



## PALEOPEDOLOGY NEWSLETTER No. 25, 2014

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24 February 2014

*Dear paleopedologists,*

*this Newsletter intends to give you an overview about international paleopedological events in 2013, and to inform you about activities planned for 2014. We also have the sad duty to inform you that in the last months our scientific community has lost three great scientists and persons, who inspired many of us and greatly influenced and contributed to our field of science. We will remember them in the beginning of this Newsletter.*

*A major event in 2013 was the XII<sup>th</sup> Int. Symposium and Field Workshop on Paleopedology (ISFWP-XII) in Kursk (Russia), 10-15 August 2013 (p. 5 of this Newsletter). ISFWP-XIII will take place in Toruń (Poland) on 1-6 September 2014 (p. 18). Participation can be easily combined with attending the 7<sup>th</sup> Loessfest, 8-15 September in Wrocław (Poland), including a field trip in Poland and western Ukraine.*

*Also the two INQUA Projects AEOMED and RAISIN that were initiated under the umbrella of the new INQUA Focus Group "PASTSOILS" in 2012 were very active in 2013 (p. 7). Both INQUA projects have been approved by INQUA for 2014 and are organizing workshops in 2014 as well (p. 20). Moreover, we are very happy to see that a number of activities aiming at training young scientists in paleopedology and related topics are going on, some of them having become well established over the past years.*

*The IUSS Paleopedology Commission Officers thank all members for your great support and collaboration during the last four years. After being reelected for the period 2014-2018 we are looking forward to continue this fruitful work together with you over the next five years.*

*Best wishes,*

*Daniela Sauer (Chair of IUSS Paleopedology Commission and INQUA IFG PASTSOILS),  
Sergey Sedov (Vice-Chair of IUSS Paleopedology Commission and INQUA IFG PASTSOILS),  
Alexander Makeev (IUSS Paleopedology Commission Secretary),  
Rivka Amit (Vice-Chair of INQUA IFG PASTSOILS)*

## *In memoriam Donald L. Johnson*



*Donald Lee Johnson (March 8, 1934 – May 10, 2013)*

*Donald Lee Johnson, Professor of Geography at the University of Illinois from 1970-2003 and Emeritus Professor from 2003, passed on May 10, 2013. He was born March 8, 1934, in Long Beach, California, USA. Don received his Ph.D. in geography in 1972 from the University of Kansas. He is survived by Diana, his wife of 49 years, and three lovely daughters.*

*Equally at home with geographers, geologists, soil scientists, archaeologists, and biologists, Don's life and career were an inspiration to many. He was one of those blessed individuals whose career was his hobby, and he never tired of his work. Over the course of his career, Don taught courses in physical geography, soil-geomorphology and zoogeography at University of Illinois. He loved what he taught and his enthusiasm was infectious. His list of advisees and graduate committees includes 10 with senior theses, 23 with master's theses, and 26 with doctoral dissertations. His students left his classroom believing that soils--of all things--could truly be interesting, exciting and important, and that there is still much to learn about them. Most importantly, he taught his students to question what they saw, and to always think outside of the box.*

*Don's list of published papers in refereed journals and books numbers over 80. Don published widely on the importance of bioturbation and biomechanical processes on soil formation. His theoretical papers on soil genesis and evolution dramatically changed the way that pedogenesis is viewed. This work has particularly helped archeologists and tropical soil scientists to explain the formation of stone lines, enigmatic features whose origins had been debated for decades. His work on mima mounds helped settle a centuries-long debate on their origins. Don's theoretical contributions continue to be truly revolutionary and of lasting import. His body of work will enjoy a position among the very best soil theoreticians in recent history.*

*Don was a thoughtful and generous man, always taking the time to be kind and gracious to everyone he met, and forging many strong friendships. He was a true inspiration to everyone he met. Don's lives on in our hearts and minds, and his passion for the soil lives on in what he has written.*

*Jennifer Burnham  
Augustana College*

*Randy Schaetzl  
Michigan State University*

## *In memoriam Vitaly A. Demkin*



*Vitaly A. Demkin (February 23, 1952 – July 27, 2013). Photo: Sergey Udaltsov*

*On July 27, 2013 the outstanding scientist, the founder of a new scientific direction, known now as the Archaeological Soil Science, Professor Vitaly A. Demkin, left us. All his life was associated with the Institute of Physicochemical and Biological Problems in Soil Science at the Russian Academy of Sciences (Pushchino, Moscow region), where he went the way from a postgraduate student to the Deputy Director of the Institute.*

*Forty years ago, he started his investigations on paleosols buried under burial mounds (kurgans) in the steppe zone of Russia. Basing on his studies the concept of burial mounds as monuments and archive of nature, which maintain paleosols existed at the time of kurgan creation was advanced.*

*Vitaly Demkin developed a unique system for studying the evolution of soils in the steppe zone of Russia and the dynamics of natural conditions in the second half of the Holocene using “the memory” of buried paleosols. As a result, models of pedogenesis for a number of natural zones of Russia were proposed, the dynamics of climate humidity in southern Russian steppes was reconstructed, and the role of paleo-environmental changes in the life of ancient and medieval populations was established. The results of his work were published in hundreds of articles, and his main creation was the laboratory of archaeological soil science, organized by him in 2004.*

*The blessed memory of this scientist and outstanding person will live forever in the hearts of his relatives, friends, colleagues, and students.*

*Alexander V. Borisov*

*Institute of Physicochemical and Biological Problems in Soil Science, RAS Pushchino*

## ***In memoriam Dan H. Yaalon***

*Dan H. Yaalon, Professor at the Institute of Earth Sciences, the Hebrew University of Jerusalem, an honorary member of INQUA and one of the most renowned soil geoscientists and pedologists, passed away in Jerusalem, Israel on January 29, 2014.*

*As a soil scientist, Dan pioneered the incorporation of pedology into geosciences, and into Quaternary research in particular. His interdisciplinary approach and vast, in-depth knowledge and experience in geology, geomorphology, pedology, climatology, philosophy, archeology and history were the foundation of his scientific excellence.*



***Dan H. Yaalon (1924-2014)***

*His innovative ideas and creative work remain relevant, decades after they were published, and they have influenced generations of earth scientists around the world. His many-faceted academic work was an extension, one might say, of his dramatic personal history, which may have centered in Israel but encompassed the entire world.*

*Dan was 15 years old when he was sent from partly Nazi-occupied Czechoslovakia to Denmark. When Denmark too became occupied, he was smuggled by fishermen to Sweden. After WWII he returned to Czechoslovakia in search of his family, but then went back to Denmark and graduated from university. In 1949 he immigrated to Israel, where he began his long and prolific career at the Hebrew University. In the 1950s, he focused on building the Department of Soil Sciences, was involved in soil and geological mapping of Israel, and in the founding of the Soil and Water Department at the Volcani Center for Agriculture Research. During this time, he visited, taught and conducted research in the US (Baltimore, Tucson and elsewhere), England (Cambridge, Oxford), Australia (Canberra, Melbourne, Sydney) and Belgium (Ghent).*

*Soils and surficial earth sciences suited Dan's detective-like approach: he would hypothesize sequences of events or processes, synthesize research data and knowledge derived from several disciplines, and demonstrate the interactions between several causes, sometimes resulting in the development of a new theoretical framework. He was conducting "critical zone" research 50 years ago – before the terminology was coined! How and what kind of soils formed in different parts of the landscape, and how current or past Earth surfaces, landscapes and soils developed, were fundamental questions in his research. He was fascinated by deserts from his first days as a young immigrant from Europe to Israel. Studying the Negev and other of the world's deserts, he presented to the Earth sciences community the idea that soil-forming processes in deserts are much more active than was previously thought. Dan Yaalon led the research of eolian dust accretion in arid and semi-arid zones and underscored its importance in soil formation in all kind of environments.*

*His outstanding and inspiring scientific achievements earned him in 2010 the Dokuchaev Medal (International Union of Soil Sciences, IUSS), the Sarton Medal in History of Science (Ghent University), Honorary Memberships of INQUA, of IUSS, Israel Geological Society, German Soil Science Society, and Geological Society of America, and an Honorary Doctorate from Tbilisi Agrarian University. His passing is an immense loss for the soil and Earth sciences community.*

*Yehouda Enzel &, Yigal Erel, The Hebrew University of Jerusalem*

*Rivka Amit and Onn Crouvi, Geological Survey of Israel*

*Danny Itkin, Ben-Gurion University of the Negev*

## **B. XII<sup>th</sup> Int. Symposium and Field Workshop on Paleopedology in Kursk (Russia) in August 2013**

The XII<sup>th</sup> International Symposium and Field Workshop on Paleopedology (ISFWP-XII) “Paleosols, pedosediments and landscape morphology as environmental archives” was held in the Kursk and Voronezh regions of Russia, on August 10-15, 2013. ISFWP-XII was organized by IUSS Commission 1.6 Paleopedology, the International Focus Group PASTSOILS within the INQUA Commission on Terrestrial Processes, Deposits, and History (TERPRO), and the Commission on Paleopedology, and Subcommission on Micromorphology of the Dokuchaev Soil Science Society, Russia. Local organizers of the event were the Institute of Geography of the Russian Academy of Sciences, the Ecological Soil Science Institute, Moscow State University, the V.V. Dokuchaev Soil Science Institute, Institute for the History of Material Culture of Russian Academy of Sciences, Kursk State University, Lipetsk State Pedagogical University, Ecological Department of the Kursk region Government, V.V. Alekhin Central-Chernozemic State Biospheric Reserve, Natural Architectural-Archaeological Museum-Resort “Divnogorie”.

