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# CERCETĂRI INTERDISCIPLINARE – МЕЖДИСЦИПЛИНАРНЫЕ ИССЛЕДОВАНИЯ – INTERDISCIPLINARY SURVEYS

Roman Croitor, Ghenadie Sîrbu

## Animal remains from the Late Eneolithic settlement of Gordinești II-*Stînca goală* (Edineț district). Part 1

**Keywords:** domestic animals, antler material, tool marcs, burn bones.

**Cuvinte cheie:** animale domestice, coarne de cerbi, urme de unelte, oase arse.

**Ключевые слова:** домашние животные, олений рог, следы использования орудий, обожжённые кости.

*Roman Croitor, Ghenadie Sîrbu*

### Animal remains from the Late Eneolithic settlement of Gordinești II-*Stînca goală* (Edineț district). Part 1

The present paper describes an archaeozoological assemblage from Late Eneolithic settlement of Gordinești II-*Stînca goală*. The studied osteological material is characterized by low number of remains of wild animals, the predominant position of cattle and small cattle (with apparent importance of *Capra hircus* among small cattle), sparse remains of horse and apparent absence of pig in this sample. Systematical structure of the archaeozoological material from Gordinești II-*Stînca goală* and specific post-mortem modifications of bone remains are similar to the animal remains complexes from the described earlier sites of the Cucuteni-Tripolie Culture Horodca X and Trinca-*La Șanț*.

*Roman Croitor, Ghenadie Sîrbu*

### Resturi de animale din așezarea eneolitică târzie Gordinești II-*Stînca goală* (r-nul Edineț). Partea întâi

În articolul de față se prezintă vestigiile arheozoologice descoperite în așezarea eneolitică târzie Gordinești II-*Stînca goală*. Materialul osteologic analizat este reprezentat printr-un număr mic de oase, ce aparțin speciilor de animale sălbatice, predominând bovinele și ovicaprinele (cu un avantaj clar în favoarea caprei domestice printre cele din urmă). De asemenea, se atestă prezența ocazională a oaselor de cal și absența celor de porc domestic. Structura sistematică a materialului arheozoologic din situl Gordinești II-*Stînca goală* și modificările post-mortem specifice ale rămășițelor osoase sunt similare complexelor arheozoologice din așezările specifice culturii Cucuteni-Tripolie, precum Horodca X și Trinca-*La Șanț*.

*Роман Кройтор, Геннадий Сырбу*

### Остатки животных из позднеенеолитического памятника Гординешть II-*Стынка гоалэ* (Единецкий район). Первая часть

В предлагаемой статье описывается археозоологический комплекс из позднеенеолитического памятника Гординешть II-*Стынка гоалэ*. Изученный остеологический материал характеризуется незначительным количеством остатков диких животных, доминирующим положением крупного и мелкого рогатого скота (с явным преимуществом в пользу домашней козы среди мелкого рогатого скота), эпизодическим присутствием остатков лошади и отсутствием остатков домашней свиньи в данном ограниченном по численности материале. Систематическая структура археозоологического материала из Гординешть II-*Стынка гоалэ* и модификация костного материала в процессе археологизации сходны с особенностями археозоологических комплексов из трипольских памятников Хородка X и Тринка-*Ла Шанц*.

## Introduction

Animal osteological remains described in the present work were unearthed during the archaeological field campaign 2016<sup>1</sup> of an Eneo-

lithic settlement from Edineț district, Republic of Moldova (geographic coordinates: 48°08'24.25"N; 27°09'34.58"E). The area of excavation works attained 90 m<sup>2</sup> and was divided into the sectors A, B, C, and D [Sîrbu et al. 2017a, fig. 1A; Sîrbu et al. 2017b]. The investigated area included remains of rectangular dwelling with open fire place inside and yielded a complex of fine and rough pottery and other artifacts [Sîrbu et al. 2017a, fig. 2; Sîrbu

1. The archaeological investigations were funded from project *Synchronizing the interrelations between population of the Cucuteni-Tripolye cultural complex and the Funnel Beaker culture*, Opus 8 2014/15/B/HS3/02486, coordinated by dr.hab. Małgorzata Rybicka, Institute of Archaeology from Rzeszów, Polonia.

et al. 2017b]. The archaeozoological material was grouped into three complexes: the archaeozoological assemblage discovered inside the dwelling, the archaeozoological assemblage coming from the accumulation in the Sector E (near the dwelling), and the archaeozoological material coming from the cultural level of the entire excavated area.

