

# A SURVEY ON ANIMAL HUSBANDRY OF TURDAŞ COMMUNITY FROM ORĂȘTIE „DEALUL PEMILOR" (X<sub>2</sub>) (HUNEDOARA COUNTY)

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## *I DESCRIPTION OF SAMPLE*

A total of 1,679 fragments were recovered during 1990-1995s diggings in the Neolithic site of Vinča-Turdaş Culture. Of this quantity 92% of bones came from houses only 8% yielded the cultural layer (tab. 1). A certain dense concentration of faunal remains was recorded in the house No. 1, about 68%. Species diversity at Orăștie is much lower than at other sites. Were identified just five domestic taxa and five of wild species. Among wild mammals are missing micro-mammals. Excepting of aurochs, an extinct element of present fauna, all those species are commonly in the Transilvanian Plateau. A possible explanation of a such little diversified spectrum would be furnished by taphonomic conditions of the cultural layer. On account to the nature of the soil (an acidity pH) most part of pieces were damaged beyond uncovering. The bones were simply „Melted" by soil. So that bones from fish, small carnivora, newborns and juveniles were not preserved. The lacking of small carnivora from the local fauna is out of question.

The remains distribution in houses offers resembling values for identified species, have been keeping seemingly proportions between them. Cattle are dominantly in all deposits, their remains varying between 53-56% in H<sub>1</sub>-H<sub>4</sub> with the exception of H<sub>5</sub>. The latest is incompletely excavated, so its sample is small. Red deer were the second most frequent species represented in the Orăștie assemblage. About 35% it recorded in houses. The small ruminants and pig summarize only 3-6%. Bones from dog, wild swine, and brown bear were recovered just in H<sub>1</sub>, missing in other contexts.

The method of carcass dismemberment for consumption is similar for cattle and red deer. The distribution of fragments on skeletal parts records similar values in case of cattle and red deer. The bones originate in dry meaty regions are very numerous than the others representing 30-40%. The meat poor elements account 30-35% and only 18-22% those of the skull. A significant value of cranial elements in case of red deer suggests the carcasses were brought back to the site for butchering. Excepting of several worked pieces no pedicles with shed antlers or antlers' bases still attached to cranium were found. Maybe an intensive hunting of species was practiced in summer (males) or were killed females. The metric data indicate the predominancy of stags.

The spreading of column elements is out of all proportions to other skeletal parts (11%) owing to difficulties of vertebrae separation. The skeletal distribution of the other mammals counts for little due to scarcity of their samples.

In general, the bones are extremely fragmented in comparison to most neolithic sites. Almost all of them were broken into more fragments any whole bone was preserved. Even mandibles and maxillae were rarely found intact. An important percentage of bones were burnt by cooking activities and settings on fire.

## II THE SPECIES

### *Bovids (Bos taurus L./Bos primigenius Boj.)*

Cattle are the most common mammal found at Orăştie. A total of 633 bones were identified of which 13 belong to aurochs. Any horn-core was collected, in exchange a large quantity of measurable maxillary fragments and teeth exist. It seems the skull skeleton was little gracile with a masive dentition. The length mean of  $M_3$  is 38.6 mm, similar to those from Iclod – 39.3 (El Susi, 1989-1993, p. 189), Parţa – 39.2 mm (El Susi, 1996, under press), Drăguşeni – 39.2 (Bolomey, El Susi, under press). The same masivity characterises the post-cranial skeleton. The measurements of bone ends reveal that the Orăştie sample was roughly similar in size to those from Iclod, Zau de Cîmpie (Haimovici, Man, 1986, p. 335), Parţa, Foeni (unpublished data). Confronted by cattle population from Danube Valley (Southern Banat) the bovids from Orăştie were more robust, belonging to different populations. The existance of transitional forms supposes either natural crossings between cattle and aurochs, or a local process of domestication. On the basis of measurements (tab. 2) several of cattle specimens fall into aurochs' size range. A certain sexual dimorphisme is visible on bones; the males dominate among the individuals killed until four years. A complete metatarsal furnished a wither height of 119.9 cm for a cow (Matolcsi method). The aurochs 'bones come from two bulls and two cows, dimensionally they fit within the range size of neolithic population from the Pannonian Plain.

### *Suids (Sus s. domesticus L./Sus s. ferrus L.)*

Are very rare in all dwellings. Only 31 fragments belong to pig and 26 to wild form. Some pig measurements reveal individuals of small size. Its sample comes from juveniles and subadults. The wild swine sample belong to mature animals; a tall of 100.2 cm was presumed for a boar.

