Chapter 1

Introduction

1.1 Archaeozoology

Archaeological finds, written sources, and the pictorial record are some of the major sources that help us to better understand the past human societies and their way of life. Still, life is complicated; it has many different aspects, and the archaeological record offers only a fragmentary picture of the past. Thus, the interpretation of an archaeological site requires gaining as much information as possible from the finds discovered during the excavation campaigns.

A specific category of finds is biological (or environmental) remains, which include human and animal bones along with botanical remains. The focus of the present study is the analysis of animal bones, the field devoted to the investigation of the faunal remains known as archaeozoology. The investigation of animal bones is a fascinating but also demanding work and it can become even more challenging when certain important requirements are not fulfilled. The existence of a good and well-organised reference collection, space availability, and sufficient light sources are key requirements.

Studying faunal material is crucial for archaeology because it can bring to light a rich spectrum of information. Animal bones signify cognitive abilities, technological level and know-how, social status (inequality and differences), and economic structures (exchange and trading); they are markers of identity (rituals and taboos related to animals), they can visualize power (precious animal fur as visual symbols), and they can carry emotional meanings (emotional relationship between animals and people). Even if it is not always possible to find evidence for all the aforementioned aspects, it does not mean that they did not exist.

The analysis of faunal remains must be systematic and follow certain basic steps. The first crucial step is the identification. This process is a combination of knowledge and experience and can cost lot of time and energy. Archaeozoologists usually have to deal with large amounts of fragmented pieces that might represent a very wide spectrum of domesticated and wild species. The next steps are quantification, age and sex estimation, body part representation, study of modifications, and morphometric investigation. The information gained during the analysis of the material is of great significance for the final results and their interpretation.

The interpretation of the material can be influenced by many factors; taphonomy is one of them. The study of the taphonomic processes offers a vital contribution to archaeozoological studies. Significant information can be gained about the local environmental conditions and accompanying organisms, changes in the bone morphology and structure, and human practices. The taphonomic processes could be divided in three major categories: a) physicochemical processes, b) biological processes, and c) anthropogenic factors. The physicochemical processes include the environmental parameters that affect the material, such as weathering, soil, and marine/fluvial environment. The biological processes include the effect of plants (roots) and animals (carnivores, rodents, herbivores, and marine organisms) on the bones. The anthropogenic processes include diet (butchering marks etc.), manufacture of artefacts, burial customs (fire etc.), and the excavation techniques.

The interpretation of the material can become even more complicated considering that the recovery site is sometimes not the place where the material was primarily used or processed. This means that the recovery site is only the site of final deposition. These factors make it difficult to interpret and reconstruct the biography of archaeological finds.

Dating and the stratigraphic sequence are two major factors that can strongly influence any interpretation. In cases where characteristic finds are absent, such as pottery (e.g. in graves) it is difficult – and sometimes expensive – to correctly date the material. Conversely, it is equally possible that the dating of faunal remains and material culture differs. When significant archaeological information is missing (i.e. the archaeological context), it is sometimes better to avoid analysing (or over-interpreting) the material.

Moreover, it can be difficult to understand the formation of the material in terms of time. This means that it is not always possible to determine whether an assemblage was accumulated within weeks, months, or even years. Additionally, the amount of the material studied should be sufficient for statistical processing. Small assemblages might be random, and new material can significantly change the results.

Finally, many additional factors can influence the interpretation of faunal assemblages, including personal scientific interests. Archaeozoologists, similarly to archaeologists, are people with a specific social and scientific background, opinions, and experiences, which might influence the approach, the methodology, the scientific questions, and ultimately the results.

