

# Climatic and environmental changes recorded in loess

Editorial

Ian J. Smalley<sup>1\*</sup>, Slobodan B. Marković<sup>2†</sup>, Ludwig Zöller<sup>3‡</sup>, János Kovács<sup>4§</sup>

1 *Giotto Loess Research Group, Waverley Materials Project, Nottingham Trent University, Nottingham NG1 4BU, UK*

2 *Chair of Physical Geography, Faculty of Sciences, University of Novi Sad, Trg D. Obradovica 3, 21000 Novi Sad, Serbia*

3 *Chair of Geomorphology, University of Bayreuth, 95440 Bayreuth, Germany*

4 *Department of Geology, University of Pécs, 7624 Pécs, Ifjúság útja 6, Hungary*

The current issue of the Central European Journal of Geosciences contains several papers devoted to climatic and environmental changes in loess. This is the first topical issue published in the journal.

In his contribution to the Proceedings of the 1985 INQUA Loess Conference in China, Arnt Bronger of Kiel University wrote:

"For a comparative loess pedostratigraphy and, by inference, a record of Pleistocene climatic history of the south-eastern part of Central Europe, the major loess sections of the Hungarian and Yugoslavian Danubian Lowlands are particularly well suited."

Central Europe is an important loess region, and loess research has been carried on there for a remarkably long time. As Bronger pointed out this is a place for excellent loess stratigraphy, but we also see activity in the fields

of geochemistry, and mineralogy, and sedimentology, and many other disciplines. The Danube basin, a key feature of Central Europe is a beautifully defined loess system, almost a closed system with material being delivered from the surrounding mountains and contributing to major deposits. There is geotechnical interest in Central Europe; all loess deposits present geotechnical problems and Central Europe is no exception. There are problems with landslides in the Danube bluffs and a plan has been drawn up for a nuclear waste repository in the deep loess at Kozloduy, in northern Bulgaria. It might be that the thick loess of Central Europe offers opportunities for solving long-standing and intractable problems of nuclear waste disposal. These are lands where loess snails are studied and human habitations discovered. Here are the Black Earth regions, where chernozemisation was remarkably effective and soil science was invented. These are rich loess regions.

There is a scholarly problem which might be touched on: where is Central Europe? How shall we define the limits of Central Europe? Is Central Europe the same as Middle Europe? Where is Mitteleuropa? Where are the edges?

\*E-mail: ian.smalley@ntu.ac.uk

†E-mail: slobodan.markovic@dgt.uns.ac.rs

‡E-mail: ludwig.zoller@uni-bayreuth.de

§E-mail: jones@gamma.ttk.pte.hu

How much material do we possess? Perhaps the western limit could reach Heidelberg where 'loess' was named, and where Charles Lyell encountered it, and where the story, in effect, began. Perhaps the eastern limit could reach Bendery, in Moldova, where L.S. Berg was born and geography gained a great champion and we gained many happy pages of controversy. In the south it should certainly reach Serbia where Count Ferdinando Marsigli made his perceptive observations on the ground that he was guarding on behalf of the Austro-Hungarian empire. We look at our 1951 edition of The Oxford Atlas, open at the double spread labelled 'Central Europe'. We see many national boundaries which no longer exist and we see places that have moved to the status of nationhood. We see that almost in the exact centre, just about on the fold, is the city of Vienna. In this city, in the office of Julius Fink at the University of Vienna, the INQUA Loess Commission was born, and will be forever associated with Central Europe. Fink passed the presidential baton to Márton Pécsi in 1977, but the centre of things only moved as far as Budapest. Central Europe has been blessed with fine loess deposits and an abundance of scholars; no surprise that it is one the main centres of loess research. This volume is an addition to the on-going virtuous enterprise; it derives from the festival of loess, the 'LoessFest' held at the University of Novi Sad in Vojvodina in August/September 2009. This was the second LoessFest, the first had been held in Heidelberg andf Bonn in 1999, and we hope that this might represent the initiation of a cycle of appreciation for loess. Loess research is growing in many directions; it should be inclusive and universal; it should certainly flourish in Central Europe.