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## A CONTRIBUTION TO THE ANTHROPOLOGY OF THE BRONZE AGE IN SLOVAKIA

If we want to study the development of the human society, we cannot look at it from one side only — neither from the viewpoint of the development of man as an animal species, nor from the viewpoint of the development of his culture only (both material and spiritual). For the reconstruction and understanding of this complicated process we must know all the components forming and influencing it. One of these components is environment. At the very beginning man depended completely on it, but he gradually freed himself, started to change it and adapted it to his needs.

In this paper I would like to deal with fauna, one of the components of the natural environment. Our knowledge concerning the general picture of the fauna, not only in the Bronze Age, but in all periods of the development of the human society, depends on the archaeological research of a sufficient number of settlement sites containing remains of the fauna, the kind of material enabling us to answer the given question. It depends also on the fact, whether sufficient attention is being paid to these materials. In the Bronze Age the keeping of the most important domestic animals was widespread in our territory and in Europe as a whole, so that the remains of fauna at the sites of this period are mostly the bones of domesticated animals. The picture of the fauna and the history of the animal breeding on the territory of Czechoslovakia is rather incomplete, though in Slovakia the archaeozoological material of several Bronze Age settlements has been evaluated. (Ambros 1971a).

Let us mention first the numerous faunal remains recovered in the Maďarovce cultural levels

in Nitriansky Hrádok (district of Nové Zámky), further in another site of the same culture in Malé Kosihy (district of Nové Zámky) and in a site of Otomani culture in Barca (now Košice-Barca). Smaller assemblages of animal bones come from a Bronze Age site in Gánovce (district of Poprad) and from two dwelling units in Dvory nad Žitavou (district of Nové Zámky).

We must point out here that the archaeozoological finds from settlements represent mostly foodrefuse. These remains are consequently very fragmentary, differing a great deal in this respect from the anthropological finds, but differing also from the archaeological materials, especially as far as their mapping is concerned. In order to be able to draw conclusions of general validity for the archaeozoological material we must have at our disposal the material from a large area of the settlement, in ideal case from the whole area. These materials have great interpretation value as a complex, not as isolated finds (though sometimes isolated finds are also of great importance).

At the above-mentioned Bronze Age sites I have found the folowing fauna: In Nitriansky Hrádok altogether 36 species of vertebrates (14.469 bones), mainly domestic animals (relationship of the domestic and wild animals is 86:14 per cent). More frequent is cattle (51 per cent), pig (20 per cent), goat and sheep (19 per cent), dog (6 per cent), horse (4 per cent). In Malé Kosihy the remains of 18 species of vertebrates were identified (1.355 bones) with the same relationship of the domestic and wild animals (86:14 per cent) respectively. Among the domestic animals outweigh

the cattle (60 per cent), followed by pigs (18 per cent), goats and sheep (14 per cent), dogs (5 per cent) and horses (3 per cent). In Barca (3.310 bones) 25 species of vertebrates were found where domestic animals are also prevailing (82:18). Most bones belonged to cattle (46 per cent), pigs (32 per cent), goats and sheep (11 per cent), dogs (5 per cent) and horses (6 per cent).

The archaeozoological material from Gánovce and Dvory nad Žitavou cannot be compared with the material of the above mentioned settlement sites. In Gánovce the whole material comes from a single unit (the well), which in its final phase had obviously cultic character and in Dvory nad Žita-

vou from two refuse pits.

There are no substantial differences between the archaeozoological materials of the above-mentioned settlements - the ratio of the domestic and wild animals is about the same. We can conclude that the inhabitants of these settlements were not dependant on hunting, they covered their consumption of meat mostly by keeping domestic animals. Economically most important were the domestic cattle, whose remains clearly outweigh in all settlement sites, then pig, goat and sheep follow. Horse is very seldom what is pointing to the fact that horse-keeping was not very widespread. The economic importance of the dog was quite negligible, their meat was consumed obviously only occasionally. These results hold for a relatively narrow section of time - for the end of the Early and beginning of the Middle Bronze Age. Nevertheless these are our very first informations from this phase of the prehistory. If it is often said that the time for a synthesis of our knowledge on the Bronze Age anthropology has not yet arrived - the more it is true of our knowledge concerning Bronze Age fauna and animal keeping.

