

Summary

During the Pleistocene, central Europe experienced rapid climatic changes that caused cyclic growth and retreat of the glacier, occasionally covering the northernmost areas of the European Plain. Upper Palaeolithic people adapted to this environment by refining tool production techniques and developing a more complex social organization. The mastered techniques of megafauna hunting, coupled with the unstable climate, may have contributed to the extinction of species such as the woolly mammoth and woolly rhinoceros.

The study of ancient flora and fauna is facilitated by archaeology and palaeontology. As the organic matter decays, more stable structures like bones or pollen gradually become covered by sediment. Over time, new layers of sediment accumulate, enabling further study of past fauna and flora as well as observation of environmental changes that occurred in the past. Unearthed remains of animals and plants, particularly those that were cultivated, domesticated, and hunted, are valuable for studying human history.

Birds, as a diagnostically valuable faunal component, exhibit high morphological and behavioural variability and occupy a wide range of biological niches. Due to their distinctive flight ability, birds can react quickly to ongoing changes in their surroundings. Being a constant environmental component, people use birds for sustenance (meat, eggs), thermal insulation (down), and tool production (bones). Birds are also present in the various facets of the cultural sphere, e.g., ornamental, ritual or symbolic.

However, analysing bird remains from archaeological sites and conducting environmental analyses face several challenges, including the presence of morphologically similar co-occurring bird species and many potential bird predators. There is a constant struggle to overcome such challenges; rich osteological comparative collections facilitate the discovery of subtle yet significant morphological bone features, while material discarded by known raptors (such as faeces, pellets, or leftovers) can provide insights into the agent responsible for deposition.

The presented dissertation comprises seven published papers covering various aspects of bird bone accumulations from archaeological sites, with a primary focus on Upper Pleistocene sites in central Europe.

Two papers examine bird bone accumulations from five Pavlovian sites, associated with a settlement centre established nearly 30,000 years ago in Moravia and Northern Austria. Remains of ravens and tetraonids were most numerous in the studied accumulations. Bones that represented bird raptors were often foot digits. Analyses of skeletal frequency and the taphonomical studies demonstrated birds during Pavlovian played a role as meat providers, although subsidiary to mammals. A few hypotheses for hunting the ravens are proposed.

The other two papers address the gap in taphonomy studies by identifying agents responsible for bone accumulation, focusing on ingested remains of the Northern Goshawk and the Peregrine Falcon. Food remnants of the birds may be present at the sites once occupied by humans. The studies demonstrated the Northern Goshawk and the Peregrine Falcon discard mostly complete long bones and broken sterna and pelves. About 10 % of the studied bones wore perforations made by beaks or talons.

Another paper presents a case study describing and explaining needle-like structures found stuck in Willow Grouse/Ptarmigan bones from upper Pleistocene sediments at Koziarnia Cave. Although the structures may suggest a sophisticated human activity, they are most likely intratendinous ossifications stuck in the bones during a predator activity. The conducted taphonomical analysis suggests a large owl was a probable predator at the site.

The final two papers provide a manual for identifying claw bone cores of diurnal birds of prey and owls from Europe, with diagnostic features described and presented on graphic plates. The manual should be helpful to various studies based on bird bones; be it studies of the environmental alterations in the past or studies that concern the man's usage of the bird of prey in (pre-)history. The claws at anthropogenic European Pleistocene sites often manifest the ornamental or symbolic spheres.