



11th International Symposium “Prospects for the 3rd Millennium Agriculture”

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca



Domestic mammals in the diet of medieval communities in South-Eastern Romania

Simina STANC¹⁾, Luminița BEJENARU¹⁾, Ludmila BACUMENCO-PÎRNĂU²⁾

¹⁾Faculty of Biology, “Alexandru Ioan Cuza” University, Carol I Bd., 11, Iasi 700506, Romania; stancsimina@yahoo.com, lumb@uaic.ro
²⁾Faculty of History, “Alexandru Ioan Cuza” University, Bd. Carol I, 11, 700506, Iași, Romania; ludmila.pirnaeu@gmail.com

Archaeozoology is part of the interdisciplinary research that enables materials brought to light in archaeological contexts to be understood at the highest level of complexity. By studying the faunal remains recovered from excavations, archaeozoologists aim to identify the animal species that were in contact with ancient human communities and the relations established between the two (husbandry, hunting, fishing).

The paper was realized on the study of seven archaeozoological samples taken from sites from South-Eastern Romania: Oltina (X-XIth centuries), Piatra Frecăței (XI-XIIIth centuries), Dumbrăveni (IX-Xth centuries), Hârșova (XI-XIIIth centuries), Isaccea (XI-XIIIth centuries), Capidava (X-XIth centuries), Nufăru (X-XIIIth centuries).

The archaeozoological samples include the remains of animals used by humans or animals living on the settlement proximity. The molluscs, reptiles and bird remains found in the explored sites represent only a small portion of the samples (Tab. 1). The largest part of the samples consists of mammals remains.

Tab. 1. Quantification of the faunal remains (NR - number of remains).

Sample	Dumbrăveni	Oltina	Capidava	Isaccea	Hârșova	Piatra Frecăței	Nufăru
Datation (centuries)	IX th -X th	X th -XI th	X th -XI th	XI th -XIII th	XI th -XIII th	XI th -XII th	X th -XIII th
References	Haimovici, 2000	Stanc, Bejenaru, 2005; Stanc, 2006	Haimovici, Ureche, 1979	Bejenaru, 2003; Bejenaru, 2007; Bosniceanu, 2008; Cot, 2008	Bejenaru, 2003	Stanc, 2009	Bejenaru, Tarcan, 2007; Maftai, 2002
Identified mammals	199	940	1028	6890	705	1947	543
Unidentified mammals	206	796	350	3144	224	1571	248
Birds	32	128	45	142	84	86	7
Reptiles	13	-	1	-	-	-	-
Fish	174	580	370	718	600	316	8
Molluscs	6	21	16	4	7	-	-
Total sample	630	2465	1810	10898	1620	3920	791

Tab. 2. Quantification of the domestic mammal remains (NR - number of remains).

Species	Dumbrăveni		Oltina		Capidava		Isaccea		Hârșova		Piatra Frecăței		Nufăru	
	NR	%	NR	%	NR	%	NR	%	NR	%	NR	%	NR	%
<i>Bos taurus</i>	37	18.6	384	40.85	523	50.88	3699	53.69	303	43.41	636	32.72	319	58.75
<i>Ovis aries/ Capra hircus</i>	110	55.28	152	16.17	245	23.83	1689	24.51	137	19.63	226	11.61	53	9.76
<i>Sus scrofa domesticus</i>	16	8.08	268	28.51	172	16.73	634	9.2	192	27.51	214	10.99	17	3.13
<i>Equus caballus</i>	13	6.35	41	4.36	15	1.46	95	1.38	6	0.86	17	0.87	15	2.76
<i>Equus asinus</i>	1	0.5	1	0.11	1	0.1	7	0.1	-	-	2	0.1	-	-
<i>Canis familiaris</i>	5	2.51	34	3.62	6	0.58	207	3	3	0.43	7	0.36	59	10.87
<i>Felis domesticus</i>	1	0.5	-	-	-	-	77	1.12	-	-	2	0.1	1	0.18
<i>Camelus sp.</i>	-	-	-	-	-	-	1	0.01	-	-	-	-	-	-
Total domestic mammals	183	91.96	880	93.62	962	93.58	6409	93.02	641	91.84	1104	56.75	464	85.45
Total wild mammals	16	8.04	60	6.38	66	6.42	481	6.98	57	8.16	843	43.25	79	14.55
Total mammals	199	100	940	100	1028	100	6890	100	698	100	1947	100	543	100

Tab. 3. Quantification of the domestic mammal remains (MNI - minimum number of individuals).

Species	Oltina		Capidava		Isaccea		Hârșova		Piatra Frecăței		Nufăru	
	MNI	%	MNI	%	MNI	%	MNI	%	MNI	%	MNI	%
<i>Bos taurus</i>	16	23.53	33	37.5	104	27.44	8	21.62	33	20.25	7	20
<i>Ovis aries/Capra hircus</i>	11	16.18	21	23.86	111	29.29	7	18.92	25	15.34	6	17.14
<i>Sus scrofa domesticus</i>	20	29.41	20	22.73	62	16.36	9	24.32	27	16.56	2	5.71
<i>Equus caballus</i>	4	5.88	4	4.55	13	3.43	1	2.7	3	1.84	1	2.86
<i>Equus asinus</i>	1	1.47	1	1.14	4	1.06	-	-	1	0.61	-	-
<i>Canis familiaris</i>	5	7.35	2	2.27	15	3.96	2	5.41	2	1.23	7	20
<i>Felis domesticus</i>	-	-	-	-	6	1.58	-	-	1	0.61	1	2.86
<i>Camelus sp.</i>	-	-	-	-	1	0.26	-	-	-	-	-	-
Total domestic mammals	57	83.82	81	92.05	316	83.38	27	72.97	92	56.1	24	68.57
Total wild mammals	11	16.18	17	7.95	63	16.62	10	27.03	72	43.9	11	31.43
Total mammals	68	100	88	100	379	100	37	100	164	100	35	100

The size of archaeozoological assemblages, expressed by the number of remains (NR), varies between 630 and 10898. Expert archaeologists collected and dated the remains discovered during the various excavations.