### Research methods and material

The osteological material is heavily fragmented, therefore, the research methods suitable for morphological and comparative analysis was quite limited. The measurements are taken according to the methodology of A. Von den Driesch (1976). Fragments of deer shed antlers are regarded here as manuports and are not included in the minimum number of individuals. Abbreviations used in the text: DLM, lateromedial diameter or measurement; DAP, anteroposterior diameter or measurement; BN, bone number; BBN, burn bone number; MNI, minimum number of individuals; TM, tool marks.

### Description

**1. Dwelling.** The osteological material discovered in the dwelling remains includes comparatively higher number of cattle (*Bos taurus*) remains including limb bone fragments, skull fragments,

mm to 55.0 mm, n = 17 [Cavaleriu, Bejenaru 2009]. The initial stage of wear of P4 suggest a young adult age of the individual.

The small cattle remains from the dwelling belong rather to a domestic goat *Capra hircus*. This conclusion is drawn from the morphological peculiarities of talus reported by H. Fernandez (2001). Goat remains are represented by small fragments of ribs, limb bones, and vertebrae. The small cattle individual is juvenile too, since the distal epiphysis of humerus still maintains a fusion suture between diaphysis and epiphysis. DAP distal of the humerus attains 31.7 mm, DLM distal of the humerus attains 30.2 mm.

The horse is represented only by a longitudinally broken first phalanx (maximal length amounts to 84.0 mm).

The wild boar (*Sus scrofa ferus*) is represented by two fragments of ribs and a fragment of large upper male canine. Red deer (*Cervus elaphus*) is another wild species represented by a single complete first phalanx (L, 58.5 mm; DLM × DAP proximal, 25.8 × 30.8 mm; DLM × DAP distal, 24.4 × 19.1 mm).

The archaeozoological material from the dwelling includes also a shell of grape snail *Helix cf. pomatia*, two shells of *Unio sp.*, and rodent remains (Tab. 1).

Species	BN	MNI	BBN
<i>Bos taurus</i>	46	1	3
<i>Capra hircus</i>	17	1	3
<i>Sus scrofa ferus</i>	2	1	
<i>Equus ferus caballus</i>	1	1	
<i>Cervus elaphus</i>	1	1	
<i>Helix cf. pomatia</i>	1	1	
<i>Unio sp.</i>	2	1	
<i>Rodentia gen. et sp.</i>	4	1	
<b>Total</b>	74	8	6

**Tab. 1.** Systematical and quantitative structure of the archaeozoological assemblage from the dwelling (Gordinești II-Stîncea goală).

and horn core. Only one skeletal element of cattle, the distal epiphysis of tibia, provided suitable measurements (DLM distal, 72.3 mm; DAP distal, 55.6 mm). The measurements of distal epiphysis of tibia belong to a very large individual, possibly, a bull, since its measurements correspond to the largest specimens of *Bos taurus* from Poduri, Romania (Cucuteni Culture, phase A): the breadth of distal epiphysis of the Romanian sample varies from 73.0

**2. Sector E.** The remains of cattle (*Bos taurus*) from this complex also belong to a young or even juvenile individual (Tab. 2). This conclusion is supported by the unfused to the bone body caput femoris and by the initial stage of wear of lower second molar (M2). Distal epiphysis of metacarpus (DLM distal, 44.0 mm; DAP distal, 33.0 mm) is exceptionally narrow and belongs rather to a female. The distal breadth of metacarpus from

Species	BN	MNI	BBN	TM
<i>Bos Taurus</i>	62	2	6	
<i>Capra hircus</i>	26	1		
<i>Sus scrofa</i>	2	1		
<i>Cervus elaphus</i>	1	1	1	1
<i>Aves gen. et sp.</i>	1	1		
<b>Total</b>	92	5	7	1

Tab. 2. Systematical and quantitative structure of the archaeozoological assemblage from the Sector E (Gordinești II-*Stînca goală*).

Gordinești-*Stînca goală* is significantly smaller than the rather large sample from Poduri characterized by distal breadth ranging from 57.0 to 78.0 mm, n = 21 [Cavaleriu, Bejenaru 2009]. A proximal epiphysis of metatarsus (DLM proximal, 46.8 mm; DAP proximal, 44.4 mm) possibly belongs to another larger individual, which falls within the variation range of cattle remains from Poduri (DLM proximal = 45.0 – 56.0 mm, n = 27).

