

## **Activities of Dokuchaev Soil Science Society (DSSS) in Russia for IYS 2015**

Many conferences on soil science and propagation of soil knowledge to the society were organized within the scope of the IYS (2015). The main soil forums held in Russia are enumerated here in their time sequence.

**XVIII Dokuchaev's conference for young scientists 'Soil degradation and food security of Russia', March 2-5, 2015, St. Petersburg, Russia** (The IUSS Bulletin No. 126, P.27-28)

**Interregional Conference "Soils of arid territories in the south of Central Siberia: contribution of scientists from Lomonosov Moscow State University into research, setting, reclamation, conservation and sustainable development of lands"** was held at the Research Institute of Agricultural Problems in Khakassia in cooperation with Sukachev Institute of Forest Siberian Branch of Russian Academy of Sciences, Soil Science Faculty of Lomonosov Moscow State University, Khakassia, Tyva and Krasnoyarsk Regional Divisions of DSSS, Abakan, Republic Khakassia, Russia, July 29-31, 2015. The conference President was Prof. Vadim Savostiyanov (Research Institute of Agricultural Problems in Khakassia).

**The 2nd International Conference "Modern Research in Natural Sciences"** was held at the Far-Eastern Federal University with support of the Far-Eastern Regional Division of Dokuchaev Soil Science Society, Vladivostok, Russia, August 26 – September 5, 2015. The President of the Conference was Prof. Andrey Adrianov (Far-Eastern Federal University, Vladivostok), the Vice-President – Prof. Alexander Makeev, Lomonosov Moscow State University, Moscow, Russia.

**All-Russian Conference with international participation "Soils of Cold Regions: genesis, geography, ecology"** was held at the Institute of General and Experimental Biology (IGEB) Siberian Branch of RAS in cooperation with the Federal Agency of Scientific Organizations, Institute of Physico-chemical and Biological Problems of Soil Science (IPCBPSS) RAS, Buryatia Scientific Center SB RAS, Buryatia Regional Division of DSSS, Paleopedology commission of the IUSS, Ulan-Ude, Republic Buryatia, Russia, August 31 - September 9, 2015.

Presidents of the conference were Prof. Leonid Ubugunov (IGEB SD RAS) and Prof. Valery Kudayarov (IPCBPSS RAS). The Chair of Organizing Committee was Prof. Nimazhap Badmaev (IGEB SD RAS). Scientific secretaries were Dr. Larisa Balsanova and Dr. Irina Lavrenteva (IGEB SD RAS).

Plenary session was dedicated to Prof. Oleg Makeev (100-th anniversary), his scientific activities and biography.

The main topics of scientific symposia were the following: (1) Genesis, geography and classification of soils in cold regions; (2) Paleocryogenic epochs as stages of extreme soil formation in the course of pedosphere evolution; (3) Climate and hydrothermal regimes of cold soils; (4) Physical, chemical and mineralogical properties of cold soils; (5) Microbiology, biogeochemistry and ecology of soils and landscapes of cold regions; (6) Land use and soil conservation in cold regions.

**The 4<sup>th</sup> Forest Soil Science Conference "Fundamental and Applied Aspects of Forest Soil Science"** with International Participation was organized by the Division of Biological Sciences of Russian Academy of Sciences, Dokuchaev Soil Science Society, Ministry of Natural Resources of Komi Republic, with organizing support by Center on Problems of Forest Ecology and Productivity, Lomonosov Moscow State University, Syktyvkar, Russia, September 14-19, 2015.

The main topics of symposiums were: (1) Diagnostics for forest soil taxonomy: genesis, processes, morphology (Convener – Prof. Maria Gerasimova); (2) Biogeochemical cycles and Sustainability of Forest Ecosystems: field research and modeling (Conveners – Prof. Alexander Komarov, Prof. Kapitolina Bobkova); (3) Structure and functions of soil biota in forest ecosystems (Convener – Prof. Bella Striganova); (4) Organic matter in forest soils (Convener – Prof. Evgeny Milanovskiy, Lomonosov Moscow State University); (5) Anthropogenic changes in forest soils (Convener – Prof. Nataliya. Lukina).

**International Conference “Role of soils in biosphere and human life”** was held at the Faculty of Soil Science in cooperation with the Institute of Ecological Soil Science, Lomonosov Moscow State University, DSSS, Russian Geographical Society, Federal Agency of Scientific Organizations, Division of Biological Sciences of RAS, Scientific Council on Soil Science of RAS, Dokuchaev Soil Science Institute (DSSI), IPCBPSS RAS, Severtsev Institute of Ecology and Evolution Problems (SIEEP) RAS, Moscow, Russia, October 5-7, 2015.

