

Animal remains of the Neolithic Ritual Burial Complex near Krum Village (Haskovo Region, SE Bulgaria)

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Abstract. From a total of 389 highly fragmented animal bone and tooth finds, dated ca. 6500-6300 B.P. have been identified 7 taxa: Lesser mole rat, Eurasian beaver, Cattle, Sheep, Goat, Pig, and Donkey.

Key words: Neolithic; Animal husbandry; Domestic animals; Bulgaria; Eurasian Beaver.

Material and Methods

During the excavations have been noticed, proceeded and collected a total of 389 animal bone and tooth finds from 71 samples. At least 33 of the finds represent tooth remains. Most of them are unidentifiable as even the teeth were destroyed and usually come as splinters. That is why, because of the extremely bad preservation of the finds, the exact number of the remains could be difficultly stated. The degree of fragmentariness is relatively high and very few bone/tooth finds are of intact state. The great majority of them are splinters 1-3 cm long. Only several (> 20) of the bone remains preserved their definitive surfaces, that have diagnostic value in the osteological analysis. Thus, the archaeozoological data are rarely scant. Obviously, the extremely unfavorable taphonomic conditions (typical cinnamon forest and delluvial-meadow soils (Eutic Fluvisols) (Galabov, 1973), high level of soil acidity, burning of some finds before their burial, caused their extraordinary bad preservation. It is notable that almost all finds of teeth (the most resistant, hardest structures of the living body at all), are actually represented by tooth splinters. The teeth namely are split and in most cases they have been gathered in situ in destroyed state. The same is much often in the bones. All of them are represented by bone fragments or bone splinters. Such a lower degree of preservation is very rare phenomenon in the archaeological sites throughout the country. Taxonomy of domestic forms follows Gentrya *et al.* (2004).

After ceramic artefacts and the stratigraphic examinations (Vandova, 2012), the examined burial complex is synchronic to Karanovo II–III Period, i. e. ca. 6500-6300 B.P. (Genov, 1987)). The settlement is situated on the left bank of Kar river. After Vandova (2012) the cultural finds originate from the sediments of the Ahmatovo suite. Kar river is almost completely dried up at present but it carried its waters up to Maritsa river in the past. All material came from the Neolithic Ritual Burial Complex examined in 2009-212 in the salvage excavations in the Kar Dere locality near the Krum village along the route of the Maritsa Highway between km 32+100 and km 32+200 (Borisov *et al.*, 2011; Vandova, 2012; Vandova *et al.*, 2013).

Results

Species-diagnostic features could be found only on very few of the remains (Table 1). All remains belong to large eutherian mammals, mainly domestic ungulates – both artiodactyls (chiefly) and perrisodactyl (single find). The taxonomic composition in most cases remains undetermined completely.

Table 1. Taxonomic representation of the identifiable bone/teeth remains of large mammals from the Ritual Burial complex near Krum village (Haskovo Region).

| No | Common name | Scientific name | Number of finds | % |
|-----------------------------------|--|---|-----------------|--------------|
| Wild mammals | | | | |
| 1 | Lesser mole rat | <i>Spalax leucodon</i> | 2 | |
| 2 | Eurasian beaver | <i>Castor fiber</i> | 1 | |
| Subtotal | | | 3 | 0.77 |
| Domestic Mammals | | | | |
| 3 | Wild boar | <i>Sus domesticus</i> | 10 | |
| 4 | Sheep/Goat | <i>Capra hircus</i> / <i>Ovis aries</i> | 73 | |
| 5 | Cattle | <i>Bos taurus</i> | 50 | |
| 6 | Donkey | <i>Equus asinus</i> | 1 | |
| 7 | Goat | <i>Capra hircus</i> | 3 | |
| | Sheep | <i>Ovis aries</i> | 7 | |
| Subtotal | | | 144 | 37.02 |
| Undetermined large mammals | | | | |
| 3 | Placentalia indet. (<i>Bos taurus</i> size) | | 57 | |
| 4 | Placentalia indet. (<i>Ovis aries</i> / <i>Capra hircus</i> size) | | 148 | |
| 5 | Placentalia ?Artyodactyla indet. | | 8 | |
| 6 | Placentalia indet. (<i>Felis catus</i> size) | | 1 | |
| 7 | Placentalia indet. | | 27 | |
| Subtotal | | | 241 | 62.00 |
| Wild birds | | | | |
| 8 | ?Rock Partridge | cf. <i>Alectoris</i> sp. | 1 | |
| Subtotal | | | 1 | 0.25 |
| Total | | | 389 | 100.0 |

Mammalia LINNAEUS, 1758

Wild Mammals

Rodentia BOWDICH, 1821

Spalacidae GRAY, 1821

Lesser mole rat (*Spalax leucodon* Nordmann, 1840): 2 incissives. This subterranean rodent digs long and complex tunnels in the soil and its finds may be of more recent time. Its presence in the Ritual Burial complex layers is completely reasonable too.