As in the previous archaeozoological complex, the remains of small cattle belong to goat (diagnostic characters are provided by talus). The heavily fragmented bone remains (limb bones, ribs, mandible, isolated lower deciduous tooth PD4) belong to a juvenile individual.

The burn fragment of antler of red deer with tool marks represents a special interest. The porous internal antler tissue is destroyed. Apparently, the antler fragment (fig. 1,A) bears a longitudinal cut or/and was polished [Sirbu et al. 2017a, fig. 2,7].

**3. Cultural layer.** Skeletal remains of *Bos taurus* belong to an adult individual (the upper second premolar P2 is characterized by the medium stage of wear). The bone remains of small cattle are heavily fragmented, therefore the species determination was impossible. M2 is on the initial stage of wear, while caput femoris is not completely ossified, thus indicating a young age of the individual.

The finding of a single damaged upper cheek horse tooth is interesting. The tooth (fig. 2) is burnt and is not touched by physiological wear and thus belongs to a juvenile individual. The rather long tooth's protocone (14.2 mm) distinguishes the specimen under study from the wild European tarpan. The length of protocone in upper cheek teeth varies in tarpan between 10.0 and 11.5 mm [Gromova 1949]. Therefore, we assume that the tooth from Gordinești-*Stînca goală* rather belongs to a domestic horse characterized by the specific long protocone.

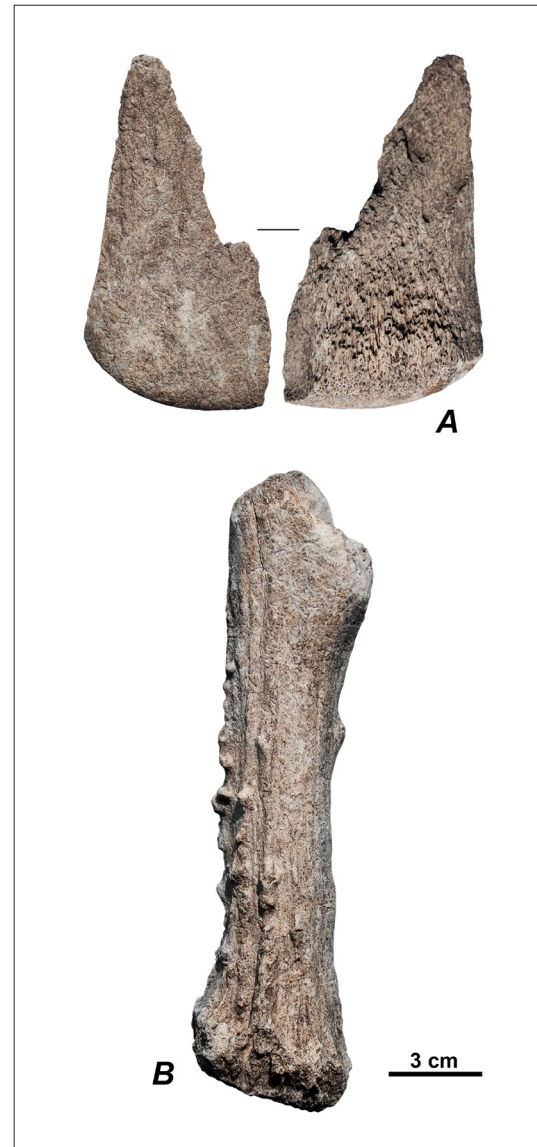


Fig.1. Fragments of deer antlers with cut marks: A, fragment of red deer *Cervus elaphus* antler; B, proximal part of shed antler of roe deer *Capreolus capreolus*.