The symposium held in Kursk included 6 sessions: Loess- and tephra-paleosol sequences, alluvial and colluvial soil-sedimentary sequences; Paleosols and pedosediments of human habitats; Surface paleosols and relic features in modern profiles; Chernozems as paleo-environmental archives; Pre-quaternary paleosols: paleoecology and post-burial changes; Biological markers in paleosols. 86 participants from 12 countries (Russia, Ukraine, Germany, Poland, Mexico, USA, Canada, Australia, Switzerland, France, Brazil, Nigeria) contributed 35 oral and 25 poster presentations.



*Conference participants in front of the hotel in Kursk where the conference was held.*

The main task of the field workshop was to demonstrate the unique loess-paleosol sections, Paleolithic sites, alluvial and colluvial pedosedimentary sequences including Late Pleistocene and Holocene paleosols. A special focus was on the famous Russian Chernozems. Classical views and modern concepts concerning their genesis were discussed near spectacular sections of these soils. The field part of the event was an exciting experience and an important opportunity for getting joint field experience and open discussions on paleosol genesis and paleo-environment.

The Field Workshop consisted of a pre-conference tour in the Kursk region (August 10-11) and a post-conference tour in the Voronezh region (August 14-15). During the pre-conference tour ISFWP-XII participants visited the geological monument Alexandrov quarry with the most comprehensive soil-sedimentary sequence of the Late Pleistocene; herbaceous meadow steppes - the unique patch of never ploughed Russian Chernozem in the Central Chernozem State Biosphere Reserve; Mid-Holocene buried soils in Senovaya balka; Korennaya Pustyn' Monastery; the military memorial of the Battle of Kursk (World

War II); a Valdai loess section with a contemporary surface Chernozem in Kursk biosphere station. MIS3 and MIS2 cultural layers and paleosols of the world famous Palaeolithic site Kostenki-14 (Markina gora), Palaeolithic museum (Palaeolithic dwelling built of mammoth bones and Palaeolithic art); Divnogorie-9 site: Late Palaeolithic location of numerous horse bones and within an archaeological site, overlaid with paleo-lacustrine sediments and weakly developed MIS2 soils; the same age archaeological site Divnogorie-1, Natural Architectural-Archaeological Museum-Resort Divnogorie famous due to beautiful views of Cretaceous plateau with valleys of Tikhaya Sosna and Don rivers, "Divy" – residual erosion forms of Cretaceous rocks, the mediaeval cave church Mayatskaya, relic Neogene plants were demonstrated during the ISFWP-XII post-tour.

Both during the Symposium and the Field Workshop micromorphological issues of paleosols and contemporary soils were widely discussed as it is traditional for events of the IUSS 1.6 Commission.



**Alexandrov quarry: explanations on the loess-paleosol stratigraphy (MIS5-MIS1)**



**Excursion group in the Korennaya Pustyn' Monastery**



**Palaeolithic site Kostenki-14**



**Archaeological site Dinogorie-9**

On behalf of the ISFW-XII Organizers:

*Maria Bronnikova, Secretary of ISFWP-XII Organizing Committee*

*Irina Kovda, Secretary of Commission on Micromorphology*

*Dokuchaev Soil Science Society, Institute of Geography, Russian Academy of Sciences*

## C. AEOMED and RAISIN Workshops in 2013

INQUA Project AEOMED: “Loess and aeolian additions to current surface soils and paleosols in Mediterranean climate”

<https://ppsg2011.uni-hohenheim.de/94176>

Project leaders: Rivka Amit (Israel), Stefano Carnicelli (Italy)

INQUA Project RAISIN: “Rates of soil forming processes obtained from soils and paleosols in well-defined settings”

<https://ppsg2011.uni-hohenheim.de/94175>



### C1. Second INQUA-AEOMED workshop: “Reconsidering Loess in Northern Italy”, fieldtrip in the Po Plain, 1-3 July 2013

Rivka Amit<sup>1</sup>, Andrea Zerboni<sup>2</sup>

1) Geological Survey of Israel, Jerusalem, Israel

2) Dipartimento di Scienze della Terra “A. Desio”, Università degli Studi di Milano, Milano, Italy

The second workshop of the AEOMED Project, 1-3 July 2013, entitled ‘Reconsidering Loess in Northern Italy’, aimed at visiting some of the most representative loess sequences in several key sites in the Po Plain Loess Basin (PPLB), and discussing loess in Italy in the context of loess in Europe and around the Mediterranean basin. Basic questions were discussed such as variety of loess types, sources of the different loess types, climatic forces for loess transportation and deposition, processes of loess accumulation, formation of soils from loess in glacial and non-glacial environments and its paleoclimatic implications.

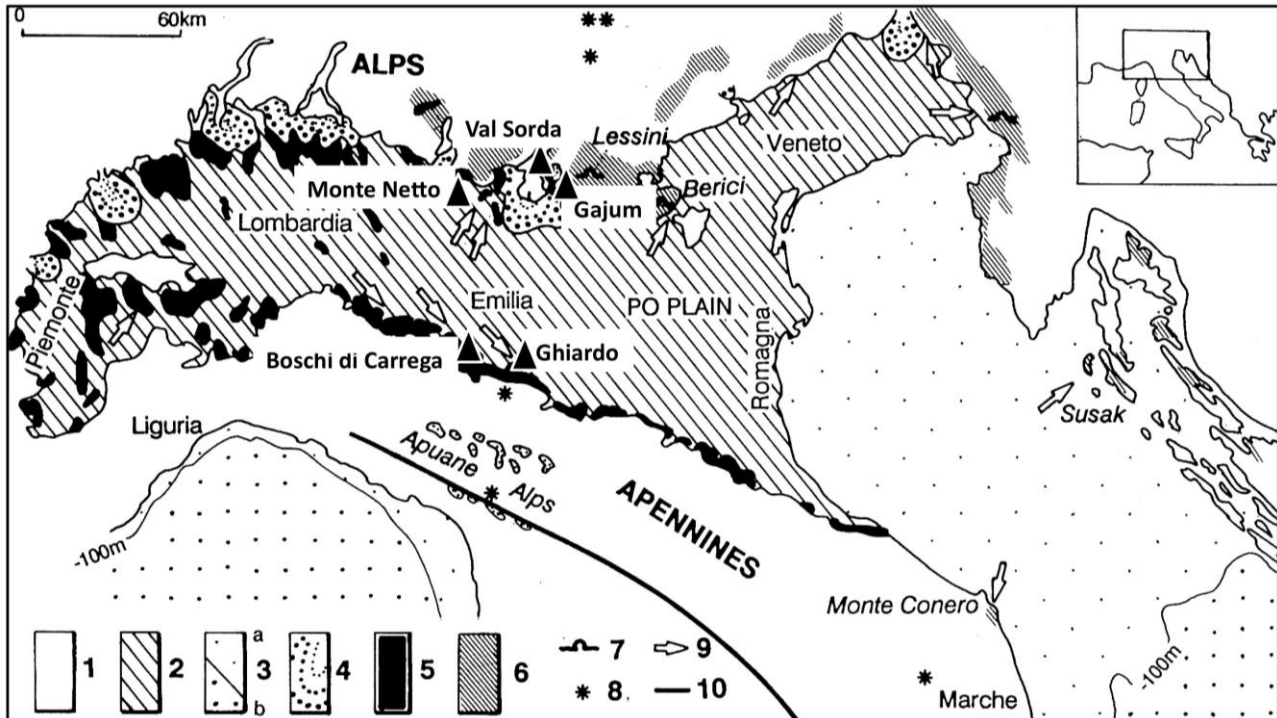


Fig. 1: Map of loess in the Po Plain indicating the sites visited during the workshop. 1) pre-Quaternary bedrock; 2) alluvial plain; 3) present-day sea extent; 4) moraine systems; 5) loess on fluvial terraces and moraine ridges; 6) loess on karst plateaus; 7) loess in rock shelters; 8) loess on erosional surfaces; 9) direction of dominant winds during loess sedimentation; 10) possible SW boundary of the loess basin.

The workshop was organized by R. Amit, A. Zerboni, E. Costantini, S. Carnicelli, M. Cremaschi, F. Livio, and A.M. Michetti as part of INQUA TERPRO activities. 30 scientists attended the meeting, and 9 grants were available for young researchers from Italy, Israel and Mexico. Despite many systematic studies carried out in the last decades, loess in Italy is somewhat overlooked in comparison to the classical sequences described in central and north Europe; as a result, crucial data are excluded from the analyses and interpretations of the well-studied loess in Europe. During the field workshop we focused on several loess key sites in the Po Plain (Fig. 1).

Two of the visited sites are located in the eastern part of the Lake Garda area. The Val Sorda sequence is a very well preserved Upper Pleistocene section consisting of the succession of post-Eemian loess, which includes three Chernozem paleosols that are capped, compacted and preserved by glacial deposits dating to MIS 2. The loess sequence at Gajum site is similar to the loess sequence at Val Sorda, with local colluvial material present at the bottom and aeolian loess at the top, but it was accumulated in a depression on the top of a karst plateau. Monte Netto site is an isolated hill in the middle of the northern Po Plain formed by amplification of a buried thrust-related anticline since the Middle Pleistocene. The continuous growth of the anticline during the late Quaternary allowed for thick accumulation of aeolian loess, interlayered by paleosols displaying different degrees of pedogenesis (Fig. 2).



**Fig. 2: Workshop participants visiting the Monte Netto loess sequence; note the thick red paleosol buried by loess.**

The last two sequences (Ghiardo and Boschi di Carrega) are located at the foot of the Apennines, and are represented by thick loess strata covering deeply weathered Pleistocene fluvial sediments. The aeolian loess went through intense to moderate pedogenesis, which result in the formation of different loessial soil profiles in each site. The main soil forming processes were: accumulation of illuvial clay, decalcification, and acidification, which were followed by release, translocation, reduction/oxidation and precipitation of Mn and Fe through hydromorphism.

