

International Course on Paleosols and Paleoenvironment

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19th to 22nd, June 2014 in Würzburg/Germany

The course provides basic knowledge on Paleopedology and the role of paleosols in geologic history of the Earth. It concentrates on Quaternary paleosols and related sediments. Soil forming processes as well as polypedogenesis are highlighted and related to geomorphodynamics and paleoenvironment.

The course is based on a 3-day theoretical part, microscope session and a short field excursion. The lectures are intermixed with interactive case studies. Participants are instructed to learn the international state of knowledge, methods and systematics. Registered participants will get an access to e-learning platform with course materials.

Deadline: 15th, February 2014

Registration fee: 200,- € (accommodation not included)

Contact person for registration:

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Name: _____

Institution: _____

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Signature: _____



After registration you are provided with further information.

Day first

9:00 - 10:30	<p>Basic definitions in Paleopedology. <i>Buried and unburied paleosols. Interrelations of paleosols with geomorphodynamic process (truncated, composite, welded, accretionary paleosol). Pedoliths and transformation of paleosols in bio-geo-cycles. Diagenesis and metamorphism of paleosols. Detection of paleosols in rock sequences. Paleosols as palaeoenvironmental proxies.</i></p>
10:45 – 11:00	<p>Paleosols in geologic history of the Earth (pre-Cambrian-Devonian). <i>What appeared first – life or soil? First biogeochemical cycles and paleosols. Extinct paleosols. Soils of microbial biosphere. Co-evolution of Soils and Higher Plants.</i></p>
11:15 – 12:45	<p>Paleosols in geologic history of the Earth (Carboniferous-Neogene). <i>Paleosols and mass extinction events. Co-evolution of grass ecosystems. Major stages of evolution of the Pedosphere.</i></p>
12:45 – 14:00	Lunch
14:00 – 15:30	<p>Quaternary paleosols. <i>Basic trends of landscape evolution in the Quaternary, major terrestrial archives and paleopedology record. Loess-paleosol sequences of China, Tajikistan, Russian Plain, Ukraine.</i></p>

Day second

9:00 - 10:30	<p>Quaternary paleosols. <i>Loess-paleosol sequences of Western Europe and North America.</i></p>
10:45 – 11:00	<p>Quaternary paleosols. <i>Loess-paleosol sequences of Beringia (Russian North-East, Alaska) and Western Siberia. Soil sedimentary sequences on other sediments – tephra, glacial till, marine clays, slope deposits, etc.)</i></p>
11:15 – 12:45	<p>Case studies: <i>New insights into the loess-paleosol sequences in Austria Pleistocene periglacial layers and Holocene soil formation in Central Europe</i></p>
12:45 – 14:00	Lunch
14:00 – 15:30	<p>Case study: <i>Paleosols on volcanic landscapes in Mexico: how to understand them as paleoenvironmental proxies.</i></p>

Day three

9:00 – 10:30	<p>Surface (unburied or relic) paleosols on glacial and periglacial plains. <i>Soils of the Russian Plain, Western Europe and Great Plains of US, formed on loesses, glacial tills, fgl sands, etc.</i></p>
10:45 – 11:00	<p>Surface paleosols of extra-glacial areas. <i>Soils formed on various sediments with aeolian input. Soils on tephra. Soils of marine terraces. Vetusols. Exhumed paleosols</i></p>
11:15 – 12:45	<p>Conclusive lecture. Integration of Paleopedology with other biosciences and geosciences. <i>Co-evolution of Life and Soil – a new paradigm of natural sciences. Ecology of paleosols – an emerging discipline. Pedogenesis and Exogenesis, re-cycling of pedogenic material in bio-geosphere cycles. Paleopedology and Climate Change – a retrospective approach. Paleosols and stratigraphy – geosols. Classification of paleosols.</i></p>
12:45 – 14:00	Lunch
14:00 – 16:00	Soil micromorphology as a basic tool for the study of paleosols

Day four

0,5 day excursion in the form of master-class on the field study of periglacial layers and loess-paleosol sequences in Franconia.