

THE STUDY OF THE ARCHAEOZOOLOGICAL MATERIAL FROM THE PRE-CUCUTENIAN SITE AT ANDRIEȘENI

BY

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The Andrieșeni site is placed near the homonymous village, in the Iași county, immediately south-east of the Botoșani county. From the geographical point of view, the site is placed east of the Jijia river, where it passes from the upper to the lower Jijia plain and where its water-meadows grow wider due to deposits and alluvial soils. At this level we can find forests of willow trees (*Salix sp.*) and poplars (*Populus sp.*), with salty soils in the vicinity.

The bone material discovered in the site belongs to the Pre-Cucuteni culture, which developed at the beginning of the Chalcolithic, about 4000 years ago.

463 mammalian fragments have been determined (table no.1), 72.79 % of them coming from four domesticated species (*Bos taurus*, *Capra hircus* and maybe *Ovis aries* and *Sus scrofa domesticus*) 26.35 % coming from five wild species (*Bos primigenius*, *Cervus elaphus*, *Capreolus capreolus*, *Sus scrofa ferus* and *Alces alces*) and 0.86 % coming from the horse (*Equus caballus*), about which we believe it was to be domesticated.

DOMESTICATED MAMMALS

Bos taurus, the species of highest frequency, with 333 fragments; the fragments coming from horned cattle are less numerous than the sum of all the other mammals.

The executed measurements indicate that the horned cattle have the same height as in the other Pre-Cucutenian sites¹; there is a very large individual variability due to the size differences between sexes (table nr. 2), but we cannot know if the male used to be gelded. Four very little horn fragments have been identified, but, unfortunately, neither could measurements be done, nor could sex be determined. As regards the slaughter age of horned cattle, the determined fragments belong only to adult and mature animals, the young being probably preserved.

The second domesticated species as frequency, ***Sus scrofa domesticus***, is represented only by two fragments, a radius superior epiphysis and a phalanx I. Measurements have been executed at the radius proximal end: superior epiphysis width = 31mm, anterior-posterior diameter = 21; the phalanx I belongs to a young individual, the superior epiphysis being non-epiphysed. As we do not have integer long bones, we cannot determine the pig's height.

¹ Haimovici S. Coroliuc A., *The study of the archaeozoological material founded in the pitno.26 of the precucuteni III settlement at Târgu Frumos – Baza Pătule*, in *Studia Antiqua et Archaeologica*, VII, Iași, 2000, p.170–206

A. Coroliuc, *Studiul arheozoologic al resturilor găsite în așezarea precucuteniană (faza a II-a) de la Isaiia – Balta Popii*, în *Carpica* XXX, 2001, p. 221–228

A. Coroliuc, *Studiul materialului arheozoologic provenit din așezarea precucuteniană de la Mândrișca, Valea Seacă (jud. Bacău)*, in *Carpica* XXXIV, 2005, p. 341–354

Ovicaprinae are represented only by two fragments: a horn fragment coming from *Capra hircus* and a thighbone fragment for which we could not do a specific determination, so we included it in the ovicaprinae group. The horn belongs to a female goat, which could not be measured due to its fragmentary aspect.

We can see that the domesticated mammals do not include fragments coming from the dog. It is known that during the Neolithic and the Chalcolithic, the dog has, generally, a very low frequency, usually 1–2 % of the bone material, if it is present in some settlements. We believe that if our material had been more abundant, the dog might have been represented by two–three fragments.

Equus caballus is relatively well represented at the beginning of the Chalcolithic (four fragments: a humeral bone fragment, a coxa, an astragal and a III phalanx), that is why the horse domestication appears to have started; measurements have been executed for the coxa (acetabular diameter = 71mm) and for the astragal (maximum width = 61mm; maximum diameter = 65 mm; auricular surface width = 53mm).

WILD MAMMALS

Cervus elaphus (red deer) is represented by 40 fragments, being placed second in frequency among the wild species (after the aurochs); the measurements (table nr. 3) indicate a relatively big height for the Andrieșeni red deer, with an obvious sexual dimorphism. The second individual, *Capreolus capreolus* (roe deer), has a much lower frequency.

There are 25 fragments coming from *Sus scrofa ferus*; all the wild boar fragments belong to adult and mature individuals. The executed measurements are presented in the table nr 4. We calculated a height of 1062,74mm based on a calcaneus's maximum length and Teichert coefficients.

Bos primigenius (the aurochs), the ancestor of the domesticated horned cattle, is represented by 52 fragments (table nr. 5), and it is the wild species with the most numerous fragments; it used to be common in all the Cucutenian settlements in Romania, and it preferred almost the same biotope like the roe deer.

