

ANIMAL BREEDING, ZOOTECHNICS AND VETERINARY MEDICINE IN THE DACIAN PROVINCES (106-275). A METHODOLOGICAL ATTEMPT FOR THE PRESENT STAGE OF RESEARCH

(SUMMARY)

Introduction

- a) The object (purpose) of the paper
- b) The present stage of research and knowledge
- c) The research method and the tackling of the problem

Sources concerning the existence, usage and breeding of animals

- a) Written and epigraphic sources
- b) Iconographical sources
- c) Proper archaeological sources (harness pieces, cart and yoke fragments, hiposandales etc)
- d) Historical deductions

Osteological analyses- a primary source for cognition of the domain

- a) Statistical view over the domain based on the osteological material
- b) Animal effectives, species and races
- c) Problems of zootechnics
- d) Veterinary medicine
- e) Duties of the archaeologist regarding the collection and treatment of the osteological material

Conclusions

- a) Ancestral domestic animal stock found by the Romans on the Dacian territory
- b) The Roman colonisation, setting up of the occupation troops and changes occurred in the animal effectives
- c) Archaeozoology, its contribution to the cognition of the domain
- d) Animal races within the species
- e) Problems raised by the adaptation of foreign races to the local conditions (interbreeding improvement)

f) Specific problems of the archaeozoology in Romania

Bibliographical abbreviations

Abbreviations and bibliography

List of illustrations

In a previous work the authors (an anatomist and an archaeologist) overviewed the situation of the animal breeding up to the Roman conquest (Gudea-Gudea 1999). In the present paper they intend to tackle the problem of domestic animal breeding with all the problems connected to this activity in the Dacian provinces (106-275 AD).

The introduction comprises some preparatory matters:

a) The paper assumes at its purpose the presentation, for the first time, of a methodological study of the animal breeding in the Dacian provinces alongside with problems connected to zootechnics and veterinary medicine, as much as they can be deduced from the existing sources.

b) The research of these domains, unfortunately, is very much left behind in Romania, no matter it concerns animal breeding as a branch of economic history (see bibliography: works about the economic history of the provinces) or the knowledge of zootechnical and veterinary medicine problems as branches of the history of the respective sciences (see bibliography relating to these domains).

c) The authors have decided to describe, for the time being, all data identified by them: epigraphical, iconological, archaeological proper, historical deductions, together with the few osteological analyses for each settlement. From these sources they hope to "extract" every possible thing for the attainment of their goal.

The used *sources* are of several categories, with unequal and varied informational value. They are:

a) Epigraphical sources (relatively few in number)

b) Iconological sources limited by the authors to representations on burial monuments, which seem to them more realistic than the ones on the votive monuments (stereotyped).

c) The found archaeological items reflect either the existence of certain domestic animals and the ways in which they were utilized (for traction, farming, war, hunting etc) or show how these animals were kept (hoof traces), how they were harnessed (harness pieces) and how they were protected

d) The historical deductions are based especially on the existence of some institutions, consumers of animal products (skins, meat, milk) or which functionally were bound to animal breeding.

The four groups of sources prove the existence of domestic animals, the variety of species (bovines, ovines, swine, horses, dogs, and poultry) and often also the way the animals were utilized (farming, transport, hunting etc). The sources do not offer sometimes only hint facts about animal breeding and its collateral problems.

The osteological analyses constitute a more secure primary source, richer in information than the above mentioned four sources, but they are still too small in number and territorially limited.

A. Analyses have been made in twelve settlements from which in five camps (Brancovenesti, Hinova, Bologa, Micia, Pojejena), one military vicus (Stolniceni), three civil settlements (Timisoara-Freidorf, Cicau-Saliste, Moldova Veche - Vinograda- Vlaskicrai), three town constructions (the Porolissum customs house, the Porolissum pub and the amphitheatre from Ulpia Traiana Sarmisegetusa)

B. The quantity of analysed bones offer sufficient information, which allow making an analysis both on the objectives and as a whole.

