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A FEW CONSIDERATIONS REGARDING AN EXCEPTIONAL ARCHAEOLOGICAL SITUATION. FOUNDATION PIT OF THE SETTLEMENT OR OCCASIONAL OFFERING? (BUCŞANI, GIURGIU COUNTY, ROMÂNIA)

Abstract: Descoperirea unui schelet postcranian cvasi-întreg al unui bour (*Bos priminigenius*) în *tell*-ul gumelniţean de la Bucşani *Pod* (jud. Giurgiu) a prilejuit autorilor prezentului studiu realizarea unei serii de reflecţii şi considerente asupra caracteristicilor unei depuneri rituale. Concluzia arheologică imediată indică depunerea intenţionată a corpului bourului înaintea ridicării primelor construcţii ale aşezarii gumelniţene. Spre deosebire de alte *daruri* acesta nu era legat în mod direct de o anume locuinţă sau complex ci de întregul *sat* preistoric. Ineditul situaţiei arheologice nu a permis, din păcate, realizarea unor analogii.

Keywords: eneolithic, Gumelniţa culture, Bucşani tell, *Bos primigenius*, foundation, sacrifice, offerings, zooarchaeology.

Within the Balkan and Central-European Aeneolithic, the Gumelniţa-Kodjadermen-Karanovo VI civilization[1] has a well established position, from a chronological and cultural point of view.

In the last few years, in the Romanian area of this important cultural complex, older research projects have been continued or resumed in a new conception, with special implications in understanding the evolution of local and regional communities. New excavations also started in practically uncharted areas, in order to fill the gaps on the archaeological map. The research in the area of the Bucşani commune (Giurgiu county) - Fig.1 – is part of this new research program.

Shortly after it was started (in 1998) as a rescue excavation, the pluridisciplinary archaeological research at Bucşani imposed the re-evaluation of the objectives and of the entire research conception. The extent of the archaeological excavations, that seemed to be considerable, and especially the remarkable potential of the Aeneolithic settlement and the entire area have determined a scientific re-evaluation. Thus a new scientific project became necessary, that should include all the aspects concerning a complex and complete research, unlimited by contractual deadlines and that would not be restricted only to the archaeological excavations. Nine other Aeneolithic settlements (Bem et al. 2002: 134) were identified in the approximately 8.5 linear km of the Neajlov course

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(Fig.2), and they constitute the object of our investigations. Also, the reconstruction – even if partial, for the time being – of the livestock of the *La Pod* settlement, of the game, of the wooden flora, of the sedimentation conditions for the formation of the present day meadow of the River Neajlov and of the researched *tell* are elements that have confirmed that the scientific potential foreseen from the beginning was most promising.

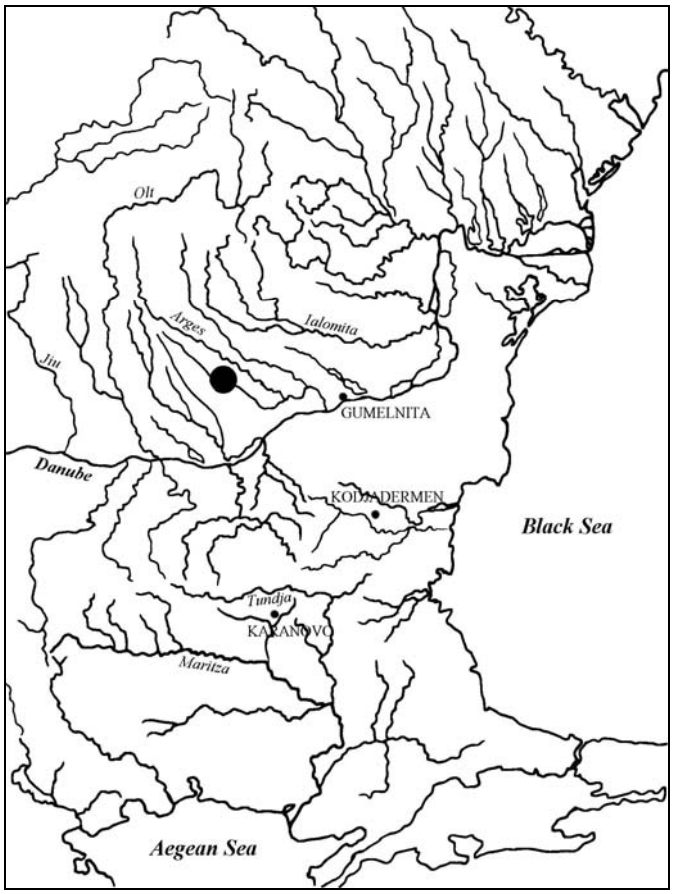

Fig.1 The map of Gumelniţa area.
The black point indicates Bucşani microzone.

The *La Pod tell*, situated on the meadow of the River Neajlov - which is sometimes flooded in spring -, at about 75 m from its present day river bed, is not one of the most impressive because of its dimensions. It has a maximal diameter preserved[2], on the E-W direction, of 56 m (and 54 m on the N-S direction). Its height, calculated from the meadow's level, does not surpass 3.20 m, but it seems that this is not the thickness of the anthropic sediments. The embankment of a modern intervention in the western extremity of the settlement (Fig.3 – S1), continued by a 2x2 m sounding that tried to detect the initial level of habitation and its relation with the natural sediments (Haită 2002) have revealed that the stratigraphy doesn't have an amplitude of over 2.80 m.

For a better planimetric and stratigraphic record, the surface was divided in 8x8 m sectors (as semi-independent elements) with 0.3 m baulks between them, over these being set up a grid system of 2x2 m.

