

Ralf-Dietrich Kahlke (Ed.)

The Pleistocene of Untermassfeld  
near Meiningen (Thüringen, Germany)  
Part 4

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**Senckenberg**  
Research Station of Quaternary Palaeontology Weimar

Ralf-Dietrich Kahlke (Ed.)

## **THE PLEISTOCENE OF UNTERMASFELD NEAR MEININGEN (THÜRINGEN, GERMANY)**

### **PART 4**

Mit Beiträgen von

Mark Benecke · Madelaine Böhme · Nicolas Boulbes · Marzia Breda  
Maia Bukhsianidze · Véra Eisenmann · Andreas Gärtner · Axel Gerdes  
Ralf-Dietrich Kahlke · John-Albrecht Keiler · Jonas Keiler · Uwe Kierdorf  
Adam Kotowski · Ulf Linnemann · Adrian M. Lister · Albrecht Manegold  
Krzysztof Stefaniak

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Bildbearbeitung: Evelin Haase | Senckenberg Research Station of  
Quaternary Palaeontology Weimar  
Umschlaggestaltung: Evelin Haase | Senckenberg Research Station of  
Quaternary Palaeontology Weimar – Skull of an approximately two-  
year-old *Eucladoceros giulii* (1/3 natural size) from Untermassfeld and  
detail of the excavated area (1979–2015 field seasons)

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Foldout I

*Dedicated to our esteemed colleague and friend of many years*

***Helmut Hemmer***

*on the occasion of his 80<sup>th</sup> birthday.*





# FOREWORD

## **Untermassfeld – A scientific treasure trove for generations to come**

As archaeologists we want to comprehend how we became human and to do so, we must look back at the beginning of our species, to understand the ecological niche hominins occupied when they first entered Europe, the niche that formed them and that they in turn influenced. We need contexts that enable us to evaluate the environment encountered by these hominin ancestors.

For these discussions, the site of Untermassfeld is key. Untermassfeld represents a unique archive that offers a wealth of data for the reconstruction of past habitats and landscapes before hominins arrived in Europe. For us, as archaeologists, it provides specific insights into predator-prey relationships that help us to evaluate hominins' position in the food web. With the preservation of a wide variety of remains of a biocoenosis that had fallen victim to a catastrophic flooding episode around one million years ago, Untermassfeld allows the reconstruction of such a food web into which hominins were later to intrude.

Against this background it is astonishing that Untermassfeld still awaits discovery as a crucial source for model building concerning early hominins in archaeology and palaeoanthropology and this is exactly where the Römisch-Germanisches Zentralmuseum, Leibniz-Research Institute for Archaeology (RGZM) comes in. Untermassfeld is a purely palaeontological record; hominins are not a variable at the site. So how is it that already during the 1990s the RGZM Publishing House invested in ensuring the publication of the first three principal volumes about the site (Kahlke 1997a; 2001a; 2001b)? The answer is easy: during our excavations at the beginning of the 1990s at the 1.8 Mio year old Georgian site of Dmanisi, a site that up till now still represents the earliest evidence for hominins outside of Africa, we together with our Georgian colleagues unearthed a well preserved thanatocoenosis including hominin fossils. With its scarcity of lithic tools and lack of evidence for active hominin interaction with the fauna these discoveries illustrated once more hominin interlacement in past habitats and it became apparent once again that we must make an effort to understand these habitats as prerequisite for the evaluation of the role hominins played in them. This was the context for the publication of the first Untermassfeld volumes and we are proud that with the publication of the current volume on Untermassfeld, we could once more contribute to this decade-long achievement, the results of which will remain a treasure trove for generations to come.

Having said all this, the potential of Untermassfeld to benefit archaeological research has not yet been exhausted. Untermassfeld helps us to understand the taphonomic chain of bone loss at both archaeological and palaeontological sites. In unique case studies, data on modification by hyenas (in volume 5), micro-mammals (Maul 2001), herbivores (Kahlke 2001c) as well as insects (Keiler et al. in this volume) enable the qualitative and quantitative assessment of these biotic agents in a given biocoenosis/thanatocoenosis. Pre- and postburial mechanisms and their consequences for the fossil record can be studied meticulously in settings known in detail and difficult to replicate in controlled experimental setups (Kahlke 1997b). Moreover, Untermassfeld allows an evaluation and interpretation of age profiles used in the zooarchaeological methodological apparatus (Kahlke and Gaudzinski 2005), to mention just a few relevant studies.

Recent publications since 2013 (Garcia et al. 2013; Landeck and Garcia Garriga 2016; 2017) have claimed that Untermassfeld provides the earliest evidence for human occupation of Europe. Particular controversy arose when Landeck and Garcia Garriga (2016) published supposedly anthropogenic cut-marked animal bones, on a sample that proved to be fraudulent (Callaway 2017; Roebroeks et al. 2018). This notorious case had juridical consequences for the first author of the paper, and editors of the journals in which the

authors had published about Untermassfeld later expressed their concerns, with consequences for the journals' policy on handling research data. If we review palaeontological and/or archaeological sites throughout human history, not many of them can claim to have been the subject of fraud, which perhaps illustrates perfectly that Untermassfeld is to be counted among the very few that »made it to the top«.

The picture I draw here is from a purely archaeological perspective, which should however not diminish the importance for palaeontology of this well-preserved and species-rich fossil deposit that was exhumed over 127 months of active field work to the exacting standards of archaeological excavation which now make the site so important for our understanding of taphonomic processes.

