

ARCHAEOZOOLOGICAL STUDIES OF THE DACIAN AND ROMAN MATERIALS IN THE DANUBE VALLEY (SOUTHERN BANAT)

This paper will present an attempt to outline a general picture of faunal remains of the Dacian and Roman period in the territory of the Southern Banat. Many of the data and hypothetical statements are to be further tested by future researches at the presented sites. In this context the results of the archaeozoological researches of the well-known Dacian settlements will be considered: Stenca Liubcovei, with its two cultural layers, the first one dated into the period between the third and the first centuries AD, and the second one between the first century BC and the first century AD (Gumă 1992, 28), and Divici (I century BC – I century AD, Gumă, Luca, Săcărin 1987, 238), as well as the Roman camp in Pojejena, dated between the first and the third centuries AD (Gudea 1977).

The Dacian animal husbandry has been analyzed in more detail and published in a previous paper (El Susi

1997, 628–643). In the present article, however, the results of the Roman faunal determinations compared to the ones from the prior epoch will be emphasized. The geographic placement and surroundings of the mentioned sites has already been presented in detail (El Susi 1996, 75, 79, 86).

About 7000 bones came to light from both Dacian sites, including the samples from the recent excavations, and 2000 from the Roman castrum. Unfortunately, faunal data for the Roman civil settlements in the area under discussion are missing, making it difficult to compare the economic strategies in animal exploitation between the two epochs. In this case, only the species used for military supply can be specified. Some remarks can indirectly be made about the animal husbandry in the villages supporting the military camp in Pojejena.

Table 1. The species frequencies in the Dacian and Roman sites in the Danube valley (%)

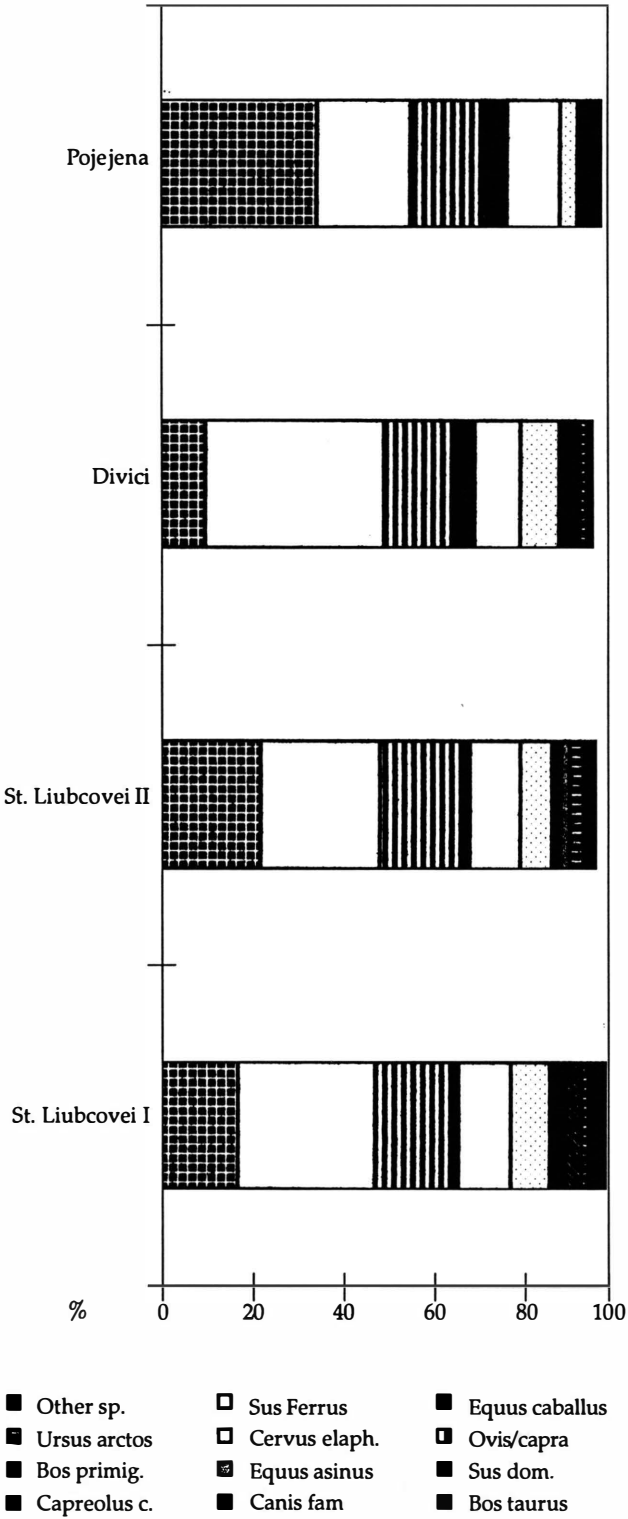
	St. Liubcovei I	St. Liubcovei II	Divici	Pojejena
Mammals	85.3	95.6	99.8	94
Birds	5.7	0.8	–	1.8
Reptiles	–	0.4	–	–
Fishes	8.7	8.7	0.1	4.2
Molluscs	0.1	0.3	0.1	–