The study of skeletal remains of the fauna from some of our Bronze Age settlement sites has brought — besides the above-mentioned results also some generally valid methodical conclusions (Ambros 1973), and confirmed former finds of human bones on settlement sites. One of the methodical questions we were asking was whether there are qualitative and quantitative differences between the remains of the fauna which was found in closed settlement objects (refuse pits, huts, ditches, etc.) and between the finds from the cultural levels (i.e. from the area among the dwelling units). We have found the due answer on studying the archaeozoological materials from Nitriansky Hrádok. The main part of the settlement was excavated by the archaeologists (a part of it was destroyed prior to starting the excavation). We have collected separately the finds from the dwelling units and separately from cultural levels. By comparing these two groups of materials we have found that more bones come from the levels (60 per cent) and less from the dwelling units (40 per cent). The ratio of various representatives of the fauna and especially of the domestic animals is approximately the same in both groups. Though there are some quantitative differences in the share of various domestic animals,

but these differences are of little importance, not influencing our final conclusions. The overall ratio of the domestic and wild animals is practically the same. From this conclusion follows that if we have only material from cultural levels we can consider it representative enough. We can draw the same conclusion from a larger number of dwelling units. We underline that it must be a larger number, not only a few randomly recovered units (which is usually the case in small-scale emergency excavations).

This is one of our conclusions of general validity. While in the cultural levels of the Maďarovce culture in Nitriansky Hrádok we did not find any conspicuous concentration of bones at certain places (they were more or less regularly spread over the whole area of the site), it was quite different in the case of dwelling units. Some refuse pits contained larger quantities of animal bones, and some of the species present there were more frequent. So e.g. in one pit outweighed the bones of pig, in other those of goat and sheep, and yet in other of red deer, etc. It means that on the basis of studying the material of several pits recovered by chance we cannot draw general conclusions on animal keeping, hunting, etc. for the whole settlement.

Finally the finds of human bones in occupied levels of the sites are of great importance both for studying the spiritual life of man and the anthropology of the Bronze Age. These problems were allready published (A m b r o s 1971 b), and I would

like to mention them only briefly.

In the above mentioned Bronze Age settlements — with the exception of Dvory nad Žitavou (limited to the material of two refuse pits) — there were also human bones forming part of the refuse alongside with scattered animal bones. They are also in a similar state of preservation as the animal bones, i.e. they are mostly fragmentary, crushed, with traces of intentional damage (cutting, chopping), bitten by dogs. These bones can be divided into three groups:

1. Bones with traces of intentional interference by man (crushing, chopping, cutting). These traces are apparent both on the long bones and

in the skulls.

2. The group of human bones with traces of dog bitings. They are mostly long bones of the limbs, with the spongy epiphyses missing, i.e. devoured by dogs. The traces of bitings are well vi-

sible between the shaft and articular ends.

3. Human bones with no traces of interference. They may come from earlier burials (Neolithic or Eneolithic ones), which were destroyed in the period of the Maďarovce culture, so that they got into these layers. These bones differ from the bones of the first two groups both as regards to their look and to physical properties. Their surface is dim and they are relatively fragile and light. The bones of the first two groups have shiny, smooth (as if greasy) surface. They are also more solid and heavier. The bones of the first two groups are regarded by me as documents of anthropophagy. Similar finds of bones are relatively frequent also in other Bronze

Age settlements, as described e.g. by J. Jelinek (1957) and V. Spurný (1969). This underlines the necessity to analyse the archaeozoological ma-

terials from the sites by specialists.

Remarkable is also the find of the part of a skull (frontal bone) from pit 166 (Nitriansky Hrádok). This pit contained among other archaeological finds a woman idol made of clay. The margo parietalis of the frontal bone seems to had been adjusted. No other interference with this bone is evident. This bone strongly reminds of the finds of the masks made of human skulls and used for cultic purposes in the earlier periods (Bárta 1958, 1962). The frontal bone from Nitriansky Hrádok may be a torso of such a mask.

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