### *Ovicaprins (Ovis aries L./Capra hircus L.)*

They occur in very limited quantity at site, 22 bones. Their sample consists of vertebrae, teeth, splinters of long bones and they could not be positively identified to either sheep or goat. Some measurements on mandibles parts suggest a microdontia phenomenon, typical to neolithic population from Transilvania. All bones originate in young and subadult animals.

### *Dog (Canis familiaris L.)*

A pair of mandibles with the length of molar row of 70 mm belonging to a medium size were identified.

### *Cervids (Cervus elaphus L./Capreolus capreolus L.)*

Aside from cattle remains red deer is the most common hunted mammal. His measurements show a large variation caused especially by sexual

*The species frequencies in the neolithic site from Orăștie*

Table 1

|                            | House 1 |      | House 4 |      | House 5 |        | Layer       |      | MNI | %    |
|----------------------------|---------|------|---------|------|---------|--------|-------------|------|-----|------|
|                            | Fragm.  | %    | Fragm.  | %    | Fragm.  | Fragm. | Total frgm. |      |     |      |
| <i>Bos taurus</i>          | 435     | 55.9 | 150     | 53.5 | 23      | 12     | 620         | 56   | 42  | 47.1 |
| <i>Ovis/ Capra</i>         | 3       | 0.3  | 18      | 6.4  | 1       |        | 22          | 1.9  | 2   | 2.2  |
| <i>Sus scrofa</i>          |         |      |         |      |         |        |             |      |     |      |
| <i>domesticus</i>          | 29      | 3.7  | 6       | 2.1  |         |        | 35          | 3.1  | 4   | 4.4  |
| <i>Canis familiaris</i>    | 2       | 0.2  |         |      |         |        | 2           | 0.1  | 1   | 1.1  |
| DOMESTIC                   |         |      |         |      |         |        |             |      |     |      |
| MAMMALS                    | 469     | 60.2 | 174     | 62.1 | 24      | 12     | 679         | 61.3 | 49  | 55   |
| <i>Cervus elaphus</i>      | 274     | 35.2 | 99      | 35.3 | 6       | 5      | 384         | 34.7 | 28  | 31.4 |
| <i>Sus scrofa ferrus</i>   | 26      | 3.3  |         |      |         |        | 26          | 2.3  | 4   | 4.4  |
| <i>Ursus arctos</i>        | 2       | 0.2  |         |      |         |        | 2           | 0.1  | 2   | 2.2  |
| <i>Boş primigenius</i>     | 6       | 0.7  | 6       | 2.1  | 1       |        | 13          | 1.1  | 4   | 4.4  |
| <i>Capreolus capreolus</i> | 1       | 0.1  | 1       | 0.3  |         |        | 2           | 0.1  | 2   | 2.2  |
| WILD MAMMALS               | 309     | 39.8 | 106     | 37.9 | 7       |        | 427         | 38.7 | 40  | 44.9 |
| TOTAL                      | 778     | 100  | 280     | 100  | 31      | 17     | 1,106       | 100  | 89  | 100  |
| <i>Bos / Cervus</i>        | 77      |      | 12      |      | 2       |        | 91          |      |     |      |
| Ribs                       | 126     |      | 54      |      | 6       | 8      | 194         |      |     |      |
| Splinters                  | 170     |      | 79      |      | 9       | 30     | 288         |      |     |      |
| TOTAL                      |         |      |         |      |         |        |             |      |     |      |
| ASSEMBLAGE                 | 1,151   |      | 425     |      | 48      | 55     | 1,679       |      |     |      |

dimorphism. The males outnumber the females among the presumed individuals. The size variation corresponds to that found in neolithic sites as Iclod, Zau de Cîmpie (Haimovici, Man, 1986, p. 336), and the Banat Plain. Only two fragments of left shoulderblades belong to species. They come from adult animals.

*Brown bear (Ursus arctos L.)*

He is the only wild carnivore found at Orăștie. His sample consists of two epiphyses of humerus and come from adults. Their measurements indicate animals of medium-big size: breadth of trochlea 72; 72 mm; distal breadth 96; 105.