Table 2. The mammal frequencies in the Dacian and Roman sites as MNI

Species	St. Liubcovei I	St. Liubcovei II	Divici	Pojejena
<i>Bos taurus</i>	18.6	23.5	11.2	35.8
<i>Sus domesticus</i>	30.5	26.5	39.7	20.9
<i>Ovis/Capra</i>	17	18.3	15.6	17
<i>Equus caballus</i>	1.7	1	3.7	2.5
<i>Canis fam.</i>		1	1	1.7
<i>Equus asinus</i>				0.4
DOMESTICS	67.8	70.5	71.5	78.6
<i>Cervus elaphus</i>	11.8	11.2	10.2	11.9
<i>Sus ferrus</i>	8.7	7.1	8.6	3.8
<i>Capreolus c.</i>	3.5	2	3.7	3.4
<i>Bos primig.</i>	3.5	2	1	0.4
<i>Ursus arctos</i>	1.7	3	1.6	0.8
Other species	3.4	3	1.5	0.8
WILDS	32.2	29.5	28.4	21.3

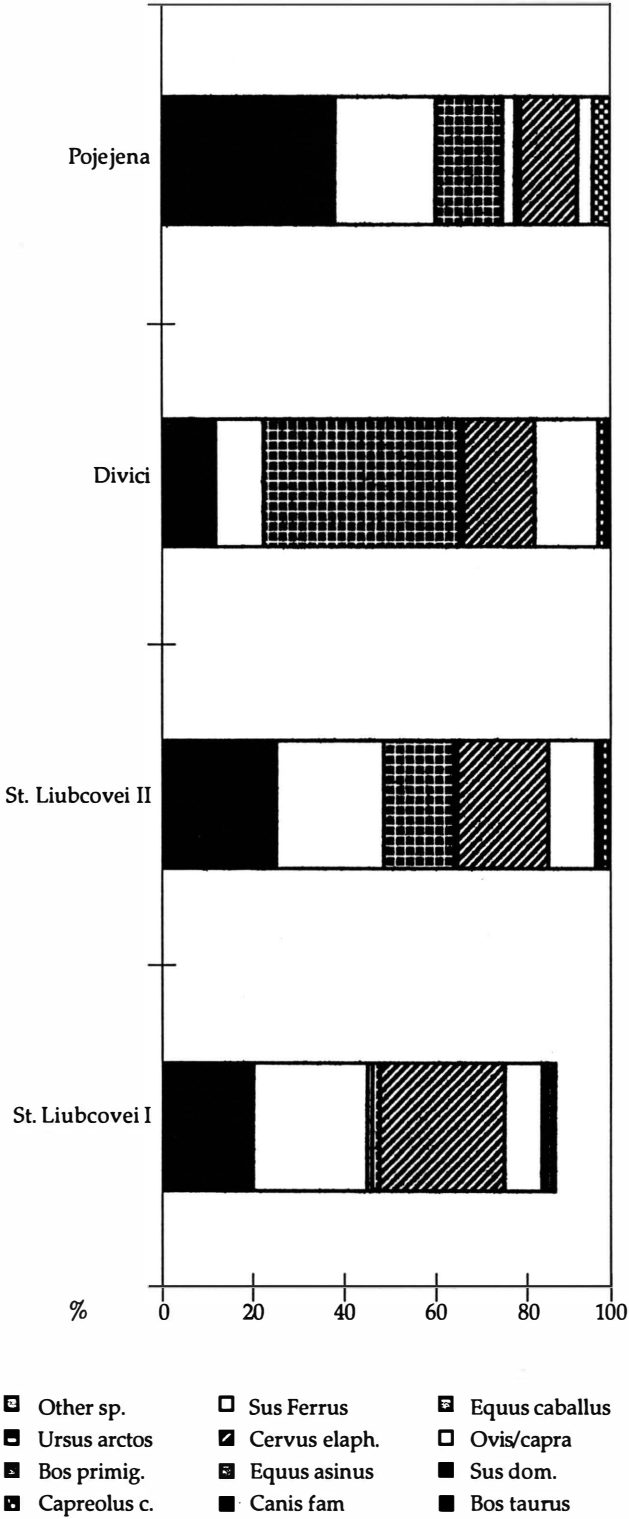
Not a great deal can be said about fish and mollusc fragments. Though the area is rich in water courses, the gathering and fishing were occasionally practiced in both epochs, contributing very little to the daily diet. Only the fowl breeding seems to have had some importance at St. Liubcovei I, the bones of chicken being recorded about 7,8%.