The wild species of lowest frequency is the elk (*Alces alces*) with only one fragment, of an antler. Some other Pre-Cucutenian settlements in Moldova have been studied; the Andrieșeni site has a somewhat special position, as this antler (see photo), belonging to a relatively young male individual, was found in the archaeozoological material.

It is known that the elk is nowadays specific to the Northern Eurasia – to Russia and, in the West, to the Scandinavian Peninsula. It was known for the beauty of its antlers, and once it spread toward lower latitudes, being well represented in northern Ukraine and Poland. Its presence on the Moldavian territory proves that it used to be present in south-eastern areas, including today's eastern Romania. Certainly it was very rare, coming only by chance down to our country's territory. Its presence in Andrieșeni is due to the fact that the elk – a species specific to the wet forest with marshy areas, a habitat for which it is well adapted, as it has the hoofs wider than the other **red deer** representatives, in order to support its body on relatively soft and watery areas – found in the previously mentioned area a convenient biotope, which allowed its survival here, where it may have accidentally arrived during the winter migration from the North to the South.

So, we can consider the eastern border of today's Romania as the south-eastern limit of the elk's living area, as even nowadays, from time to time, once in many years, an elk individual has been identified on the Jijia, near Iași, or in the Danube Delta, where it could find a proper environment.

Taking into consideration the above-mentioned facts, we may say that the Pre-Cucutenian population of the settlement near Andrieșeni, used to have animal breeding as their main occupation, and they bred especially horned cattle, followed by pigs and ovicaprinae. The horned cattle are a polyvalent species, being bred for meat and maybe for milk, but, judging for the available material, we cannot prove their usage for traction; the wool of sheep might not have been used yet (or the *Ovis* wild gender had no real wool good for spinning, or for matting), but only their meat and milk. Pigs provided only meat and grease.

Hunting was secondary but well circumscribed activity, especially of the aurochs (*Bos primigenius*) and wild boar (*Sus scrofa ferus*), but also of deer (*Cervus elaphus* and *Capreolus capreolus*). As the horse was still wild, it also played a part in the hunting economy.

All the animals, either wild or domesticated, used to be slaughtered for meat and grease and also for horns, antlers, teeth, skins, bones and soft tissues. Many of the discovered long bones indicate removal of the nutritious marrow.

Unfortunately, although agriculture certainly was an important occupation at that time, our material cannot demonstrate it, and our study on the fauna fragments does not directly reflect the importance of that occupation.

Table 1

The repartition of species according to the number of fragments	nr	%
<i>Bos taurus</i>	333	71,92
<i>Ovicaprinae</i>	2	0,43
<i>Sus scrofa doemsticus</i>	2	0,43
<i>Equus caballus</i>	4	0,86
<i>Bos primigenius</i>	52	11,24
<i>Sus scrofa ferus</i>	25	5,40
<i>Cervus elaphus</i>	40	8,65
<i>Capreolus capreolus</i>	4	0,86
<i>Alces alces</i>	1	0,21

Table 2

Bos taurus The variability and the media of measurements

	Nr.	Average	variability
MANDIBLE			
M ₃ length	1	41	
SCAPULUM			
Greatest length of artic. head	–		
Artic. surface length	1	59	
Artic. surface breadth	1	43	
Width of colum	–		
HUMERUS			
Distal breadth	7	92,57	86–98
Distal artic. surface breadth	7	86,86	80–94
RADIUS			
Proximal breadth	3	94,67	93–97
Proximal artic. surface breadth	3	87,34	84–90
Proximal diameter	3	49,67	45–52
COXAL			
Acetabular diameter	3	76,34	73–80
THIGHBONE			
Thighbone head diameter	6	60,00	55–64
TIBIA			
Distal breadth	5	68,80	55–78
Distal artic. surface breadth	5	65,60	50–76
Distal diameter	5	51,80	42–60
METACARPUS			
Proximal breadth	2		71;76
Proximal diameter	2		40; 47
CENTROTARSUS			
Greatest length	4	67,25	54–77
TALUS			
Lateral greatest length	5	68,40	59–76
Distal breadth	5	43,20	36–45
PHALANX I			
Greatest length	7	66,42	54–78
Proximal breadth	7	33,14	26–39
Distal breadth	7	31,28	25–38
Smallest diaphysis	7	30,57	23–36
PHALANX II			
Greatest length	2		53;54
Proximal breadth	2		38,43
Smallest diaphysis	2		29,33

