New Data on Livestock and Hunting in the Settlement Vinča A3-B1 (Level IIb) at Miercurea Sibiului – "Petriş", Sibiu County

Georgeta El Susi[1]
getasusi@yahoo.com

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Summary: *We do not insist on bio-geographical location of the site, it is included in numerous articles. So far there have been published faunal samples from the level I, corresponding to Starčevo-Criş Culture*[2] *and level IIa, referring to Vinča A2-3*[3]*. This study aims to present the faunal remains from the level IIb, equivalent to Vinča A3-B1*[4]*, in order to ensure continuity in terms of paleoeconomy. The 1,174 bones were collected during 2000-2008 campaigns, they originate only in mammals. In addition to the 892 bones with definite assignment to five domestic and seven wild taxa, 282 fragments were partially determined. 45 ribs may belong to cattle or red deer, 79 are waste from small-sized mammals and 158 bones are from large-sized species, bovines, red deer (Table 1). The bones are quite well preserved, without signs of burning or cutting. Four ends of bones show signs of gnawing, mostly in sub-adults. As is common for Neolithic sites*[5] *there are few complete bones, no complete skeletons, few bones attributable to the same skeleton. We note a single case of articulated bones. It is a metacarpal articulated with carpals, all of them from B. (dwelling) 22. About 30% of bones were collected from four houses and an oven closed to one of them, but most come from the culture layer.*

1. Distribution of bones within dwellings

A3-B1 stage is evidenced between 6350 and 6200 BP, the surface dwelling levels from Miercurea Sibiului-Petriş (level IIb) belonging to the end of this stage[6] Dwelling – L. 3 was partially recovered in S. I[7] provided three bones of cattle and two of red deer. The dwelling/platform – L. 11 located in S. II was fully excavated, about 271

Table 1 – Distribution of bones in level IIb at Miercurea Sibiului

Complex	L3	L. 11	L.13-14	B. 22	Oven 3	Layer	NISP	%	MNI	%
Bos taurus	3	129	33	77	2	284	528	59.19	25	29.41
Ovis/Capra		13	4	34	4	75	130	14.57	17	20
Sus s. domesticus		38	2	7	2	40	89	9.98	13	15.29
Canis familiaris				2	1	2	5	0.56	3	3.53

[1] **El Susi Georgeta**, arheozoolog, C.Ş.II, Institutul de Arheologie „Vasile Pârvan", Bucureşti.
[2] El Susi 2011a, p. 47-56.
[3] *Idem* 2011b, p. 17-47.
[4] Luca, Diaconescu, Suciu 2008, p. 7.
[5] Dimitrijević 2006, p. 245.
[6] Suciu 2009, 306.
[7] *Ibidem*, p. 123.

Domestic taxa	**3**	**180**	**39**	**120**	**9**	**401**	**752**	**84.3**	**58**	**68.23**
Cervus elaphus	2	24	5	6	1	36	74	8.3	11	12.94
Bos primigenius		6	1	3		17	27	3.03	5	5.88
Capreolus c.		7		1	2	10	20	2.24	4	4.71
Sus s. ferrus		4	1	2		9	16	1.79	4	4.71
Lynx lynx		1					1	0.11	1	1.17
Meles meles		1					1	0.11	1	1.17
Lepus sp.						1	1	0.11	1	1.17
Wild taxa	**2**	**43**	**7**	**12**	**3**	**73**	**140**	**15.7**	**27**	**31.76**
Identified	5	223	46	132	12	474	892	100	85	100
Big-sized frgm.		35	12	30		81	158			
Small-sized frgm.				40		39	79			
Ribs Bos/Cervus		13				32	45			
T O T A L	**5**	**271**	**58**	**202**	**12**	**626**	**1,174**			

remainders being collected. Cattle prevail by nearly 60%, followed by pig with 17.4% and red deer with 10%. Other species recorded less than 5% (Fig. 1). Distribution of cattle bones (Fig. 2) shows a slightly higher density of elements from distal part of the legs, namely phalanges, metapodials, lower teeth as well. Perhaps the large parts of the skeleton would have been thrown into garbage pits or elsewhere, after cleaning complex, reaching the deposit only smaller items. 129 bones are from at least seven cattle, aged five-six months (one), three-four years (two) and over four years (four individuals). Thirty-eight pig bones, mostly derived from skull and proximal parts of the forelimb (Fig. 3), from at least six animals, aged five-seven months (two individuals), 12-14 months (one), two-three years (two), mature and advanced (one). A metacarpal of 122 mm suggesting a withers' height of 122.4 cm was found.

Table 2- Cattle bones distribution in level IIb

Bone	**L3**	**L11**	**L13**	**B22**	**Oven 3**	**Layer**	**Total**	**%NISP**
Skull		7		8		11	26	4.92
Maxilla+teeth		6	3	2		12	23	4.36
Mandibula+teeth	1	9	6	10		35	61	11.55
Scapula		7	2	1		10	20	3.79
Humerus		8		3		26	37	7.01
Radius	1	8	2	4		11	26	4.92
Ulna	0	0	0			3	3	0.57
Metacarpus		8	1	7		20	36	6.82
Ossa metacarpi		4		1		6	11	2.08
Pelvis		6	3	4		8	21	3.98
Sacrum						1	1	0.19
Femur	1	6		3	1	7	18	3.41
Tibia		5	2	2		14	23	4.36
Patela				1		1	2	0.38

Bone	L3	L11	L13	B22	Oven 3	Layer	Total	%NISP
Astragalus		3	1	2		10	16	3.03
Calcaneus		4	2			6	12	2.27
Centroquartal			1			4	5	0.95
Metatarsus		13	1	5		22	41	7.77
Metapodials		9		4		9	22	4.17
Phalanges		14	8	4		34	60	11.35
Ribs		5		11	1	15	32	6.06
Vertebra		7	1	5		19	32	6.06
Total	**3**	**129**	**33**	**77**	**2**	**284**	**528**	**100**