We found that, different from central Europe, loess deposits in northern Italy are generally thin and are easily affected by soil formation processes that in turn result in loess deposits and loess soils that are slightly different at each loess site. However, the main sedimentological and pedological characteristics of the loess are mostly similar in their field appearance, particle size distribution, and mineralogy. These similarities suggest that the loess in the Po Plain might be derived from the same local sources (maybe the Po flood plain and the Po influents), which were exposed during glacial time for long periods and were subject to intense winds at that time. In addition, it should be noted that at the time of loess deposition the Po Plain was densely dwelled by Palaeolithic groups, as confirmed by huge lithic assemblages entombed within the sequences.

The preliminary results of this workshop will be the basis for planning the next steps of the AEOMED Project working group, which will aim to continue to discuss and study glacial and the non-glacial loess of Italy. The data from the non-glacial loess will be compared to the glacial loess type in the PPLB and around the Mediterranean to better understand the process of loess formation, transportation, accumulation, distribution and its association with soil formation and climate. A detailed report of the workshop is in: Amit and Zerboni (2013), *Alpine and Mediterranean Quaternary* 26 (<http://amq.aiqua.it/it/issues>).



## C2. Workshop "Soils and Dust in the Mediterranean", Ulm/Germany, 4-5 October 2013

Organizers: Daniela Sauer and Annette Kadereit

<https://ppsg2011.uni-hohenheim.de/84832>

The workshop comprised one day of oral and poster presentations on aeolian sediments and additions to soils in the Mediterranean (Friday, 4 October) and a one-day field trip (Saturday, 5 October).

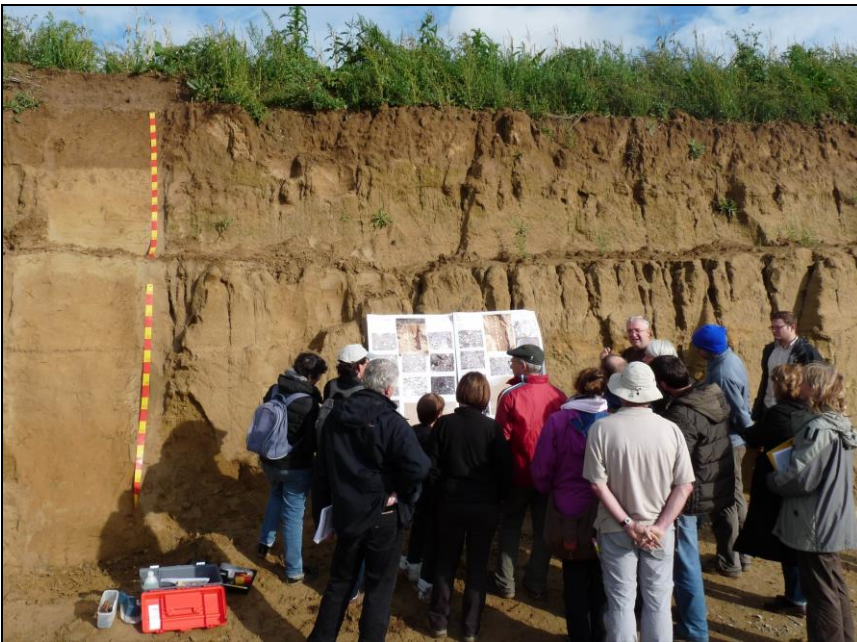
### Program of indoor workshop on Friday, 4 October

Western Mediterranean		
8:30 am	<b>Keynote talk 1 on loess in Spain</b> <b>Rosa Poch</b> (University of Lleida, Spain), J.Carles Balasch, Sally Lowick, Jaume Boixadera	Loess sequences in the lower Ebro area and Central Catalonia (NE Iberian Peninsula): formation processes and pedogenesis
9:25 am	<b>Keynote talk 2 on loess in Spain</b> <b>Stephen Wagner</b> , Armin Skowronek, Norbert Günster (University of Bonn, Germany)	Loess and aeolian deposits in paleosol-sediment sequences of Southern Spain and the Balearic Islands
10:20 am	<b>Poster</b> <b>Baldomer Corderroure Camins</b> (University of Lleida, Spain), Rosa M. Poch, J. Carles Balasch, Jaume Boixadera	Calcareous rhizcretions in loess deposits in Tivissa
10:30-11:00 am Coffee break		
11:00 am	Discussion on Loess in Spain, including possible suggestions for additional loess areas in Spain to be added to the loess map of Europe	
Central Mediterranean		
11:30 am	<b>Keynote talk on loess in Italy</b> <b>Edoardo Costantini</b> (CRA-ABP Florence, Italy), Stefano Carnicelli (University of Florence, Italy)	Characteristics of Italian Loess
12:25 pm	<b>Poster</b> <b>Chiara Frigerio</b> , Luca Trombino, Alfredo Bini, Luisa Zuccoli (University of Milan)	Weathering and paleosols on the high plain of Castelseprio (Northern Italy): micromorphological approach
Eastern Mediterranean		
3:00 pm	<b>Keynote talk on sources of desert loess</b> <b>Onn Crouvi</b> (Geological Survey of Israel), Rivka Amit, Yehouda Enzel, Alan R. Gillespie	Active sand seas: A major source of desert loess
3:55 pm	<b>Regular talk</b> <b>Sa'eb A. Khresat</b> (Jordan University of Science and Technology, Irbid, Jordan)	Aeolian processes and their effects on soil genesis in the Mediterranean region of northern Jordan
4:30 pm	<b>Poster</b> <b>Nazanin Khakipour</b> (Islamic Azad University Savadkooh branch, Iran), Noushin Parsa manesh, Atena Alipour, Saber Esmaeilzadeh	Changes in soil organic matter in the A horizon of Mollisols in Savadkooh region
4:40 pm	<b>Final discussion, including loess areas in Italy to be added to the loess map of Europe</b>	

### Field trip on Saturday, 5 October

The topic of the field trip was “Landscape history, soil development and paleolithic caves along the rivers Blau and Danube”. The first highlights of the tour were the karstic spring of the river Blau, followed by the world-famous palaeolithic caves „Geißenklösterle“ and „Hohle Fels“, where Christopher Miller (Tübingen) presented geoarcheological studies including micro-morphological analyses of the cave sediments.

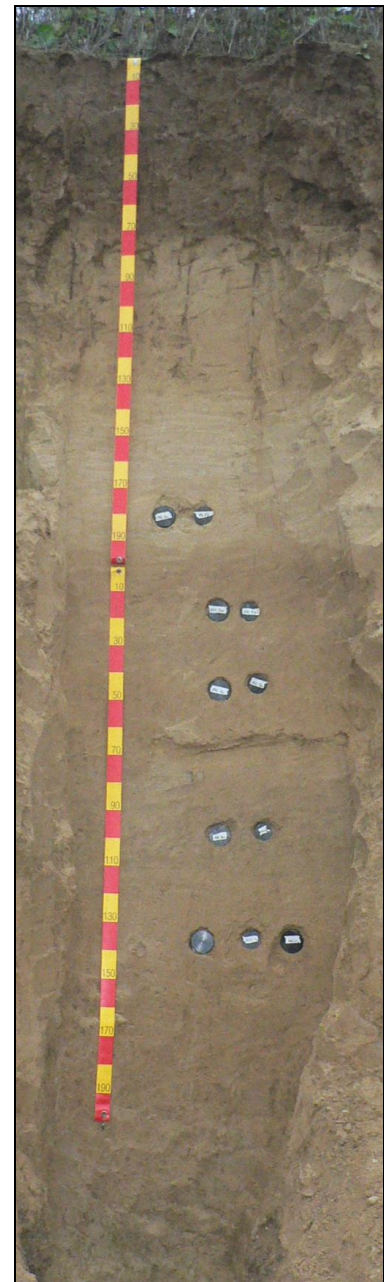
In the afternoon, we visited the loess-paleosol sequence “Datthausen” developed in last glacial loess sitting on the penultimate glacial terrace of the Danube river (photos below). Finally we arrived at Mt. Bussen (767 m) consisting of molasse. During the penultimate glacial period it was surrounded by the alpine ice from three sides. We studied a soil profile developed on sandy molasse (Arenosol with distinct hydromorphic features whose genesis was discussed) near the top of Mt. Bussen.



*The group at Profile Datthausen, Peter Kühn (Tübingen) presenting the results of his micromorphological analyses of the profile on a series of posters.*



*Annette Kadereit presenting preliminary results of luminescence datings of the loess deposits.*



*Profile Datthausen with samples for luminescence dating.*

**C3. International Workshop "Rates of Soil Forming Processes in Mediterranean Climate" 24-28 September 2013, University of Calabria in Arcavacata di Rende (near Cosenza)**

Second workshop of RAISIN, <https://ppsg2011.uni-hohenheim.de/94442>

Organizers: Fabio Scarciglia and Daniela Sauer

**Workshop Program**

**Monday evening, September 23:**

Welcome party at University of Calabria, Arcavacata di Rende (red star in map)