After the present day vegetal soil, that in some areas is not thicker than 10 cm, follows the first coherent archaeological layer (conventionally named N1), made up of Gumelniţa B1 burnt-down dwellings (cca. 4000 B.C.), structures of outside combustion and modern domestic layouts. A few ceramic fragments from the early Bronze period (Cernavoda III), from the Hallstatt and Medieval (XVIth - XVIIIth centuries) periods were discovered, scattered and close to the surface. The scarcity of the material, but also the fact that there is no archaeological layer from these periods cannot signify anything else but a short inhabitation of the *tell* after the Gumelniţa period.

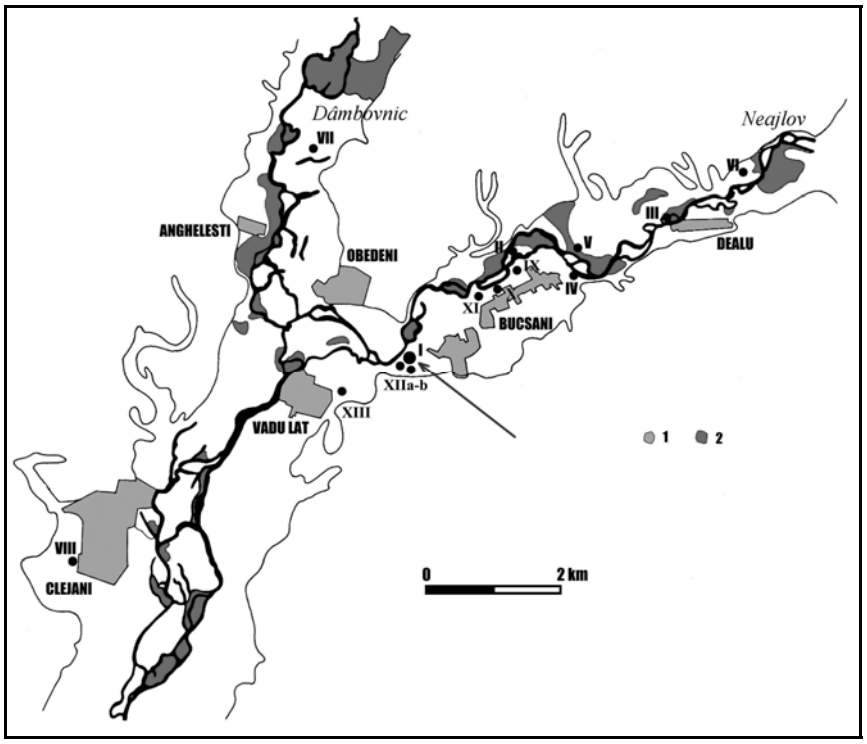

Fig.2 The map of Bucşani microzone. I indicates the position of the *tell La Pod*. 1 – contemporaneous constructed areas, 2 – marshy areas; in 1950 (after C. Bem *et al* 2002).

Between what we call the present day soil and the last Gumelniţa layer (to which culture it was attributed because it was formed in its damage) we could detect a layer of general abandonment of the settlement. Unfortunately, outside the limits of the dwellings this layer could not be identified, as it becomes one with the layer covering it – the present day soil. The pedogenetic homogeneity of a succession of two or more layers is not a process encountered only at Bucşani. Its consequences appear in many sites, and they represent an almost general characteristic of the upper layers in multilayered settlements.

We have discussed on other occasions (Marinescu-Bîlcu et al. 1998: 96 sqq; Bem et al. 2002: 137) the existence of a clear difference of the space affected by the settlement. From a structural and compositional point of view, in the last Gumelniţa level of habitation there are three issues that interest us (of course, they are not disjoint), that correspond, most probably, to the internal necessities for organizing the area covered by the settlement (Fig.3). First of all, there is the central area of the *tell* (approximately in the Western part of sector 5, sectors 6-8 and 16 and the South-Eastern part of sector 17 from Sα and most of Sβ), destined for habitation proper, where the seven burnt down dwellings are concentrated (L1=L7, L2, L3, L4, L9, L11 and L12), as well as an annex (L5) and a combustion structure (C18). All the architectonic ensembles (Fig.3) have the longitudinal axis oriented approximately E-W or N-S, with their surface varying between 20.5 m^2 (L9) and 36 m^2 (L1=L7). But the architectonic solutions chosen for each one differ. A special type of dwelling, identified – until the present moment - in the Gumelniţa culture only at Bucşani (L1=L7, L4, L9 and L11), is characterized mainly by the presence of an empty space between the ground and the interior layout, a platform. In other words, the dwellings belonging to this category were slightly raised on a base made out of sandy sediment and wood (or just out of wood - L1=L7), completed by rows of more or less parallel short (12-18 cm) beams (logs), that were not buried, placed in the interior of the surface surrounded by the base.

