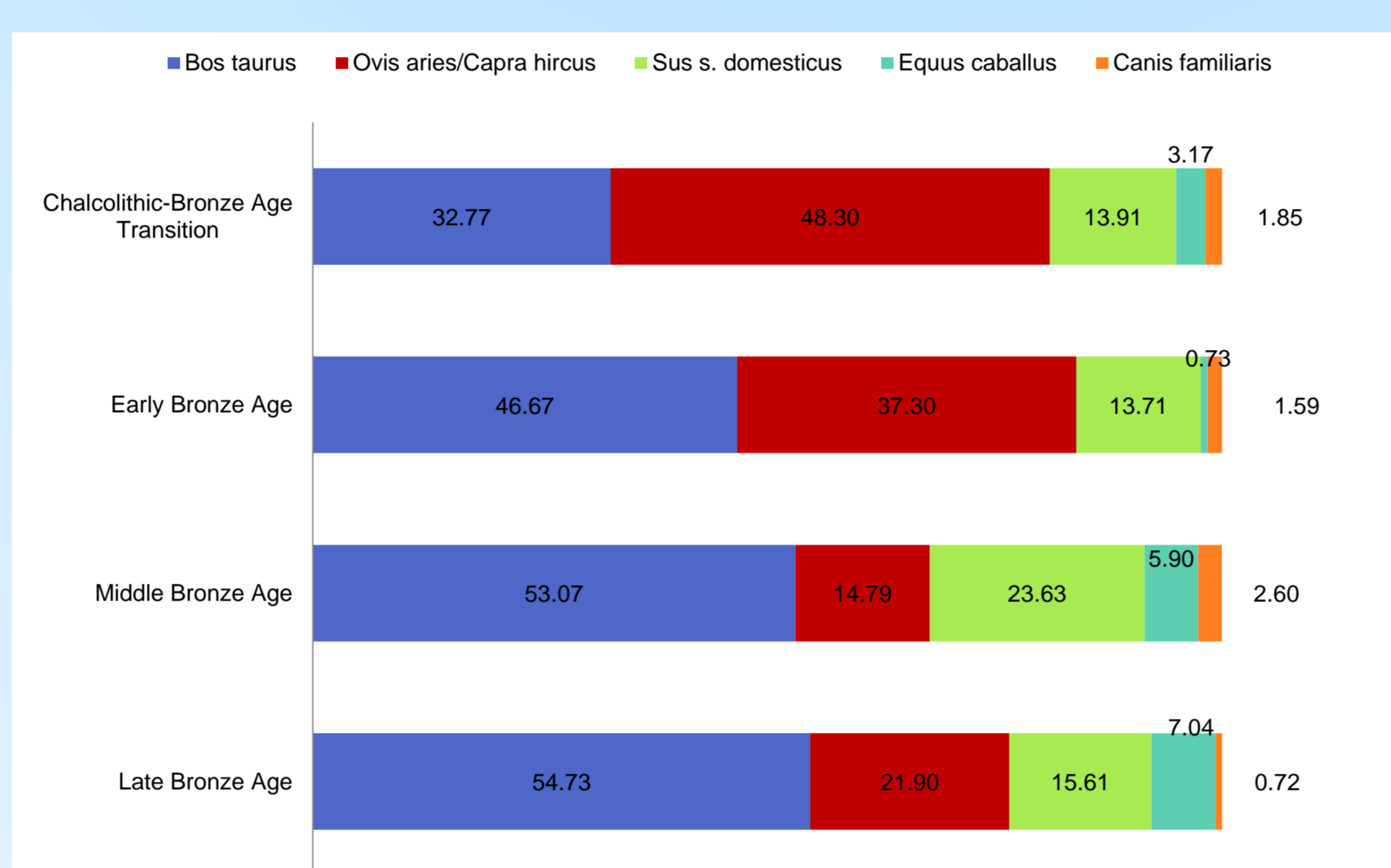


Figure 3. Regional and diachronic variation of pig remains (NISP).

The pig has been a constant part of the life since Neolithic until present in Romania (considering suited environmental conditions and the ability of pig to use nutritional value from diverse sources including waste and providing in turn protein food back to people). Pig skeletal remains have been encountered in all Neolithic and Bronze Age sites, in various archaeological contexts (Cavaleriu & Bejenaru, 2009; Balasescu et al., 2005; El Susi, 1996; Bindea, 2008; Oleniuc, 2010). The majority of the pig remains recovered have a domestic origin, mainly as food remains; others are artefacts with manufacturing marks (Figure 5), and another have been identified as ritual depositions (Figure 6). The subsistence systems of the Chalcolithic and Bronze Age settlements were diverse, depending on the cultures and on the local environment.

Case study

The tell of Poduri-Dealul Ghindaru is located in the county of Bacău, in eastern Romania. The site stands at 429m asl on a 30m-high terrace on the right bank of the Tazlau Sarat river and has a known extent of c. 1.2ha. Excavators studying the stratification over some 27 campaigns have identified levels belonging to both the Precucuteni and Cucuteni Chalcolithic cultures and to the Bronze Age (Monah et al. 2003).



Figure 4. Excavation on the tell of Poduri-Dealul Ghindaru.

A Chalcolithic community with economic specialization in cattle husbandry has been estimated for A phase of the Cucuteni culture. In this case, the frequency of pig is lower than in the next periods. NISP percentage is higher with a value of 15.3% at the end of Chalcolithic, and lower in the early Bronze Age level, with a value of 13.37%. We may suppose that as result of an increasing mobility of peoples, a decreasing agriculture, the pig production became less efficient compared with the husbandry in herding of other species such as sheep/goat.



