



## 300,000-Year-Old Snapshot: Oldest Human Footprints from Germany Found

Three fossil footprints of *Homo heidelbergensis* discovered among prehistoric elephant tracks at the Schöningen site in Lower Saxony

**Schöningen/Tübingen, 05/12/2023. In a study published today in the journal “Quaternary Science Reviews,” an international research team led by scientists from the University of Tübingen and the Senckenberg Centre for Human Evolution and Palaeoenvironment presents the earliest human footprints known from Germany. The tracks were discovered in the roughly 300,000-year-old Schöningen Paleolithic site complex in Lower Saxony. The footprints, presumably from *Homo heidelbergensis*, are surrounded by several animal tracks – collectively, they present a picture of the ecosystem at that time. The project is funded by the Ministry of Science and Culture of Lower Saxony and the University of Tübingen.**

In an open birch and pine forest with an understory of grasses sits a lake, a few kilometers long and several hundred meters wide. On its muddy shores, herds of elephants, rhinoceroses, and even-toed ungulates gather to drink or bathe. In the midst of this scenery stands a small family of “Heidelberg people,” a species of human long since extinct. “This is what it might have looked like at Schöningen in Lower Saxony 300,000 years ago,” explains the lead author of the newly published study, Dr. Flavio Altamura, a fellow at the Senckenberg Centre for Human Evolution and Palaeoenvironment at the University of Tübingen (SHEP), and he continues, “For the first time, we conducted a detailed investigation of the fossil footprints from two sites in Schöningen. These tracks, together with information from sedimentological, archaeological, paleontological, and paleobotanical analyses, provide us with insights into the paleoenvironment and the mammals that once lived in this area. Among the prints are three tracks that match hominin footprints – with an age of about 300,000 years, they are the oldest human tracks known from Germany and were most likely left by *Homo heidelbergensis*.”

The scientists attribute two of the three human tracks at Schöningen to young individuals who used the lake and its resources in a small mixed-age group. “Depending on the season, plants, fruits, leaves, shoots, and mushrooms were available around the lake. Our findings confirm that the extinct human species dwelled on lake or

PRESS RELEASE  
05/12/2023

### Contact

Judith Jördens  
Press Office  
Senckenberg Gesellschaft für  
Naturforschung  
Phone 069 7542 1434  
pressestelle@senckenberg.de

Antje Karbe  
Press Officer  
University of Tübingen  
Phone 07071 29-76788  
antje.karbe@uni-tuebingen.de

Dr. Tobias Wulf  
Press Officer  
Lower Saxony State Office for the  
Preservation of Monuments  
Phone 0511 925 5263  
tobias.wulf@nld.niedersachsen.de

Dr. Jordi Serangeli  
University of Tübingen,  
Senckenberg Centre for Human  
Evolution and Palaeoenvironment  
Research Museum Schöningen  
jordi.serangeli@uni-tuebingen.de

Dr. Flavio Altamura  
University of Tübingen,  
Senckenberg Centre for Human  
Evolution and Palaeoenvironment  
altamuraflavio@gmail.com

Prof. Nicholas J. Conard, PhD  
University of Tübingen,  
Senckenberg Centre for Human  
Evolution and Palaeoenvironment  
nicholas.conard@uni-tuebingen.de

### Videoclip

[https://youtu.be/Y\\_nbfFqAZsQ](https://youtu.be/Y_nbfFqAZsQ)

### Publication

Flavio Altamura, Jens Lehmann,  
Bárbara Rodríguez-Álvarez,  
Brigitte Urban, Thijs van  
Kolfschoten, Ivo Verheijen,  
Nicholas J. Conard, Jordi Serangeli  
2023. Fossil footprints at the late  
Lower Paleolithic site of  
Schöningen (Germany): a new line  
of research to reconstruct animal  
and hominin paleoecology.  
Quaternary Science Reviews. DOI:  
<https://doi.org/10.1016/j.quascirev.2023.108094>

SENCKENBERG GESELLSCHAFT FÜR NATURFORSCHUNG

Judith Jördens | Press & Social Media | Communication Staff

T +49 (0) 69 75 42 - 1434 F +49 (0) 69 75 42 - 1517 judith.joerdens@senckenberg.de www.senckenberg.de

M+49 (0) 1725842340

SENCKENBERG Gesellschaft für Naturforschung | Senckenberganlage 25 | 60325 Frankfurt am Main  
Board of Directors: Prof. Dr. Klement Tockner, Prof. Dr. Angelika Brandt, Dr. Martin Mittelbach, Prof. Dr. Andreas Mulch, Prof. Dr. Karsten Wesche



Member of the Leibniz Association

river shores with shallow water. This is also known from other Lower and Middle Pleistocene sites with hominin footprints,” says Altamura. The various tracks at Schöningen offer a snapshot of a family’s daily life and may provide information about the behavior and social composition of hominin groups as well as spatial interactions and coexistence with elephant herds and other, smaller mammals, according to the study. “Based on the tracks, including those of children and juveniles, this was probably a family outing rather than a group of adult hunters,” summarizes the archaeologist and expert on fossil footprints.