It is a value of a female according shaft index (15.02). Thirteen remainders originate from a goat and a ram, three years old (distal radius, with sutures visible). With twenty-four bones meaning 10.76% red deer prevails in the wild mammals. The fragments of the head are better represented, the sample originating in one subadult and two adults. Seven roe deer bones from one adult and one juvenile and six aurochs bones from at least two adult individuals were also collected. Four bones belong to an adult boar. An ulna comes from lynx, and a fragment from the hip of a badger. The platform including L. 13 and L. 14, provided several bones, only the sixth part of the structure being investigated S. I[8]. Of fifty-eight animal bones spread between the platform stones, about 58% (thirty-three fragments) derived from cattle. We note again a majority share of teeth, phalanges, metatarsal bones meaning smaller items "scattered" among the other remnants of the stone platform (Fig. 2). At least four animals of 16-18 months, two-three years, and three-four years old and above have provided the sample. Four bones come from a goat in three-four years, and two from a sub-adult pig. Seven remainders of red deer, one from wild boar and one from aurochs completes the sample from that location. The dwelling - B. 22 appears as an oval pit with almost vertical walls. Pillar circular pits were found on the side of this complex, indicating a relatively light covering structure. By researching this complex was found an installation of fire appliances - oven C3 closed to that house[9]. Of sixty-one collected bones, thirty-six remains are also from cattle, among them vertebrae, metapodials and skull elements prevailing. Bones originate in a juvenile and three adults. One of them is a male, with a height of 126.8 cm based on a metacarpal of 200.3 mm, shaft index-18.22. Eight bones come from a ewe with a waist of 53.1 cm and a ram. A horn core belongs to the second individual (sizing in Annex). From a pig, aged over one year, come a proximal radius, a scapula and a rib. A broken bone in the frontal region of a dog completes domestic species group. A horn core and a distal metacarpus with Bd/ Dd - 69.5/43.4 mm were collected from the bottom of pit house. They originate maybe in an aurochs female. Twelve bones from at least seven taxa collected from the oven no 3. A snout portion of a dog was also found. Hypothetically, the rest of the frontal skull dog, found in B. 22 could come from the same individual who provided the mandible in the oven 3. If we consider the layer distribution of bones, 37% is the share of the distal limb elements,

[8] Suciu 2009, p. 130.
[9] Luca *et alii* 2007.

parts no food value, about 18% those of the skull and 30% of the fleshy part of the limbs. Perhaps these items will have been spread by movements in the level (Fig. 3).

2. Kill-off patterns

In terms of cattle management the data are as follows. According to fusing bones we find that, the survival rate is 75% up to one year, then decreased to 66% at two years and, around three-four years is placed at 62.5%. Statistics suggest a major share of bones from animals that have reached the adult stage and few young and sub-adults. Data on teeth confirm the mentioned- results. Specifically the survival rate is 92% up to six months, and then it is reduced to 88% at one year, it is 76% at two years and reaches 52% up to three-years (Fig. 4).

Table 3 – Cattle age estimation according dentition

Context	Element	L/R	Pd4/P4	M1	M2	M3	Age (months)
MANDIBULA/MWS							
L3/	M3	l				h	36+
Layer	M3	l				e	36+
Layer	M3	l				½	24-30
Layer	M3	l				l	36+
Layer	M3	l				l	36+
Layer	M3	l				k	36+
Layer	M3	r				c	24-36
Layer	M3	r				k	36+
Layer	M3	r				e	36+
L11/	M3	r				k	36+
L11/	M3	r				j	36+
L11/	M3	r				f	36+
L13/	M3	r				l	36+
Layer	M3	r				E	24-30
Layer	Mandibula	l			c	V	18-24
L11/	Mandibula	l	/c	j	g	f	36+
L11/	Mandibula	r		½			5-6
B22/	Mandibula	r		a			5-6
B22/	Mandibula	r			b	C	18-24
Layer	Mandibula	r	l/		a		18-24
B22/	Mandibula	r		h	j	k	36+
B22/	Mandibula	r		h	k	k	36+
MAXILLA							
Layer	M2	l				very worn	mature
L11/	M2	l				very worn	senile
Layer	M2	r			erupted	in crypt	18-22
L13/	M2	r			just erupted		16-18
B22/	M3	l				erupting	24-26

Context	Element	L/R	Pd4/P4	M1	M2	M3	Age (months)
L11/	M3	l				C3 not worn	30-32
L11/	M3	l				erupting	24-30
Layer	M3	l				C3 not worn	30-32
Layer	M3	l				erupting	28-30
Layer	M3	l				erupting	28-30
L11/	M3	r				erupting	24-30
Layer	M3	r				erupting	26-28
Layer	M3	r				very worn	senile
Layer	Maxilla	l				very worn	senile
Layer	Maxilla	l		erupting			5-7

According to dentition were assessed twenty-five individuals, of which 12% reached a year, as between 1-2 years, 36% up to 4 years and 40% over. The latter category includes mostly individuals kept by advanced age; there are even specimens with teeth much eroded. So, beef from immature specimens (2-4 years and fewer calves) was mainly used, dairy products as well. In the goats, there are bones of two individuals slaughtered between 2-3 and 4-6 years. Nine individuals are sheep. On dentition was established that, of seventeen individuals 20.17% is culled up to six months and 15.13% between six months and one year.