**Tuesday, Sep 24 & Wednesday, Sep 25:**

Workshop at University of Calabria, Arcavacata di Rende

**Thursday, September 26:**

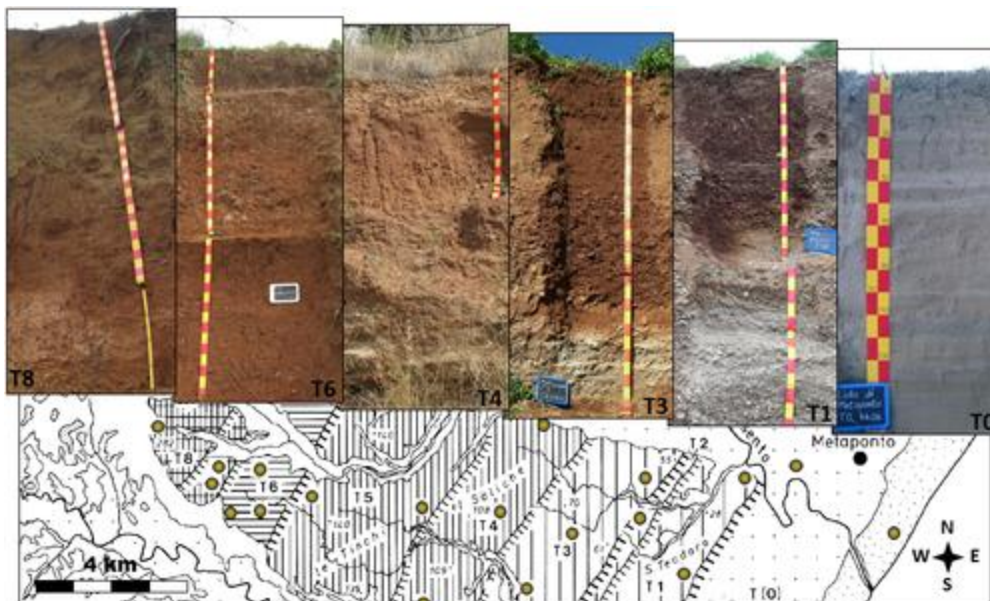
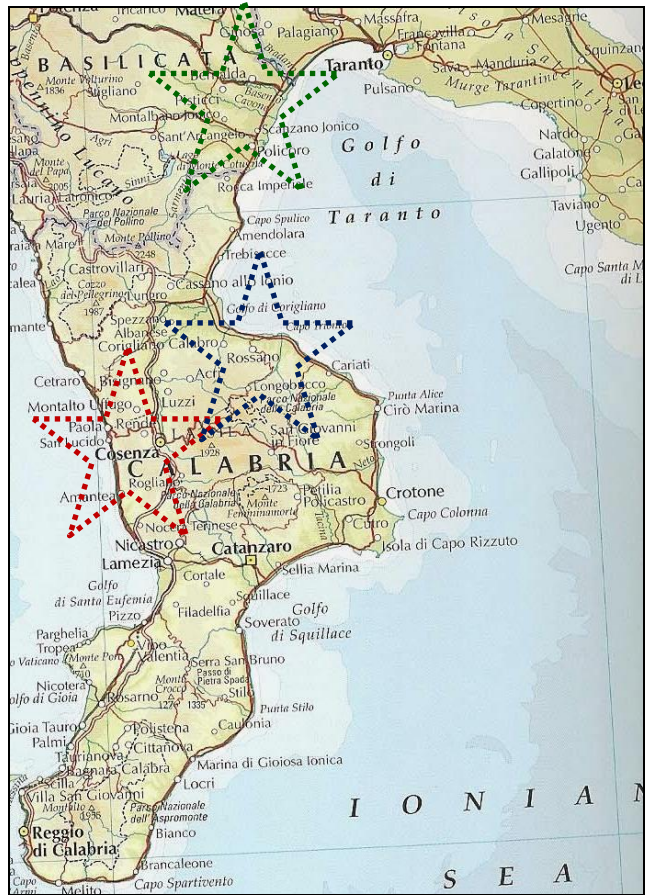
Field trip to Rossano soil chronosequence (Ionian coast of Calabria; blue star in map), guided by Fabio Scarciglia

**Friday, Sep 27 & Saturday, Sep 28:**

Field trip to Metaponto soil chronosequence (Gulf of Taranto, Basilicata; green star in map), guided by Daniela Sauer; return to Cosenza in the evening of Sep 28

**Sunday, September 29:**

Departure from Arcavacata di Rende



*Marine terrace sequence in the Metaponto area (Gulf of Taranto) with profile locations (yellow dots) and selected profiles (photos: Daniela Sauer; map of terraces from Brückner, 1980).*

## Workshop Program

Tuesday, September 24	
<b>9.00 am – 10.30 am: Opening and keynote talk</b>	
9.00-9.15	Opening of the workshop by <i>Fabio Scarciglia</i> and <i>Daniela Sauer</i> : Welcome, background and main ideas of RAISIN, main goals of the workshop
9.15-10.00	<u>Keynote talk</u> <i>Jennifer Harden</i> : Linking soil forming processes to carbon cycling: a study in contrasts
10.00-10.30	Discussion, significance for RAISIN
<b>10.30-11.00 Coffee break</b>	
<b>11.00 am – 1.00 pm: The western Mediterranean region</b>	
<i>Convener: Fabio Scarciglia (Coordinator of RAISIN-Mediterranean)</i>	
11.00-11.20	<i>Elvira Roquero</i> : Soil evolution indices in fluvial terrace chronosequences of the western Mediterranean: Tagus River basin (Central Spain)
11.20-11.30	Discussion
11.30-11.50	<i>Pablo Silva</i> : Use of soil sequences in paleoseismology: Application to the Palomares Fault (Betic cordillera, SE Spain)
11.50-12.00	Discussion
12.00-12.20	<i>Eric McDonald</i> : Soil development and regional correlations of river terraces in the Spanish Pyrenees for elucidating tectonic and climate history
12.20-12.30	Discussion
12.30-1.00	General discussion on the western Mediterranean region, main outcomes for RAISIN
<b>1.00 pm – 2.00 pm: Lunch break</b>	
<b>2.00 pm – 4.00 pm: The eastern Mediterranean region</b>	
<i>Convener: Peter Wigand</i>	
2.00-2.20	<i>Rivka Amit</i> : Transition from arid to hyper-arid environment in the southern Levant deserts as recorded by early Pleistocene cummulic Aridisols
2.20-2.30	Discussion
2.30-2.50	<i>Amir Sandler</i> : Evidence for estimating rates of pedogenic processes in Mediterranean soils
2.50-3.00	Discussion
3.00-3.30	General discussion on eastern Mediterranean region, main outcomes for RAISIN
<b>3.30-4.00 Coffee break</b>	
<b>4.00 pm – 5.30 pm: Africa</b>	
<i>Convener: Daniela Sauer</i>	
4.00-4.20	<i>Jean Pierre Nguetnkam</i> : Morphology of soils chronosequence on Mount Cameroon (Central Africa): evidence of soil deepen and differentiation with age
4.20-4.30	Discussion
4.30-4.50	<i>Peter Eze</i> : Late Quaternary palaeosols from South African coasts: pedogenesis and palaeoenvironmental interpretation
4.50-5.00	Discussion
5.00-5.30	General discussion on Africa, main outcomes for RAISIN

**Wednesday, September 25**

**8.30 am – 10.30 am: The central Mediterranean region 1**

*Convener: Rivka Amit*

8.30-9.15 Keynote talk

*Fabio Scarciglia:*

A comparison of Quaternary soil chronosequences from the Ionian and Tyrrhenian coasts of Calabria, southern Italy: Rates of soil development and geomorphic dynamics

9.15-9.30 Discussion

9.30-9.50 *Guido Mariani:*

Micromorphological evidence of contrasting pedogenetic processes in Holocene soil development in the Northern Apennines

9.50-10.00 Discussion

10.00-10.20 *Peter Wigand:*

Holocene Soils of Southern Italy: Human and/or Climate Interaction

10.20-10.30 Discussion

10.30-11.00 *Coffee break*

**11.00 am – 1.00 pm: The central Mediterranean region 2**

*Convener: Markus Egli*

11.00-11.45 Keynote talk

*Daniela Sauer:*

Interplay of soil-forming processes, aeolian and geomorphic dynamics in the Mediterranean - the 730 ka Metaponto soil sequence, Basilicata, S Italy

11.45-12.00 Discussion

12.00-12.20 *Benoit Deffontaines:*

Marine terraces and seismic cycle: case example of the Southern Apennine deformation front (Basilicata, Taranto gulf)

12.20-12.30 Discussion

12.30-1.00 General discussion on the central Mediterranean region

1.00 pm – 2.00 pm: *Lunch break*

**2.00 pm – 3.40 pm: Temperate and cool climates 1**

*Convener: Jennifer Harden*

2.00-2.45 Keynote talk

*Markus Egli:*

Soil chronosequences in Alpine areas: possibilities and limitations for deriving reaction rates

2.45-3.10 Discussion

3.10-3.30 *Emmanuel Opolot:*

Modeling evolution of weathering indices with SoilGen: preliminary results and perspectives

3.30-3.40 Discussion

3.40-4.00 *Coffee break*

4.00-5.00 General discussion on temperate to cool climates, main outcomes for RAISIN

## D. Other activities at international conferences in 2013

### D1. Session at EGU (European Geosciences Union) General Assembly Vienna/Austria, 7–12 April 2013 “Soils as record of the past” <http://meetings.copernicus.org/equ2012/>

*Conveners: S. Kluiwing, I. Simpson, J. van Mourik, C. Zaccone*

The session comprised 15 posters and 6 oral presentations. The oral presentations included:

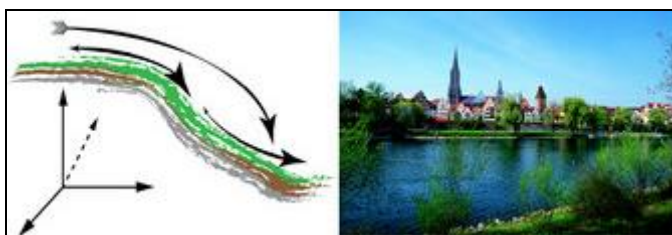
- 1) Timothy Beach, Sheryl Luzzadder-Beach: *Soil and Human Interactions in Maya Wetlands* (solicited)
- 2) Rebecca Barclay, Ian Simpson, Eileen Tisdall: *Formation and Cultural Use of Wetland Areas in Vatnsfjörður, Northwest Iceland*
- 3) Maria Dergacheva, Olga Nekrasova: *Lanthanides in humic acids of soils, paleosols and cultural horizons (Southern Urals, Russia)*
- 4) Arnald Puy: *The construction of fertility in al-Andalus. Geoarchaeology in Ricote (Murcia, Spain, 8th century AD)*
- 5) Karolina Leszczynska, Julie Boreham, Steve Boreham: *Hidden Ice Worlds - Pleistocene glacigenic deposits in Essex, England. Application of the novel systematic approach to thin-section description.*
- 6) Daniela Sauer, Lisa Zwanzig, Fabio Scarciglia, Annette Kadereit, Achim Brauer, Riyad Al-Sharif, Helmut Brückner: *Steppe to forest steppe ecosystems during the last glacial period in S Italy - evidence from sediment-paleosol sequences, compared to lacustrine archives and marine data*

### D2. IUSS Global Soil Carbon Conference in Madison/Wisconsin (USA), 3-6 June 2013

This conference was an IUSS Division, Commission and Working Group conference focusing on soil C in space and time, soil C properties and processes, soil C in relation to soil use and management, and the role of soil C in sustaining society and the environment. Each Division, Commission and Working Group was invited to present their work. All presentations were done in plenary in order to exploit the interdisciplinary approach. The conference included keynote talks, 15 min talks and a number of 5-min presentations.