Table 3

Cervus elaphus The variability and the media of measurements

	Nr.	Average	variability
SCAPULUM			
Greatest length of artic. head	2		60,72
Artic. surface length	2		46,52
Artic. surface breadth	3	50,34	44–58
Width of colum	2		43;48
HUMERUS			
Distal breadth	2		63;67
Distal diameter	2		61;62
Distal artic. surface breadth	3	60,67	58–65
RADIUS			
Proximal breadth	1		68
Proximal artic. surface breadth	1		65
Proximal diameter	1		36
METACARPUS			
Distal breadth	1		49
Distal diameter	1		34
THIGHBONE			
Distal breadth	4	59.00	57–61
Distal diameter	4	81.50	80–85
TIBIA			
Proximal breadth	1		80
Proximal diameter	1		79
Distal breadth	3	54,00	51–57
Distal artic. surface breadth	3	52,67	50–56
Distal diameter	3	43,00	41–44
TALUS			
Lateral greatest length	1		64
Distal breadth	1		43
CALCANEUS			
Greatest length	1		136
Greatest breadth	1		44

Table 4

Sus scrofa ferus The variability and the media of measurements

	Nr.	Average	variability
MANDIBLE			
M ₃ length	1		52
SCAPULUM			
Greatest length of artic head	1		50
Artic. surface length	1		45
Artic. surface breadth	1		36
Width of colum	1		36
HUMERUS			
Distal breadth	4	55,75	52–61
Distal diameter	4	51,25	47–58
Distal artic. surface breadth	4	42,00	32–47
RADIUS			
Proximal artic. surface breadth	1		51
Proximal diameter	1		39
Distal breadth	2		52;50

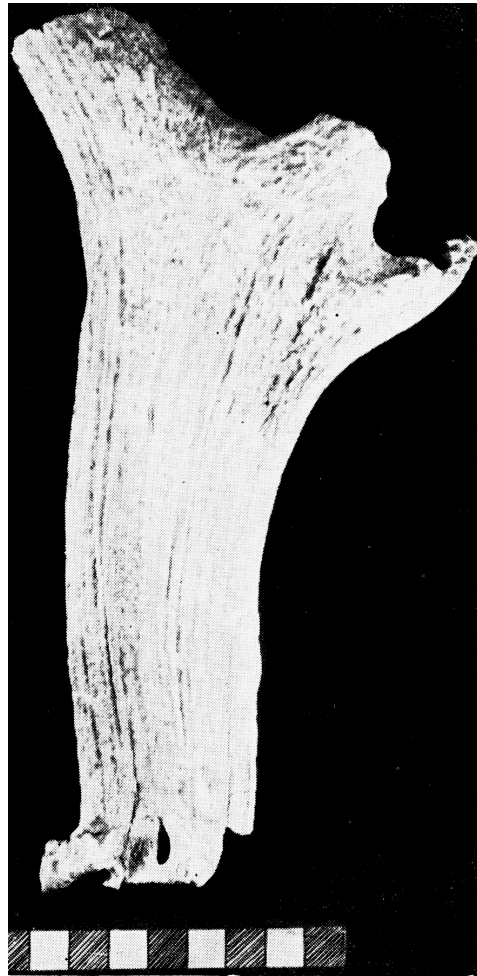
Table 4 (continued)

Distal diameter	2		38;37
COXAL			
Acetabular diameter	3	49,34	48–52
THIGHBONE			
Thighbone head diameter	1		37
TIBIA			
Distal breadth	2		38;38
Distal artic. surface breadth	2		37;36
Distal diameter	2		35;35
CALCANEUS			
Greatest length	1		111
Greatest breadth	1		32

Table 5

Bos primigenius The variability and the media of measurements

	Nr.	Average	variability
MANDIBLE			
M ₃ length	1		43
SCAPULUM			
Greatest length of artic head	5	83,20	80–90
Artic. surface length	5	71,40	69–76
Artic. surface breadth	5	58,00	55–62
Width of colum	4	67,75	63–72
HUMERUS			
Distal breadth	4	115,75	109–120
Distal diameter	2		101;108
Distal artic. surface breadth	4	105,75	101–110
RADIUS			
Proximal breadth	4	106,50	100–113
Proximal artic. surface breadth	4	99,50	91–105
Proximal diameter	4	52,50	47–57
METACARPUS			
Distal breadth	2		71;71
Distal diameter	2		41;45
COXAL			
Acetabular diameter	4	93,75	93–95
TIBIA			
Proximal breadth	1		121020
Proximal diameter	1		88
Distal breadth	1		79
Distal artic. surface breadth	1		72
Distal diameter	1		
CENTROTARSUS			
Greatest length	1		82
TALUS			
Lateral greatest length	8	85,37	82–90
Distal breadth	8	53,37	52–62
PHALANX I			
Greatest length	3	82,00	80–85
Proximal breadth	3	41,67	42–43
Distal breadth	3	36,67	36–38
Smallest diaphysis	3	34,67	33–37



Alces alces: antler

Translated by Monica Popa