Table 4 – Sheep/goat age estimation according dentition

Context	Element	L/R	Pd4/P4	M1	M2	M3	Age	Payne MWS
B22/ sheep	M2	r			½		6-12 m	C
L11/sheep	M3	l				U	22-24 m	D
Layer/sheep	M3	l				b	22-24 m	D
Layer/sheep	M3	l				E	22-24 m	D
B22/sheep	Mandibula	l				½	22-24 m	D
B22/sheep	Mandibula	l				U	6-12 m	C
Layer/goat	Mandibula	l		g	e	d	24-36 m	E
Layer/sheep	Mandibula	l	/h	k	g	h	5-6 years	G
Layer/sheep	Mandibula	l		g	d	b	22-24 m	D
Layer/sheep	Mandibula	l				a	2-6 months	B
B22/goat	Mandibula	r			h	g	4-6 y	G
B22/sheep	Mandibula	r				E	22-24 m	D
B22/sheep	Mandibula	r	a/				0-2 m	A
Layer/sheep	Mandibula	r		l	h	g	4-6 y	G
Layer/sheep	Mandibula	r		j	g	f	4-6 y	G
Layer/sheep	Mandibula	r	U/				1 m	A
Layer/sheep	Mandibula	r				½	22-24 m	D
Layer/sheep	Mandibula	r				b	2-6 m	B
Layer/sheep	Mandibula	r				½	6-12 m	C
B22/	Mandibula	d		m	k	j	6-8 y	H

In case of individuals one-two years old, slaughtering is focused on the time span 22-24 months (29.41%). Few slaughters evidenced between two-four years, amounting to 6%. 23.53% is recorded between four-six years and 6% between six-eight years (Fig. 5). On a part, the exploitation focused on young and sub-adult category suggests mutton obtaining, meaning about 65% of individuals. On the other hand, about one third of specimens were exploited for many years, primarily for dairy products and breeding. The slaughtering season was established in case of eleven animals. According them, most of killings were starting from late fall, continuing during winter and early spring. In the warm season few exemplars were culled. It can therefore speak about a permanent dwelling, in winter as well, as in case of B 22. On the other hand, intensive exploitation in winter may suggest insufficient feeding reserves. The absence of slaughtering in the summer might suggest some movement of the flock, so a kind of transhumance. Or simply a preservation of the lambs, for breeding flock. Regarding the pig exploitation, the large number of jaws has led to appreciation of thirteen individuals. According to age-class distribution, 15.38% is killed up to six months and only 7.7% up to one year. Maximum cut off recorded between one-two years, about 54%, then the percentage decreasing to 23%. There is only one individual with much eroded dentition, probably a breeding animal. Regarding red deer hunting, there is a prevalence of adult and matures, about 60%, compared to 40% share of immature exemplars. If aurochs of five individuals, one is sub-adult, one is between three-four years and the rest beyond this limit. We note in case of roe deer two adult and two sub-adults. As for wild boar, there is an immature specimen and three reaching maturity. So, we might suggest a deliberate hunting of adult specimens.

3. Metric evaluations

Related to cattle cephalic skeleton, it is worth mentioning a female horn-core oval-shaped and GD/ SD/ base circumference of 55.1/ 46.6/ 158.2 mm, collected from the layer. Another piece has a base diameter of almost 80 mm. The core is damaged and it comes from a domestic bull. Appreciation is supported by the fact that, in the same complex - B 22 and at the same depth a metacarpus with GL- 200.3 mm, providing a withers' height of 126.8 cm was found. In Fig. 9 is well-observed the association between bones. Another piece with large diameter/ low of 88/ 71.5 mm (Fig. 11) may suggest a wild female. Outer curvature length is about 408 mm. The piece is slightly arched in front, twisted inward and upward, with deep grooves. A portion of the intercornual ridge is also preserved. It has an ascendant way and then flattened. It has common characters to "primigenius" type. So far, based on data from Vinča A-B sites in the Banat and Transylvania (Fig. 6), range of cattle horn-cores variation have been established: according them, the large diameter and the small diameter vary between 48-80 mm/ 35-65 mm. Those of aurochs are clearly separated from cattle. Dentition of cattle is massive, prevailing large data. Specifically, the length of the M3 shows a variation of 34 to 40.7 mm, averaging 39 mm in the level IIb at Miercurea Sibiului. In general, the measurements from Transylvanian site fall within the range size (Fig. 6) of Vinča A-B settlements or their analogues (see Parța-tell 1 – levels 7/a-c). As above mentioned, withers' heights of 122.4 and 126.8 cm were supposed. In both cases the sexual dimorphism is well expressed. Obviously, the two values do not entirely cover the range size of heights at the withers, larger dimensions may also exist. To remember

that a value of 116.9 cm was also estimated at Miercurea Sibiului, in the level IIa[10]. An average of 126.07 cm (122.8-129.2 cm) was found in case of Gornea sample[11]. Several complete metapodii from cattle were identified at Parța - level 7/a-c equivalent to Vinča A[12]. According them, values of 123.2 cm for females, 127-128 cm for males and 133.8 cm for geldings were supposed[13]. As the 6a level analogous to Vinca A_3-B_1[14] there are no specifications over this parameter. Bones' width measurements show also large-sized cattle with more than 1.20 m height at the withers. Exemplify by metacarpal and talus scatter diagrams on Fig. 7. Such exemplars are common in the area of Vinča settlements[15] outside the territory in question.

A robust horn from buck, slightly arched, flat-convex, with very sharp leading edge and rounded the poster comes from the cultural layer. It belongs to "aegagrus" type according its morphology. GD/SD is 68.7/44.5 mm, 195 mm preserved from its original length (Fig. 12). A goat metacarpus of B. 22 with GL 99.7 mm allowed an estimation of 57.32 mm, a reduced value even for the time. In the levels 7 b-c at Parța, we have also low values of 55.4 cm, 56.6 cm and 58 cm[16]. In contrast, an increased one of 71.3 cm was found at Gornea[17]. Concerning the morphology of ram horns, there are two incomplete pieces, of small-sized, with sharp nucal and frontal edges, rounded the third; two flat sides, convex the third. Diagram of GD versus SD suggests, on the one hand, a diversified morphology of male horns, and a wide variation, on the other. For example, a specimen with diameters of 52/22 is strongly flattened, the triangular shape weakly perceptible. A ewe with "goat type" horn appears on the diagram in Fig. 8; it is 26/22 mm in diameters and originates from Tărtăria-Vinča sample[18]. Overall the dimensions fall within the medium-size variation. A single massive horn (diameters of 69.5/ 50 mm) the Parța sanctuary[19] make specific note, from all other Vinča sites. I have given this example, to draw the upper limit of the variation in the Neolithic of the Banat by now, even if the piece comes from a later level. On the horns of females, we identified at Miercurea Sibiului a piece of acorn front, with only two knobs instead of horns. Based on a metacarpus, with GL 108.6 mm from B. 22 was estimated a value of 53.1 cm (Fig. 10). Thus there were sheep less high than goats. Value of 53.1 cm is part of the lower range of variation, the species reached at that time. For instance a value of 51.66 cm was estimated at Miercurea Sibiului, in the IIa. A variation of 56.6 - 63.9 cm was found at Gornea and 55.4 - 58 cm at Parța. By and large, the goats were more robust than sheep, though belonging to the same value range. On the suids, pig measurements clearly distinguish from those of wild boar; the few data suggest small pig specimens. A withers' height of 65.5cm provided the pig sample from L. 11. Similar or slightly

