

## DOBROVĂȚ-„PĂDUREA BUDA” – 2019. ARCHAEOZOLOGICAL STUDY

BY  
CRISTIAN OPREAN\*

### Abstract:

*During the Dobrovăț researches, 484 osteological remains were identified and analyzed, 88 of them being indeterminable (Table 1). The residues from the domestic animals predominate, accounting for 95,2% (83.8% NMI) of the total, and those coming from the wild animals representing only 4.8%. Pigs predominate in domestic animals (44.4% and 38.2% as NMI), followed by cattle (42.9% and 35.3% as NMI) and ovicaprids (7.8%, 10.3% as NMI). Based on the measurements and analyzes, specifications were made regarding the size of the domestic animals, as well as the age of slaughter. We mention that in Pit B, a pig skull was discovered, which originates from a 2 1/2 year old female, belonging to a gracile animal of palustris type. The remains of wild animals come from deer (*Cervus elaphus*), wild boar (*Sus scrofa*), rabbit (*Lepus europaeus*) and wild horse (*Equus caballus*). Analogies were made with other Cucuteni settlements where zooarchaeological analyzes were performed and in this case, the use of domestic animals is clearly superior in the animal economy. We also referred to some artifacts from bone, deer horn or shell that appeared during the excavations in 2019 (Pl. 1 / 1-4, 6).*

**Keywords:** *archaeozoological analyze; domestic animals; wild animals; animal economy; artifacts made of bone; horn and shell.*

Within this archaeological research a number of 484 faunal remains were identified and analyzed. All the faunal fragments identified come from mammals, and 88 out of the total fragments analyzed were classified as indeterminable residues (most of those residues are very small fragments that can not be placed in a particular species category). (Table 1)

The list of species is not a large one. In the category of domestic mammals, cattle (*Bos taurus*), pig (*Sus domesticus*) and ovicaprids (*Ovis aries*/*Capra hircus*) were identified. Also, osteological fragments from wild mammals were identified, being represented by red deer (*Cervus elaphus*), wild boar (*Sus scrofa*), rabbit (*Lepus europaeus*) and wild horse (*Equus caballus*). A majority of the identified osteological remains have characteristics of household waste: an increased fragmentation, traces of cutting, traces of carnivores (or rodents) and traces of combustion.

The fragments of domestic mammals are predominant with a percentage of 95.2% as NISP<sup>1</sup> (83.8% as MNI<sup>2</sup>). Of these, the most numerous being the pigs, which as a NISP have a percentage of 44.4% and 38.2% as MNI, followed by cattle with 42.9% as NISP (35.3% as MNI) and by ovicaprids with 7.8% as NISP (10.3% as MNI). Hunting is poorly represented as the number of debris and taxa, with a percentage of 4.8% as NISP (16,2% as MNI), and for this category of mammals the best represented is the deer, which forms a percentage of 2.8% as NISP and 7.4% as MNI. They are followed by wild boar with a percentage of 1.5% as NISP and 5.9% as MNI, and wild rabbits and wild horses have a percentage of 0.3% as NISP and 1.5% as MNI (Table 1). This distribution is similar to the one found in the Cucuteni settlement of Scânteia.<sup>3</sup>

In the case of domestic cattle, despite there were only few measurable osteological remains, the presence of mainly small cattles was observed, a fact noted in the case of other Cucuteni settlements, being a feature of this species in the area of Cucuteni culture. The cattles were not tall, but they had a larger meat mass. The age of slaughter of the cattle suggests that the animals that reached the maximum weight, between 2 and 4 years, and that are suppliers of good quality

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\* PhD student at Iași Institute of Archaeology; cristioprean2009@gmail.com.

<sup>1</sup> NISP – Number of Identified Specimens.

<sup>2</sup> MNI – Minimum Number of Individuals.

