

## ABSTRACT

The present study gives a review of the current archaeozoological state of knowledge for the era of the Byzantine Empire. By means of analysing how animal husbandry, hunting, fowling, fishery and the gathering of molluscs find expression in the faunal materials, new insights into the diet of this era can be gained. Thus archaeozoological reports on excavated byzantine sites are collected and their results are compared. The area of research comprises the whole eastern mediterranean region and a time span of about a thousand years. Following a customary division, the temporal dimension can be subdivided into three sections. Most of the faunal materials originate from the Early Byzantine Period (395-642), during which the Empire attained its maximum expansion under Justinian 1st (527-565, **Fig. 1**). For the Middle Byzantine Period (643-1204), when the Empire was considerably smaller and included solely parts of Italy, Asia Minor and the Balkans, the state of knowledge already diminishes (**Fig. 2**), and for the Late Byzantine Period (1205-1453) only one archaeozoological report could be found (**Fig. 3**). To isolate the factors that determine the composition of the faunal materials, the area of research was split into seven regions (**Fig. 4, 11, 18, 26, 36, 49, 58**; pp. 12, 30, 43, 70, 90, 115, 130), which were first examined separately. This approach was chosen to filter out certain regional idiosyncrasies, which are mainly due to the ecogeography and the historical development of each region. In a second step the results gained are compared supra-regionally with each other to expose distinctions and similarities. At this point some cultural factors influencing the meat diet are taken into consideration, too. These are the roman tradition, Christianity, Humorism (i.e. the doctrine of the four juices black bile, yellow bile, phlegm and blood) and the courtly food customs. As these are to some extent difficult to grasp by means of archaeozoology, this section is based widely on results of Byzantine studies.

Meat diet in the Byzantine Empire was based on livestock husbandry (**Fig. 80**), and for the choice of which animals were to be kept their respective secondary products were crucial. The small ruminants sheep and goat were usually exploited for a long time as providers of milk and wool and were not culled until they had reached an age of at least three to four years. Cattle, however, were only seldom used for dairy purposes, an exception is the fort Iatrus-Krivina on the Danube, but rather as draught animals for plough and wagon. Only the domestic pig, which provides no secondary products during its lifetime, was killed at the latest when it had reached its maximum meat weight. Occasionally, for instance in city areas of Carthage, in Limyra and Tell Hesban, a luxurious consumption of tender piglet meat can be detected.

The composition of the main domestic livestock in the different areas demonstrates that the transition from the Roman to the Early Byzantine era took place without any major shifts in the animal husbandry patterns. The economic focuses were maintained with minor amendments particularly in the utilisation of the less important species (**Fig. 65**, p. 151). Except for the region on the lower Danube, where cattle breeding was still dominant as it had been for centuries, flocks of small ruminants were the most frequent animals throughout the Empire. Higher shares of pig bones can mainly be found in larger cities and towns on the mediterranean coast, such as Naples, Otranto (**Fig. 9**, p. 25), Butrint (**Fig. 16**, p. 39), Ephesos (**Fig. 30**, p. 82), Caesarea (**Fig. 38**, p. 103) and Carthage (**Fig. 60**, p. 141). At the latest from the 6th century, however, pork no longer ranked first in the urban meat consumption, but instead the meat of sheep and goats. The composition of livestock was also determined regionally by economic and ecogeographic factors. The conspicuous high shares of cattle bones (though based on small bone numbers) at the settlements Shal-lale, Sumaqa and Raqit in the lush Carmel Range of Israel (**Fig. 38**, p. 103) can be seen as evidence for a micro-regionalisation in an advantaged area amidst an arid landscape. In this region the shares of cattle are usually much lower.

All in all, a micro-regionalisation can be detected in the provinces – most obviously in South Italy and Asia Minor (**Fig. 9; 30**, pp. 25; 82) – which is distinguished by very variable bone spectra even at closely adjacent sites. In other regions, like Greece and North Africa (**Fig. 16; 60**, pp. 39; 141), a higher degree of homogeneity can be observed. It seems that the population tried to adjust its animal husbandry as well as possible to the local conditions and requirements to assure a high level of economic safety.