Fig. 1. Mammal frequencies in Dacian and Roman sites –MNI



In the other sites the values are below 1%. Among bird remains about two thirds of fragments come from chicken. The new elements in the Roman faunal spectrum are goose and ass. It has been ascertained that the Romans introduced several new domestic animal species into the Danube area, such as cat, ass, goose (Bökönyi 1988, 173).

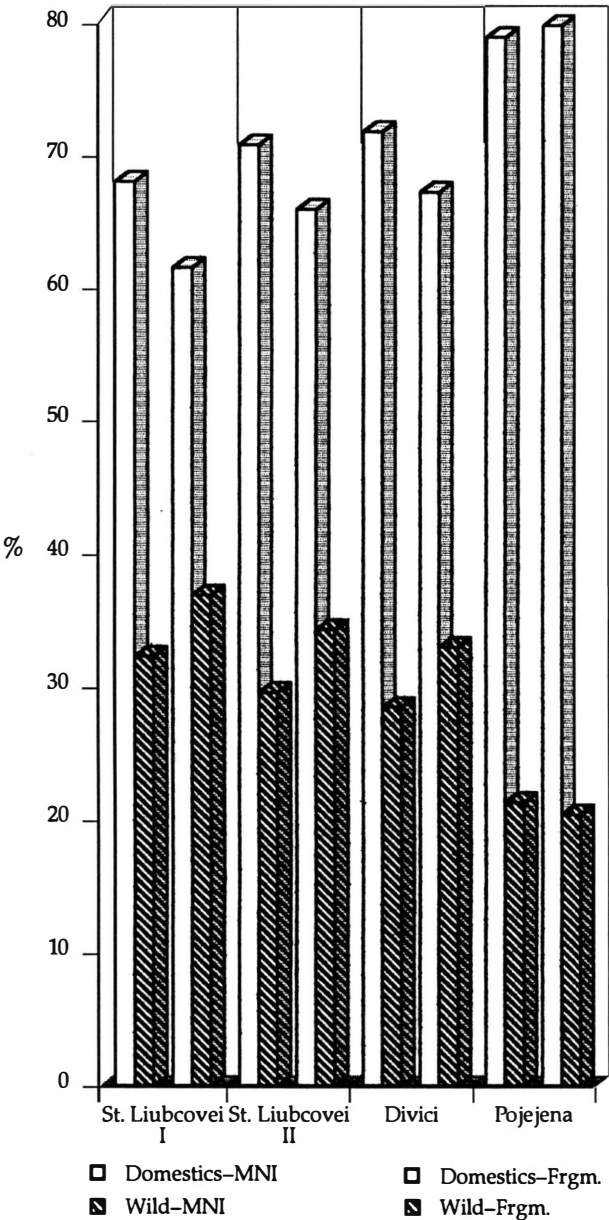
Fig. 2. Mammal frequencies in Dacian and Romanian sites