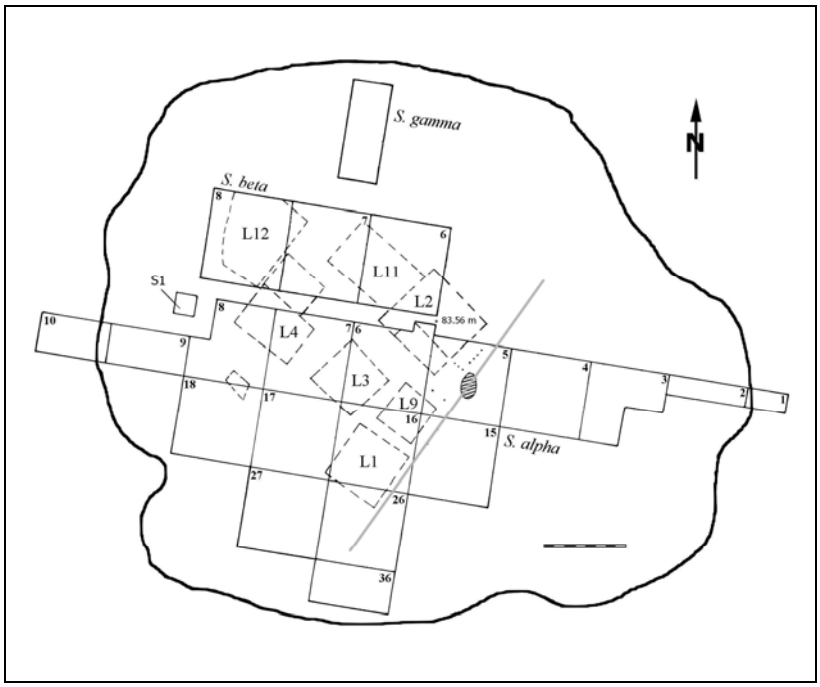

Fig.3 The plan of the upper level (Gumelniţa B1) of the *tell La Pod*. The position of the researched surfaces and of discovered dwellings. The hatch indicates the pit of the auroch.

The second area that interests us comprises the southern and South-Western parts, as well as the South-Eastern extremity of the area covered by dwellings

(sectors 9-10, 17-18 and 26-27, 36 and in the eastern extremity of sector 16 from Sα). The important quantity of pottery, unusable tool fragments and bone remains indicates a mainly domestic character of the area, even if it has a better access towards the centre of the settlement. The fact that the slope of the sediments in this part of the *tell* is less steep, as well as the slight southward elongation of the mound, can be precisely the result of the sedimentation of domestic waste that was, sometimes, leveled (pushed towards the meadow). Slowly advancing eastward, in Sα, starting from the eastern part of sector 26 and the western part of sector 15, the quantity of archaeological material decreases visibly, becoming practically insignificant in sectors 2-4 and approximately the eastern part of sectors 5 and 15, if we compare the situation with that in the rest of the *tell*'s surface (the few bone fragments and 38 shards discovered on a surface of over 250 m^2 represent under 0.015% of the total). We find the same characteristics on the whole surface of Sγ. In this third individualized area we thus deal with a space that is not properly inhabited and is not used as a space for depositing domestic waste (it is thus "clean"), formed of a sandy, grayish-brown sediment, identical with the one that constitutes most of the archaeological sediments that form what we have called N1, but much thinner than the latter. After the four-month campaign in 1998 we identified a clear separation of the two spaces. The campaign of 1999 has brought new arguments for the existence of this clear delimitation between the habitation space proper, occupied by dwellings, and the one that lacks anthropic remains, at least at a macroscopic scale.

The Eastern "walls" of the annexes of dwellings nr. 2 and 9 respectively and the Eastern limit of dwelling nr. 1 are placed on the same line, on a direction close to N-S. Its trajectory is almost the same as that of the above-mentioned limit. The discovery that is the subject of the present paper was placed precisely in the area of contact between the two spaces, between the above-mentioned annexes (Fig.3). Here a pit came to light, dug in the second habitation level of the *tell*, and is thus covered, stratigraphically, by the entire level that we have researched and concisely presented above. The pit begins under the external layers of the dwellings nearby, L2 and L9, and bores through a series of alluvial deposits (Bem 2002: 136; Bem et al. 2002: 153 sqq), as well as through the last stratigraphic deposit of the next level. The pit is almost ellipsoidal, with maximum dimensions - on the two diameters - of 1.2x2.5m. Without being remarkable in it self, the pit is unique at least for the entire area of the Gumelniţa culture because of its contents. A very fine layer of ash and charcoal, with a maximal thickness of 4mm, was discovered at the maximal depth of the pit, even though neither its walls, nor its bottom bear burn marks. One cannot exclude the intentional burning of the pit before it received its intended contents.

The fact that the upper level was formed, stratigraphically, on what we have called on other occasions "flood level" (Bem 2000: 20; 2005: Fig.1-2) permits us to fully individualize it; moreover, it indicates that the respective pit is the first manifestation with stratigraphical implications of the newcomers that have re-founded the settlement. Before any construction – still visible after 6000 years - was raised, in a pit dug approximately in the centre of the circular surface of the mound and in the immediate vicinity of its highest point (Bem 2002: Fig.1), although exterior to the habitation area proper, occupied by dwellings and annexes, was laid the headless body of an aurochs (*Bos primigenius*). Its position inside the micro topography of the *tell* and especially the fact that it separates the habitation area from the rest of the mound, in N1 – which is paradoxically poor in finds -, and last, but not least, the evident renunciation of at least half a ton of

meat and its protean qualities, cannot indicate anything but a symbolic act, that is the ritual hunting, beheading and burial of an auroch.