The Untermassfeld site will forever be linked to the name of Ralf-Dietrich Kahlke, whose unrelenting commitment and passion first helped to establish the scientific value of the site, and with whom we at MONREPOS are proud to collaborate since the 1990's. With this volume and volume 5 including the complete excavation plans, he brings the Untermassfeld project to its preliminary finish, although essential sites such as Untermassfeld will always remain at the focus of scientific interest.

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*Sabine Gaudzinski-Windheuser*

MONREPOS Archäologisches Forschungszentrum  
und  
Museum für menschliche Verhaltensevolution,  
Römisch-Germanisches Zentralmuseum,  
Leibniz-Forschungsinstitut für Archäologie

## PREFACE

The extraordinary find- and species-rich Early Pleistocene fossil deposit of Untermassfeld near Meiningen has been the focus of systematic excavation and documentation since it was discovered in January 1978. Until 1992, the work was carried out by the Institute of Quaternary Palaeontology, Weimar, which then became the Weimar-based Quaternary Palaeontology Group of the Institute of Geosciences at the Friedrich Schiller University, Jena, and since 2000, the Senckenberg Research Station of Quaternary Palaeontology. Taking place nearly every year from 1979 onwards, the duration of the field seasons totals 127 months of active field work. During this time, more than 18,000 palaeontological finds were recovered. Over four decades, these finds have been prepared, conserved and stored together in one Untermassfeld collection in their own custom-made cabinets. The excavation work ended during the summer of 2019 and in agreement with the responsible monument protection authorities specially marked reserved areas have been left untouched for future investigations. The status of the entire site as a protected ground monument of the Free State of Thuringia remains unchanged.

From 1997 to 2019, the field and conservation work was mainly supported and financed by the Senckenberg Research Institute and the Free State of Thuringia, annually approved by the Thuringian State Office for Heritage and Archaeology, the City of Meiningen and the District of Schmalkalden-Meiningen. For the many years of successful collaboration we would like to thank State Archaeologist Sven Ostritz (Erfurt, Weimar) and his team, City Treasurer Klaus-Dieter Schmidt (Meiningen), the Heads of the Department of Budget, Tax and Social Issues of the municipality of Meiningen Börje Scholz and David Kempf, the Mayors of the City of Meiningen Reinhard Kupietz (until 2012) and Fabian Giesder (from 2012), and the District Office of Schmalkalden-Meiningen (Monument Protection Authority) represented by Karin Ganß.

Organization of the field season work and site protection lay in the capable hands of John-Albrecht Keiler (Weimar). Accounting support was provided by Regina Langner (until 2009) and Sabine Schneider (from 2009, both Weimar). We thank Tiefbau Schliewe Untermassfeld for the precise implementation of excavation work requiring heavy technical equipment as well as for the annual use of cranes to open and close active excavation areas. Thanks go to our friend Roland Werner † (Jüchsen) as well as the Heimatverein Jüchsen e. V. for technical assistance in the day-to-day running of the field work and for protection and monitoring of the site during excavation-free periods. For their valuable support in protecting the site against repeated thefts and damage, we would like to thank the Schmalkalden-Meiningen Police Service and the Suhl Criminal Investigation Department.

All excavation work was carried out by the staff of the Senckenberg Research Station of Quaternary Palaeontology, Weimar, with the occasional involvement of student assistants. Conservation of the finds recovered from the year 2000 onwards was the responsibility of Dennis Rössler, Michael Stache (until 2011) and Rebecca Wunder (from 2011). Parallel to the preparation progress, Evelin Haase (Weimar) managed the collection catalogue and created the excavation plans. Management of the collection itself was carried out by Gerald Utschig with the support of Jessica Arnold (both Weimar).

Evaluation of the finds and records from Untermassfeld was conducted by various groups of specialists. Results were published in 1997 and 2001 in three volumes of the monograph series of the Römisch-Germanisches Zentralmuseum, Mainz, as well as in 2006 in an English language summary detailing the knowledge acquired at the time of publication. The present fourth volume of the Untermassfeld monograph contains numerous new findings on site genesis and absolute age, along with bone modifications, as well as ichthyo-, herpeto- and avifauna. Substantial new find of dental and skeletal elements of hitherto little-known

artiodactyls and perissodactyls of the western Palaearctic are extensively discussed. The photographs contained in this volume were mainly produced by Thomas Korn (until 2015) and Susann Döring (from 2016) (both Weimar). Evelin Haase created all graphics and arranged the photographs within the figures. Christina Nielsen-Marsh (Leipzig) translated or edited the majority of the English texts and Bärbel Fiedler (Weimar) was responsible for the editorial finishing of the manuscripts. We thank Stefan Flohr (Hildesheim), Matthias Hartmann (Erfurt), Lutz Katzschmann (Jena), John-Albrecht Keiler (Weimar), Dimitris S. Kostopoulos (Thessaloniki), Lutz Christian Maul (Weimar), Gerald Mayr (Frankfurt/M.), Paul P. A. Mazza (Firenze), Richard Albert Roper (Frankfurt/M.), Davit Vasilyan (Fribourg), and one anonymous reviewer for reviewing one or more of the contributions in this volume.

We are grateful to Sabine Gaudzinski-Windheuser (Mainz, Neuwied), who for many years was our cooperation partner within the Römisch-Germanisches Zentralmuseum, which ensured the smooth-running of the printing of the fourth volume of the Untermassfeld monograph, and we thank Claudia Nickel (Mainz) for her help, and attention to detail in publishing this volume. Our heartfelt thanks go last, but not least, to all of our esteemed colleagues for their many years of tireless work and service to the Untermassfeld project.

*Weimar, January 2020*

*Ralf-Dietrich Kahlke*