

New faunal, stratigraphical, and taphonomical implications on the early Middle Pleistocene locality of Mauer (SW Germany)

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The first identifiable fossil remains from the „Mauerer Sande” of the locality of Mauer were collected by the priest Johann Jakob Rutz (1800-1851) in the 1830th. In 1838 a first charge of material has given by him to the collection of the „Naturalien Kabinett Karlsruhe” (today the State Museum of Natural History, SMNK). In the following decades the sand pits in the Mauer region yielded a rich and diverse mammalian faunal assemblage, including the famous find of the lower jaw of *Homo heidelbergensis* in the sand pit „Grafenrain”.

The recovery of the historical fossil material at the SMNK is one result of the project „inventory and documentation of the fossil remains from the early Middle Pleistocene of Mauer”, a co-operation of the society „*Homo heidelbergensis* von Mauer e. V.” with the SMNK, supported by the „Klaus Tschira Stiftung” (foundation).

The inventory will be available for the scientific community as a database in the web. The catalogue of the „Mauer Collection” with detailed information on osteology, taphonomy and taxonomy enables further investigations on the faunal assemblage. The fossil-material can be related to the different sand pits in the Mauer region. About 16 % of the sample is assigned to the sand pit „Grafenrain”, and about 54 % can be referred to the later one by the labelling with the term „Mauer”, and its preservation. Other 13 % refers to the sand pits „Hollmut”, „Ziegler”, „Mergel”, „Aspen”, and the outcrop „Ziegelei”. The remaining 17 % are without any reference.

The faunal assemblages of these sand pits, excluding the pit „Hollmut”, are comparable, and represent the typical warm period assemblage of the locality of Mauer according to Koenigswald & Heinrich (1999), characterised by *Elephas antiquus*, and *Hippopotamus amphibius*. Whereas the faunal

assemblage from the sand pit „Hollmut”, containing *Mammuthus trogontherii* suggests a grassland-like habitat, and a different stratigraphical level in the early Middle Pleistocene.

Additional to the faunal assemblage from the „Mauerer Sande” the sand pit „Grafenrain” yielded fossil remains from two younger levels, even mentioned by former studies (Wurm, 1913, Koenigswald, 1992). As a result of the inventory the „Mauer Collection” can be divided into four samples:

- sample from the „Mauerer Sande”, early Middle Pleistocene
- sample from the sand pit „Hollmut”, older or younger in age, but early Middle Pleistocene
- sample from the „rust-coloured” sands on the top of the „Mauerer Sande” section, skeletons of foxes and rodents from the Upper Pleistocene, remained in their burrows in the Middle Pleistocene sediment
- sample from the Loess, Upper Pleistocene in age.

References

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