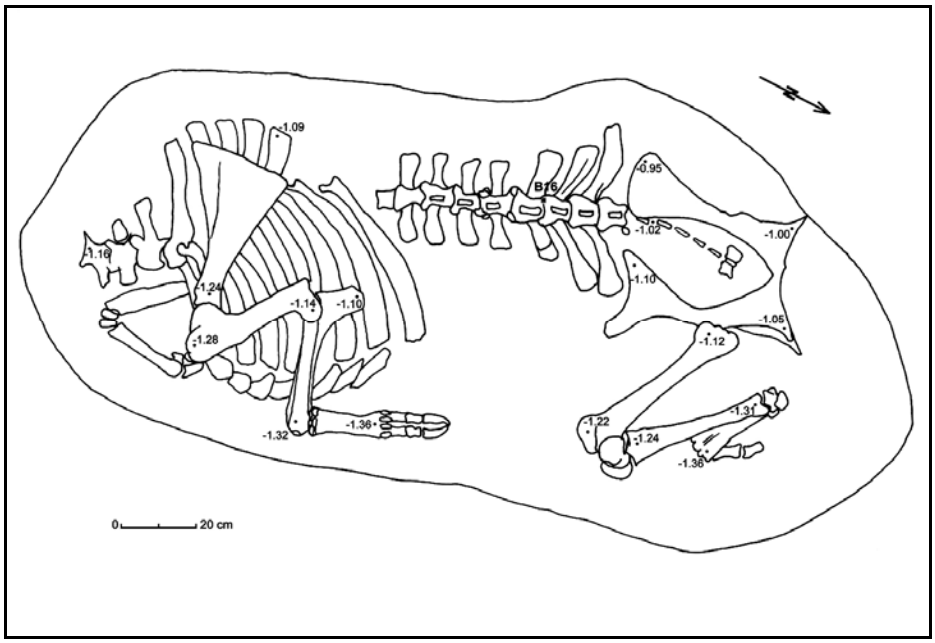

Fig.4 The plan of the auroch left side (the altimetric values are indicated in meters).

In other words, its vertical stratigraphic position – at the lower level of the upper level, as well as the horizontal one – at the limits between the two spaces that have enjoyed a different treatment (the one represented by the habitation area and the one that is, virtually, uninhabited), not to mention the serious danger implied by the hunt of a male aurochs (Fig.8), allow us to presume that we are not dealing with a casual offering, but, most probably, we have to consider the consecration of the inhabited area, as an over-the-millennia animal counterpart of the Master-mason Manole's myth. In this case, it is a *foundation pit for the entire settlement*, for the entire future habitation area that it protected[3], functioning at the same time as an element that marked the separation of the interior from the exterior and acted as a partition element of the interior from the exterior.

With the exception of the above-mentioned fine layer of ash and charcoal, no other visible element of inventory accompanied the aurochs skeleton at the moment of discovery. Of course, a series of shards were found in the pit's fill, but they were part of the intermediary level of the *tell*. The animal's body, oriented approximately North-South (with the forepart to the South) was strongly crouched on its right side, as if it had been pressed in the pit. The dimensions of the living animal that was deposited in this small pit could suggest that it may have been tied up at the moment of the layout, as its legs were pressed under the body. This is a hypothesis caused by the way the animal was laid in the pit (Fig.4-6). But another hypothesis could be that in the specific conditions of a

restrained living space on the *tell*, the community chose to dig a pit with a small width, in which the animal was pressed without being tied up. For the missing head and caudal vertebrae we have no explanation yet. The rarity of discoveries of this kind does not help us. The few known animal burials are not related to the foundation of settlements. They are found either in funerary backgrounds, accompanying human bodies or in the ditches surrounding the precinct walls of a special nature and in the latter case only parts of the skeleton was used (Lichardus et al. 1985: 296, 417 sqq).

The animal was over 4 years old, taking into account that all the long bones are epiphysed (Schmid 1972) and under 7-9 years old, because the vertebrae are not epiphysed.

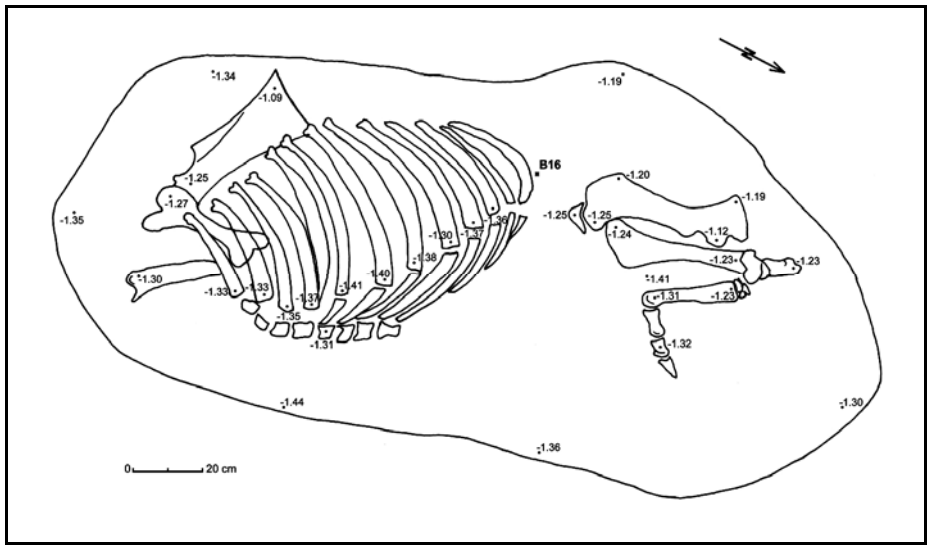

Fig.5 The plan of the auroch right side (the altimetric values are indicated in meters).

The biometric data indicate a not very tall animal, its height at the withers being of 143.7 cm (n=12; two humeri, two radii, two metacarpi, two femurs, two tibiae, two metatarsi, limits between 137-149.2 cm) according to Matolcsi (Chaix, Méniel 1996: 20). This is not one of the biggest specimens compared with other examples from the Aeneolithic in Romania, identified only after disparate skeleton remains (Bălăşescu et al. 2004). It is bigger than another specimen discovered at Râmnicelu (138.8 cm), similar with a reconstructed specimen found at Liubcova (143.3 cm) and belonging to the Vinča culture and it is smaller than the ones discovered at Vităneşti, belonging to the Gumelniţa culture (158.5 cm) and Râmnicelu, belonging to the Cernavoda I culture (162 cm).

The average for the thoracic limb is 143.4 cm, and that of the pelvian limb 144.1 cm; the smallest dimensions of the waist are those of the metacarpi and metatarsi.