In addition to the human tracks, the team analyzed a series of elephant tracks attributable to the extinct species *Palaeoloxodon antiquus* – an elephant with straight tusks that was the largest land animal at the time and whose adult bulls reached a body weight of up to 13 tons. “The elephant tracks we discovered at Schöningen reach an impressive length of 55 centimeters. In some cases, we also found wood fragments in the prints that were pushed into the – at that time still soft – soil by the animals,” explains Dr. Jordi Serangeli, excavation supervisor at Schöningen, and he adds, “There is also one track from a rhinoceros – *Stephanorhinus kirchbergensis* or *Stephanorhinus hemitoechus* – which is the first footprint of either of these Pleistocene species ever found in Europe.”

Falko Mohrs, Minister for Science and Culture of Lower Saxony, is excited. “The new discoveries illustrate once again the outstanding importance of the Schöningen site, which is already known for spectacular finds such as the famed nine throwing spears, a thrusting lance, two throwing sticks, or the almost complete skeleton of a Eurasian forest elephant. The study of fossil traces, on which the Senckenberg Centre for Human Evolution and Palaeoenvironment and the University of Tübingen have been focusing since 2018 in close cooperation with the Lower Saxony State Office for the Preservation of Monuments and other institutions, has enormous potential for reconstructing a reliable picture of prehistoric life. I am looking forward to the finds that will be recovered in Schöningen in the future!”

*The University of Tübingen is one of eleven universities in Germany that were recognized as excellent. Within the life sciences, it provides top-of-the-line research in the fields of neurosciences, translational immunology and cancer research, microbiology and infectious disease research, as well as molecular*

Press Images



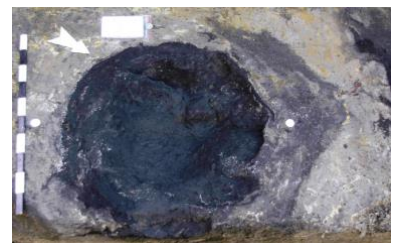
This is how it might have looked in Schöningen about 300,000 years ago. Watercolor by Benoît Clarys.



Fossil footprints from the site Schöningen 13 II-2 Untere Berme. Photo: Senckenberg



Potential hominin footprint discovered in Schöningen 13 II-2 Untere Berme. Photo: Senckenberg



Fossil elephant track in Schöningen 13 II-2 Untere Berme, with wood fragments in the footprint backfill. Photo: Senckenberg

biology. Additional research emphasis is given to machine learning, geo- and environmental research, archeology and anthropology, language and cognition, and education and media. More than 27,600 students from all over the world are currently enrolled at the University of Tübingen, where they can choose from over 200 study courses – from Archeology to Zoology.

The **Senckenberg Gesellschaft für Naturforschung (Senckenberg Nature Society)**, a member institution of the Leibniz Association, has studied the “Earth System” on a global scale for over 200 years – in the past, in the present, and with predictions for the future. We conduct integrative “geobiodiversity research” with the goal of understanding nature with its infinite diversity, so we can preserve it for future generations and use it in a sustainable fashion. In addition, Senckenberg presents its research results in a variety of ways, first and foremost in its three natural history museums in Frankfurt, Görlitz, and Dresden. The Senckenberg natural history museums are places of learning and wonder and serve as open platforms for a democratic dialogue – inclusive, participative, and international. For additional information, visit [www.senckenberg.de](http://www.senckenberg.de).



The footprint of a rhinoceros - *Stephanorhinus kirchbergensis* or *Stephanorhinus hemitoechus* - is the first of this species from the Pleistocene found in Europe.  
Photo: Senckenberg

Press images may be used at no cost for editorial reporting, provided that the original author’s name is published, as well. The images may only be passed on to third parties in the context of current reporting.

This press release and the images are also available at [www.senckenberg.de/presse](http://www.senckenberg.de/presse)