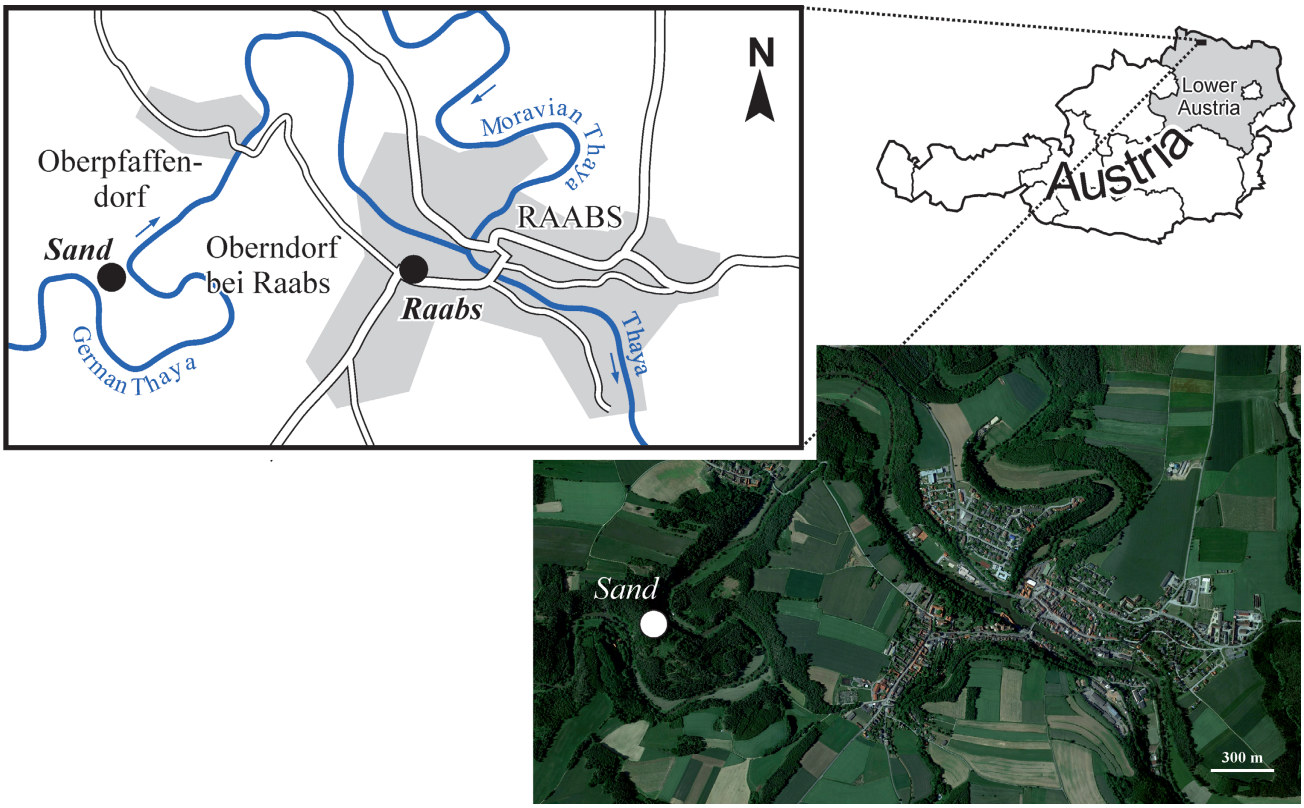

Figure 1. Location of Sand in a river bend of the Thaya (Waldviertel, Lower Austria). Source: Satellite image: Google Earth (6th June 2014).

1.2 The site of Sand and its archaeozoological context

Sand was an early medieval stronghold in Lower Austria that was erected around 930 AD and it was destroyed in the second half of the 10th century (Figure 1). The site was discovered by Kurt Bors in 1992 and excavations were conducted by Sabine Felgenhauer-Schmiedt (Institut für Urgeschichte und Historische Archäologie,[1] Universität Wien) from 1993 to 2008.

Sand combines practical and scientific characteristics that make the site a very interesting case study. To begin with the practical factors, the material derives from a well-defined period of the Early Middle Ages based on dendrochronological analysis (Grabner 2002, 975–976). Moreover, the destruction of the site some years after its erection indicates that the observable trends and patterns pertain to a very short period of maximally 50 years. This helps place the material in a very specific historical context. Another practical reason was the quantity of the faunal remains. In total, Sand produced more than 9000 animal bones, which is significant for statistically processing the material. Finally, the material represents mainly primary waste, which is important for the discussion, interpretation, and conclusions.

Additional factors concern the interesting archaeological and historical background of the site. The role of Sand in the political scenery of the early medieval period is enigmatic. Questions related to the identity of the inhabitants of the site, their political connections, and the reasons for the erection of the stronghold remain unknown; written sources are absent.

Finally, a preliminary investigation of the faunal remains by Pucher and Schmitzberger (1999b, 111–121) exhibited a high scientific potential. In their analysis of the material from the upper settlement terrace (Sand 1), the authors concluded that many vital questions regarding the economic strategy and logistical organisation of the site remain to be answered.

1.3 Research questions and structure

The main aims of this work are to understand the socio-economic organisation of the site, the strategies employed for the exploitation of the natural resources, and the interaction between providers (peasants) and consumers (inhabitants of the stronghold) based on the faunal material. Information on the socio-economic structures is crucial and can deliver important evidence for the way of life and the identity of the inhabitants. Thus, another major challenge is to approach historical questions through the study of animal bones. In order to meet these aims, the present work has been divided into five main chapters.

- Chapter 1 includes a brief introduction, the archaeozoological context of the site, and the research questions.

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- Chapter 2 presents information about the site, the archaeological background, the historical context, and the animal bones.
- Chapter 3 contains the methodology.
- Chapter 4 presents the analysis of the material per species and is subdivided into two major parts, where the domesticated and wild animals are separately treated.
- Chapter 5 contains the discussion and interpretation.