**III EXPLOITATION STRATEGIES**

Concerning cattle of 42 individuals 20.8% were killed between 0-2,5 years, 45.2% until four years and 23.8% over. Most of the immature specimens (45%) were subadults. The relative high frequency of them implies an exploitation focused upon meat and hide productions. Also the ratio of young is lesser, strongly increasing after first birth. The bulls dominate among the animals killed between 2,5-4 years, the females have been spared. Though the production of meat appears to have been the primary objective there is evidence toward utilising secondary products such as milk or traction. A 23% quota of matures besides a better employment of individuals slaughtered until four years and

*The cattle measurements of Orăştie site**Table 2*

| Skeletal part                     | Nr. | Variability |        | M    | Variability |
|-----------------------------------|-----|-------------|--------|------|-------------|
|                                   |     | Bos         | taurus |      |             |
| MAXILLA Lg. M <sup>3</sup>        | 2   | 38.5; 39.5  |        |      |             |
| MANDIBLE                          |     |             |        |      |             |
| - P <sub>2</sub> - M <sub>3</sub> | 1   | 94.5        |        |      |             |
| - M <sub>1</sub> - M <sub>3</sub> | 1   | 61          |        |      |             |
| - Lg. M <sub>3</sub>              | 8   | 37 - 41     |        | 38.6 |             |
| SCAPULA                           |     |             |        |      |             |
| - Smallest width of<br>collum     | 2   | 56; 60      |        |      | 60.5 (?)    |
| - Width of angulus<br>articularis | 3   | 72; 73; 75  |        |      | 77          |
| - D. of facies art.               | 5   | 51 - 63     |        | 61.1 | 66; 65      |
| HUMERUS                           |     |             |        |      |             |
| - Breadth of trochl.              | 6   | 72 - 80     |        | 76.3 |             |
| - Distal length                   | 5   | 78 - 87     |        | 83.1 |             |
| - Distal diameter                 | 6   | 74 - 94 (?) |        | 83.2 | 100         |
| RADIUS                            |     |             |        |      |             |
| - Proximal breadth                | 2   | 81; 83      |        |      | 97          |
| - Proximal diameter               | 2   | 41; 43      |        |      | 50          |
| - Distal breadth                  |     |             |        |      | 85.5; 93    |
| - Distal diameter                 |     |             |        |      | 54          |
| TIBIA                             |     |             |        |      |             |
| - Distal breadth                  | 7   | 63 - 71     |        | 65.7 | 76          |
| - Distal diameter                 | 8   | 45.5 - 51   |        | 48.6 | 53          |
| METACARPUS                        |     |             |        |      |             |
| - Proximal breadth                | 5   | 59 - 69     |        | 62.6 |             |
| - Proximal diameter               | 5   | 34 - 41     |        | 37.6 |             |
| - Distal breadth                  | 5   | 59 - 69     |        | 62.6 | 73.5; 75    |
| - Distal diameter                 | 5   | 28 - 38     |        | 34.1 | 41          |
| METATARSUS                        |     |             |        |      |             |
| - Proximal breadth                | 7   | 46 - 54     |        | 51.5 |             |
| - Proximal diameter               | 88  | 45.5 - 52   |        | 48.8 |             |
| TALUS                             |     |             |        |      |             |
| - Greatest length                 | 13  | 63 - 75.5   |        | 70.7 | 78; 84; 85  |
| PHALANX I                         |     |             |        |      |             |
| - Greatest length                 | 11  | 59 - 73 (?) |        | 64.2 |             |

D - diameter; Lg. - length

propitious natural conditions of fodder would have assured numerous stocks in the conditions of an economy grounded on cattle exploitation. It is not out of the question the using of cattle as draft animals. Some bones with pathological deformations might prove the assertion.

Among pig a different picture of exploitation emerges. All four animals were killed when young.

As for red deer the age distribution is strongly oriented toward mature individuals (85.5%). Little evidence for young and subadults was found. They represent 14.2% of the presumed individuals.