As regards its robustness, the animal can be placed towards the lower limit of the dimensions of male aurochs in the Câmpia Română (Romanian Plain), some of its dimensions being in the range of those presented by female aurochs

(Bălăşescu, Radu 2004). In order to better visualize the specimen's biometric characteristics, we have created a series of diagrams in which we have integrated its dimensions, as well as those coming from other disparate (fragmentary) bones found at Bucşani and at Vităneşti, a settlement about 40 km away from Bucşani in a straight line (Fig.7/a-f). We have taken into consideration only the settlement at Vităneşti (the Gumelniţa B1 and A2 levels), because we consider that it presents general physical and geographical conditions similar to those at Bucşani, even though the valley is much larger and in addition an impressive quantity of aurochs remains were discovered here. (Bălăşescu, Radu 2003; Moise unpublished).

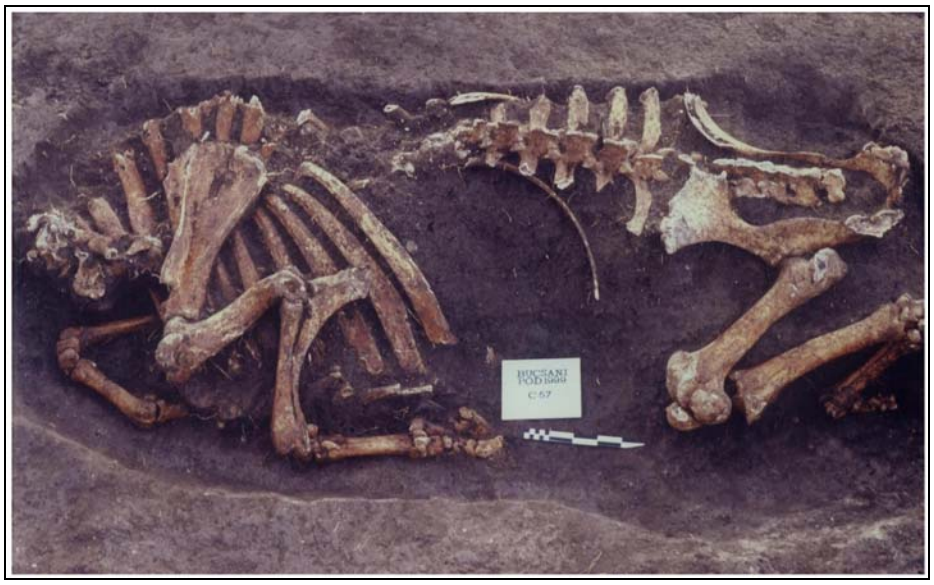

Fig.6 The *Bos primigenius* skeleton deposited in the pit.

From the point of view of the different widths of different anatomic elements, the specimen discovered at Bucşani presents most of the values above the average usually encountered with animals in Western Europe (Chaix, Arbogast 1999). But it has similar dimensions to the one discovered in the Pannonic Plain (Bökönу 1972).

The skeleton's state of preservation is relatively good, considering the fact that the long bones are only slightly degraded (plates 1-4). Exceptions are the scapulae, the proximal epiphyses of the humerus and the coxal, anatomic elements that have considerable parts made of a spongy tissue. At the moment of discovery, the skeleton lay at a small depth from the present day level, and had exfoliations on the surface of the bones, caused by the atmospheric agents (freezing-melting, humid-dry, etc) that affected it over time. At the present moment, the bones present strong cracks, and if the elements of the fauna will not be treated with the appropriate solutions, they will irremediably decay in time.

A series of bones are also degraded because they were found closer to the surface, thus suffering more of the action of the atmospheric agents. It is the case of the cervical vertebrae nr. 6 and 7, as well as that of the thoracic vertebrae from nr. 9 to 11. Also, pretty degraded are the phalanxes nr. 3, especially on their distal portion.