Wild animals are represented by fox *Vulpes vulpes* (fig. 3,A-B) (right hemimandible with P4 and M1), roe deer *Capreolus capreolus* (a proximal

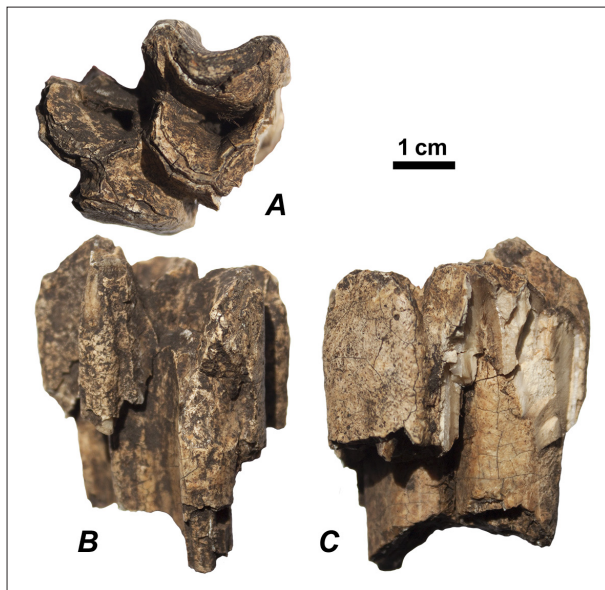


Fig. 2. Isolated upper cheek tooth of horse *Equus ferus caballus*: A, upper view; B, labial view; C, lingual view.

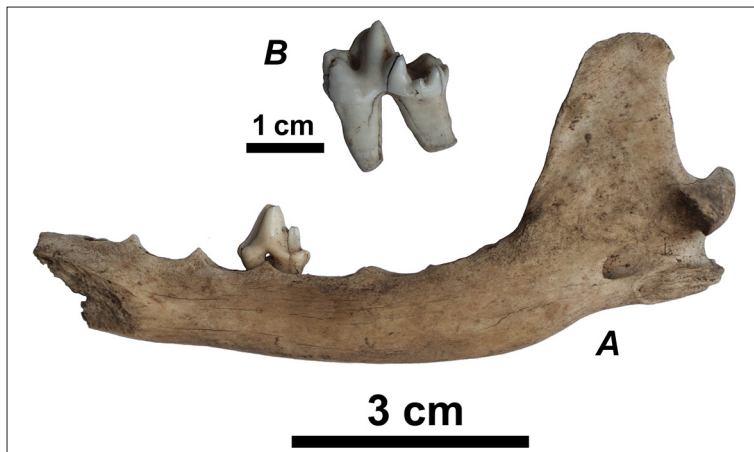


Fig. 3. A right hemimandible (A) of fox *Vulpes vulpes* with P4 (medial view) and isolated M1 (B), which apparently belongs to the same hemimandible.

part of shed antler (fig. 1,B): [Sirbu et al. 2017a, fig. 2,8], and a small fragment of antler of red deer (*Cervus elaphus*) antler with tool marks (Tab. 3).

### Conclusions

The remains of game animals (red deer, roe deer, wild boar, and fox) are very scanty in the archaeozoological assemblage and attain only 4.8% of the total number of animal remains. The low number of wild animals in the archaeozoological complexes represents a specific trait of certain monuments of Cucuteni-Tripolie Culture of Prut-Dniester Area, such as Horodca X (ca. 5% of wild animal remains) and Trinca-La Șanț (4% of wild animal remains) [Kroitor, Bodean 2008; Kroitor et al. 2012]. The absence of remains that certainly may be ascribed to domestic pig is noteworthy. The osteological assemblage is characterized by a certain degree of bone modification: the 7.6% of bone remains are burn, and three fragments of antlers of roe deer and red deer bear the traces of tool marks. The rather significant number of burn bone remains approaches the archaeozoological complex Gordinești II-*Stînca goală* to Horodca X (burn bones attain 8-11% of the sample). Generally, the archaeozoological material from Gordinești II-*Stînca goală*, Horodca X, and Trinca-La Șanț yielded conspicuously similar assemblages of domestic animals, characterized by predominant position of cattle and small cattle (with apparent importance of *Capra hircus* among the small cattle remains), and sparse remains of horse and pig (which, apparently, is missing in the studied sample from Gordinești II-*Stînca goală*).

Species	BN	MNI	BBN	TM
<i>Bos Taurus</i>	43	1	3	
<i>Capra hircus /Ovis aries</i>	31	2	2	2
<i>Equus ferus caballus</i>	1	1	1	
<i>Vulpes vulpes</i>	1	1		
<i>Cervus elaphus</i>	4	-		
<i>Capreolus capreolus</i>	1	-		
<i>Unio sp.</i>	2	2		
Total	83	7	6	2

Tab. 3. Systematical and quantitative structure of the archaeozoological assemblage from the cultural layer (Gordinești II-*Stînca goală*).

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