

Laudation: Dr. Kurt Rademaker, Sixteenth Recipient of the Tübingen Prize for Early Prehistory and Quaternary Ecology

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Dr. Kurt Rademaker is the sixteenth recipient of the Tübingen Prize for Early Prehistory and Quaternary Ecology, sponsored by Romina Mineralbrunnen GmbH/EiszeitQuell (Reutlingen). He received the prize during a ceremony held at Schloss Hohentübingen on February 06, 2014. Previous prize winners hail from numerous countries, including Germany, France, the USA, Greece, Mexico and the UK. However, the research topics of all past recipients are geographically limited to what Americans call the “Old World.”



Award of the sixteenth Tübingen Prize for Early Prehistory and Quaternary Ecology on February 06, 2014, at Schloss Hohentübingen. From left to right: Priv.-Doz. Dr. Miriam N. Haidle, Prof. Dr. Michael Bolus, Prof. Dr. Harald Floss (all jury), Nina Gramer (Romina Mineralbrunnen GmbH, sponsor), Prof. Dr. Nicholas J. Conard (jury), Dr. Kurt Rademaker (recipient), Armin Jarck (director of Romina Mineralbrunnen GmbH, sponsor), Dr. Britt M. Starkovich (jury), Prof. Dr. Wolfgang Rosenstiel (Dean, Faculty of Science, University of Tübingen), Prof. Dr. Christopher Miller (jury). Photo: H. Jensen.

Only two of the last 16 prize winners conducted their work in Africa; the rest focused on Western Eurasia. Kurt Rademaker's dissertation, entitled 'Early human settlement of the high-altitude Pucuncho Basin, Peruvian Andes', is the first time that work in the "New World" has been awarded the prize.

Kurt Rademaker was born in 1974 in Pittsburgh, Pennsylvania, although he was raised near Louisville, Kentucky. He received his Bachelor's degree in 1997 from the University of Kentucky, where he gained his first experience in Latin American archaeology at the site of Tres Zapotes in Veracruz, Mexico. Following graduation, he worked as a professional archaeologist (and also firefighter) for both public and private archaeological firms. During this time, Dr. Rademaker gained extensive experience in field survey and excavation which would later prove useful for his own research projects. In 2003 he returned to the world of academia and in 2006 he completed a Master's degree in Quaternary and Climate Studies at the University of Maine with a thesis entitled 'Geoarchaeological investigations of the Wayñuna site and Alca obsidian source, Peru'. This study laid the groundwork for his masterful dissertation at the University of Maine, which was successfully defended in 2012. Kurt Rademaker currently holds a position as visiting Assistant Professor at the University of Maine.

In addition to his dissertation and thesis, Dr. Rademaker has an impressive publication list on a range of topics, including glacial geomorphology, climate change, obsidian sourcing, high altitude adaptation, and coastal adaptation. These papers are published in top journals, including *Nature*, *Science*, *Geology*, *Quaternary Science Reviews*, and *Journal of Quaternary Science*. Although Kurt Rademaker has conducted much of his field work in the high Andes of Peru, he has extensive field experience in other regions and countries as well, including Mexico, coastal Peru, Patagonia, and also Scotland. He has had a string of successful grants which has funded much of his field work, including the Churchill Exploration Fund (University of Maine), Sigma Xi, Lewis and Clark Exploration and Field Research Grant (American Philosophical Society), the National Geographic Society, and a National Science Foundation Dissertation improvement grant. The Tübingen Prize is also not the first time that Dr. Rademaker's work has been recognized. In 2008 alone, he received the Society for American Archaeology Douglas C. Kellogg Geoarchaeology Award, the Geological Society of America Clade C. Albritton Archaeological Geology Award, and the Lambda Alpha Anthropology Honor Society Graduate Research Award!

The numerous awards, grants and accolades that Dr. Rademaker has received are certainly warranted. The work recognized here combines groundbreaking multidisciplinary research with discovery and adventure and tells a story that is appealing both for the scientific community and the public at large. For those not familiar with the pre-history of the Americas, most researchers believe that humans first moved into the Western Hemisphere around 13,500 years ago at the end of the Pleistocene. The wave of migration, beginning from Beringia, spread rapidly through both North and South America. Some researchers suggest that the rapid migration was facilitated by movement along the Pacific coastline. This idea has been supported by the discovery of sites dating to the late Pleistocene along the coast of South America that show evidence for coastal adaptation and fishing. One of these sites, Quebrada Jaguay in Peru, is where Kurt Rademaker began his research. At this site, excavators found stone tools made

from Alca Obsidian, a volcanic glass that is found in outcrop 100s of km away, and at an elevation of above 3000m in the Andes Mountains. The discovery of Andean obsidian at an early coastal site in Peru was remarkable, since it suggested that the first settlers in Peru not only used and exploited the coast, but were familiar with raw materials that were located at extremely high altitudes. In order to study the possible highland adaptations of the first Peruvians, Dr. Rademaker used Geographical Information Systems (GIS) to determine possible routes connecting the Pacific coast with the Andean source of volcanic glass. Rather than just stopping there, however, he put on his hiking boots, loaded up a mule, and hiked these paths himself, in order to see which was most easily traversed. During these month-long treks into the High Andes, he conducted extensive survey for archaeological sites.

It was during one of these surveys, in the Pucuncho Basin, at an elevation of 4500m, that Dr. Rademaker found evidence for late Pleistocene occupation near the Alca Obsidian source. Here he discovered the Cuncaicha Rock Shelter, which contained archaeological deposits. He conducted excavations into the stratified sediments of the shelter, and recovered artifacts and obtained radiocarbon dates that suggested the shelter was occupied as early as 12,500 years ago. This makes Cuncaicha the highest Pleistocene archaeological site yet discovered in the world.

This discovery is important for several reasons. It suggests that the earliest settlers of this part of South America were not only adapted to coastal regions, but also exploited, and lived in the high Andes Mountains. Previous scholars had argued that humans in the Pleistocene would not venture into high altitude settings, where survival would be difficult. With this discovery, Dr. Rademaker has clearly demonstrated that despite the extreme cold, extensive glaciation, and low-oxygen conditions, early South Americans regularly visited the high Andes and had integrated this ecological niche within a coastal-highland adaptive strategy.

The Andes play a significant role in the daily lives of modern-day Peruvians. When we as Europeans think of Peru, we cannot imagine it without thinking of Machu Picchu, the Inka, of Llamas, and the majestic mountain scenery. Kurt Rademaker's dissertation shows that these spectacular mountains were as important for the first Peruvians as they are for their descendants today. He also has shown that even during the Ice Age, humans were capable of exploring and adapting to new and difficult terrain.

In recognition of Dr. Rademaker's exploration, discovery, and his scientific excellence, we award him the Tübingen Prize for Early Prehistory and Quaternary Ecology.

Congratulations!

