

Laudation: Dr. Adrián Pablos, Seventeenth Recipient of the Tübingen Prize for Early Prehistory and Quaternary Ecology

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Ladies and gentlemen, Dean, representatives of EiszeitQuell, Colleagues, Students, and of course, Dr. Adrián Pablos,

I am extremely honored this year to address you on the seventeenth year of the Tübingen Prize for Early Prehistory and Quaternary Ecology. In these seventeen years, the prize has been awarded to an equal number of outstanding young prehistorians, many of whom have since continued brilliant trajectories. As always, this year also saw a very strong pool of applicants, and a long deliberation of the jury. Today it is my honor to



Award of the seventeenth Tübingen Prize for Early Prehistory and Quaternary Ecology on February 05, 2015, at Schloss Hohentübingen. From left to right: Dr. Britt M. Starkovich Prof. Dr. Katerina Harvati (both jury), Dr. Adrián Pablos (recipient), Prof. Dr. Johannes Krause, Prof. Dr. Michael Bolus (both jury), Nina Gramer (Romina Mineralbrunnen GmbH, sponsor), Prof. Dr. Harald Floss, Prof. Nicholas J. Conard Ph.D., Prof. Dr. Christopher Müller (all jury). Photo: H. Jensen.

present to you, on behalf of the jury and our sponsor, this year's winner of the award, Dr. Adrián Pablos. This occasion of course is of special importance to myself, as Adrián is a paleoanthropologist, and only the second paleoanthropologist to ever be awarded the Tübingen Förderpreis.

Adrián was born in 1978 in Madrid (Spain). He studied at the Universidad Autónoma de Madrid, where he earned his B.Sc. in 2008. During this time he met Juan Luis Arsuaga and Ignacio Martínez, renowned paleoanthropologists of the Atapuerca research team. Juan Luis Arsuaga, who is also the leader of the Atapuerca team, gave him the opportunity to attend the excavations of Atapuerca, and, like many of us in this room, this experience made Adrián fall in love with human evolution and paleoanthropology. He continued attending several field seasons in Atapuerca, and at the same time started working on his M.Sc. in Paleontology. For this degree, which he completed in 2010 also at the Universidad Autónoma de Madrid, Adrián already started working on the human foot remains from the Sima de los Huesos, Atapuerca, and specifically on the talus. His PhD was awarded in 2013 from the Universidad de Alcalá in Madrid and focused on all the human fossil foot remains from the Atapuerca sites. Dr. Pablos is currently a post-doctoral fellow at the Universidad de Burgos, where he is working following the research direction that he established during his PhD.

Dr. Pablos's biographical sketch is very impressive for his young age. He has numerous publications in prestigious journals, including a recent co-authored article in *Science*, as well as several publications in the highest ranking journal in our field, the *Journal of Human Evolution*. For most of these Adrián is the primary author. He has become an integral member of the Atapuerca research team, and has participated in excavations of the most famous Spanish Pleistocene sites, including Sima de los Huesos, Gran Dolina and Sima del Elefante, over the last ten years. During his PhD research, Dr. Pablos worked at the major European paleoanthropological collections, including those of the Natural History Museum, London, the Museum National d'Histoire Naturelle, Paris, and the Rheinisches Landesmuseum, Bonn. Several of these visits were funded by external grants from SYNTHESYS. He has been extremely active in presenting his work at international conferences, including that of the American Association of Physical Anthropologists, as well as that of the European Society for the Study of Human Evolution. His dynamic presence at these international venues over the last few years has helped him build a considerable international profile. Adrián is also active in teaching, and has contributed to the Paleoanthropology curriculum at the University of Burgos, the Universidad Complutense Madrid and the Universidad Autónoma de Madrid.