A state supply, as it is recorded primarily for the inhabitants of Constantinople, can not be proved clearly on the basis of animal bone finds. Such a state supply could most plausibly be supposed for the coastal towns, since they were accessible by the cost-saving sea routes and regularly show higher shares of pig bones – pork was even in byzantine times still part of the *annona*. On the other hand these higher amounts of pig bones can also be due to other reasons, for instance a larger clientele for highly prized pork, or a surrounding vegetation favourable to wood pasture. Generally, the regions were on their own, most of all those which were situated far inland and which were subject to hostilities, like the lower Danube region in Early Byzantine times and Asia Minor in the Middle Byzantine Period, confronting the Seljuqs. In Nicopolis ad Istrum an organized pig husbandry is indicated (**Fig. 21**, p. 59), which was possibly to some extent established to supply the neighbouring Roman forts, whose units built granaries and were engaged in farming, thereby indicating a lack of supplies provided by the state.

A couple of towns and even military forts show signs of ruralisation, which is in part due to unstable conditions in the hinterland. On the one hand this development was fostered by extended vacancies in the towns, a consequence of the early byzantine wars and the Justinianic Plague. On the other hand this concentration of agricultural activities *intra muros* was obviously caused by hostilities in the hinterland. In order to deprive the enemy of access and to assure ones own provisioning in case of siege valuable livestock was brought into town. Pigs were the most suitable animal for such an urban husbandry. The laws of the Book of the Eparch concerning the guild of the pig dealers indicate a black market for pigs for middle byzantine Constantinople, where pigs kept *intra muros* also seem to have been traded.

Elsewhere the Byzantines tackled famine and shortages by an increased exploitation of natural resources, as can be evidenced by punctually high shares of game (**Fig. 76**, p. 193) – conspicuously in case of the serbian fort Pontes (**Fig. 21**, p. 59) –, fish (**Col. plate 16**) or fowl (**Fig. 75**, p. 183), which were shot, trapped or fished in close vicinity of the respective site. In isolated cases a consumption of horses or even wolves can be proved – animals that were only eaten in emergency situations. Unfortunately, birds and fish remain partially invisible, because intensive sieving, which is the only means of recovering a representative amount of small bones (also seeds etc.), has only recently found a more wide-spread application in mediterranean Archaeology. Hence the possibilities of a comparative consideration are limited.

Both economic diversification and urban agriculture are signs of a voluntary or involuntary low governmental influence on the economy of the provinces and indicate that towns and villages tried to be economically independent of trade and imports as far as they could, be it from abroad (as can be assumed for Naples) or simply from the hinterland.

Apart from livestock, especially fish played a major role in the diet: on the one hand as a delicacy, and on the other hand as a nutritive substance in times of famine. Fish was always available in different qualities and could be caught even by non-skilled people or be bought at low prices. In some parts of the Empire fish was preserved by means of salting, as in Roman times. In the Early Byzantine monasteries on the Egyptian Nile (**Fig. 55**, p. 125) and the Middle Byzantine Black Sea harbour Cherson (**Fig. 25**, p. 66) the catching and conservation of fish seems to have been an organized branch of the economy, but usually the processing took place in a small-scale private setting for domestic purposes. Trade with processed fish products, which had prospered in Roman times, decreased and is in byzantine times only traceable between Asia Minor, Palestine, which is particularly low in fish, and Egypt, but archaeozoological evidence is poorer

in other regions. The intensive fishery already showed effects in middle byzantine Constantinople: law texts of the 10th century Book of the Eparch, aiming at a more sustainable fishery at the Golden Horn, point out that some degree of overfishing must have been reached at that time.

Hence glamour and gloom lie close together when it comes to the menu: here and there we can find proof of a refined diet with suckling pigs, tender poultry and expensive seafish, but often we encounter remains of long-serving domestic mammals in the leftovers. Hunting, fowling and fishing provided some variety in the menu and were intensified in times of shortages, because a supply of staple foods could obviously not be secured by the state, especially in case of regional famines, neither for the civil population nor for the armed forces.