[10] El Susi 2011b, p. 19.
[11] *Idem*, p. 111.
[12] Lazarovici, Lazarovici 2006, Fig. IIIb.4b, p. 212.
[13] El Susi 1995, p. 28.
[14] Lazarovici-Mantu, Lazarovici 2006, p. 212.
[15] Orton 2008, p. 136-140.
[16] El Susi 1995, p. 32.
[17] *Idem* 1996, p. 295.
[18] Bindea 2008, p. 410.
[19] Bolomey 1988, p. 214.

higher values recorded in Gornea[20] (68-76, average 65.2 cm), Liubcova (76.5 cm) and Parța (57-75 cm, average 68 22 cm). A dog mandible harvested from B 22 has a length of teeth row of 67.3 mm. The Dahr length of 151.2 suggests a medium-sized individual. In this case M_1 is 22 mm and P_1 and P_2 are straddled. Another M_1 is 19.5 mm. A fragment of mandible (P_1-P_4 - 34.4 mm) was gathered inside the oven no. 3. There are no bones to calculate the height, but based on dentition it is assumed small to medium-sized animals. About eating dog cannot say anything, indeed the jaw remains are broken but not evidenced of its consumption. Red deer and roe deer material offered little metric data; they fit into the range of variation of species in the epoch. On a talus from boar was considered a waist size of 98.96 cm. Measurements of aurochs belong to the field of female variation, if referring to some existing data[21].

4. About percentage ratios

A look at the frequency of managed species in the settlement highlights the following aspects: the prevalence of cattle in meat supplying and by-products. As fragments they reach 59.19% (Fig. 9), followed by ovicaprids with 14.57% and pig with 9.98%. Dog has a little contribution, about 0.56%. Overall, domestic taxa account for 84.3%. Of the 15.7% provided by hunting, red deer gives 8.3%, 3% aurochs, roe deer 2.24% and 1.79% boar. Occasionally, hare and some carnivores as badger, lynx were caught. Their share is placed under 1%. The presence of lynx, a taxon adapted to wooded areas, highlights the broad distribution of the taxon during Prehistory, also in the low altitude forests (300-500 m). Currently it is rarely met in the high hills, its area being limited to the south-west of the Sibiu County, in the mountains Cindrel (Posea et al 1982, p. 696-697). On a part, the hunting was focused on meat supplying, but then on the production of leather, fur and raw materials for manufacturing. Analysis of horn and bone tools[22] shows the existence of a wide variety of tools obtained from wild species.

Grouping wild taxa depending on their biotope requirements, species adapted to a slightly wooded biotope represent about 10% (red deer, boar, lynx), up against 5%, the share of those adapted to steppe area (roe deer, aurochs, hare). Taking into account the MNI evaluation, there are some differences from the NISP assessment, as an effect of the share of different skeletal elements. It seems that in our case, the cattle are "disadvantaged" compared to small taxa, the latter being represented by numerous jaw bones, mainly in dwellings. Explicitly, cattle total only 30% as MNI versus 60% as NISP; suids rank the second by 15% (MNI) versus 10% (NISP) and small ruminants 20% (MNI) versus 14.5% (NISP). So pigs and small ruminants win in frequency by MNI evaluation. Red deer reaches more, about 13% versus 8.3% (NISP) and the boar, nearly 6%. The hunted mammals get to a significant quota, 32%. For comparison with other faunal assemblages we used the NISP estimation. In our case, the data from level II b did not significantly differ from those of the previous level (II a). To mention only an increase of 3% in cattle share, a declining of sheep/ goat frequency by the same percentage. Pigs increases by 4%.

[20] El Susi 1996, p. 125.
[21] Kyselý 2008, p. 20.
[22] Beldiman, Sztancs 2007; Suciu 2009, p. 218-220.

Table 5 - Species frequencies in Vinca A-B settlements (NISP)

Site	**MS-IIa**	**MS-IIb**	**Tărtăria**	**Parța-tell 1**	**Liubcova**
Culture	*Vinča A2-3*	*Vinča A3-B1*	*Vinča B*	*Banat Culture*	*Vinča A-B*
Bos taurus	56.14	59.19	76.42	29.74	34.16
Ovis/Capra	17.82	14.57	6.42	6.89	11.55
Sus s. domesticus	5.71	9.98	5.71	8.69	6.01
Canis familiaris	0.5	0.56	1.42	0.28	1.24
Cervus elaphus	13.11	8.3	5	33.44	24.43
Bos primigenius	1.85	3.03	1.42	1.48	2.67
Capreolus c.	3.02	2.24	2.85	5.18	2.96
Sus s. ferrus	1.51	1.79		14.06	13.55
Other sp.	0.34	0.33	0.76	0.24	9.35
Wild taxa	**19.83**	**15.7**	**10.03**	**54.4**	**47.04**
Domestic taxa	**80.17**	**84.3**	**89.97**	**45.6**	**52.96**
Total sample	749	1,174	148	2,162	1,048

In terms of hunting, about the same species are captured, in fact common in local wildlife: red deer, roe deer, wild boar, aurochs and hare. The game is 5% lower in level IIb compared to the previous one, consequence of the increasing share of domestic segment. The only sample, belonging to this time span in S-W Transylvania comes from Turdaş- Vinča B level (Bindea 2008, p. 68-69). Unfortunately the 148 bones offer little information, however it is worth mentioning the largest share of cattle - 76.42%, pig and ovicaprids summing only 5-6%. Comparisons with data from Parța-tell 7/b-c levels (the Plain Banat) show no similarities in any case. Specifically the cattle do not exceed 30%, ovicaprids and pig reach up 7-9%. In contrast, red deer reaches about 33%; by and large the game exceeds the rate of domestic mammals, being at 54%. It is an economic model that does not "fit" with what we have in the settlements in south-eastern Transylvania. It is something different in terms of animal husbandry. To some extent, the level Vinča A-B from Liubcova-Ornița seems to approach to "economic pattern" from Miercurea Sibiului by the prevalence of bovines (not exceeding 35%). In contrast small ruminants do not exceed 1.5% and pig is insignificant in food (although living conditions in the Danube Valley facilitated an easy management). Hunting was focused on exploitation of red deer and wild boar, both taxa widespread on the terraces of the river that time, reaching 47%.