The mammal bones dominant in all the faunal lists recording high values (Table 2). Cattle stands at the top, as the main source of meat and milk, and as draught power. In the Dacian sites (Fig. 1, 2), the cattle quota vary between 18,6 and 23,4% at St.Liubcovei, falling below 11,2% at Divici. At Pojejena, the cattle unambiguously dominates the faunal spectrum with 35,8%. It is also evident that the percentage contribution of cattle to the faunal assemblages increases between the two periods discussed here. As to the withers heights of bovids, an average of 112,5 cm (Matolcsi) was emphasized at the Dacian sites (El Susi 1996, 80). Small animals of aboriginal breeds are typical of this period (Haimovici 1971, 258). The size of animals started to grow during the Roman times (Bökönyi 1984, Udrescu 1984, 85; 1985, 67). On the contrary, small aboriginal animals prevail at Pojeje-

na, with only few animals large in size, reaching 122,8 to 131,1 cm (El Susi 1996, 87). On the whole, the cattle's average is 116,1 cm, a small value during the Roman times. The broad variation of body parameters suggests the presence of heterogeneous bovine population in the region. Certainly the camp was supplied by aboriginal cattle individuals bred by the local communities. On the other hand, the big-sized animals were the result of cross-breeding between the local primitive breeds and those newly introduced, being the result of a long selective breeding practice. The increase in size was not the same everywhere (Bökönyi 1988, 173). For example, in the town of Gorsium in the hinterland, an average has been calculated of 126,3 cm (Bökönyi 1984, 28), and smaller values have been recorded in the castrum of Intercisa at the Danube limes (Bökönyi 1988, 177).

Fig. 3. Domestic/wild ratio in Dacian and Roman sites



At the Dacian sites, pig unambiguously dominates, representing the support of meat supply of the communities. At St.Liubcovei 26–30% is recorded, significantly increasing up to 40% at Divici. Maybe, other factors not being neglected, the favorable environmental conditions caused the orientation of the local economy towards breeding pigs. During the camp function too, pork represented an important meat source, the species reaching as high as 21%. Only the quota of small ruminants remained unchanged during both the periods. They take values between 15 and 18% on the whole.

In the case of pigs, two averages of height have been established: 66,2 cm at St.Liubcovei and 70,2 cm at Divici (El Susi 1997, 631). The data are in concordance with those quoted for the Pojejena camp, being 58,9 to 79,5 cm ($A=72,1$ cm). Despite of the larger values for the Roman sample (the result of natural crossing with wild ancestor or of a better breeding), pig belonged to the same primitive type slowly growing.

Sheep and goat were both medium-sized. The significant increase in the size of sheep during the Roman period is worth mentioning, reaching the values of 60,6 to 73,9 ($A=67,7$), versus 51,4 to 65,7 ($M=63,1$) in the previous period. The goat stock of the Dacian inhabitants were medium in size, values being 62 to 64,4 cm. Only a single value has been recorded for the Roman sample, that of 68,3 cm.

From both epochs only few fragments of horse bones are registered. The horse bred by the Dacian communities belonged to the small type, so-called "ordinary", being 134,3 to 139,6 cm high.

In the Roman camp, the bones of small aboriginal individuals were registered, along with the big-sized animals called "choice horse", 142 cm high, the latter represented by smaller percentage. Generally,

the frequency of horse remains during both the epochs is insignificant, falling below 3%. A radius with distal diameter 34 mm, smallest width 30,5, seems to have belonged to an ass.

As far as dogs are concerned, mostly big-sized animals were found in the Dacian sites, reaching 57–62,4 cm in height. Only a single mandible with the value of 127,1 (Dahr length) points to a small dog. Dogs of large stature are recorded during the Roman epoch, only few bones coming from small individuals. In the castrum sample, the height of 54 cm has been estimated as average.

Propitious climatic conditions, along with the rich flora, favored a diversified wild fauna in the Danube valley. During the Dacian times, the hunting of ungulates and brown bear played an important role in completing the daily needs, so one third of MNI is made up by wild species. The domestic/wild ratio varies between 67,8/32,2–71,5/28,4% (Fig. 3) in the Dacian faunal spectrum. During the Roman epoch a significant shift towards the exploitation of domestic mammals is emphasized, so the quota of hunted species decreases below 22%. Hunting seems to have become more of a sport or a pastime, connected to

the more leisured way of life of the soldiers living in a camp (Bökönyi 1988, 173). It has been ascertained that “a comparison of the percentages of wild species in Roman military versus civilian sites shows a tendency for slightly more wild animals to appear in the faunal assemblages” (Bartosiewicz 1991, 112). Nevertheless, in our case the rule is not applicable. The ratio of wild species is larger compared to the other Roman sites (Bökönyi 1983, 175), reflecting to some extent the diversity and richness of the environment. Among hunted mammals, red deer seems to hold a significant percentage of 11,9%, suggesting a well forested area. Roe deer and wild swine reach down to 3,8 to 3,4%. Aurochs, brown bear, badger, and beaver hold a small quota of 1%.