<sup>3</sup> MANTU, ȘTIRBU, BUZGAR 1995: 129-131.

meat are predominant. Such an exploitation of domestic cattle was also observed in the case of the Cucuteni settlement from Ghelăiești-*Nedeia*.<sup>4</sup>

At the present stage of the research, as number of remains and as minimum number of individuals, the difference between domestic beef and pig is not large (the pig being better represented). However, in the present situation, considering the size of cattle, much larger than that of pigs, we can say that animal protein needs of the community were primarily covered by cattle and then supplemented by pigs. Also, we cannot yet exclude the possibility of using this species in traction, although, so far, no specific pathologies have been identified on the bones, so that we can be able to support this hypothesis. But the use of this species in traction has been observed in other contemporary settlements,<sup>5</sup> which is why at this stage of the research we cannot exclude this possibility (probably future research will clarify this issue).

For domestic pigs, following the calculation of the dimensions, it was found that this species is represented by small animals, similar to the “*palustris*” type. This type of pig is well represented in other Cucuteni settlements.<sup>6</sup> From the slaughter ages point of view, the adult animals are the majority (around the age of 2 1/2 years), being identified a single individual with the age of 6-8 months. This preference for adult animals can also be explained by the fact that this type of pig (“*palustris*”) had a slower growth.<sup>7</sup>

Also in connection with the analysis of domestic swines, a pig skull was discovered in Pit B. A large part of the bones of the face (viscerocranium) were fragmentary, making it impossible to collect the skull in its anatomical form (Fig. 1.9). However, on the skull it was possible to make osteometric measurements<sup>8</sup> and determinations related to waist, age and sex. As a result of the measurements we noticed the dentition is small in dimension. For M3, a length of 25.2 mm was obtained (where the length normally ranges from 32-39 mm)<sup>9</sup> and M1-M3 with a length of 57.9 mm. The sex determination showed that this skull comes from a female. Age was determined based on dental wear and resulted in an animal about 2 1/2 years old.<sup>10</sup> Therefore, the data obtained from the osteometric analysis of this skull show that it comes from a small-sized gracile animal (the type “*palustris*”), being characteristic for the Cucutenian settlements.<sup>11</sup>

Of the domestic mammals, the ovicaprids are in the last place, being much weaker represented in comparison with the beef and the pig. Due to the small and very fragmentary number of debris from this species, a clear delimitation between the two species (sheep and goat) was not possible and details regarding the size of these animals could not be obtained. In terms of slaughter ages, animals over the age of 2 years predominate. This proves that these animals were kept for the entire economic life. Such a case was observed also in the settlement of Drăgușeni,<sup>12</sup> the main purpose of raising ovicaprids being not the consumption of meat, but the longer use of the products provided (milk, wool, etc.).

In the current state of research, we observe that hunting was a less important activity for the community (was practiced mainly for food purposes), focusing on the artiodactyla species such as red deer and wild boar. For these species it was not possible to determine the size or age of slaughtering the animals. The rabbit is very poorly represented being identified only one osteological fragment. Also, within the analyzed sample was identified a horse tooth (Fig. 1.7), which we placed in the category of wild mammals (because there is no evidence of the species being domestic). In the specialized literature it is mentioned that there was a domestication center on the Middle Dnieper,<sup>13</sup> and from this area the domestic horse has spread throughout the area of Cucuteni-Tripolye Culture (especially in its end phases), but the carriers of this culture were still unfamiliar with this animal, therefore being so rarely used.<sup>14</sup>

In this archaeological research, a series of bone pieces were discovered on the surface of which can be seen traces of the attempt to obtain different bone tools or ornaments. One of the most interesting objects is a pendant obtained from a bivalve shell (*mactridae* family) (Fig. 1.2). From the outside of the dwelling L3 was collected a bone crafted object, placed

<sup>4</sup> HAIMOVICI, STAN 1985: 693-694.

<sup>5</sup> BĂLĂȘESCU *et al.* 2006: 269-273.

<sup>6</sup> HAIMOVICI 1986: 79.

<sup>7</sup> HAIMOVICI, STAN 1985: 694.

<sup>8</sup> VON DEN DRIESCH 1976.

<sup>9</sup> EL SUSI 1998: 144-145.

