

[HTTP://IGU.ORG.RU](http://IGU.ORG.RU)
[HTTP://EECOMM.ORG](http://EECOMM.ORG)



Dear colleagues!

We are very glad to inform that the Environment Evolution Commission started to publish an annual Newsletter. This news-bulletin will be circulated to Commissions members, IGU Commissions and Task Forces and our colleagues in sphere of geography, biology, archeology and human life.

In our Newsletter we plan to present announcements, information, calls for participation in scientific events, programs and reports.

The information of the commission activity and Newsletter is presented on web-site: <http://eecomm.org>

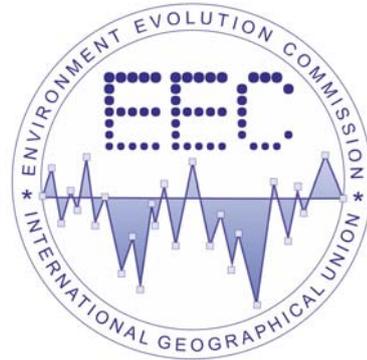
The Editors



Content:

1. The IGU Commission on Environment Evolution...1
2. Meeting report.....4
 - 2.1. A special session in a frame of Kyoto regional conference of IGU, 4-9 August, 2013.
 - 2.2. International conference and young scientists school «Methods of palaeoenvironmental researches» 16-19, April, 2014, Moscow.
3. Commission's recent publications.....8
4. Forthcoming events. IGU Regional Conference in Moscow, 17-21 August, 2015.....9
 - 4.1. Special sessions of the Environment Evolution Commission
 - 4.2. Excursion

THE IGU COMMISSION ON ENVIRONMENT EVOLUTION



The Commission on Environment Evolution is one of the research bodies of the International Geographical Union. The Commission has been organized in a first time of the IGU history in 2004. The main goal of the commission activity is to study human and environmental interaction including climate, landscapes and culture from the Paleolithic epoch until present. The principal lines of research are: **Landscape dynamics, Natural Processes and Human impact**. The Commission is focused also on assessment of role of climate and landscape in development of the human society evolution as well as the anthropogenic influence on environmental conditions.

The basic aims of the Commission on Environment Evolution are:

- to create a network of specialists in paleoecology, landscape evolution, climate changes and human-environment interaction;
- to stimulate active cooperation among scientists (exchanging data, common data standards, joint projects);
- to compile and to distribute information on paleoenvironmental research beyond national borders.

To achieve its aims, the Commission on Environment Evolution provides follow media for the exchange of information between specialists

- special session in a frame of the IGU Congresses and Regional Conferences;
- Commission's meetings (Conferences, Workshops and young scientists school dedicated to different problems of environment evolution and paleoecology);
- special issues on environment evolution-related topics in various peer-reviewed journals;
- homepage of the Commission on Environment Evolution (<http://eecom.org>);
- The new annual newsletter of the Commission

THE STRUCTURE OF ORGANIZATION

The Environment Evolution Commission consists of 11 regional working groups. The leaders of WGs are the members of Commission Steering Committee

The chair of the Commission

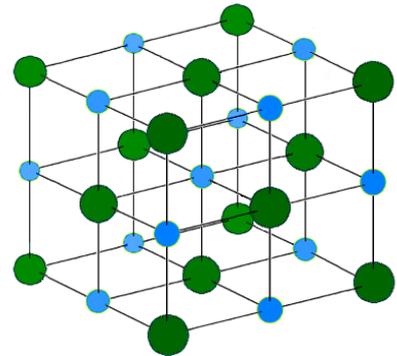
Dr. T. Boettger. (Germany). Helmholtz Centre for Environmental Research – UFZ, Department of Catchment Hydrology, e-mail: tatjana.boettger@ufz.de

The vice chair of the Commission:

Dr. Fahu Chen (China). Research School of Arid Environment and Climate Change, Lanzhou University, e-mail: chenfh@lzu.edu.cn

The secretary:

Dr. Elena Novenko (Russia). M.V. Lomonosov Moscow State University, Faculty of Geography, e-mail: lenanov@mail.ru



The Steering Committee:

1. Professor Andrei Velichko (Russia)- ***the first chair of the Commission (2004-2012)*** Institute of Geography Russian Academy of Science.
2. Dr. Lukas Barton (USA). Department of Anthropology, University of Pittsburgh.
3. Dr. Bernhard Weninger (Germany). Institute of Prehistoric Archaeology, University of Cologne.
4. Professor T. Sugai (Japan), The University of Tokyo.
5. Dr. P Kershow (Australia) Monash University; School of Geography and Environmental Science.
6. Dr. Ch. Turner (Great Britain) Quaternary Environments Group, Dept. of Geography, University of Cambridge.
7. Dr. M. Stancikaite (Lithuania), Institute of Geology and Geography.
8. Dr. V. Zernitskaya (Belarus) Institute of Geochemistry and Geophysics, National Academy of Sciences of Belarus.
9. Dr. L. Bezusko (Ukraine) National University "Kyiv-Mohyla Academy"
10. Dr. A. Tsatzkin (Israel) University of Haifa.

MEETING REPORT



In 2013 the Environment Evolution Commission organized
**A SPECIAL SESSION IN A FRAME OF KYOTO REGIONAL
CONFERENCE OF IGU,**
4-9 August, 2013.

The session's title was *"Environment Evolution and Human Activity in the late Quaternary: Geographical Pattern"* and chairs Tatjana Boettger, Elena Novenko and Alexandr Olchev.

The session includes 16 oral presentations (4 time-slots), and a lot of people (about 20) took an active part in discussions. Geographers from 8 countries (Russia, Japan, Germany, China, USA, Cambodia, India and Indonesia) participated in the session; those were focused on studies of the landscapes evolution and human activity in different geographical regions during the Pleistocene and the Holocene.

The principal topics of the presentations were:

- Landscape dynamics: participants presented the results of investigations the landscape dynamics during the Late Pleistocene and Holocene (the last 120 kyr) in a scale of Northern Hemisphere. The main ideas and conclusions were in possibility of paleo-analog approaches for assessing the position of modern environments in the general evolutionary system.
- Natural Processes: participants presented the results of the experimental and theoretical studies in the key-regions: paleontological information (pollen, microfossil, diatoms, etc); geomorphological data, paleolimnic and paleohydrological materials, radiocarbon dates, stable isotope data and the evidence about beginning of human activities. The presented results have shown that human activity in late Pleistocene and Holocene become a more and more important factor in the environment evolution system
- A special attention in the session was paid to studies of human impacts on land surface – atmosphere interactions under modern environmental conditions and under different scenarios of projected future climate changes. This knowledge will help us to assess the relationship between human and environment today.



Introduction of the Commission's secretary
E. Novenko



Participants



Presentations of Japan colleagues



Field trip during the conference

2014, APRIL, 16-19. **INTERNATIONAL CONFERENCE AND YOUNG SCIENTISTS SCHOOL «METHODS OF PALAEOENVIRONMENTAL RESEARCHES»** Moscow, Geological Institute of Russian Academy of Science



The International Conference *«Methods of palaeoenvironmental researches»* held April, 16-19, 2014 in the Geological Institute RAS and was organized by *Environment Evolution Commission of IGU*, Russian Academy of Science, Moscow State University and Russian Palynological Commission. 148 participants from 8 countries (Russia, Germany, Ukraine, Belorussia, Estonia, Azerbaijan, Kazakstan, Abkhazia and Kyrgyzstan) took part in the conference. The programme included 16 key-note lectures, 40 oral and 32 poster presentations and 5 master classes.

The Conference was focusing on the methodological issues of paleoecological studies and aimed to provide a comprehensive overview of the most current and innovative techniques.

The main topics of the conference were follow:

- 1) Multy-proxy approaches in palaeoecology;
- 2) Relationships between composition of recent pollen assemblages and vegetation; problems in interpretation of pollen data;
- 3) Palaeoenvironmental analysis by archeological studies;
- 4) Morphology of pollen and non-pollen palynomorphs;
- 5) Methodical problems in studies of pre-Quaternary deposits;
- 6) Software for palaeoenvironmental data .