Rezumat

Acest articol se referă la rezultatele analizei a 1174 oase prelevate din nivelul IIb, echivalent cu Vinča A3-B1. Potrivit statisticilor bovinele prevalează cu cele 59,19%, urmate de ovicaprine cu 14,57% şi suine cu 9,98%. Resturile canidelor sunt puține, însumând 0,56%. Per ansamblu, taxonii domestici însumează 84,3%. Dintre cele 15,7%, rata vânatului, cerbul reprezintă 9,3%, bourul 3%, căpriorul 2,24% şi mistrețul 1,79%. Ocazional se vâna iepurele, râsul. Rata lor se plasează sub 1%. Datele metrice

ale vitelor se încadrează în domeniul de variație al speciei pe pentru aşezări Vinča A-B sau cele aflate la acelaşi palier cronologic. Înălțimi la greabăn de 124,2 cm şi 126,8 cm au fost estimate în cazul vitei domestice, existând, evident şi valori mai mari. Pentru un individ caprin s-a estimat o talie de 57,32 cm, valoare mică pentru epocă. Pentru o femelă de ovine s-a estimat o talie de 53,1 cm, valoare normală pentru acele vremi. În cazul suinelor, dimensionările speciei domestice se detaşează de cele ale mistrețului; puținele dimensionări sugerează exemplare mici şi gracile. De pildă pe baza unui mc. IV s-a estimat o înălțime de 65,5 cm.

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Measurements

Horn cores

Context	Taxon	GL	Gd	Sd	Circonf.
Layer	Cattle		55.1	46.6	158.2
B. 22	Cattle		79.8		
B. 22	Aurochs	408	88	71.5	255
Layer	Goat	195	68.7	44.5	174
B. 22	Sheep		46.9	34.6	
L. 11	Sheep		48.5	31	

Mandibula

Context	Taxon	P2-M3	M1-M3	LM3/M1
L. 13	Cattle			34
L. 11	Cattle			37.5
L. 11	Cattle			38.5
Layer	Cattle			39.3
L. 11	Cattle			39.5
Layer	Cattle			40.1
Layer	Cattle			40.1
Layer	Cattle		90.5	40.1
B. 22	Cattle			40.3
B. 22	Cattle			40.7
Layer	Aurochs			42
B. 22	Dog	67.3	34.6	21.8
Layer	Dog			19.5
Layer	Sheep	67.2	46.7	23.3
Layer	Sheep			23.3

Maxilla

Context	Taxon	M1-M3	LM3
L. 11	Cattle		29.5
Layer	Cattle		30.2
Layer	Cattle		33.2
Layer	Cattle		31
L. 11	Sheep		17
Layer	Pig		24.5

Atlas

Context	Taxon	GL	BFcr
B. 22	Cattle		79
Layer	Cattle		78.2

Axis

Layer	Sheep			22.8
Layer	Ovicaprid		46.5	21.4
L. 11	Roe deer	42.5		17

Context	Taxon	BFcr
L. 11	Cattle	88
Layer	Sheep	27

Scapula

Context	Taxon	SLC	GLP	LG
L. 11	Cattle	59.5		
L. 11	Cattle		67.5	
L. 11	Cattle	55	70	52
L. 11	Cattle	52.5		
L. 11	Cattle	50.5		
L. 11	Cattle		72.5	59.5
Layer	Cattle		75.5	64.5
B. 22	Sheep	21.6	35.2	27.8
Layer	Sheep	21.2	32.6	24.9
B. 22	Pig	21		
L. 11	Pig	21.5		
L. 14	Boar	26.5		
Layer	Red deer	34		
L. 11	Red deer	43	66	54

Calcaneus

Context	Taxon	GL	GB
Layer	Cattle	137.2	46.5
Layer	Cattle	139.8	48.6
L. 11	Cattle	157.5	60.5
Layer	Sheep	66.1	21.8
Layer	Sheep	67.3	18.9
Layer	Red deer	129.5	

Centroquartal

Context	Taxon	GL
L. 14	Cattle	66

Humerus

Context	Taxon	BT	Bd	Dd
Layer	Cattle	73.1	81.7	78
B. 22	Cattle	73.2	77.1	
L. 11	Cattle	74.5	81.5	82
Layer	Cattle	74.7	80	
L. 11	Goat	30.5	31	28
Layer	Pig			36.2
Layer	Pig	27.8	34.4	36.6
L. 11	Pig	28.5	38.5	35
L. 11	Pig	32		
B. 22	Boar			54.4
L. 11	Boar	38	49	48
L. 11	Red deer		56.4	58.5
Layer	Roe deer		29	

Pelvis

Context	Taxon	LA
Layer	Cattle	56.2
B. 22	Cattle	61.8
Layer	Cattle	64.3
Layer	Bos	77
B. 22	Bos	79.8
L. 11	Pig	28
L. 11	Pig	29.1
Layer	Pig	31

Radius

Context	Taxon	BFP	Bp	Dp
Layer	Cattle	71.3	75	38.5
B. 22	Cattle	79.3	87.7	
L. 11	Cattle	79.5		
Layer	Cattle	83		45
B. 22	Cattle	84.2		46.7
B. 22	Cattle			37
B. 22	Cattle			39.8