Figure 5. Artefacts with manufacturing marks discovered in the Chalcolithic Cucuteni level of Poduri-Dealul Ghindaru tell (Oleniuc, 2010).

Species	Chalcolithic Cucuteni A (Cavaleriu & Bejenaru, 2009)		Chalcolithic Cucuteni B (Oleniuc, 2010)		Early Bronze Age (Bejenaru, unpublished data)	
	NISP	%	NISP	%	NISP	%
<i>Bos taurus</i>	1895	58.13	3465	38.64	1109	50.80
<i>Ovis aries/Capra hircus</i>	519	15.92	3029	33.76	552	25.28
<i>Sus scrofa domestica</i>	339	10.40	1402	15.63	292	13.37
<i>Canis familiaris</i>	57	1.75	134	1.49	36	1.65
<i>Equus caballus</i>	-	-	-	-	18	0.82
Total domestic mammals	2810	86.20	8030	89.56	2007	91.93
<i>Equus caballus</i>	7	0.21	8	0.08	-	-
Total wild mammals	443	13.59	929	10.36	176	8.06
Total mammals	3260	100	8967	100	2183	100

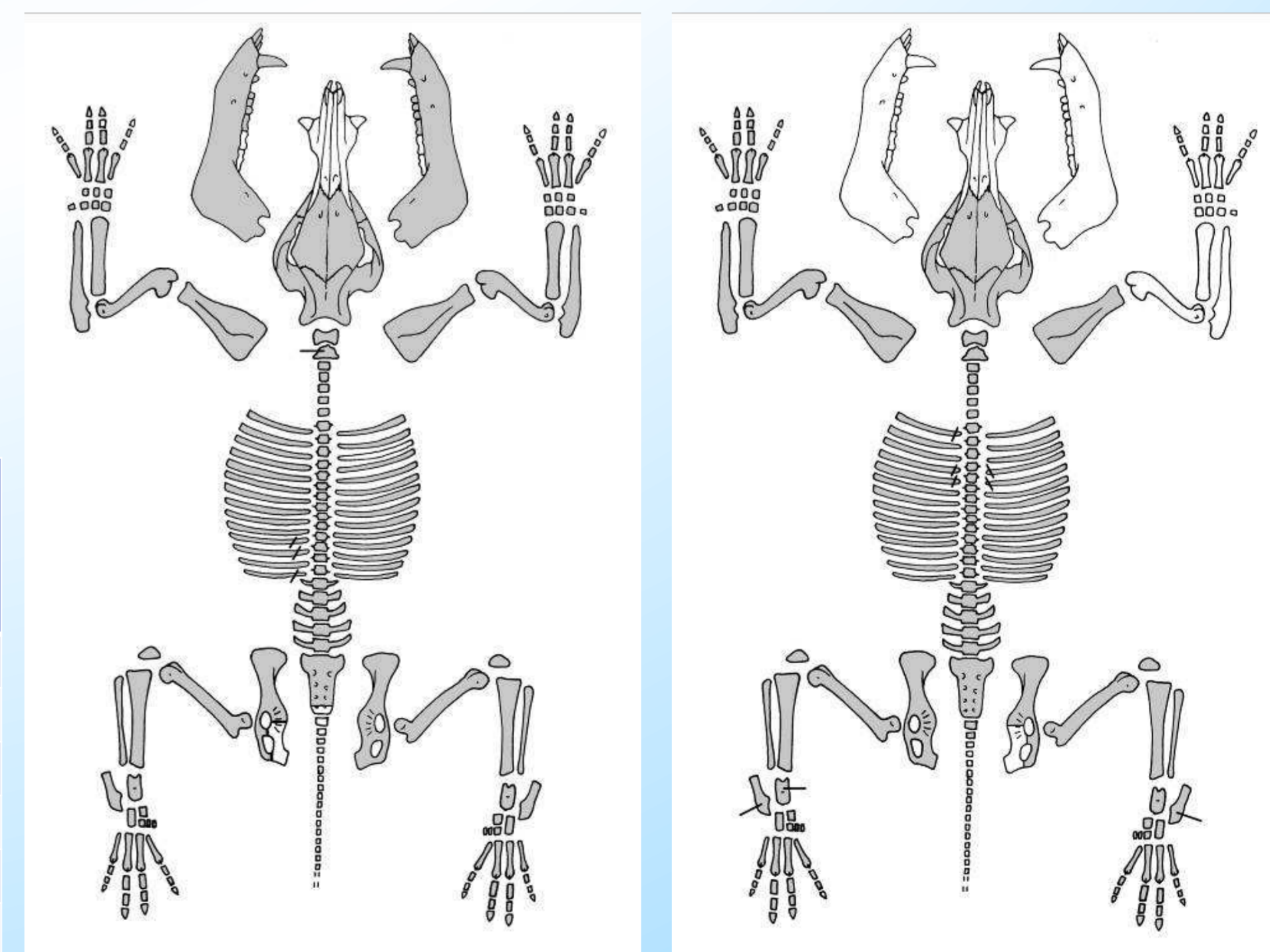


Figure 6. Ritual deposition of two pig skeletons in the Chalcolithic Cucuteni level of the Poduri-Dealul Ghindaru tell (Balasescu, 2009).

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