Castoridae Hemprich, 1820

Eurasian beaver (*Castor fiber* Linnaeus, 1758): 1 molar tooth (Fig.1). The species disappeared from Bulgaria ca. 18 century A. D. (Boev, 1958), but numerous records prove its wide former distribution in the lowlands and plains throughout all the country (Boev, 2013).

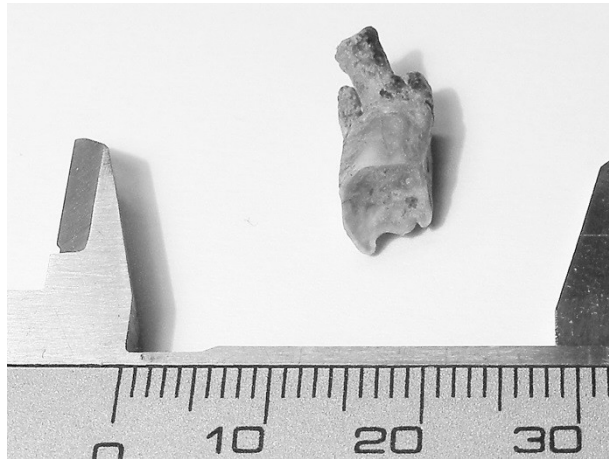


Fig. 1. Eurasian beaver (*Castor fiber*) – molar tooth. (Photograph: Z. Boev).

Domestic Mammals

Artiodactyla Owen, 1848

Bovidae Gray, 1821

Cattle (*Bos taurus* Linnaeus, 1758): os carpato-trapezoid sin.; os carpi accessorium; phalanx 2 medialis; phalanx distalis; phalanx intermedialis; phalanx proximalis, prox. end; phalanx proximalis metacarpalis sin. - distal half; scapula sin., 19 fragments of axial part; ?juv. os carpale IV dex.; juv. - praemolar tooth, 22 tooth and maxillar small unidentifiable splinters; juv. - radius dex. prox. - articular end, only part of f. a.; juv. - ulna dex. prox. - 3 fragments, 2-4 cm long; mandibula dex., proc. coronoideus dex., burnt, depth,; mandibula dex., proc. coronoideus sin. (Fig. 2); juv. - 4 splinters of teeth; juv. - 5 small carpal bones, damaged; juv. - vertebra caudalis - corpus vertebrae. The cattle is among the most common domestic mammals since the Early Neolithic in all the Balkans and Europe. Its presence in the Neolithic settlement near Krum is not unexpected. Some of the preserved pedal phalanges are shown on Fig. 3.



Fig. 2. Cattle (*Bos taurus*) – mandibular, processus coronoideus (Photograph: Z. Boev).



Fig. 3. Cattle (*Bos taurus*) – pedal phalanges (Photograph: Z. Boev).

Sheep (*Ovis aries* Linnaeus, 1758): 14 splinters of teeth fragments; 4 splinters of teeth fragments, long 1-1.5 cm each; 6 bone splinters of a rib, burnt, each 1-3 cm long; 8 bone splinters of ossa longa tubulosa, each 1-3 cm long, burnt; 8 splinters of ossa longa tubulosa, long 1-4 cm each; 32 small splinters of teeth, 10.09.2010; os hamatum sin., 9 splinters of ossa longa tubulosa, long 1-6 cm.

Goat (*Capra hircus* Linnaeus, 1758): 2 molar teeth dex., 1 molar tooth sin., 17 maxillar splinters 5-2 cm long.

Goat (*Capra hircus* Linnaeus, 1758) and/or Sheep (*Ovis aries* Linnaeus, 1758): 1 praemolar tooth of left semimandible; 4 teeth; almost completely destroyed maxillar fragment with 1 praemolar tooth; scapula sin. prox.