The archaeozoological quantification aimed at evaluating the relative frequencies of the different species and of the different skeletal elements in the samples. The quantification methods used were based on establishing the number of remains (NR) and on estimating minimum number of individuals (MNI).

Animal breeding was an essential activity for the inhabitants of mediaeval Dobruđa; the archaeozoological investigations performed during recent years provide numerous informations that support such statements. The samples contain large amounts of domestic mammals remains, over 90% in almost all the cases; an exception is the sample at Nufăru with a percentage of 85.4%, as well as the sample from Piatra Frecăței, with domestic mammals remains percentage of 56.7% (Tab. 2).

The list of the domestic mammals identified in the medieval sites on the Dobruđa territory is quite comprehensive. The composition on the livestock seems relatively homogenous in the case of the investigated settlements (Tab. 2). The identified domestic mammals are: cattle (*Bos taurus*), sheep and goat (*Ovis aries* and *Capra hircus*), pig (*Sus scrofa domesticus*), horse (*Equus caballus*), donkey (*Equus asinus*), dog (*Canis familiaris*), cat (*Felis domesticus*) and camel (*Camelus sp.*). Domestic species with no direct economical relevance are *Canis familiaris*, *Felis domesticus*, *Equus asinus* and *Camelus sp.*

As far as the number of remains (NR) and the minimum number of individuals (MNI) are concerned, the prevailing domestic mammals in the investigated sites are cattle, pig and sheep/goat and their breeding was a basic component of local economies. The percentage of each of this species varies from one settlement to another. For six mediaeval settlements from Dobruđa, among the remains pertaining to domestic mammals the highest frequency is recorded in the case of cattle fragments, in point of the number of identified remains (NR), as well as in point of the minimum number of individuals (MNI); cattle remains frequencies vary between 32.7% in Piatra Frecăței and 58.7% in Nufăru. In Dumbrăveni sample on the first place is sheep/goat (55.6%), while cattle represent 18.6% from the total identified mammals.

In terms of occurring frequency of remains, sheep/goat in Capidava (23.8%), Isaccea (24.5%), Nufăru (9.7%) come second; in Oltina (28.5%) and Hârșova (27.5%) second place is occupied by pig; in Piatra Frecăței sample the proportion of the sheep/goat (11.6%) and pig (10.9%) remains is very similar (Tab. 2).

As for the minimum number of individuals (MNI) the cattle scores higher than the sheep/goat and pig in Oltina, Capidava, Hârșova, Piatra Frecăței and Nufăru, and range between 20% in Nufăru and 37.5% in Capidava; in Isaccea sample the proportion of sheep/goat (29.9%) is a little higher than the cattle's one (27.4%). The pig comes before the sheep/goat in Oltina (29.4%), Hârșova (24.3%) and Piatra Frecăței (16.5%) (Tab. 3).

The occurrence frequency of the horse within the frame of the medieval faunal samples is generally low and the number of remains varies from 0.8% in Hârșova and Piatra Frecăței till 6.3% in Dumbrăveni (Tab. 2). According to the archaeozoological data, the habit of eating horse-meat is occasionally and it was probably as a result of food shortages and/or the utilization for feeding purposes of the injured individuals.

CONCLUSION

Mammals breeding had a major importance in the economy of the settlements in medieval Dobruđa and most households had focused on breeding cattle, pig and sheep/goat; the relative representation of these species varying from one settlement to another. Cattle occur constantly in almost all the investigated settlements. The remains pertaining to sheep/goat have a higher frequency in the Dumbrăveni settlement and are followed by cattle, and this could be influenced by a religious factor, because at Dumbrăveni was a monastic settlement. In Piatra Frecăței settlement husbandry and hunting had almost the same importance in the food economy, compared to other six settlements where only husbandry was very important.

Bejenaru, L. (2003). Arheozoologia spațiului românesc medieval, Editura Universității Alexandru Ioan Cuza, Iași.
Bejenaru, L. (2009). Archaeozoological Approaches to Medieval Moldavia. BAR International Series 1954, Oxford.
Haimovici, S. (2000). Studiul resturilor animaliere, datate în sec. IX – X, descoperite în ruinele unui așezământ monahal paleocreștin de la Dumbrăveni, jud. Constanța. Acta Moldavie Septentrionalis. I: 291 – 310.
Haimovici, S. and R. Ureche (1979). Studiul preliminar al faunei descoperite în așezarea feudală timpurie de la Capidava, Pontica. XII: 157-170.
Maftai, R. (2002). Date arheozoologice privind așezarea medievală de la Nufăru. Lucrare de Licență. Facultatea de Biologie, Universitatea Alexandru Ioan Cuza, Iași.
Stanc, S. (2009). Arheozoologia primului mileniu d.Hr. pentru teritoriul cuprins între Dunăre și Marea Neagră. Editura Universității Alexandru Ioan Cuza, Iași.

This study was supported by the Romanian research programs CNCS–UEFISCDI PN-II-RU-TE-2011-3-0146 (S. Stanc, L. Bejenaru) and EU, POSDRU, 89/1.5./S/49944 (L. Bacumenco-Pîrnău).