

PREFACE

Special Issue Commemorating Cemil Cangir EUROCLAY 2011 Clay Conference Selected Papers from the Meeting in Antalya, Turkey 26 June - 01 July 2011

On 10 March 2010, Prof Dr Cemil Cangir passed away in Tekirdağ. He was a respected and internationally recognized soil scientist who devoted his life to teaching and supervising his many students as well as to efforts to combat desertification and improper land use. His contribution to the development of clay science in Turkey should also be recognized. He served as an executive committee member of the Turkish National Committee on Clay Science for 19 years. His invaluable efforts in the organization of the National Clay Symposiums, which have taken place biennially for the last 30 years, and the international clay conferences (namely the 4th Mediterranean Clay Meeting, 2009, in Ankara, and the EUROCLAY 2011 European Clay Conference, in Antalya) received great praise and stimulated the growth of interest in the study of clays and clay minerals, especially among young scientists. Prof Dr Cangir also pioneered the country-wide development of soil/land protection studies, leading to policy-based strategies in land management. His efforts, based on his unique forbearing character, in linking NGOs to the responsible bodies in appropriate land use in Thrace have been a remarkable example for all land-based scientists. This will never be forgotten and will surely be followed by the younger generation of scientists, engineers, and planners for an appropriately used soil environment.

This special issue is dedicated to the memory of Prof Dr Cemil Cangir and includes selected contributions, mainly on soil clays, presented during the European Clay Conference EUROCLAY 2011 held from 26 June to 1 July 2011 in Antalya. During this conference a special symposium on “Soil Micromorphology, Clays in Soil/Agriculture” was organized in memory of Cemil Cangir. Soil micromorphology is a microscopic and sub-microscopic tool enabling the determination of clay mineral and soil formation via weathering directed through numerous processes in rocks and soils/sediments. The art of soil micromorphology has the power to provide interpretations of the paleo-environment and paleo-climate alongside the changes occurring via contemporary land and water management by offering sound phenomena of soil/sediment microstructure bearing mineralogical inferences. The foreseen contribution of soil micromorphology to soil change in the course of future climate changes will offer new horizons in interpreting the probable and appropriate shifts in the use of agricultural and forest soils. The archeo aspect of micromorphology/soil-sediment microstructure is known to enhance and complement the knowledge of paleo-site soils and materials, composed of ceramics, mortars, and other building materials along with bones.



Prof Dr Cemil Cangir

The types of clay minerals and their compositions are of primary importance in the planning of land and soil management with respect to the conservation of soil structure and porosity, i.e. by conserving the physical quality of soil. On the other hand, clays and clay minerals have long been known to protect ground water and soils cultivated for edible plants from heavy metal pollution by their sorptive properties, i.e. by conserving the chemical quality of soil. The 8 papers included in this special issue focus on soil micromorphology and agriculture, geology, and genesis of clays and paleosols by weathering and hydrothermal processes, and paleo-climatic implications of paleosols. **Fedoroff and Courty's** paper is an invaluable and unique review that includes all knowledge that has been accumulated to date on one of the major topics of soil development determined by soil micromorphology, concerning the discussions on the development of clay illuviation. **Churchman's** article explains the role of micromorphology in understanding clay mineral formation in soils in an interdisciplinary manner. **Madrau et al.** have successfully interpreted, via micromorphology, the enhanced physical quality of the olive tree root-zone soils. **Kovacs et al.** used clay mineral data to interpret the paleo-climatic implications of red soil deposits in the Carpathian Basin of Hungary, revealing the prevalence of a wetter and warmer climate during the Pleistocene. **Martins et al.** present a good example for the use of clay mineral assemblages in interpreting Holocene climatic oscillations. Similarly, the two papers from **Kadir et al.** and **Kadir & Erkoyun** show significant results in the weathering processes of deep pedo-sedimentary sections based on the past climatic changes in a well-determined sequence and the genesis of hydrothermal kaolinite deposits in Miocene volcanites and Paleozoic metamorphic rocks, respectively. **Küçükuysal et al.** reveal the paleo-climatic fluctuations of a paleosol/calcrete section in Ankara, Turkey, primarily by the use of clay minerals and micromorphology.

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Prof Nicolas Fedoroff, a member of the Editorial Board of this special issue of the TJES, passed away on 14 February 2013 in France. This is a great loss to soil science and especially to the field of soil micromorphology. Prof Fedoroff was a champion of soil micromorphology throughout the world and greatly influenced many students and scientists via his humane and honest manner in teaching the knowledge he had obtained through his vast experience in the field and the laboratory. May he rest in peace embracing the soil.

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