H. Curtis Monger (New Mexico, USA) represented the Palaeopedology Commission at this IUSS Conference with a 15-min talk on “Soils as generators and sinks of inorganic carbon in geologic time”.

### D3. Paleopedological Symposia at the IUSS Division 1 Conference “Soils in Space in Time”, Ulm/Germany, 30 Sep – 5 Oct 2013 <https://iuss-division1.uni-hohenheim.de>



Three paleopedological symposia and one joint micromorphological-paleopedological symposium were organized. The following oral presentations were held, besides numerous posters that were presented (not listed here):

#### Symposium 16: Qualitative and quantitative indicators of environmental changes in paleosols and polygenetic soils

Convener: Elizabeth Solleiro Rebollo (Mexico)

- 1) Alexandrovskaya, E.; Alexandrovskiy, A.; Dolgikh, A.: Accumulation of pollutants in soils and urbosediments of ancient Moscow and Veliky Novgorod during 1000 years

- 2) Prikhodko, V.Y.; Inubushi, K.; Kawahigashi, M.; Polaynskey, L.M.; Manakhova, E.V.; Novenko, E.Y.; Nagano, H.; Sugihara, S.: Reconstruction of climate, soils and vegetation of the Bronze Age in the Trans-uralian steppe region, Russia
- 3) Alexandrovskiy, A.; Ershova, E.; Krenke, N.: The evolution of the landscapes of the Moskva river floodplain in the Holocene: pedology and palinological records
- 4) Golyeva, A.; Sedov, S.; Solis-Castillo, B.; Tovar, R.; Solleiro, E.: Phytoliths and  $\delta^{13}C$  in the Late Quaternary paleosols as paleoenvironmental indicators in Mesoamerica: solving records and contradictions
- 5) Pustovoytov, K.; Sauer, D.; Sedov, S.; Solleiro-Rebolledo, E.; Khokhlova, O.; Durand, N.; Stahr, K.: Conditions and timing of pedogenic carbonate formation in Mexico

### **Symposium 17: Soil forming processes - rates, thresholds and changes in rates over time**

Conveners: Daniela Sauer (Germany), Simone Priori (Italy)

- 1) Khamnueva, S.V.; Mitusov, A.V.; Gonda, R.; Bork, H.-R.: *Quantification of pedogenesis in Holocene palaeosols by derivatives of magnetic susceptibility of buried material*
- 2) Huang, L.; Zhang, G.-L.; Thompson, A.; Rossiter, D.G.: *Phosphorus transformation and loss of adsorption capacity during long-term evolution of typical paddy soils in China*
- 3) Zwanzig, L.; Sauer, D.; Scarciglia, F.; Kadereit, A.: *Southern Italy in the Late Pleistocene - paleoenvironmental reconstruction by fossil soils combined with regional lacustrine and marine archives*
- 4) Pustovoytov, K.; Golubtsov, V.; Durand, N.; Mermut, A.; Stahr, K.: *Variation of stable isotope and age systematics in pedogenic carbonate coatings and its paleoenvironmental implications*
- 5) Kasparinskis, R.; Rolavs, N.; Nikodemus, O.: *The development of podzolization process after the afforestation of agricultural lands*
- 6) Yang, J.-L.; Zhang, G.-L.: *The role of plant on Si cycle and its contribution to silicate weathering*
- 7) D'Amico, M.E.; Freppaz, M.; Zanini, E.: *Vegetation and parent material influence on pedogenic rates in the Western Alps*
- 8) Jankowski, M.; Rutkowska, P.; Sewerniak, P.: *Rate of podzolization in the 150-years chronosequence of soils under timber pine forests on inland dunes in the Torun Basin (norther Poland)*
- 9) Lessovaia, S.: *Recent soils on basic rocks of cold environments (Russia)*
- 10) Todorova, M.; Atanassova, S.; Ilieva, R.: *Near infrared spectra and chemometrics for discrimination of soil types*

### **Symposium 27: Pedogenic development in palaeo-environments**

Convener: Erika Micheli

- 1) Wang, Q.B.; Sun, Z.X.; Han, C.L.; Sun, F.J.; Tong, L.: *The selection of paleosol reference profiles derived from quaternary loess to aid identification and classification: An example of the Fenghuangshan profile in Chaoyang, China*
- 2) Dmytruk, Y.M.; Cherlinka, V.R.: Rates of pedogenesis and their changes over the results of analysis soils of early Slavic settlements areas (West Ukraine)
- 3) Sauer, D.; Svendgård-Stokke, S.; Sperstad, R.; Sørensen, R.; Fuchs, M.; Gebers, H.; Schüllli-Maurer, I.; Scholten, T.; Stahr, K.: *Podzol development and related soil organic carbon dynamics in S Norway*
- 4) Hamzhepour, N.; Karimian Eghbal, M.; Bogaert, P.: *Top soil salinity prediction in South Western part of Uromia Lake with ground water data as secondary information*
- 5) Reidy, B.J.; Simo, I.; Massey, P.; Fealy, R.; Mayr, T.; Creamer, R.: *How to do a soil survey?*

## Symposium 26: Soil morphological indicators of past environments

Convener: P. Kühn (Germany)

- 1) Kacprzak, A.; Szymaoski, W.; Drewnik, M.; Wójcik-Tabol, P.; Kasprzak, M.: *Evidence of the Pleistocene polygenesis of slope materials in soil profiles in the Carpathian Foothills (southern Poland)*
- 2) Kabala, C.; Plonka, T.: *Relics of vertic properties and gilgai microrelief in Stagnic Chernozems of SW Poland*
- 3) Kovda, I.; Sycheva, S.; Shorkunov, I.; Semenov, V.: *Pleistocene vertic soils of the Central Russian Upland and their modern analogues, example of Kursk region*
- 4) Poch, R.M.; Boixadera, J.; Riera, S.; Vila, S.; Esteban, I.; Albert, R.M.; Llop, J.M.: *Buried A horizons in old bench terraces in Les Garrigues (Catalonia): soil forming conditions*
- 5) Zucca, C.; Sechi, D.; Andreucci, S.; Shaddad, M.S.; Madrau, S.; Previtali, F.; Pascucci, V.; Kapur, S.: *Pedogenic and palaeoclimatic evidence from a Late Quaternary (Eemian) calcrete in North-western Sardinia (Italy)*

### D4. International Field Course “Biodiversity, Ecosystems and Geoarchaeology of the Sonoran Desert”, 16 November to 1 December 2013, at the visitor center of the Cerro de Trincheras archaeological site in Sonora, Mexico

The field course consisted of three sections:

Section 1) Geoarchaeology, soils and sediments, by Sergey Sedov and Guadalupe Sanchez (Instituto de Geología, UNAM, Mexico), and Vance Holliday (University of Arizona, USA).

Section 2) Landscapes, ecosystems and biodiversity of the Sonoran Desert, by Angelina Martinez Yrizar and Alberto Burquez (Instituto de Ecología, UNAM, Mexico), and Thierry Calmus (Instituto de Geología, UNAM, Mexico).

Section 3) Human adaptations and longue duree at the Sonoran Desert, by Elisa Villalpando and John Carpenter (Centro INAH Sonora, Mexico), James Watson (University of Arizona, USA), and Guadalupe Sanchez (Instituto de Geologia UNAM, Mexico).

Throughout a combination of lectures and fieldwork, graduate students in geosciences and archaeology were able to obtain from the interdisciplinary group integral knowledge about regional geologic processes, biodiversity and past and modern ecosystems, paleopedogenesis, paleoenvironments and human adaptations to the Sonoran Desert.

The course is an initiative between UNAM (Mexico), University of Arizona (USA), and INAH (Mexico). The course in 2013 was a success and will be established as a permanent core course. The next one will be taught in March 2015.





## E. Summer schools in 2013

### E1. 4<sup>th</sup> International Summer School on Paleopedology "Paleosols as a Source of Information about Past Environments", Volodarka/Siberia, 30 July – 4 August 2013

Main organizer: *Maria Dergacheva*

Languages: *Russian and English*

The summer school was held in Volodarka, Altai Region (250 km South of Novosibirsk and 100 km South of Barnaul) on the banks of River Ob. The area is interesting because of its diverse landscape history, abundant paleosol outcrops and a mixture of recent and relict features in surface soils. It is a part of the extensive loess plateau famous for its loess-paleosol sequences providing a detailed record of the Pleistocene. Tectonic activity and erosion cycles produced a set of buried paleosols, surface soils and exhumed paleosols which can be observed in river exposures up to 50 m high.

The school consisted of lectures and field master-classes. Young scientists presented their research results during a special oral and poster session. The lectures covered the following topics: Paleopedology in the system of environmental sciences; Morphology and micromorphology of paleosols; Environmental reconstructions based on microbiomorphs in paleosols; Humic acids as a memory of paleo-environments and isotopic composition of organic substances; Soil carbonates as a record of pedogenetic processes in paleosols; Microelements in paleosols as a source of information about paleo-environments; Latest achievement of paleomagnetic studies; Radiocarbon dating of paleosols. The field master classes focused on the field study of buried and exhumed paleosols (morphology, field interpretation, sampling for different analyses, etc.).