Bd	Dd

L3	Cattle			47			
Layer	Cattle			47.3			
Layer	Cattle			49.8			
Layer	Cattle			52			
Layer	Aurochs			57.9			
L. 14	Goat				28.5	16.5	
Layer	Sheep	25.8	29.1	14.1			
Layer	Sheep	28.8	30.3	15.3			
B. 22	Sheep				25	16.6	
L. 11	Sheep				25.5		
Layer	Goat				26.7	12.9	
Oven 3	Red deer	54.6	56.5	28.5			
Layer	Roe deer		28	16.3			

Metacarpus

Context	**Taxon**	**GL**	**Bp**	**Dp**	**Sd**	**Bd**	**Dd**
L. 11	Cattle		57.5	33.5			
L. 11	Cattle	203	58.5	35	30.5	61.5	34
L. 11	Cattle		58.5	35			
Layer	Cattle		59	41			
L. 14	Cattle		60.5	36			
B. 22	Cattle	200.3	64.2	39	36.4	65.1	34.7
Layer	Cattle		65.7	37.5			
B. 22	Cattle		66.6	37.3			
Layer	Cattle		69.8				
B. 22	Cattle						33.1
B. 22	Cattle					53.3	30.8
L. 11	Cattle			34.5			
Layer	Cattle			34.1			
Layer	Cattle						38
L. 11	Aurochs		69.5	44			
L. 11	Aurochs		72	48			
Layer	Aurochs		76.2	46.3			
B. 22	Aurochs					69.5	43.5
L. 11	Aurochs						43.5
L. 11	Aurochs						42
Layer	Goat	99.7	23.9	17.1	15.6	25.7	15.2
B. 22	Sheep	108.6	19.8	14.2	12.1	22.2	13.6
L. 11	Pig	Mc4-65					

Metatarsus

Context	**Taxon**	**Bp**	**Dp**	**Bd**	**Dd**
B. 22/	Cattle		31.5		
Layer	Cattle	44,8	46.7		
Layer	Cattle	46,4	46.6		
Layer	Cattle	48,8	44.9		

L. 11	Cattle	49	49.5		
Layer	Cattle	51,6	49.7		
L. 11	Cattle	54,5	55		
Layer	Cattle	55,2	59.9		
Layer	Cattle			53.7	31
L. 11	Cattle			53	30.5
Layer	Cattle			63,1	36.5
L. 11	Cattle			63	35.5
Layer	Cattle			69,3	38.8
Layer	Cattle			69,4	33.8

Tibia

Context	**Taxon**	**Bd**	**Dd**
Layer	Cattle	63.5	44.2
Layer	Cattle	63	44.6
L. 11	Cattle	65	47
Layer	Cattle	65	47.6
Layer	Cattle	68.2	49.1
L. 11	Cattle	71	54
L. 14	Aurochs	75.5	56.5
Layer	Aurochs	74.5	55.4
Layer	Pig	28.7	25.3
Layer	Roe deer	22.4	16.9

Talus

Context	**Taxon**	**GLl**	**GLm**	**Bd**
B. 22	Cattle	66.7	62.4	45
L. 11	Cattle	68	64	44.5
Layer	Cattle	69.3	62	43.7
Layer	Cattle	69.5	62.3	43.6
L. 11	Cattle	70.5	64.5	41
Layer	Cattle	71	64	
B. 22	Cattle	71.2	63.9	45.1
L. 11	Cattle	71.5	66	46.5
Layer	Cattle	72.1	66.5	48.3
Layer	Cattle	72.5	**65**	45.5
Layer	Cattle	72.7	67.2	
Layer	Cattle	75.3	68.8	44.3
Layer	Aurochs	77.8		48.8
Layer	Aurochs			51.8
Layer	Boar	54	47	31.2
L. 14	Red deer	62	61	38.5
Layer	Red deer	63.2	60.4	37.7

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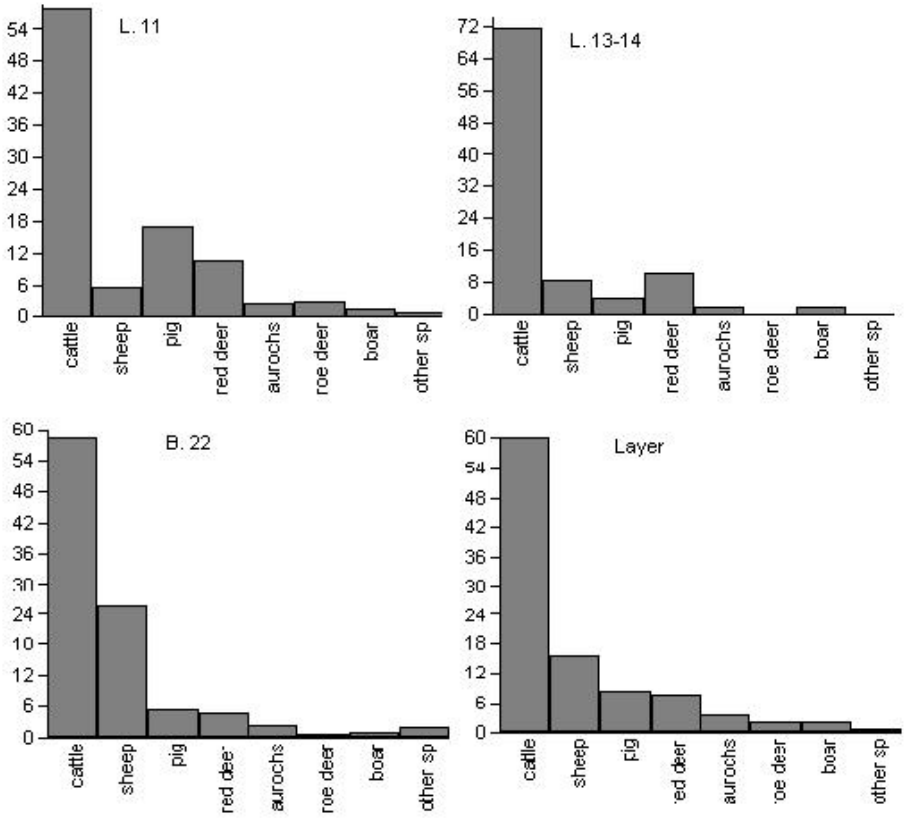