#### *IV INTERSPECIES PROPORTIONS*

It is a little difficult the outcomes to be framed in a broad archaeozoological contexte because of scarcity of information. Just now only few Vinča-Turdaş sites from Transylvania have been enjoyed of faunal analyses. So that we were obliged to resort to materials from settlements more or less contemporaneous for analogies. These are: earlier layers from Iclod (El Susi, 1989-1993), Zau de Cîmpie (Haimovici, Man, 1986), Tisza sites from Hungary (Bökönyi, 1958, *idem*, 1977), Vinča layers from Divostin (Bökönyi, 1988), Vinča-Belo-Brdo (Bökönyi, 1990), Gomolava (Clason, 1979) and Liubcova-Ornița (El Susi, 1995). The husbandry and hunting are complementary segments of the subsistence economy of the community from Orăștie-, „Dealul Pemilor”. With regard to domestic/wild ratio this is 55/45 at Orăștie; resembling proportions were outlined at Iclod (53.1/46.7), in Tisza sites (50.2-51.9/47.7-48) and at Liubcova-Ornița (46.3/53.6). In the latest case the wild mammals surpass the domestic ones. With regard to higher ratio of hunted mammals the similarities between Orăștie and Liubcova shouldn't astonish. The both sites developed on areas coresponding to climate, flora and fauna elements. However the ecological diversification is better reflected by the Liubcova spectrum. Eleven wild species were identified at Liubcova and only five at Orăștie. In case of latest settement maybe a coupe of taphonomic factors, a certain stage of site investigation have had an impact upon species frequencies. Considering the higher quota of wilds (about 45% on MNI) the hunting practice played an important role in community supplying. The local economy integrated the exploitation of red deer into the subsistence cycle, especially in spring-summer. A 31.4% value is uncommonly in contemporary sites from Romania 17% totalize his bones at Zau de Cîmpie and Iclod. Depending on biogeographical his bones at Zau de Cîmpie and Iclod. Depending on biogeographical placement in settlements of Vinča C-D Culture from Yugoslavia his share varies between 6% at Divostin, 18% at Gomolava, 36% at Opovo (Greenfield, 1986, p. 338). The high value of species preferring forest or open-forest environments reflects the high density in the surroundings of Orăștie. His spreading area was much more extent than our days. As for the brown bear his distribution area was more driven to northwards than present times. The aurochs was present in local fauna, however he recorded a lesser density as the spectrum reflects it.

Domestic cattle were the most common domestic element found at Orăștie. They recorded 47% at the site, 41% at Zau de Cîmpie, 40.1 at Lebö

(Bökönyi, 1977, p. 10), 44% at Divostin (Bökönyi, 1988, p. 420). Lesser values were estimated for Vinča (37% on fragments) (Bökönyi, 1990, p. 23), Gomolava (Clason, 1979, p. 72) and Iclod (34%).

The quota of small ruminants and pig rises 5%. One supposes ovicaprins were exploited to a small extent also at Iclod (8%), in Tisza sites (4-4%). Including a hypothetical percentage of destroyed bones their value shouldn't exceed by 10%. In exchange is surprisingly the lesser share of pig, about 4.4%, for which favorable conditions seemed to exist. The species also recorded small frequencies in the other sites: 11.2 at Iclod, 9.5 at Zau de Cîmpie, 4.5-14.2 in Tisza sites.

An estimation of meat amount (about 13,177kg) offered by a total of 89 MNI was provided as it follows: 61.7% by domestic mammals and 32.9 by wilds. The cattle account 64.4%, only 2.2% the pig and ovi-caprins. Of wilds, red deer summarizes 20.1%, auroch 12.1%, 6.4% the wild swine and 4,5% the brown bear.

On the whole the animal husbandry of Turdaş community from Orăştie is based on cattle exploitation, together an intensive hunting. From this point of view it draws any the better together the neolithic sites from Transylvania (Iclod, Zau de Cîmpie) and to a small extent the Tisza sites. Also the diggings in the settlement brought to light some bones with a special destination (function), maybe. That is the question of samples from two pits and a grave (G<sub>1</sub>).

The first pit furnished three ribs and a metapodial fragment from a subadult ovicaprin; from a pig not older than one year came out a rib and two mandible fragments. A left radius of a red deer originate in pit 4 (close by grave 2); the bone belongs to a mature stag of big size. To gravel belong a mandible of red deer, a splinter of a shoulderblade and of a diaphysis; the latest two are undetermined. Therefore in all cases were deposited parts of small animals and hunted species. Probably economic reasons would have laid down the choice of species.