<sup>10</sup> The data obtained for the slaughtering age show that the animal was slaughtered in November-December (being most likely an animal resulting from the spring farrowing of the specie) - after ERVYNCK 1997: 70.

<sup>11</sup> PETRESCU-DÎMBOVIȚA, VĂLEANU 2004: 310-312.

<sup>12</sup> BOLOMEY 1980: 104.

<sup>13</sup> BOESSNECK 1983: 118.

<sup>14</sup> HAIMOVICI, STAN 1985: 695.

in the category of tips with various utility, obtained from a long bone wall of a large animal (bovine or red deer) (Fig. 1.3). From pit B, two bone needles were collected, one being obtained from the wall of a long bone of a medium-sized animal (ovicaprid or roe deer), and the other was obtained from a bird's bone (Fig. 1.4). Traces of crafting were observed on the surface of a branch of a red deer horn (the usefulness of the piece is not clear, being probably part of the remains of a tool manufacturing process) (Fig. 1.6). And on the surface of an ovicapride astragalus were identified traces of polishing (the piece having the shape of a token) (Fig. 1.1).

The faunal material analyzed is not a large one, but represents the first archaeozoological data obtained regarding the animal economy of the Cucuteni settlement from Dobrovăț – Pădurea Buda. Based on this material it was possible to mention some details related to the animal husbandry in this settlement, but also, on a lesser extent, details related to the hunting practice by those prehistoric communities. We hope that the future archaeological researches of the settlement will complement the fauna sample towards a clearer understanding of the human relationship with the animal world within these communities.

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Archaeological structure Species	Level Dobrovăț I				Level Dobrovăț II				Dwelling L3				Dwelling L4				Pit B				TOTAL			
	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%
<i>Bos taurus</i>	92	51.7	10	41.7	20	33.3	4	36.4	29	50.9	4	33.3	23	26.1	4	23.5	6	46.2	2	50	170	42.9	24	35.3
<i>Ovis aries/Capra hircus</i>	14	7.9	3	12.5	7	12.3	2	16.7	10	11.4	2	11.8	10	11.4	2	11.8					31	7.8	7	10.3
<i>Sus domesticus</i>	69	38.8	8	33.3	35	58.3	5	45.5	20	35.1	5	41.7	45	51.1	6	35.3	7	53.8	2	50	176	44.4	26	38.2
Domestic mammals	175	98.3	21	87.5	55	91.7	9	81.8	56	98.2	11	91.7	78	88.6	12	70.6	13	100	4	100	377	95.2	57	83.8
<i>Cervus elaphus</i>					5	8.3	2	18.2	1	1.8	1	8.3	5	5.68	2	11.8					11	2.8	5	7.4
<i>Sus scrofa</i>	2	1.1	2	8.3									4	4.55	2	11.8					6	1.5	4	5.9
<i>Lepus europaeus</i>													1	1.14	1	5.9					1	0.3	1	1.5
<i>Equus caballus</i>	1	0.6	1	4.2																	1	0.3	1	1.5
Wild mammals	3	1.7	3	12.5	5	8.3	2	18.2	1	1.8	1	8.3	10	11.4	5	29.4					19	4.8	11	16.2
TOTAL DETERMINABLE	178	100	24	100	60	100	11	100	57	100	12	100	88	100	17	100	13	100	4	100	396	100	68	100
INDETERMINABLE	24				11				19				28				6				88			
TOTAL	202		24		71		14		76		12		116		17		19		4		484		68	

Table 1. Distribution of species as Number of Identified Specimens and Minimum Number of Individuals on archaeological levels and structures.



Pl. I. 1. Ovicaprids astragalus with traces of polishing; 2. Pendant obtained from a shell; 3. Bone crafted object representing a tip for various uses (obtained from a long bone of a large animal - bovine or roe deer); 4. Bone needles; 5. Phalangs I and II of *Bos Taurus* (domestic beef); 6. Piece with traces of processing obtained from a red deer horn; 7. Tooth of *Equus caballus* (horse); 8. Radius of *Ovis aries* (sheep); 9. The skull of a *Sus domesticus* (pig) from pit B.