### E2. 5<sup>th</sup> International Geochronology Summer School "Dating Anthropogenic and Natural Changes in a Fragile Alpine Environment" Bergün/Switzerland, 1-6 September 2013

Organizing Committee

*M. Egli (Uni Zurich), D. Brandová (Uni Zurich), P. Cherubini (WSL), H. Gärtner (WSL), S. Ivy-Ochs (ETH Zurich/Uni Zurich)*

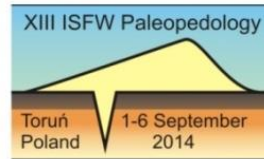
Topics covered in lectures, excursions and workshops included:

Dating techniques: such as numerical methods (radiocarbon, exposure dating with cosmogenic nuclides, OSL, <sup>137</sup>Cs, <sup>210</sup>Pb, etc.), dendrochronology, ice-core chronologies, as well as relative methods like soil weathering and Schmidt-hammer technique; Reconstruction of environmental parameters (using dendroecology, stable isotopes,...); Climate and landscape history; Reconstructing geomorphic processes: Avalanches, mud flows, landslides, rock fall, Forest fires, charcoal identification and dating; Presentation of the participants own research

Lecturers

*S. Ivy-Ochs (ETH Zurich/Uni Zurich), I. Hajdas (ETH Zurich), D. Brandová (Uni Zurich), P. Cherubini (WSL), M. Egli (Uni Zurich), H. Gärtner (WSL), S. Lowick (Uni Bern), M. Schwikowski (PSI), E. Eckmeier (Uni Bonn), E. Costantini (CRA-ABP, Firenze, Italy), D. Dahms (Uni Northern Iowa, USA) and others.*

## F. XIII<sup>th</sup> Int. Symposium and Field Workshop on Paleopedology in Toruń (Poland) in September 2014



### “Paleopedological record of postglacial soil and landscape evolution”

#### ORGANIZING INSTITUTIONS

- Department of Soil Science and Landscape Management, Faculty of Earth Sciences, Nicolaus Copernicus University, Toruń, Poland
- Paleopedology Commission, International Union of Soil Sciences
- Polish Society of Soil Science

#### GENERAL PROGRAM

- **01-02.09.2014:** Field workshop in the Toruń Basin and Kuyavia region (two single-day tours)
- **03-04.09.2014:** Symposium – oral and poster sessions at the Nicolaus Copernicus University, Toruń
- **05-06.09.2014:** Field workshop in the Toruń Basin, Chełmno moraine plateau and Brodnica Lakeland (two days tour)

#### PRELIMINARY LIST OF SCIENTIFIC SESSIONS

1. Paleosols in postglacial landscapes
2. Paleosols in loess and tephra sequences
3. Paleosols in dunes and cover sands
4. Paleosols in alluvial, colluvial and marine environments
5. Pre-Quaternary paleosols
6. Paleopedological issues in geoarcheology
7. New proxies in paleopedology

#### VENUE

- Faculty of Earth Sciences, Nicolaus Copernicus University, Lwowska Street 1, 87-100 Toruń, Poland

#### FIELD WORKSHOP

Paleopedological aspects of landscape and soil cover evolution typical for post glacial areas of Northern Poland and the whole Central European Lowland will be presented during four days lasting field sessions (two single-day pre-conference and one two-day post-conference tours). Participants will see Pleistocene periglacial relics, Late Glacial-Holocene paleosol sequences in inland-dunes, Holocene soils documenting natural and anthropogenic environment changes, soils on archeological sites.

#### IMPORTANT DATES

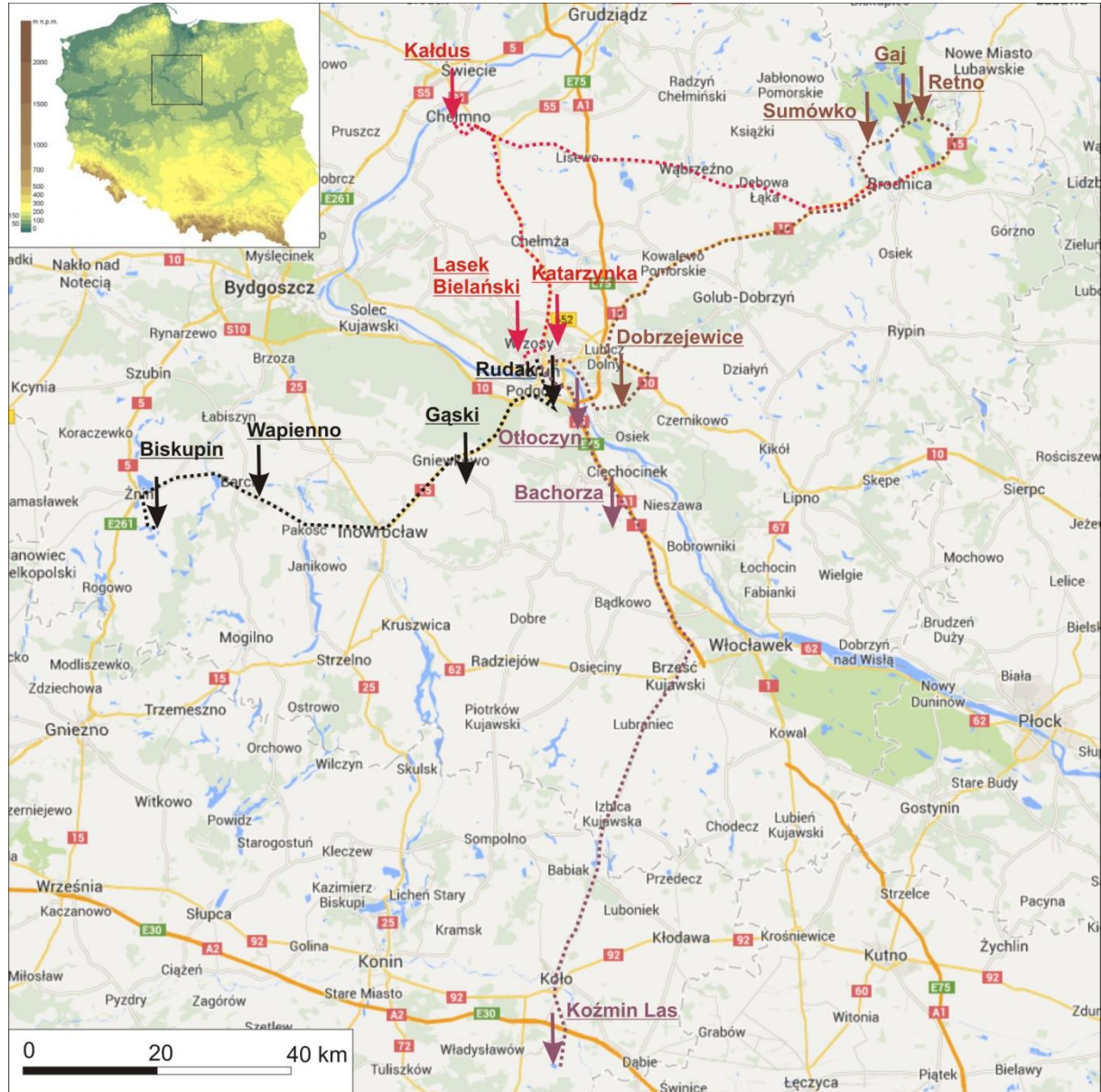
- 28 February 2014** – website preparation, registration opening  
**15 April 2014** – registration closing, abstract submission deadline  
**31 May 2014** – fee payment deadline  
**01-06 September 2014** – Conference

**Symposium:**

Regular conference fee: **180 €**; Students and PhD students fee: **130 €**; Conference dinner: **30 €**

**Field workshop:**

Pre-conference field session: **80 €**; Post-conference field session: **120 €**



*Routes of field sessions and location of presented objects*

**MORE INFORMATION**

Detailed information will be available soon on the conference website:

<http://www.home.umk.pl/~paleopedology2014/>

**CONTACT****Michał Jankowski**

Department of Soil Science and Landscape Management, Faculty of Earth Sciences, Nicolaus Copernicus University, Lwowska 1, 87-100 Toruń, Poland; e-mail: [mijank@umk.pl](mailto:mijank@umk.pl); phone: +48 56 611 2554

Conference address: [paleopedology2014@umk.pl](mailto:paleopedology2014@umk.pl)

## G. AEOMED and RAISIN Workshops in 2014

### RAISIN Workshop on “Soil-Forming Processes in Deserts”

4 days in the week of Oct 26-31, 2014 in the Mojave Desert (California, USA)



*Location of the workshop venue and accommodation: Desert Studies Center, Mojave Desert.  
The next international airport is in Las Vegas (about 150 km NE of the workshop venue).*

The workshop will include one day of talks and discussions, and three days of field trips from early morning until afternoon, with talks in the evenings.

Desert soils and landforms that have been intensively studied and dated over the last decades will be presented; geomorphological and soil-forming processes and their rates will be discussed in the field. Stops will include dated soils on alluvial fans, basalt flows, and eolian deposits in Providence Mountains, Panamint Valley, and fans near Blythe, California.