Each topic included keynote plenary lectures by experts in the field of paleoecological research, short talk session and seminars on a range of relevant palaeoecology related topics, providing a lively and comprehensive conference. The first day of the conference consist completely of keynote lectures on radiocarbon, TL and OSL methods of dating, pollen, diatom, charcoal, testate amoeba, stable isotope data, application of methods from soil science and archaeological findings for reconstructions of the environmental conditions in the past. Attendees were exposed to new methods currently being developed by high-profile senior researchers, and expanded their knowledge in traditional methods of interpreting the results of paleoecological studies.

A special emphasis in the conference was placed on data handling: chronology; data analyses: zonation, ordination techniques, diversity estimates, rate of change. 5 practical exercises (such as master-classes in morphology of pollen and non-pollen palynomorphs and software used for data analyses) were organized in a frame of the conference.

Book of abstracts (in Russian) is available in web-site <http://pollendata.org/news.html>



Director of the GI RAS, academician
M.A. Fedonkin



Chair of the Environment Evolution
Commission Dr. T. Boettger (Germany)



Participants of the conference



Corresponding member of RAS Solomina O.N.



Participants of the conference



COMMISSION'S RECENT PUBLICATIONS

The Environment Evolution Commission of IGU organized a special issue of Geographical review of Japan ser. B dedicated to the topics of Commission's session in frameworks of Kyoto Regional Conference of IGU, 4-9 August, 2013.

The title: **Environment Evolution and Human Activity in the late Quaternary: Geographical Pattern.**

The special issue of the IGU Commission on Environment Evolution is focused on studies of the landscapes evolution and human activity in different geographical regions during the Pleistocene and the Holocene. The overall theme of the special issue is "**Quaternary Science and Society**"

The special issue will be published at the end of 2014.

The editorial members of special issue of GRJ: Dr. Tatjana Boettger, (IGU The Environment Evolution Commission Chair), Dr. Yoshiki Wakabayashi (Editor in chief of GRJ), Dr. Elena Novenko, (IGU The Environment Evolution Commission Secretary), Dr. Masashi Takada (Editor of GRJ), Dr. Hideaki Maemoku (Editor of GRJ), Dr. Hideki Saijo (Editor of GRJ), , Dr. Toshihiko Sugai (Liaison for the Environment Evolution Commission session at IGU 2013 Kyoto conference)

Content of the special issue:

1. K. Matsunaga. Balancing Afforestation with Grain Production and Water Use for Sustainable Effects of Soil Conservation in the Chinese Loess Plateau
2. N. Nagumo, T. Sugai, S. Kubo. Flood Geomorphology and Characteristics of Modern Channel Bars in the Lower Stung Sen River, Cambodia
3. N. Sasaki and T. Sugai. Distribution and Development Processes of Wetlands on Landslides in the Hachimantai Volcanic Group, NE Japan
4. A. Oltchev and G. Gravenhors. Effects of climate changes on net ecosystem exchange of CO₂ and evapotranspiration of a tropical rain forest.
5. E. Novenko. The middle and late Holocene vegetation and climate history of the forest-steppe ecotone area in the central part of European Russia
6. O. Rudenko and E. Taldenkova. Holocene vegetation and climate history of the Cheshskaya Bay Region, SE Barents Sea, inferred from the first pollen archives.

FORTHCOMING EVENTS



INTERNATIONAL GEOGRAPHICAL UNION (IGU) REGIONAL CONFERENCE IN MOSCOW, 17-21 AUGUST 2015 (web-site - <http://igu2015.ru>)



IGU Moscow 2015 will focus on five main themes: Urban Environment, Polar Studies, Climate Change, Global Conflict and Regional Sustainability. The program is rooted in principals of diversity and interdisciplinary exchange. It will feature a variety of meetings, including plenary sessions, lectures, panel discussions, workshops and other events. It will also provide opportunities for sharing ideas on IGU projects and on the role of geographers in international initiatives such as Future Earth.

