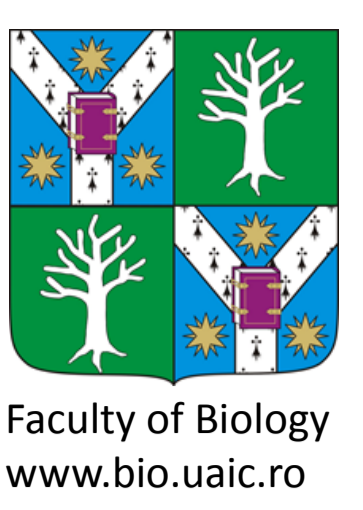


# Pathology in domestic mammals from the roman settlement at Niculitel (Romania)

Simina Stanc, Luminita Bejenaru

Alexandru Ioan Cuza University, Faculty of Biology, Carol I Bd., 20, 700505, Iasi, Romania, simina\_stanc@yahoo.com, lumib@uaic.ro



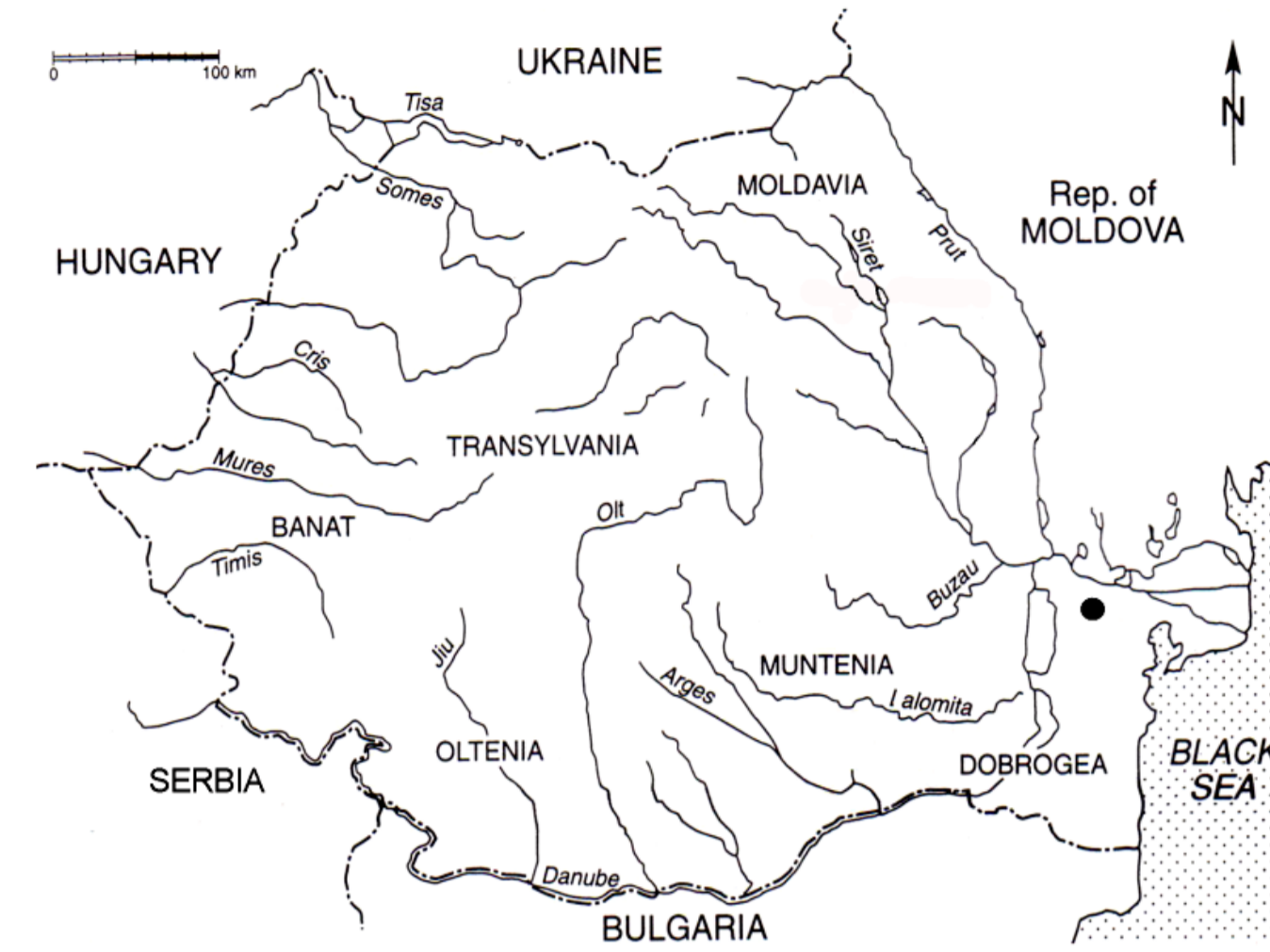
Niculitel is located in the North of Tulcea county (Dobruja, South-East Romania) a few kilometers from the River Danube, near the ancient city Noviodunum (Fig. 1).