The bone analyses permit more profound observations on the subjects under study.

a) They confirm the large number of animals

b) The number of species is also confirmed, even enriched with new ones (donkey, cat, hen)

c) Within the species races were identified (bovinae, equines, canidae, ovines)

d) There isn't much information about how the live animals were utilised, instead one can learn how they were used through slaughtering (skins, meat etc)

e) Interesting is the fact that all the species were used in household consumption (being found in the habitation layers in the settlements), which contributes to the establishing of a spectrum of Daco-Roman household. There are also cases of animal usage in certain magical rites.

f) For the first time information was found about knowledge in zootechnics and veterinary medicine.

g) The authors use this overview to draw the attention of archaeologists on the importance of osteological research and to recommend them certain procedures in connection with the ways of gathering household bones, their preparation, conservation and registration.

The conclusions are very important especially from a historical point of view.

a) It is evident that at the arrival of the troops, of colonists, at the installation of Roman administrative and financial structures in Dacia there was a very serious stock of animals. The existence of such a stock can be demonstrated comparing the situation before conquest (Gudea-Gudea 1999) and the one resulting from the

present statistics, as well as on the basis of written sources (*Simionescu-Moroşanu 1984*, p. 54-56). From a historical point of view this proves that the population who breed the animals, the dacians, remained on the spot. And that is an extraordinary proof of the autochthonous continuity after the conquest, perhaps a more conclusive one than the other sources used by the historians of today. More conclusive because this stock coexisted with the newly brought stock until the third century (time limit of the present paper).

b) The spectrum of primitive animals corresponds exactly with what is known through osteological research done in the neighbouring areas of preroman Dacia, II-I centuries BC (*Bökönyi 1974*)

c) The Roman troops that had come to Dacia with their own war animals (horses), traction animals (bovines, asses and mules), the colonists with their vehicles and various domestic animals formed in the new province a primary stock of superior races, different from the local ones

d) The two groups of animals, the primitive and the superior ones, lived together from the beginning of the Roman province (106) up to the end of the Roman rule. The second group, the Roman one respectively, had been and it became by the passing of time larger due also to the permanent imports, justifiable in the light of Roman agrarian sources, and also due to the ever growing percentage of interbreedings which increased the number of superior quality animals.

e) The consumption needs of the army, administration and enterprises (for minerals, ceramics), the needs of the society in general seem to have imposed an intensification of animal breeding in Dacian provinces. Of course, an important contribution to this was brought by the large pasturelands and the richness in salt of the territory. In a primary stage this animal breeding was based on imports, but in a later stage on growth of the production rhythm and on the amelioration of the local races.

f) The sources (epigraphical, iconological, historical deductions) as well as the osteological analyses show that in Dacian provinces there existed all the species of animals typical for the Roman provinces from eastern and central Europe in the Roman times (*Bökönyi 1974*). Although the authors didn't make contrastive analyses, they are inclined to think that the situation might be the same for the identified races within the species.

g) The bone analyses allowed some conclusions about elements of primitive zootechnics (the way of breeding, the purchase of salt, and the best periods for slaughtering); they also allowed the identification of information concerning the modality and forms of amelioration of races (combining the superior races with the primitive ones). Such amelioration processes were identified in all settlements for the main species (bovines, ovicaprines)

h) The existence of veterinary surgeons could be proved by historical deductions, as the military units (auxiliary cavalry units) should have had such personnel in their organisation. There is no such information in Dacia, but some data have been revealed by bone analyses: at Brancovenesti a case of horse castration, at Porolissum- Customs the recovery of some fractured bones can be observed, as well as certain diseases like osteoporosis, coxartrosis and coxofemoral displazia. These illnesses could have determined the veterinary surgeon's decision for the sacrifice or elimination of certain animals from the stock.

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- Fig. 1 - The map of the Dacian provinces with the archaeological points which have been researched and the settlements from where domestic bones have been analysed, the places where monuments with images of animals, harness and chariot pieces, have been discovered
- Table I - Mounted troops from Dacian provinces and the number of their fight horses
- Table II - Military Units from Dacia Porolissensis province, with the number of soldiers, the number of the fight horses and number of the animals for transport