Fig. 1 – Taxa distribution in different contexts

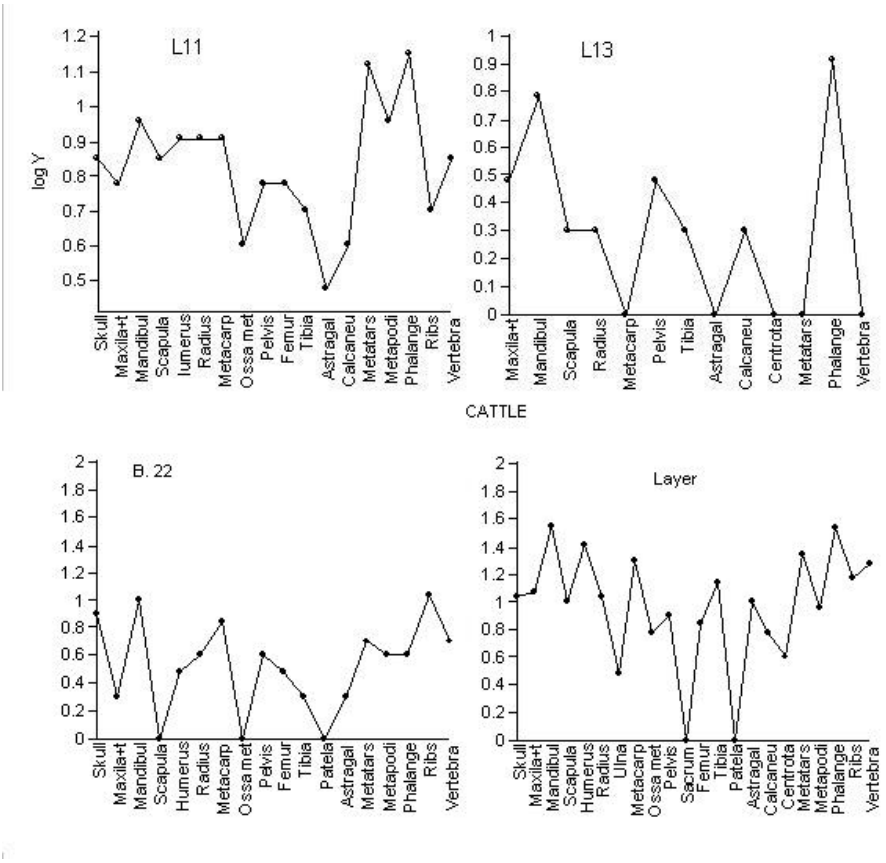

Fig. 2 – Cattle body parts distribution in different contexts

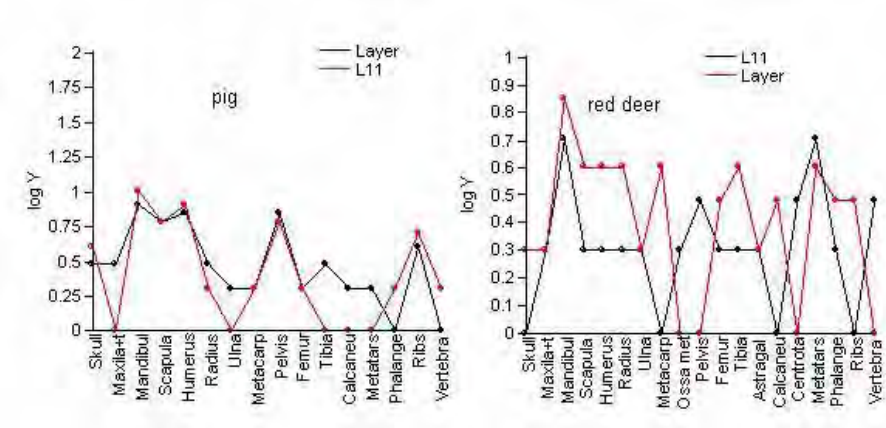

Fig. 3 – Pig, sheep/ goat body parts distribution in different contexts

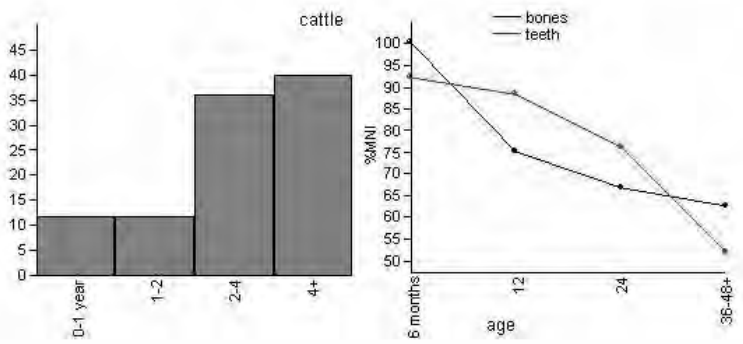

Fig. 4 – Cattle age estimations

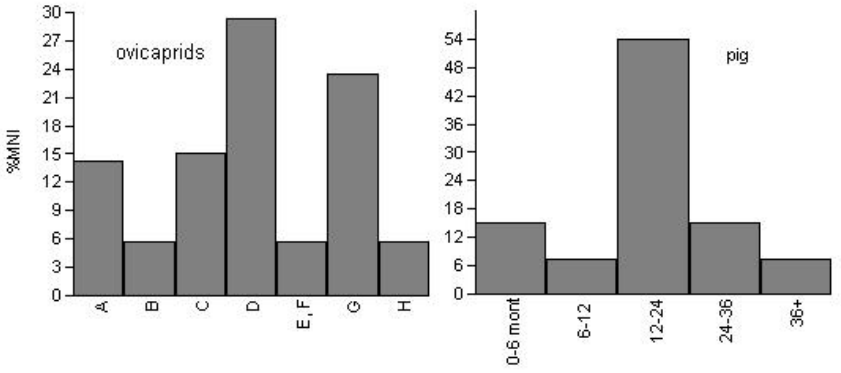

Fig. 5 – Pig, sheep/ goat age estimations

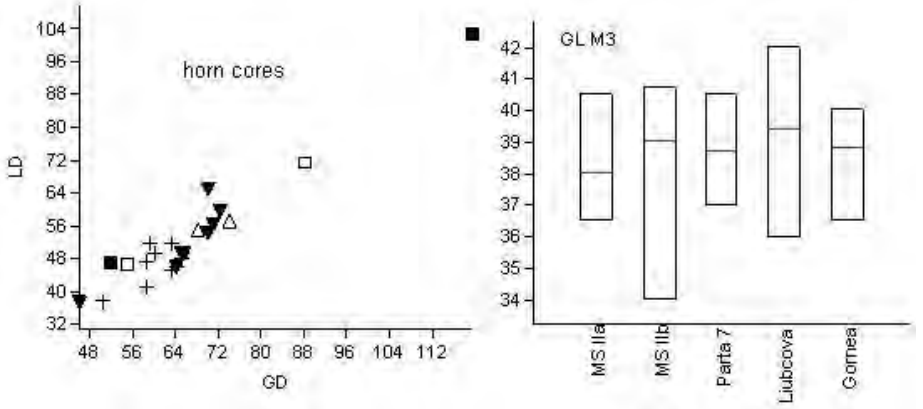

Fig. 6 – Scatter diagram of cattle horn cores (▼-Gornea-Căuniţa; + - Liubcova-Ornița; Δ- Parța; ■ – MS-IIa level; □- MS-IIb level) and M3 averages in Vinca A-B sites