During the Antiquity, this area belonged to the northern side of the province Moesia Inferior (between the 1st and 3rd centuries AD). Between the years 2009 and 2011, salvation archaeological excavations were conducted in the north side of the today village, revealing an early Roman *villa*, which functioned starting with first half of the 2nd century and last until mid. 3rd, when the entire area was destroyed by the Carpien and Gothic invasions. In the area were found a number of coins, the earliest being issued during the reign of Antoninus Pius, but most are of the Severan dynasty (Septimius Severus, Caracalla and Geta) (Barbulescu, 2001).

Located in an area marked by an abundance of historic vestiges, Niculitel experienced an intense habitation during Roman period, which was also favored by the auspicious habitation conditions.

The archaeozoological sample collected in the years 2009 and 2011 includes household waste, the vast majority from domestic mammals; cattle (*Bos taurus*) is predominant. Besides the remains of mammals (which are predominant) were identified remains of fish and birds. The identified mammals species are: *Bos taurus*, *Ovis aries*, *Capra hircus*, *Sus scrofa domesticus*, *Equus caballus*, *Canis familiaris*, *Cervus elaphus*, *Capreolus capreolus*, *Sus scrofa ferus*, *Bos primigenius*, *Lepus europaeus*.

Species	NISP	%	MNI	%
<i>Bos taurus</i>	1304	67.71	43	49.43
<i>Ovis aries / Capra hircus</i>	308	15.99	14	16.09
<i>Sus scrofa domesticus</i>	182	9.45	12	13.79
<i>Equus caballus</i>	15	0.78	2	2.3
<i>Canis familiaris</i>	17	0.88	3	3.45
<b>Total domestic mammals</b>	<b>1826</b>	<b>94.81</b>	<b>74</b>	<b>85.06</b>
<i>Sus scrofa ferus</i>	30	1.56	3	3.45
<i>Cervus elaphus</i>	33	1.71	3	3.45
<i>Capreolus capreolus</i>	6	0.31	2	2.3
<i>Lepus europaeus</i>	13	0.68	3	3.45
<i>Bos primigenius</i>	18	0.93	2	2.3
<i>Ursus arctos</i>	-	-	-	-
<i>Canis lupus</i>	-	-	-	-
<b>Total wild mammals</b>	<b>100</b>	<b>5.19</b>	<b>13</b>	<b>14.94</b>
<b>Total identified mammals</b>	<b>1926</b>	<b>100</b>	<b>87</b>	<b>100</b>
<i>Gallus domesticus</i>	28	-	-	-
<i>Anser anser/A. domesticus</i>	4	-	-	-
Aves unidentified	4	-	-	-
<b>Total birds</b>	<b>36</b>	-	-	-
<i>Huso huso</i>	1	-	-	-
<i>Acipenser</i> sp.	1	-	-	-
<i>Silurus glanis</i>	4	-	-	-
<i>Cyprinus carpio</i>	5	-	-	-
Teleostei unidentified	2	-	-	-
<b>Total fish</b>	<b>13</b>	-	-	-
Unidentified mammals	895	-	-	-
<b>Total sample</b>	<b>2870</b>	-	-	-



Settlement location.



Abnormal erosion of lower molar M1 (*Bos taurus*).



Exostosis (*Bos taurus*): 1. calcaneum; 2. proximal phalanx; 3. middle phalanx.

Most of the pathologies were observed on the cattle skeletal remains:

- exostosis of the proximal and middle phalanges, of a calcaneus, of a distal part of metatarsus;
- callus at the proximal phalanx;
- inflammatory process at the level of mandibles (in the area of the molar M3);
- abnormal erosion of lower molar M1.

Were also observed signs of using cattle for traction, distal articular surfaces of metapodials appear strongly widened.



Inflammatory process at the level of mandibles (*Ovis aries/Capra hircus*)



Callus at the proximal phalanx of *Bos taurus*.



Signs of using cattle for traction: 1. distal articular surfaces of metacarpus; 2. distal articular surfaces of metatarsus.



Inflammatory process at the level of mandibles (*Bos taurus*).