AGEING

The reconstruction of age profiles of livestock shows different cattle kill-off pattern in respective periods. During the Dacian epoch the matures are the dominant age group, making up over 70% at Divici and about 57% at St. Liubcovei. The next age group is formed by adults, reaching about 26% at St. Liubcovei and missing completely from Divici. Subadult and

Fig. 4. Age class distribution of cattle

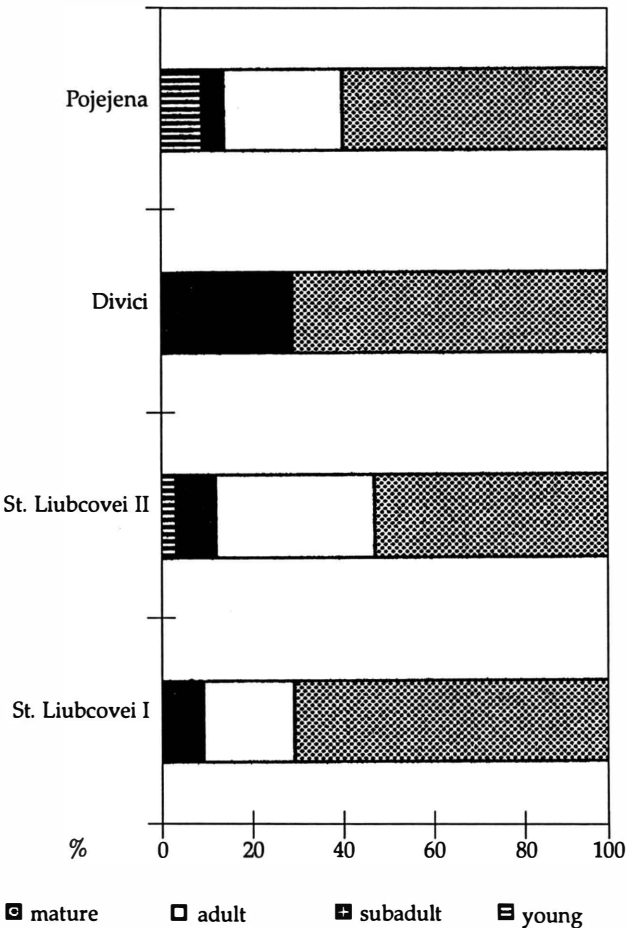


Fig. 5. Age class distribution of pig

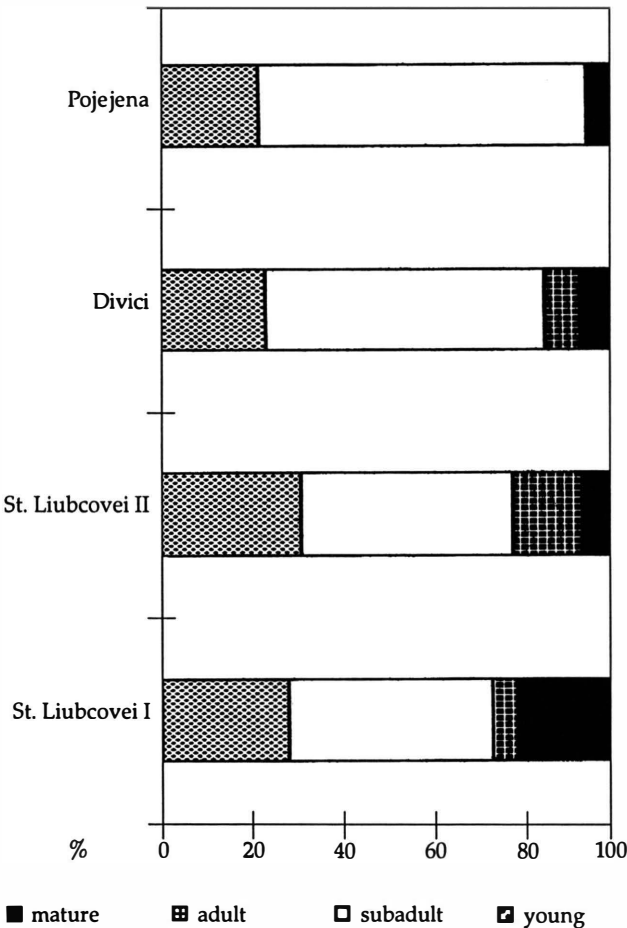
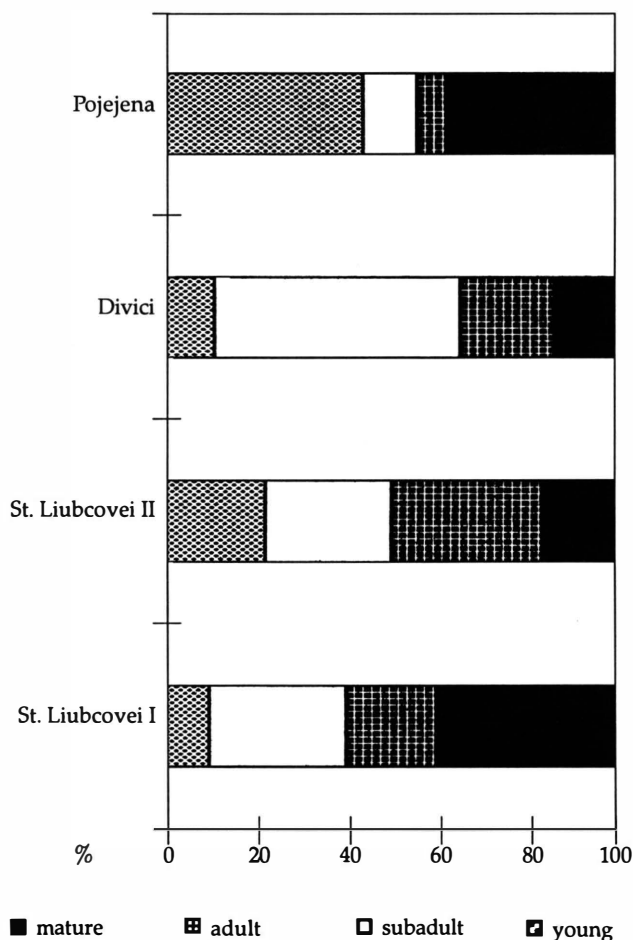