The program will include the following meeting formats:

- sessions organized by IGU commissions
- sessions on relevant interdisciplinary themes proposed by groups of scholars
- thematic sessions devoted to IGU projects and to the role of geography in international programs such as Future Earth
- plenary sessions and lectures by leading geographers as well as specialists from other earth sciences and the humanities
- lectures by practitioners from a wide variety of fields

All information about the Conference is available on the web-site

<http://igu2015.ru/>

The IGU Environment evolution Commission organize 3 special session in a frame of this Conference

SESSION 1. ENVIRONMENT EVOLUTION AND HUMAN ACTIVITY IN THE LATE QUATERNARY

Conveners: prof. A.A. Velichko and Dr. T. Boettger

The special session of the IGU Commission on Environment Evolution will be focused on the long-term studies of landscapes evolution, climate dynamics and human activity in different geographical regions during the Pleistocene and the Holocene. We invite experts from different scientific areas to introduce new results of the experimental and theoretical studies focused on human-environment interactions in the different regions of the Northern and Southern Hemispheres in past epochs that are based on detailed paleontological information (pollen, macrofossil, diatoms, etc); geomorphological data, paleolimnic and paleohydrological materials, radiocarbon dates, stable isotope data and the evidence about beginning of human activities. New data and results obtained from archaeological sites and presentations that can comprise the results of environmental and archeological studies are very welcome.

SESSION 2. LANDSCAPE DYNAMICS AND HUMAN IMPACTS DURING THE LAST MILLENNIUM

Conveners: Dr. T. Boettger and Dr. E. Novenko

The session will be focused on a review of available knowledge on the forced and unforced climate variability and dynamics of human-environment interactions during the last millennium and the late Holocene. Fruitful discussion needs presenting and analysis of already existed data sets and results of new observations, data from natural archives, results of modeling experiments, etc. One of the key scientific questions of the session is to explain how human activities have influenced and changed natural ecosystems during the last millennium and in the recent past. For fruitful discussions we invite the specialists in landscape ecology and palaeoecology.

The main topics of the session are:

- 1) Local, regional and continental reconstructions of landscape dynamics during the last millennium using multy proxy data collected from lakes sediments, peat bogs, trees, speleothems and other natural archives;
- 2) Reconstruction of climatic conditions of the last millennium using instrumental, documentary and natural proxies;
- 3) Human impacts and land use in the late Holocene and in the recent past;
- 4) Historical documentary sources and their application for climate reconstructions over timescales from the medieval period to the 20th century.
- 5) The effect of land use / land cover changes on landscape structure.

SESSION 3. CLIMATE - VEGETATION INTERACTION UNDER CURRENT AND FUTURE CLIMATE CHANGE SCENARIOS

Conveners: Dr. T. Boettger and Dr. A. Olchev

The session is aimed to bring together the specialists working in the fields of climate, vegetation and land use changes. Modern climate changes have significant impact on growth and functioning of the different plant community. On the other hand, the climate is very sensitive to land cover and vegetation changes. What is the main mechanisms of climate - atmosphere interactions, how the vegetation and land use changes influence the climate system and what is the response of the different plant communities to climate change are key questions for discussions in the session. We invite to take part in the session the specialists working in the different scientific areas (meteorologists, climatologists, forest ecologists, paleogeographers, modeling experts, etc.)

The main topic of the session:

- 1) Current climate and vegetation changes
- 2) Scenarios of future climate changes
- 3) Prediction of possible future vegetation and land use changes under different climate change scenarios.
- 4) Man - climate - vegetation interaction under climate changes.

IMPORTANT DATES AND DEADLINES:

- 01 November 2014. Early registration begins
- 31 January 2015. Deadline for submitting abstracts for papers and posters
- 01 March 2015. Notification of the results of the abstract review
- 20 March 2015. Publication of the provisional conference program
- 10 April 2015. Deadline for early registration fee payment
- 10 June 2015. Deadline for regular fee payment
- 17-21 August 2015. IGU Regional Conference in Moscow

Excursion

The IGU 2015 Regional Conference will be held in the main building of Moscow State University situated right behind a large park close to the Moscow River. From the upper floors of the building you can behold magnificent panoramic views of the Russia's capital.

The Environment Evolution Commission will organize a special excursion for participants of the sessions and Commission's guests to the natural protected area in the Moscow River valley adjoining the conference venue. You can visit the botanical gardens of the Moscow State University, which is situated near the main building and contains rare and unique plant species.