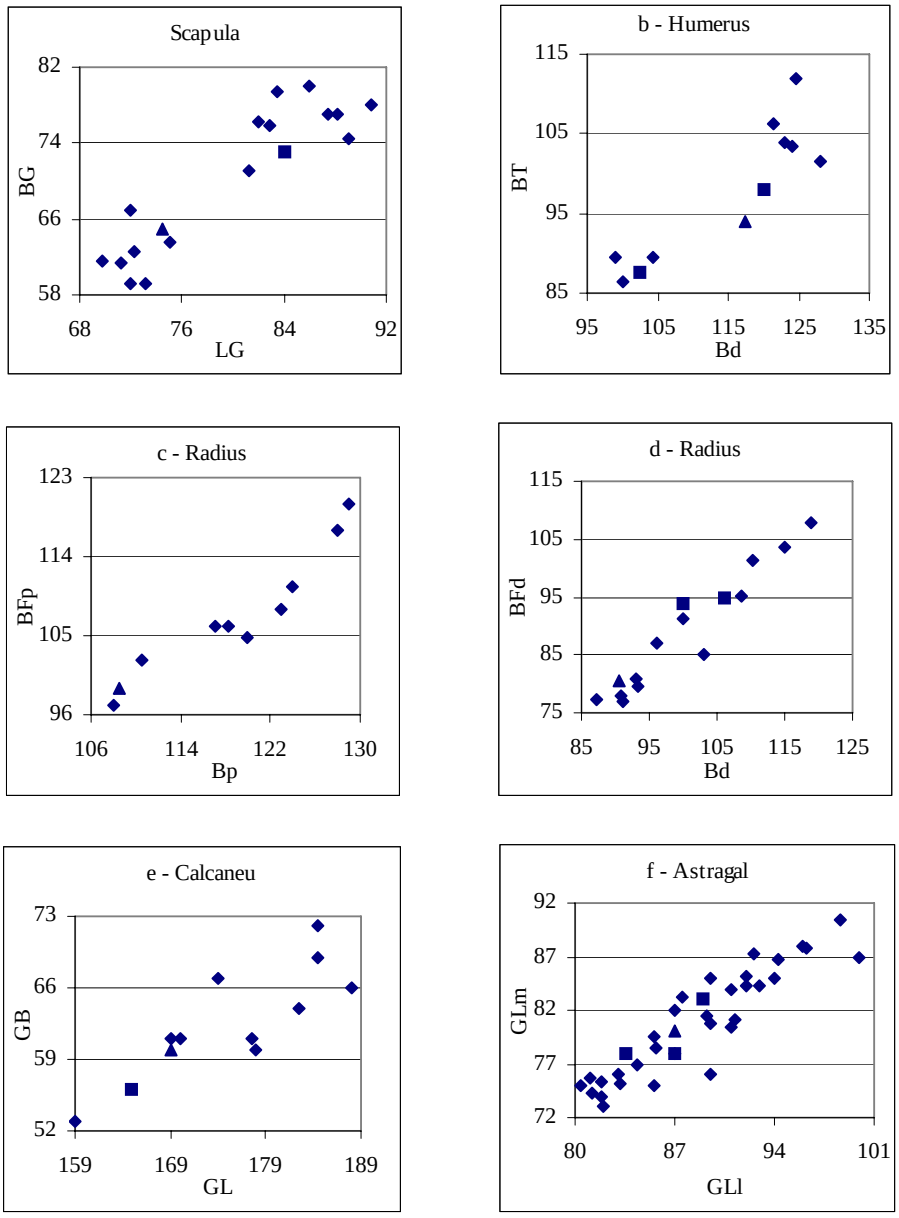

Fig.7 a-f. Diagrams of distribution of the dimensions of the specimens of *Bos primigenius* discovered at Bucşani and Vităneşti (the Gumelniţa culture). Conventional signs: triangle – the dimensions of the aurochs that was ritually deposited; square - other dimensions of aurochs at Bucşani; rhombus – the dimensions of the aurochs at Vităneşti.

The axial skeleton is represented by the spine with the cervical vertebrae nr. 6 and 7, the thoracic vertebrae nr. 1-10 and 13, the lumbar vertebrae nr. 1-6, the

sacral vertebrae 1-5 (the first ones are united) and the first caudal vertebra. As one can notice, the first five cervical vertebrae are missing, as well as the thoracic vertebrae 11 and 12 and the rest of the caudal vertebrae (18). As concerns the latter, they might have been present initially, but could have entirely degraded in time.

The taphonomic study of the entire skeleton, performed in order to reveal the human interventions, did not lead to the identification of any mark that would attest the flesh removal or the disarticulation of certain anatomical elements, situation that suggest that the whole animal was deposited in the pit, in anatomic connection, with its flesh and also its skin in place (we could not identify traces that would attest its skinning). An additional argument supporting this idea is the fact that on no skeletal element has we observed traces of teeth caused by carnivorous predators (dogs especially) or rodents (micro mammals), traces that one finds on different domestic remains. We have tried to identify on the cervical vertebrae traces that would show us the way in which the beheading took place, but unfortunately the material has not provided us with any clue. In the case of the caudal vertebrae we were also unable to find any marks that would point out the way in which the tail was detached from the rest of the body.

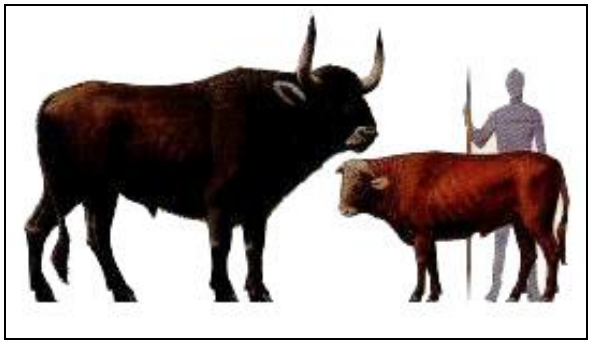

Fig. 8. Comparative schema of the auroch, cattle and man height at the withers.

The importance of this discovery is remarkable, taking into account that this kind of deposits, especially those of an almost entire, big-sized animal, have not yet been identified in the Romanian Aeneolithic. The significance of the discovery is great, both from an archaeological as well as from a zooarchaeological point of view.

The "conquest" of a part of the wild animal specter through taming was finished many centuries before. This is precisely why the deposit had precisely a wild specimen as a subject, much different from the common animal known and controlled by Man. It is precisely the force of the wild and the availability - translated through the offering -, as well as the will to renounce to an important quantity of meat that has concurred in setting the choice for an aurochs. The sexual maturity and the regenerative force indicated it as the most important "gift". The animal, hunted and deposited as an offering, probably weighed about 700-900 kg alive, but if it had been consumed, it would have provided over 400-500 kg of meat at a cutting rate of about 60%. Apart from the meat, the animal would have provided the skin, bones, blood, intestines, etc, all these elements being used in different prehistoric activities.

The offering of such an animal is even more surprising if we think that this was a very big species at that moment, because during the Aeneolithic the aurochs was the most imposing animal in our country's fauna.

The question "Why an aurochs?" is natural in the context of the Gumelniţa culture, in which the most hunted animal was the stag, followed by the wild boar and only then by the aurochs (Bălăşescu et al. 2004). An answer could be its frequent presence in the Neajlov area and precisely the fact that size wise the species was the most important at that moment.

These questions could have more than one possible answer: the new community that settled on the *tell* chose, for the foundation of the settlement, a big-sized wild animal in order to protect their flocks of domestic animals from slaughter in order to preserve them as meat supply, or it might have been a hunting community, to which the aurochs played an important nutritional role, but an even more important symbolic one.