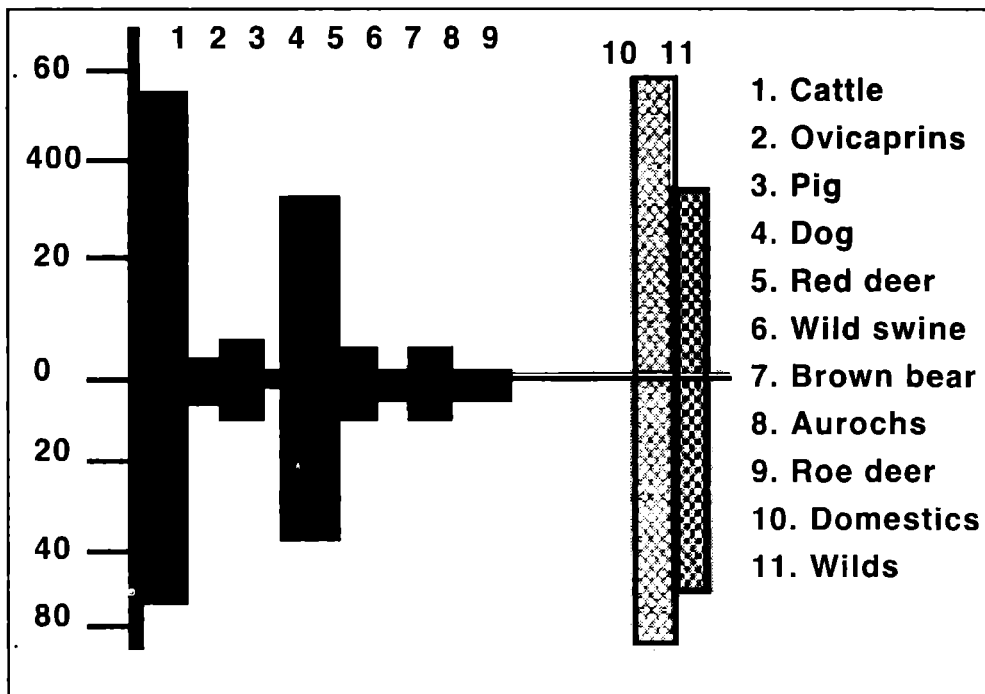


Fig.1: Species frequencies on fragments (A) and MNI (B) in Orăștie site

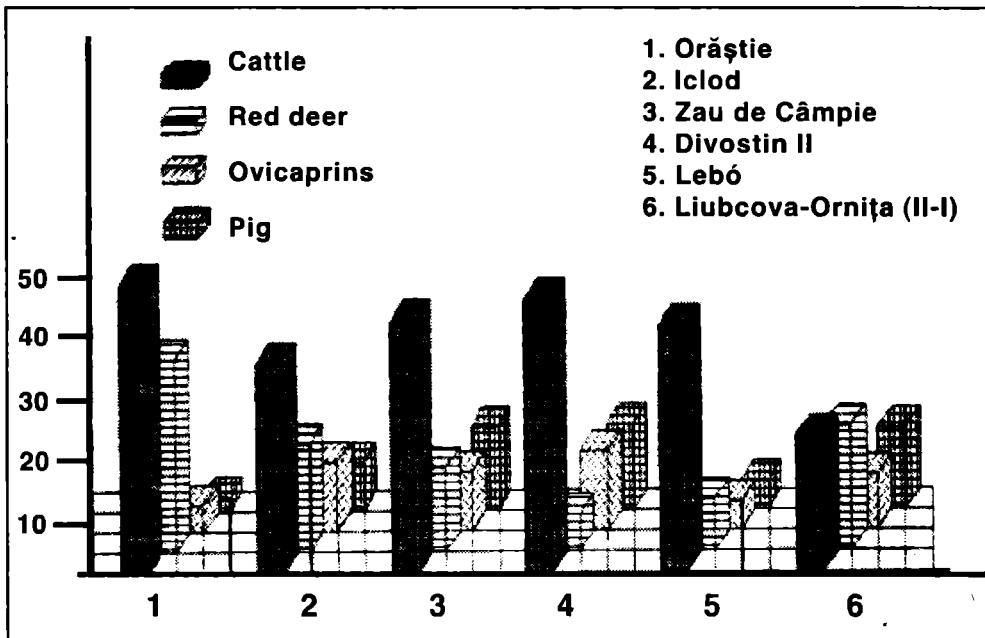


Fig.2: Species frequencies in neolithic settlements of South – East Europe.



**O PRIVIRE GENERALĂ ASUPRA CREȘTERII ANIMALELOR  
ÎN COMUNITATEA TURDAȘ DE LA ORĂȘTIE „DEALUL PEMILOR” (X<sub>2</sub>)  
(JUDEȚUL HUNEDOARA)**

*Rezumat*

Lucrarea prezintă analiza efectuată pe materialul osteologic de la Orăștie „Dealul Pemilor” (X<sub>2</sub>). Estimând un raport între speciile domestice și cele sălbatice putem încadra așezarea neolitică în categoria celor cu o economie alimentară axată pe exploatarea speciilor domestice (ponderea numerică deținând-o bovinele) și în subsidiar vânătoarea (specia cervideelor).

Frecvența speciilor în așezările neolitice din sud-estul Europei din lotul de la Orăștie, Iclod, Zau de Cîmpie, Divostin II, Lebö și Liubcova-Ornița (II-I), denotă și în aceste cazuri, existența cu preponderență a speciei de rumegătoare, pe lângă cervidee, ovicaprine și porcine.