Suidae Gray, 1821

Domestic Pig (*Sus domesticus* ERXLEBEN, 1777): 7 splinters of pelvis - ilium, 2-5 cm long; superior canine sin., 3 maxillar bone splinters, long 1-2 cm each; juv. - 10 splinters of a mandubula dex. - each 2-8 cm long.

Perissodactyla Owen, 1848

Equidae Gray, 1821

Donkey (*Equus asinus* Linnaeus, 1758): caput humeri (incomplete).

Placentalia indet.

Placentalia indet. (*Bos taurus* size): 1 bone splinter, burnt, destroyed; 1 splinter of cranium; 1 splinter of ossa longa tubulosa, long 6.5 cm; 1 splinter of ossa longa tubulosa, long 4 cm; 1 splinter of rib; 23 splinters of ossa longa tubulosa, long 1-2 cm; 3 bone splinters, substantia spongiosa of ossa longa tubulosa, long 1-4 cm each; 3 splinters of ossa longa tubulosa, long 1-4 cm; 4 splinters of ossa longa tubulosa, long 1-4 cm; 8 splinters of ossa longa tubulosa, long 1-3 cm each; 9 small bone fragments and splinters, 1-3 cm long; caput femori (fragment), 2 molar splinters; completely destroyed large bone - fragment of ? ilium; destroyed bone fragment; destroyed bone fragment; diaphysal part of ossa longa tubulosa, heavily destroyed, ca. 7 cm long.

Placentalia indet. (*Ovis aries*/*Capra hircus* size): 122 small bone fragments of ossa longa tubulosa and splinters of teeth, all 1-3.5 cm long; 3 splinters, 1-1.5 cm long - dwelling; 5 splinters, 1-1.5 cm; 9 splinters, 1-1.5 cm long; 9 splinters, 1-1.5 cm long.

Placentalia ?Artyodactyla indet.: 3 splinters of nasal bones, long 3-5 cm each; 1 splinter of ossa longa tubulosa, long 3 cm; 1 splinter of ossa longa tubulosa, long 3.5 cm; 3 splinters of ossa longa tubulosa, long 2-4 cm each.

Placentalia indet. (*Felis catus* Linnaeus, 1758 size): femur sin. dist., dist. epiphysis, med. portion. The small fragment resembles *F. catus*, but remains unidentifiable.

Placentalia indet.: 1 bone splinter of ossa longa tubulosa, long 2 cm; 1 bone splinter, 1 cm; 2 bone splinters, burnt, each 1.5-2.5 cm long; 3 bone splinters; 3 splinters of ossa longa tubulosa, long 1-3.5 cm; 4 bone splinters of a rib, each 2-3 cm long; 4 bone splinters, long 1-1.8 cm each; 9 bone splinters, each 1 cm long.

Aves Linnaeus, 1758

Wild birds

Galliformes Temminck, 1820

Phasianidae Horsfield, 1821

cf. *Alectoris* sp.: tibiotarsus dex., medial portion of diaphysis, L-3.4 cm, burnt. The European range limits of the Chukar Partridge (*Alectoris chukar* (Gray, 1830)) and the Rock Partridge (*Alectoris graeca* (Meisner, 1804)) and their zone of hybridization lies in this region namely (Watson, 1962). The fragment doesn't allow further identification.

Traces on Bones. A total of 11 bone finds bear traces of burning. Their surfaces are burnt. They represent 2.8 % of all collected material. Their distribution is as follows: *Bos taurus* (1 mandibular fragment), *Capra hircus/Ovis aries* (6 splinters of a rib and 8 splinters of an unidentified long bone), large mammal of *Bos taurus* size (1 bone splinter), large mammal (2 bone splinters), cf. *Alectoris* sp. (1 diaphysal fragment of a tibiotarsus).

Discussion

The correlation "wild : domestic" mammals in the identifiable remains is ca. 1 : 37, a clear indication of the dominant role of the animal husbandry. The sheep/goat and the cattle are best represented among the domestic mammal finds. Seven finds of cattle and one of pig belonged to juvenile individuals, representing 14 and 7 % of all remains of these animals respectively. Eight finds (seven of cattle and one of a pig) belong to juvenile individuals. The record of beaver remains suggest large steady water bodies in the vicinity of the Ritual Burial complex, as well as hygrophilous forests. The ?Chukar/Rock Partridge find is an indicator of open rocky plain or hilly habitats.

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