Organizer: Eric McDonald (Desert Research Institute, Reno, NV, USA), Eric.McDonald@dri.edu

More information will be provided in the next months at: <https://ppsg2011.uni-hohenheim.de/83960>

### AEOMED Workshop in the Negev desert, Israel in November 2014

The workshop will include two days of paper presentations and two days of field trip to key loess sites in the Negev. The suggested dates are November 25-28, the exact venue is still under consideration. The field trip will focus on desert loess formation from source to sink and beyond (e.g. erosion, recycling, re-deposition) and its implication to palaeo-climate. We will start with the Negev sand dunes (Nizana), discuss transformation of sand into loess; visit Har Keren field-lab site showing the formation process of loess; primary loess in mountain tops (Harif, or Matred or Sagy); primary loess spatial distribution (Hura, Beka); erosion of primary loess (colluvial loess, Sede Boker); secondary loess, loess re-deposition (Beer Sheva basin, or Besor basin), erosion of secondary loess (Nahal Ziporim, Nahal Eilot); erosion and re-deposition of secondary fluvial loess (Nahal Eilot, Ziporim etc); relation of loess with prehistorical sites).

Sub-topics to be stressed:

1. Soil formation processes in primary and secondary loess and their hydrological and palaeoclimate interpretations
2. The importance of particle size distribution data and geochemical tracers as tools to discriminate between different sources of loess
3. MAR of loess in regard to its sources
4. Time transgressive conceptual model of loess distribution
5. Processes of silt grains generation in deserts, with relation to loess formation and dust emission

Day 1: Nizana dunes, Keren, Sede Boker. Guides: A. Yair, N. Porat, J. Roskin, Y. Enzel, O. Crouvi, R. Amit

Day 2: Harif or Matred or Sagy, Ziporim, Beer Sheva, Secher, Hura, Beka.

Guides: O. Crouvi, R. Amit, Y. Enzel, Y. Avni, A. Neigel

More information will be provided in the next months at: <https://ppsg2011.uni-hohenheim.de/84878>

## H. Other upcoming international conferences

### H1. Sessions at the General Assembly of EGU (European Geosciences Union) in Vienna/Austria, 7–12 April 2014, within the programme group “Soils as record of the past”

Session SSS3.1 Soil and sediments micromorphology: reconstruction of palaeoenvironments, anthropogenic processes, or more recent human impact on ecosystems (co-organized)

Conveners: *Luca Trombino, Martine Gérard*

Session SSS3.3 Use of soil records in geocology and landscape archaeology

Conveners: *Sjoerd Kluyving, Ian Simpson, Jan van Mourik, Daniela Sauer, Claudio Zaccane*

### H2. Sessions at 20<sup>th</sup> World Congress of Soil Science, Jeju Island/South Korea, 8-13 June 2014

<http://www.20wcss.org/>

Session C1.6-1: Paleosols and Pedosedimentary Sequences for Understanding Impacts of Climatic Changes

Conveners: *Alexander Makeev (Russia), Mohammed Rafi G. Sayyed (India)*

Session C1.6-2: Quantitative palaeo-environmental proxies in paleosols

Conveners: *Peter Kühn (Germany), Curtis Monger (USA)*

Session DS1: Micromorphological answers to palaeopedological and polypedogenetic questions

Conveners: *Rosa Maria Poch (Spain), Daniela Sauer (Germany)*

### H3. Kukla Loessfest – 7<sup>th</sup> Loess Seminar in September 2014 in Wrocław, Poland

International Conference on Loess Research, tribute to George Kukla, 8-9 September 2014 in Wrocław, Poland, and fieldtrip on Loess in Poland and western Ukraine, 10-15 September 2014

<http://www.loessfest2014.umcs.lublin.pl/>

#### Organizers:

Zdzisław Jary (University of Wrocław), Maria Łanczont (Maria Curie-Skłodowska University, Lublin), Andriy Bogucki (Ivan Franko National University, Lviv, Ukraine), Przemysław Mroczek (Maria Curie-Skłodowska University, Lublin), Radosław Dobrowolski (Maria Curie-Skłodowska University, Lublin), Janusz Kida (University of Wrocław), Jerzy Raczyk (University of Wrocław), Bartosz Korabiewski (University of Wrocław), Krzysztof Rękas (University of Wrocław)

#### Conference topics

Plenary session – George’s friends; Loess magnetism; Loess landforms dynamics; Eurasian loess; Loess chronology; Loess and the record of Paleolithic cultures; Reconstruction of loess environments; Loess geochemistry; Dust and man; Loess as geoheritage – geoconservation & geotourism

### Conference program

Sunday, 7 September

18.00 Registration; Welcome and ice breaker party

Monday, 8 September

Morning: Registration, Opening Ceremony, Plenary Session; afternoon: Thematic Sessions

Evening: 18.00-20.00 Old Town Excursion; 20.00 Conference Dinner

Tuesday, 9 September

Morning and afternoon: Thematic Sessions, poster presentations; evening: 19.30 Conference Dinner

### **10-15 September 2014: 6-day Fieldtrip - Loess in Poland and western Ukraine**

#### Day I (10th September, Wednesday): Wrocław - Cracow

Wrocław → Biały Kościół loess section → St. Ann's Hill (lithology and relief of loess cover in the protected area) → Cracow (loess and Gravettian sites, Main Square Ground Museum, Cracow by night)

#### Day II (11th September, Thursday): Cracow – Sandomierz - Tyszowce

Wieliczka Salt Mine → Jaksice site (loess terrace of Vistula River and Gravettian archaeological site) → Cistercian Abbey in Koprzywnica → Żłota loess section → Apple orchards in Żłota → Old Town in Sandomierz → Revel in Goths' Village in Masłomęcz

#### Day III (12th September, Friday): Masłomęcz – Lviv

Tyszowce loess section → Medieval Stronghold in Gródek Loess greda in Gródek → Czeremo stronghold (Medieval capitol of Czerwień Strongholds) → UKRAINE (UNDER LATER CONSIDERATION)

#### Day IV (13th September, Saturday): Lviv – Verkhovyna

UNDER LATER CONSIDERATION

#### Day V, (14th September, Sunday) Verkhovyna - Lublin

Ukraine → Leżajsk (loess cover of Rzeszów Foothills) → Krzeszów (loess cover of Sandomierz Basin) → Lublin (old town by night)

#### Day VI (15th September, Monday): Lublin - Wrocław

Lublin → Nałęczów (spa resort) → Klementowice (Magdalenian open-air site and primary loess relief reconstruction) → Karmanowice-Celejów (loess islands) → Kazimierz Dolny (old town, loess relief and gully systems) → Podgórz (vineyard & loess covers) → Dobrze (road gully and loess on tectonic edge) → Krzemionki Opatowskie (Neolithic and Early Bronze Age complex flint mines) → Wrocław

### Conference fee

Early bird (until 30 April 2014): Students: 60 €, others: 120 €

Standard (until registration deadline on 30 June 2014): Students: 75 €, others: 150 €

The conference fee includes Abstract Book, Conference promo-materials, Welcoming cocktail & coffee breaks, Conference dinners

### Field trip fee

Early bird (until 30 April 2014): Students: 250 €, others: 350 €

Standard (until registration deadline on 30 June 2014): Students: 300 €, others: 400 €

Loess field trip fee includes: All transfers (bus), Accommodation (5 nights), Full meals, Excursions with tickets, Field Guidebook, Field promo-materials

#### **H4. International Symposium on loess, soils and climate change in southern Eurasia, Gorgan, Iran, 15-19 October and post-conference excursion to the Basin of Persepolis, Zagros Mountains, 20–22 October 2014**

The 5-day international symposium will start with two days of conference including key-note lectures and scientific sessions on loess and climate change in southern Eurasia, the potential and degradation of loess-derived soils and methods in loess research. Three days of fieldtrips will be offered to the loess-covered foothills of Alborz Mountains, the so-called Iranian Loess Plateau and the alluvial plain of Gorgan River including the shore of the Caspian Sea. Due to a pronounced climatic gradient, the aeolian deposits, soils and vegetation cover are quite diverse in these forest or steppe landscapes.

A three-day post-excursion (20 – 22 October 2014) will be organized to the Basin of Persepolis located within the heartland of Persia, where we will visit interesting exposures in loess-like sediments, the beautiful city of Shiraz, and last not least, the famous palace of Persepolis.



Further information regarding the venue and topics of scientific sessions, abstract submission, accommodation and excursions will be published in the 2nd circular in January 2014.

##### Organizing committee

Eva Lehdorff (University of Bonn, Germany), Martin Kehl (University of Cologne, Germany), Farhad Khormali (Gorgan University of Agricultural Sciences and Natural Resources, Iran), Manfred Frechen (Leibniz Institute of Applied Geophysics, Hanover, Germany)

For further questions please contact: kehlm@uni-koeln.de; fkhormali@gau.ac.ir.

#### **H5. XIV<sup>th</sup> International Symposium and Field Workshop on Paleopedology (ISFWP), Lincoln/Nebraska, USA 2015**

*Organizers: Peter Jacobs and R. Matt Joeckel*

In 2015 please consider attending an International Symposium and Field Workshop on Paleopedology (ISFWP) in Lincoln, Nebraska, USA. Nebraska is an ideal location to study paleosols in Quaternary loess deposits, along with Neogene and Cretaceous fluvial deposits.

Preliminary plans include a multiple-day symposium with oral and poster presentations, a mid-meeting excursion, and a multiple-day excursion to observe Pleistocene and Holocene paleosols in loess and eolian sand deposits. Dates are not yet established, but the gathering will likely occur in July.

## I. Upcoming summer schools and short courses

### 11. International Course on Micromorphology of Deformation Structures in Quaternary sediments, 6-8 June 2014 in Würzburg (Germany)

*Organizers:* John Menzies (Brock University, Canada), Birgit Terhorst (University of Würzburg), Daniel Jäger (University of Würzburg)

The objective of this course is to investigate deformation structures in glacial sediments and landslide deposits. The focus of this Workshop will be on variations in shear stress levels and strain rates within slide masses as well as in glacial sediments.

Participants will be instructed in international description methods and systematics. A major part of the course will involve participants working independently with selected thin sections.