The first possibility is more plausible if we take into account a French zooarchaeological study for a site dated to the Late Neolithic (linear pottery). This study demonstrates beyond doubt that each time a community settled in one place, in order to preserve their livestock from being slaughtered, its members practiced extensive hunting and only later, in the following levels, did the weight of the hunting decrease, in parallel with the growth in frequency of the domestic animals.

It is hard to say if the community at Bucşani, that formed N1, was one of hunters. The preliminary zooarchaeological analyses of this level show that that the weight of hunting is of almost 40% (Bălăşescu unpublished), a percentage high enough for this prehistoric period. The only type Gumelniţa B1 settlements that have zooarchaeological studies are the ones at Vităneşti (Teleorman county), where the game makes up about 50% of the total quantity of food, and the one at Căscioarele (Călăraşi county) "Bolomey 1968", where the game represents almost 85% of the total quantity of food. Could it thus mark a change of behavior at the end of the Gumelniţa culture or did these communities adapt very well to conditions that provided an important quantity of game? Anyway, the importance of the aurochs is demonstrated by the great number of so-called *consecration horns* discovered in the upper level at Bucşani (Fig.9/1-3), but also by the exclusive presence of this animal in the models of zoomorphic art (Fig.9/4-5; 10).

Maybe the newcomers to the area, who did not know it, founders of the last settlement on the *tell*, considered it necessary to create a bond with their new "homeland" through a sacrifice?

The habit of burying entire animals is attested at the end of the V millennium B.C. in the Tiszapolgár necropolis at Velke Rałkovce (Lichardus et al. 1985: 76) and in the well-known necropolis at Varna, but it concerns only domestic animals. Later, but in a not distant period, they rarely appear in archaeological contexts belonging to the so-called group of globular amphorae or in the Baden culture. We do not believe we have to insist on these discoveries, as they belong to a more distant period anyway and express a totally different human behavior. The same case applies for the above-mentioned burials in the Aeneolithic necropolises.

The uniqueness of the situation at Bucşani lies in the fact that it is the first manifestation of a settlement foundation through sacrifice in the Romanian Aeneolithic and –we believe- maybe elsewhere. It has no connection with the community's livestock or with what we know about the consecration or re-consecration habits in the Gumelniţa culture.

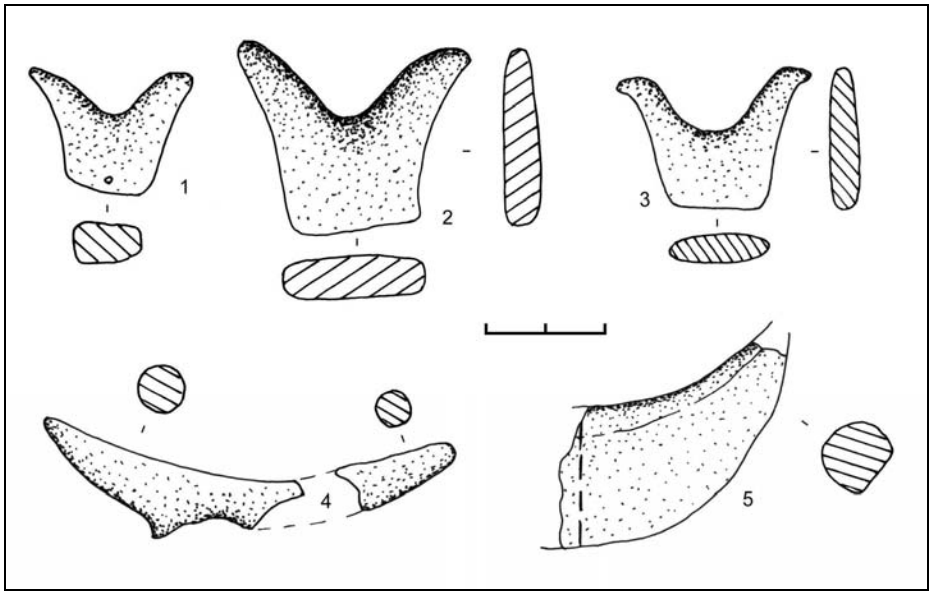

Fig. 9. Bucşani *La Pod*. 1-3. consecration horns; 4-5. horns fragments belonging to zoomorphical pieces.

Addenda

At 1.2 m SSV from the edge of the pit, very close to the modern surface, in what we have called the exterior level of L9, during the 1998 campaign we have discovered the very fragmented remains of a neurocranium and of the first four cervical vertebrae belonging to bovine remains. Their state of preservation was so bad, that they could not be reconstructed. From a dimensional point of view, these remains belong to the span of the aurochs, a situation that made us think that it is possible that they belonged to the aurochs deposited in C57, following a ritual. This supposition also starts from the fact that the animal to which the skull belonged was 6-8 years old age that coincides with that of the animal in C57 and that was determined through the analysis of an upper premolar.

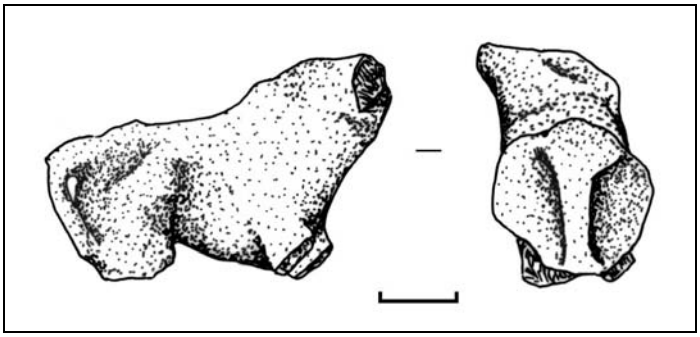
Fig. 10. Bucşani *La Pod*. Zoomorphical figurine represented an auroch.