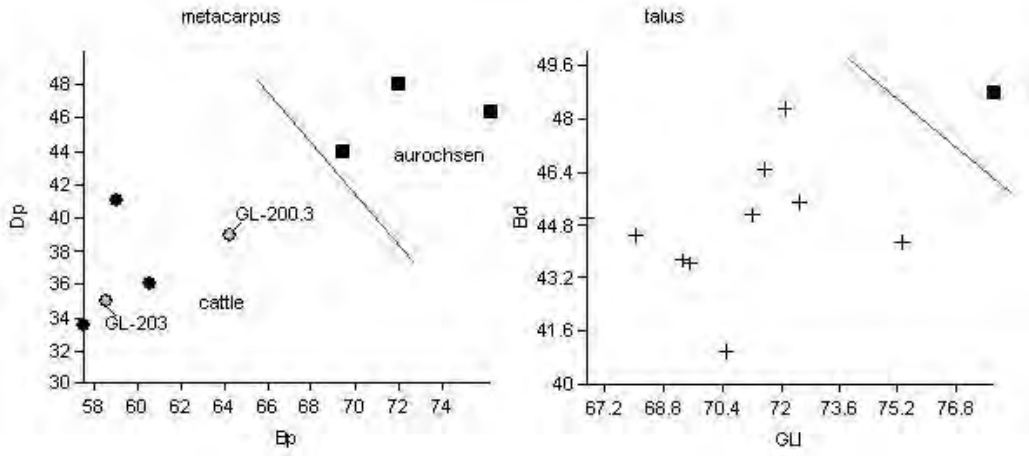

Fig. 7 – Scatter diagram of cattle metacarpus and talus

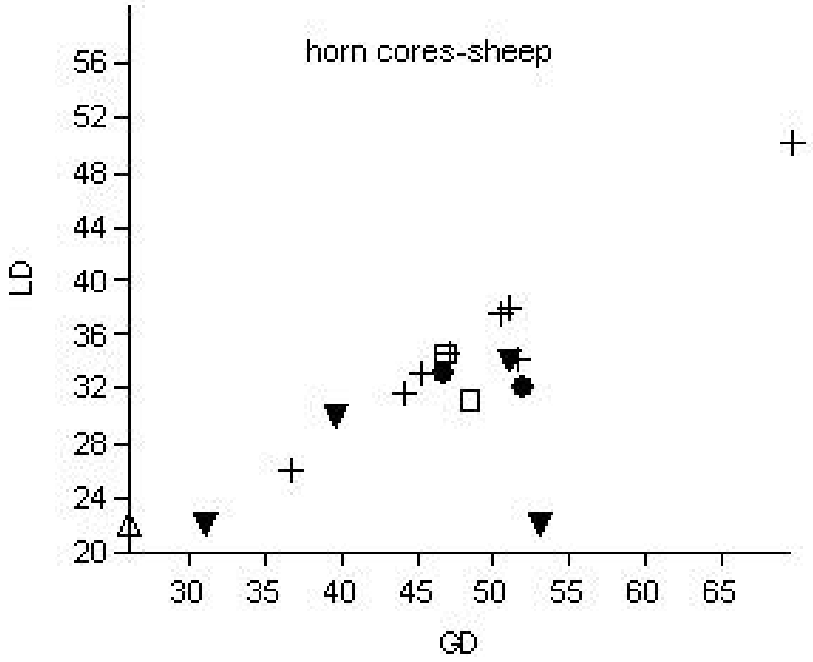

Fig. 8 – Scatter diagram of horn core sheep:
□- MS-IIa level; ▼-Gornea-Căunița; ●- Liubcova-Ornița; + - Parța; Δ- Tărtăria

Fig. 9 – Articulated cattle bones in B. 22

Fig. 10 – Bones from cattle (broadened Ph.1) and sheep/goat metapodii

Fig. 11 –Wild cattle horn core

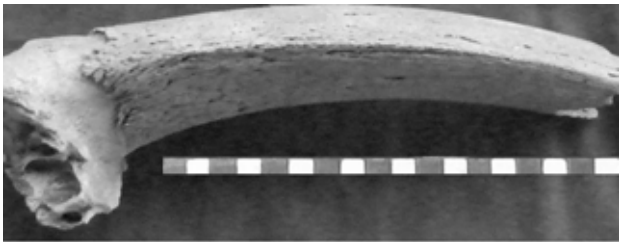

Fig. 12 – He-goat horn core