Fig. 6. Age class distribution of caprovines

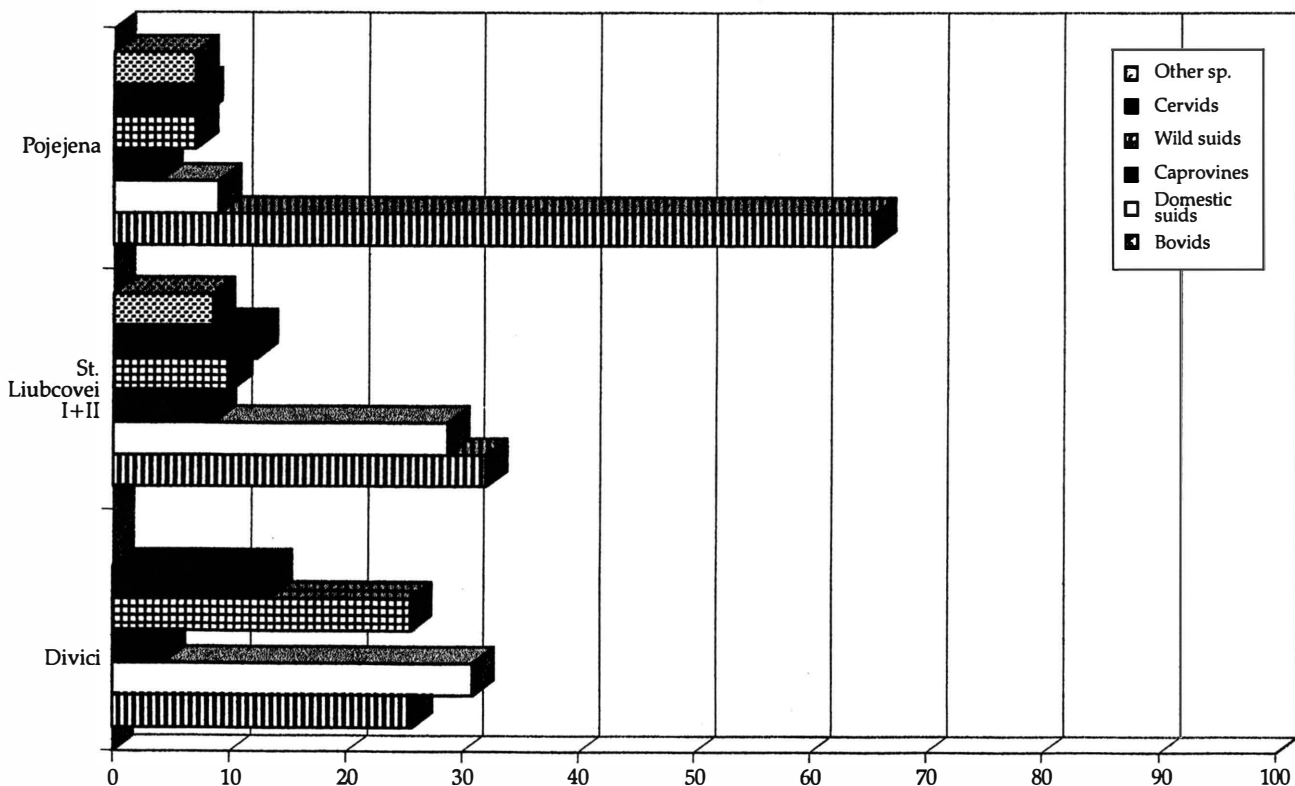


young specimens are rare at St. Liubcovei, forming 6,5%, but reaching 30% at Divici. The interpretation of age distribution suggests that cattle was exploited mostly for secondary products, rather than meat. At Pojejena, 55,9% of individuals were killed after reaching maturity, among them 3,5% being aged animals (Fig. 4). The young and subadults are rare. Cattle was probably used equally for its meat as well as secondary products such as milk and hide, and as draught power. A metacarpus of 198 mm points to an ox 122,3 cm high (El Susi 1996, 289).

Talking about pig exploitation, half of the animals were killed between the first and the second year, when they reached their full size (Fig. 5). The percentage increases up to 71,4% in the Roman castrum. Few mature/senile individuals were present, 6 to 7% in both periods. Only in the case of St. Liubcovei I sample, the breeding stock is maintained at a high level of 22%. This age distribution, strongly balanced in favor of immature animals, is typical for culling of species for meat and fat.

In the case of small ruminants at St. Liubcovei, the ratio of adult and mature animals was more than half of estimated animals (Fig. 6). A significant percentage of individuals were killed before their first winter (10–20%), or at a subadult age (27–30%). Divici forms an exception, with 54% of animals slaughtered between one and two years, and only 14% over three years of age. In this case the production was clearly

Fig. 7. The species frequencies as meat amount



oriented primarily towards meat supplying. The usage of caprovines in the castrum predominately as meat source is clearly sustained by the next values: 27,5% of animals before the first winter, 7,5% before one to two years, 45% between two and three years, and only 24% after this age.

In the case of the Roman castrum, the problem is present whether all the domestic mammals had been exclusively kept for meat, or some of them might have had some other exploitation purpose. In this context, individuals kept exclusively for meat were mainly killed in juvenile or subadult stage, and those of them meeting some other purposes, such as milk, wool, draught power, reached the adult stage in most of the cases (Bökönyi 1986, 414). In other words, the age class distribution clearly marks out the usage of pig and capro-

vines for meat, and the exploitation of cattle more for their secondary products and less for their meat.

Reviewing the data on faunal assemblages, an hypothetical estimation of meat amount furnished by animals could be calculated. So, during the life of the camp, cattle predominated in meat consumption, and at Pojejena almost 67,3% was made up by beef. Caprovines produced only 4,5% and pig 16%. The wild species furnished just 9%. The meat of domestic poultry was unimportant, below 1%. At St. Liubcovei, the situation is reverse: cattle is represented only by 34,9%, that of suids 35,9%, and 8,6% of caprovines (Fig. 7). Red and roe deer contributed 12,2% to the diet and brown bear 5,6%. At Divici, the main meat producer was pig. Pork constituted 55,4%, beef 9,4%, and caprovines only 4,4%.

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