

The beaver *Steneofiber depereti* from the lower Upper Miocene hominid locality Hammerschmiede and remarks on its ecology

Thomas Lechner and Madelaine Böhme

Acta Palaeontologica Polonica 67 (4), 2022: 807-826 doi:https://doi.org/10.4202/app.00997.2022

Dental remains of a medium sized beaver from the early Late Miocene Hammerschmiede locality (MN 7/8) in the Northern Alpine Foreland Basin (Southern Germany, Bavaria) are described and assigned to *Steneofiber depereti*. The numerous material (160 teeth) was collected in the two fossiliferous layers HAM 5 and HAM 4 and comprises beaver individuals of a large range of age classes, from juvenile to old. The dental remains metrically and morphologically overlap the stratigraphic older *Steneofiber* spp. and the younger *Chalicomys* spp. This supports the hypothesis of the European anagenetic evolutionary lineage *Steneofiber depereti–Chalicomys jaegeri*. The morphological characters to differentiate *Steneofiber depereti* and *Chalicomys jaegeri* are discussed and redefined. The performed age-frequency distribution (Mortality profile) indicates a natural ecological mortality and confirms that at least the fluvial channel of the HAM 4 deposits was the actual optimal beaver habitat and continuously populated by larger family groups of beavers. Furthermore, there are indications that the Hammerschmiede beaver had a similar parental investment as today's beavers, where young adults migrate to poorer habitats in the second year, in search of their own territory. The shallower channel of HAM 5 possibly represents such a "second choice" habitat.

Key words: Mammalia, Rodentia, Castoridae, *Steneofiber depereti*, ecology, mortality, Miocene, Germany, Bavaria.

Thomas Lechner [thomas.lechner@senckenberg.de] and Madelaine Böhme [m.boehme@ifg.uni-tuebingen.de], Senckenberg Centre for Human Evolution and Paleoenvironment (HEP), Eberhard Karls University of Tübingen, Institute for Geoscience, Sigwartstraße 10, 72074 Tübingen, Germany.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