The connection with the headless body is possible, but without a double DNA analysis we cannot say anything with certainty. One cannot exclude the possibility

that the respective skull, in case it belonged to the aurochs' body, could represent a surface mark of the animal's burial place.

Notes

1. Named after the three most important mounds (*tell*s) discovered and researched at Gumelniţa (Muntenia – southern Romania), Kodjadermen (northern Bulgaria), Karanovo (Thracia – southern Bulgaria) – Fig.1.
2. The initial dimensions of the sediments mound on which the *tell* was formed were probably bigger. The continuous growth of the meadow's level, that has implicitly resulted in the covering of the *tell*'s base, is the main cause of the shrinking of the *tell*'s surface visible above the soil.
3. In 1998 we have indirectly witnessed to a unique event in the area of Bucşani, an event that seems to be related more to distant times. The families of brick-making gipsies that had received that year the right to establish themselves on the spot performed the ritual consecration of the space that was to be used for the kilns. They buried alive a male donkey, in order for their products – the bricks (piled up and burnt on the spot) – to be durable, *not to be ruined by the rain*, as they declared themselves. Subsequently, no other sacrifice was performed for any of the multitude of individual kilns. Thus, the slaughtered donkey offered protection for the entire ensemble, without the need for any further bloody sacrifice.

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Scapula	l	r
SLC	68	67,3
GLP	88,5	85
LG	74,5	73,3
BG	64,5	65,5
Humerus	l	r
GL	346,5	348
GLC	320	320,5
Bp	122,5	121
SD	50,3	51,5
DAPD	52,5	53,2
CD	175	173
Bd	117,4	117
BT	94	93,5
Height	1434,51	1440,72
Radius	l	r
GL	347	347
Bp	108,5	108
BFp	98,4	97
DAPp	51,5	51,5
SD	56,5	56,2
DAPD	(29,5	(31,5
Bd	90,5	89,5
BFd	80,5	79,8
DAPd		
Height	1492,1	1492,1
Ulna	l	r
GL	423	426
LO	145	142,5
DPA	91,2	90,5
SDO	69	68
BPC	56,5	55,2
Metacarpus	l	r
GL	216,5	216,7
Bp	80	79,2
DAPp	53	51,5
SD	44	44,2
DAPD	28,7	28,2
CD	124	126
Bd	81	80,2
DAPd	43,5	43,5
I2=Bp x 100/GL	36,95	36,55
I3=SD x 100/GL	20,32	20,40
I4=Bd x 100/GL	37,41	37,01
SEX	male	male
Height	1370,445	1371,711
Pelvis	l	r
LA	82,1	84
LFO	112,5	116
SH	52,5	54,2
SB	30,5	32
SC	144	147

Femur	l	r
GL	462	461
GLC	422	424
Bp	161	160
DC	62,8	61
SD	50	49
CD	161	163
Bd	124	123
DAPd	166	164
Height	1492,26	1489,03
Tibia	l	r
GL	422	423
Bp	129,5	126,5
DAPp	114	112,5
SD	52,5	50,5
DAPD	34,5	34,5
CD	145	144
Bd	80	82,5
DAPd	65	62,5
Height	1455,9	1459,35
Patella	l	r
GL	-	87,2
BG	71	72,8
Astragalus	l	r
GLl	87	85,7
GLm	80	78,5
Dl	47,8	47,4
Dm	51	50,5
Bd	58,3	58,5
Calcaneus	l	r
GL	169	169
BG	60	60,4
DAPmin	42,5	44
Dtmin	24	25
Centrotarsus	l	r
BG	75	76,2
DAP	68,7	69,3
Metatarsus	l	r
GL	245	244,5
Bp	70	69,5
DAPp	61,2	61,1
SD	36	36
DAPdiaf	34,2	34
CD	130	131
Bd	73	71
DAPd	44	42
I2=Bp x 100/GL	28,57	28,43
I3=SD x 100/GL	14,69	14,72
I4=Bd x 100/GL	29,80	29,04
SEX	male	male
Height	1376,9	1374,09

Phalanx 1	s.a.lat	s.a.med	d.a.lat.	d.a.med.	s.p.lat.	s.p.med.	d.p.lat	d.p.med
GL	68	68,1	69	68	72	70,5	70,5	69
Bp	42,5	41,9	43	42	40	39	39	39
SD	34,5	34,6	35,5	34,5	32	34,5	31,6	33
Bd	40	40,6	40	40,5	37,5	39,6	38,2	38,5
Phalanx 2	s.a.lat.	s.a.med	d.a.lat.	d.a.med.	s.p.lat.	s.p.med.	d.p.lat.	d.p.med
GL	47	45,5	45,5	46,2	47	47	46,2	46,3
Bp	41	42	41,8	42	40	40,5	41	39,6
SD	33,7	34,2	34,5	33,2	33	31,4	31,5	
Bd	37	37,1	35,5	37	32	29,6	**29**	

Table 1. Osteometrical data - all measurements in mm, taken after von den Driesch (1976).

Humerus left

cranial view caudal view medial view lateral view

Radius and ulna

right left right left

lateral view dorsal view

PLATE 1

Femur

right left right left

cranial view caudal view

Tibia

left right right left

dorsal view plantar view

PLATE 2

Calcaneus

dorsal view

medial view

Astragalus

right left
medial view

right left
lateral view

left right
plantar view

left right
dorsal view

PLATE 3

Centrotarsus

left right
distal view

left right
proximal view

Metacarpus

left right
dorsal view

Metatarsus

left right
dorsal view

Phalanx 1 and 2 anterior

Left medial Left lateral
dorsal view

Phalanx 1 and 2 posterior

Left median Left lateral
dorsal view

PLATE 4