Of all these achievements, however, it is for his doctoral dissertation that Dr. Pablos is awarded the Tübingen Prize. This work was completed in 2013 at the University of Alcalá in Madrid, and was supervised by Professors Juan Luis Arsuaga, Ignacio Martínez, and Carlos Lorenzo. It focused on the detailed description and comparative analysis of the human fossil foot remains from the Atapuerca sites – in total, more than 500 individual bones. The title of this thesis is “Paleobiological and morphological study of the foot bones in the human evolution, with special reference to the fossils from the Sierra de Atapuerca (Burgos, Spain).” The study, which I will discuss briefly in this introduction, is a major contribution to the understanding of the evolution of the human foot in the Pleistocene.

But before I discuss the specifics of the thesis, allow me to spend a few moments presenting the sites of Atapuerca. Certainly, these sites do not require an introduction for the prehistorians and paleoanthropologists in the room. However, for those who are not specialists, it must be pointed out that Atapuerca has yielded perhaps the most important paleoanthropological sites in Europe. Sima del Elefante preserves among the oldest evidence for human presence on the European continent, dating to ca. 1.2 million years before present. Gran Dolina is also among a handful of European archaeological sites dating to ca. 800,000 years. Finally, Sima de los Huesos, although much younger at ca. 430,000 years BP, has yielded a spectacular treasure trove of human fossils: A unique site, it preserves the remains of at least 28 individuals, who are represented by nearly complete skeletons. Altogether, more than 6500 individual human fossil bones have been recovered from the Sima de los Huesos alone. This unprecedented series of sites is the research focus of the Atapuerca team, and has provided the wonderful fossil human material that was the object of study of Adrián's dissertation.

But what of the foot? Far removed from the more glamorous skull remains that most paleoanthropologists, including myself, like to study, the foot skeleton is at the center of a quintessential human adaptation: bipedal locomotion. Each human foot comprises 26 bones, which all work in synergy to ensure our upright stance and efficient bipedal walking. The human foot evolved from a grasping organ among our remote ancestors to an extremity designed for shock absorption and propulsion, which interfaces with the ground and propels us forward as we walk and run. The foot, therefore, holds information not only to the type of locomotion that a fossil species performed, but also gives clues about its adaptation and activities. Complete human feet are very rare in the fossil record, and, although individual elements are often found in isolation, they are often neglected by paleoanthropological studies. The exceptionally rich Atapuerca material, therefore, offers a unique glimpse into the evolution of this crucial part of our skeleton half a million years before the present time and beyond.

When starting on his doctoral study, Adrián was faced with the formidable task of not only meticulously measuring and describing each of the 500 bones that his study comprised, but also comparing them to equivalent elements from the fossil record and from modern humans living today, with the aim of discovering any special characteristics of the Atapuerca material. These were then interpreted from a phylogenetic as well as biomechanical perspective. Beyond this he was charged with the task of finding which elements might fit together because they belonged to the same foot, as well as to which of the known individuals from the sites the feet could belong. In this, his work was a major contribution in putting back together the skeletons of the individuals that were mixed up in the Sima de los Huesos. Finally, he obtained insights about their adaptation, biology and everyday life, such as assigning sex and estimating body size. In the course of this work, Adrián also developed a new method to more accurately estimate body size from foot remains.

Beyond his insights into the Atapuerca populations, Adrián's dissertation work constitutes a major reference work for paleoanthropologists working on Pleistocene human remains. Its meticulous documentation of the Spanish material will serve as a comparative basis, against which future finds can be compared and interpreted, even in the case of isolated elements. Furthermore, his novel methodology to estimate body mass from

foot remains will be of great use to paleoanthropologists faced with the common problem of isolated remains, which are more often than not neglected and considered to be of limited usefulness. In this respect, Adrián's work will help shape future paleoanthropological approaches to the evolution of the human foot in the Pleistocene.

Ladies and gentlemen, I hope that in this brief introduction I was able to give you a first taste of Adrián Pablos's work and its significance for human evolutionary studies. It is my pleasure to introduce our guest of honor, Dr. Adrián Pablos himself, who will give us a much more in depth presentation of his research. On behalf of the jury and our sponsor, I would again like to express our heartfelt congratulations, and, with no further ado, to present to you the 17th winner of the Tübingen Prize for Early Prehistory and Quaternary Ecology, Dr. Adrián Pablos!