*Deadline for registration:* 15 February 2014

*Registration fee:* 150,- € (accommodation not included)

Contact: Daniel Jäger, [daniel.jaeger@uni-wuerzburg.de](mailto:daniel.jaeger@uni-wuerzburg.de)

### 12. International Course on Paleosols and Paleoenvironment, 19-22 June 2014 in Würzburg (Germany)

*Organizers:* Alexander Makeev (Moscow State University), Birgit Terhorst (University of Würzburg), Elizabeth Solleiro Rebolledo (UNAM, Mexico City), Tobias Sprafke (University of Würzburg)

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 access to e-learning platform with course materials.

*Deadline for registration:* 15 February 2014

*Registration fee:* 200 € (accommodation not included)

Contact: Tobias Sprafke, [tobias.sprafke@uni-wuerzburg.de](mailto:tobias.sprafke@uni-wuerzburg.de), phone: +49 (0)931 31-81099



**14. 6<sup>th</sup> International Geochronology Summer School "Dating Anthropogenic and Natural Changes in a Fragile Alpine Environment" 30 August - 05 September 2014 in Bergün (Switzerland)**

<http://www.geo.uzh.ch/microsite/geochronology/>

This Summer School concentrates on various dating techniques. Topics to be covered in lectures, excursions and workshops include palaeo-ecological techniques (e.g. biochemical markers), dating techniques such as numerical methods (radiocarbon, exposure dating using cosmogenic nuclides, OSL, etc.); dendrochronology, Ice-core chronologies, and relative methods such as soil weathering, Schmidt-hammer technique etc.

List of Lecturers:

H. Gärtner (WSL); D. Brandová (Uni Zurich), P. Cherubini (WSL), M. Egli (Uni Zurich), S. Ivy-Ochs (ETH Zurich/Uni Zurich), I. Hajdas (ETH Zurich), E. Eckmeier (Uni Aachen, Germany), S. Lowick (Uni Bern), E. Costantini (CRA-ABP, Firenze, Italy), R. Kipfer (EAWAG), D. Dahms (Uni Northern Iowa, USA) and others.

The Summer School is open to young researchers (PhD students and Post-Docs) worldwide. Participation is competitive and will be limited to a maximum of 20. The registration fee (600 Euro or 750 CHF) includes accommodation (room sharing required), half board and lunch, field trips and teaching material. There is a limited amount of financial support for those in greatest need.

DEADLINE FOR APPLICATIONS: 30 April 2014

Registration: <http://www.geo.uzh.ch/microsite/geochronology/>

On behalf of the organizers

Holger Gärtner

Markus Egli

**13. V<sup>th</sup> International Summer School on Paleopedology "Paleosols as a Source of Information about Past Environments", Volodarka/Siberia, 30 July – 4 August 2014**

Main organizer: *Maria Dergacheva, languages: Russian and English*

The V International School on Paleopedology for Young Scholars in Siberia will be held in Volodarka settlement, Altai Region (about 300 km from Novosibirsk) on the bank of Ob River. The area is interesting because of its diverse history, abundant outcrops with paleosols and by a confused mixture of recent and relic features in surface soils. This is a part of an extensive loess plateau famous for its loess-paleosol sequences with detailed record of lower, middle and upper Pleistocene history. Due to combination of tectonic activity and erosion cycles a set of buried, surface and exhumed paleosols can be observed in river exposures up to 50 m high.

The School will be held as field master-classes and lectures. The lectures will cover the following topics: Palaeopedology: subject, objects and basic concepts; Status of Paleopedology within system biosphere - geosphere sciences; Soil Memory: theoretical and applied aspects; Paleosols, Environment and Men in Pleistocene; Soil Science role in the study of Prehistory; Main soil markers of paleo-environmental change; Micromorphology in Paleopedology; Phytoliths and their use in studying of the Last Environment; Pedogenic carbonates as environmental indicators; Microelements and geochemical condition of paleosol formation; Paleomagnetic method in Geology and Paleopedology; Problems of absolute dating of Quaternary formations; WRB Soil Classification and others.

Among the lecturers will be Victor Targulian and Alexandra Gol'eva (RAS, Moscow, Russia), Daniela Sauer (Dresden University of Technology, Germany), Wolfgang Zech (University of Bayreuth, Germany), Maria Dergacheva (RAS, Novosibirsk; Tomsk State University, Russia), Zinaida Gribidenko (RAS, Novosibirsk, Russia), Olga Khokhlova (RAS, Pushchino, Moscow Region, Russia), Marina Lebedeva-Verba (V.V. Dokuchaev Soil Science Institute, Moscow, Russia), Alexander Makeev, Maria Gerasimova, Valery Snakin (Moscow State University, Moscow, Russia), Alexander Puzanov (RAS, Barnaul, Russia), Vladimir Sheinkman (Ben-Gurion University of the Negev, Beer-Sheva, Israel; RAS, Tyumen, Russia), Sergey Lukashenko (Institute of Radiating Safety and Ecology of the National Nuclear Center, Republic Kazakhstan). Sergey Sedov (UNAM Mexico City), Michal Jankowski (UMK Torun, Poland), Gyorgy Fulekey (Sztnt Istvan University, Godolo, Hungary), Ludmila Shumilovskih (Germany), Olga Yakimenko (Moscow, Russia) and others.

Master classes will focus on the field study of buried and exhumed paleosols (morphology, field interpretation, sampling for different analyses, etc.).



A scientific session of young scientists “Modern soils and paleosols: methodology and methods of decoding of the information on environment” will be organized within the framework of the School. The School invites young scholars to get extra knowledge and experience and to present their own results on paleosol research. The reports of young scientists-participants of School will be published to the beginning of School work. The program of the session “Modern soils and paleosols: methodology and methods of decoding of the information on environment” will be developed by the organizing committee after receiving the registration forms and materials of the young participants.

#### Registration fee

260 Euros, including meals and transfer from the airport in Novosibirsk and to and from school location, accommodation (including 1 day after arrival – July, 29) and transfer during excursion to Mountain Altai (August, 4-6).

#### Deadline for registration

**15 March 2014**

Please complete the registration form and send it to the secretariat: [paleosol@yandex.ru](mailto:paleosol@yandex.ru)

**REGISTRATION FORM**  
**The V<sup>th</sup> International School on Palaeopedology**  
**for Young Scholars in Siberia**

**Title (Dr. Prof./Mr./Ms.,etc)**.....

**Surname:**.....

**Name:**.....

**Year of birth:**.....

**Position:**.....

**Affiliation:**.....

**Address:**.....

**City:**..... **Postal Code:**.....

**Tel:**..... **Fax:**.....

**E-mail:**.....

**Title of report:**

.....  
.....  
.....

**Excursion to Mountain Altai**                      Yes                      No

Mail this form not later than March **15**, 2014, to:

**Ksenya Ochur**

**Secretary of School**

Email: [paleosol@yandex.ru](mailto:paleosol@yandex.ru)

## J. Recent paleopedological publications

### J1. Special Issue of *Catena* “Landscapes & Soils through Time”

Guest editors: Daniela Sauer, Reinhold Jahn

Handling *Catena* associate editor: Karl Stahr

#### Content

- 1) Bernhard Lucke, Helga Kemnitz, Rupert Bäuml, Michael Schmidt: *Red Mediterranean Soils in Jordan: new insights in their origin, genesis, and role as environmental archives.*
- 2) Rosa E. Tovar, Sergey Sedov, Marisol Montellano-Ballesteros, Elizabeth Solleiro, Mouloud Bennami: *Paleosols, phytoliths, bones and carbon isotopes in the alluvial sequence of Axamilpa, Puebla: reconstructing the paleoenvironmental trends during MIS 3-2 in Southern Mexico.*
- 3) Alexandra Golyeva, Maja Andrič: *Paleoecological reconstruction of wetlands and Eneolithic land used in Ljubjansko barje (Slovenia) based on biomorphic and pollen analysis.*
- 4) Hülya Alçiçek, M. Cihat Alçiçek: *Palustrine carbonates and pedogenic calcretes in the Çal basin of SW Anatolia: implications for the Plio-Pleistocene regional climatic pattern in the eastern Mediterranean.*
- 5) Irina Kovda, Evgeny Morgun, and Natalia Golubeva: *Stable isotopic composition of carbonate pedofeatures in soils along a transect, southern part of European Russia.*
- 6) Alexander Alexandrovskiy, Sergey Sedov: *The Development of Deep Soil Processes in Ancient Kurgans of the North Caucasus.*
- 7) Martina Gocke, Stephan Peth, Guido L.B. Wiesenberg: *Lateral and depth variation of loess organic matter overprint related to rhizoliths - revealed by lipid molecular proxies and X-ray tomography.*
- 8) Pankaj Srivastava, Daniela Sauer: *Thin-section analysis as a tool to resolve the effects of burial diagenesis of lithified paleosols for paleoenvironments: an example from the oldest fossil soils of the Himalayan Foreland.*
- 9) Maria Bronnikova, Andrey Panin, Olga Uspenskaya, Yuliya Fuzeina, Irina Turova: *Late Pleistocene-Holocene environmental changes in ultra-continental subarid permafrost affected landscapes of the Terkhol' Basin, South Siberia.*
- 10) Stephen Wagner, Eileen Eckmeier, Norbert Günster, Armin Skowronek: *Quaternary paleosols and sediments on the Balearic Islands as indicators of climate changes.*
- 11) Michael Zech, Claudia Hörold, Katharina Leiber-Sauheitl, Andreas Hemp, Wolfgang Zech: *Buried black soils surrounding Mt. Kilimanjaro as regional carbon storage hotspot.*
- 12) J.-T. Cornelis, M. Dumon, A.R. Tolossa, B. Delvaux, J. Deckers, E. Van Ranst: *The effect of pedological conditions on the sources and sinks of silicon in the Vertic Planosols in south-western Ethiopia.*
- 13) Michał Jankowski: *The evidence of lateral podzolization in sandy soils of Northern Poland.*