

Foreword

This is an anniversary year for the karst paleoclimate research community and also for the Karst Waters Institute. Ten years ago, in Bergen (Norway), Stein-Erik Lauritzen launched/organized the first *Climate Change: the Karst Record* meeting. It was there for the first time that leading scientists, studying different types of cave sediments from various perspectives, gathered together in a large-scale, focused conference. The driving force for the critical interest in studying cave sediments was the increasing role these type of archives play in Quaternary paleoclimate and paleo-environment reconstruction.

Until recently, the primary evidence of a close link between climate changes, sea-level rise and fall, and ice-sheet growth and decay, came from deep-sea sediments, ice cores, precisely dated coral terraces, and peat deposits. Over the last decade, major improvements in analytical facilities allowed the generation of high-resolution paleoclimate data. Thanks to many works published in leading journals, paleoclimatologists became more than ever aware that speleothem archives are the best datable continental records. Many of the papers published in this special publication address or answer complex problems that regard the relationship between speleothem geochemistry, macroclimate, ecosystem (vegetation and soil), karst aquifer, and intimate crystal growth.

“Ten years after” the Bergen meeting, the community of researchers and/or speleologists is gathering again in Băile

Herculane, Romania, for **the Fourth Conference “Climate Change: the Karst Record”** (26–29 May, 2006) (KR4), organized by the “Emil Racoviță” Institute of Speleology and the Romanian Society for Speleology and Karstology. As organizers, we are extremely honored that our scientific community has chosen Romania as a host-country. In the last decade the studies dedicated to climate change as derived from karst deposits of Romania have significantly increased, although many of them made their way to mainstream journals only in the last years. The conference was organized as a special edition (the 19th) of the “Theoretical and Applied Karstology” (TAK) International Symposium.

This book includes the full series of abstracts and extended abstracts presented at the KR4 Conference and a few associated, off-topic, TAK papers. The papers are grouped into topical sections, with papers arranged alphabetically inside sections. The last section presents the off-topic communications. If one would compare the papers presented at the first, Bergen Conference, with current ones, both scientific and technical advances are obvious. Therefore, we won't add any more comments about the extreme technical and scientific refinement that may currently be encountered in the studies of the karstic realm. We let the readers judge for themselves, but we are convinced that they will appreciate the broad range of methods and new results emerging from our ‘black box’.

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