The conference president was Rector of Lomonosov Moscow State University Academician Victor Sadovnichiy (MSU), Vice-Presidents were Prof. Sergey Shoba (MSU), Prof. Andrey Ivanov (DSSI), Prof. Dmitry Pavlov (SIEEP RAS), Prof. Valery Kudiyarov (IPCBPSS RAS)

The conference was dedicated to the 100-th anniversary of Academician Gleb Dobrovolsky, his scientific activities, diverse contributions to soil science and biography.

There were three symposia based on the ideas of Prof. Gleb Dobrovolskiy in soil science.

First symposium “Soil resources: evaluation of status and rational use” comprised the following issues: (1) Lands of Russia and evaluation of soil resource potential; (2) Legislative aspects of soil use and conservation; (3) Economics of land use and environmental services of soils; (4) Soil degradation and sustainable land use.

Second symposium “Ecological functions of soils in biosphere” comprised the following issues: (1) Role of soils in maintenance of Earth’s biodiversity; (2) Role of soils in sustainable functioning of hydrosphere and atmosphere; (3) Carbon fluxes and role of organic matter in biosphere; (4) Biodiagnostics as a tool for environmental evaluation of soils.

Third symposium “Soils and civilization” comprised the following issues: (1) Soil fertility and strategy of food security; (2) Soil as a source of paleoenvironmental and archeological information; (3) Soils and Society; (4) Ecological education and popularization of knowledge about soils.

**All-Russian Conference “Soil is a Mirror and Memory of Landscape”** was organized by the Institute of Natural Sciences at Vyatka State Humanitarian University (VSHU), Vyatka State Agricultural Academy, Kirov Regional Division of Russian Geographic Society, Kirov Regional Division of Dokuchaev Soil Science Society, Kirov, Russia, October 8-9, 2015. The President of the Conference was Prof. Valery Yungblyud (VSHU, Kirov), the Vice-President – Prof. Alexey Prokashev (VSHU, Kirov).

The main topics of several symposia were: (1) Modern conceptual and methodological problems of soil science; (2) Regional researches on soil genesis and soil evolution; (3) Soil classification; geography of soils, soil cover patterns; (4) Agricultural soil science, agricultural chemistry, agronomy, soil management and reclamation, soil fertility; (5) Regional Red Books of Soils; (6) Soil mapping, evaluation of land resources; (7) Teaching of soil science and soil geography.

**The 4th Conference “Evolution and Degradation of the Soil Cover”** was held at the Stavropol State Agrarian University in cooperation with Stavropol Research Institute of Agriculture, State Center of Agricultural Chemistry Survey “Stavropolsky”, Ministry of Agriculture of Russian Federation, Ministry of Agriculture of Stavropol krai, DSSS, Russian

Ecological Academy, Kuban State Agrarian University, Southern Federal University, Stavropol, Russia, October 13-15, 2015.

The President of conference was Prof. Vladimir Trukhachev (Stavropol State Agrarian University)

The main topics of the conference were (1) Theory of soil evolution and soil degradation; (2) Soil contamination by heavy metals and pesticides; (3) Soil erosion and deflation; (4) Soil overmoistening, salinity and sodicity; (5) Farming practices; (6) Soil biology.

### **The 10<sup>th</sup> International Eurasian Soil Science Congress “Soil Science in the International Year of Soils 2015”, October 19-23, 2015, Sochi, Russia.**

The 10<sup>th</sup> International Eurasian Soil Science Congress “Soil Science in the International Year of Soils 2015” was held in Sochi, Russia, October 19-23, 2015. It was organized by Dokuchaev Soil Science Society in cooperation with Federation of Eurasian Soil Science Societies, Lomonosov Moscow State University and Dokuchaev Soil Science Institute, and was sponsored by Russian Foundation for Basic Research.

The President of the Congress was Prof. Evgeny Shein (Lomonosov Moscow State University (MSU), Soil Science Faculty, Russia), the Vice-President – Prof. Vladimir Goncharov (MSU), the Scientific Secretary of the Congress – Prof. Aminat Umarova (MSU), The Secretary – Dr. Dolgor Khaydapova (MSU).

128 soil scientists from Azerbaijan, China, Croatia, Hungary, Iran, Kazakhstan, Poland, Portugal, Russia, Turkey, USA, Uzbekistan took part in the Congress.

The congress program comprised

- Plenary lectures (moderator - Evgeny Shein, MSU, Russia),
- Section 1 - Soil Biology and Biochemistry, Soil Health and Quality (6 oral and 6 posters, moderator – Nadezhda Verkhovtseva, MSU, Russia),
- Section 2 - Soil Physics, Soil Management and Reclamation (18 oral and 22 posters, moderator – Galina Stulina, Scientific-Information Center of the Interstate Coordination Water Commission of Central Asia, Tashkent, Uzbekistan),
- Section 3 - Soil Chemistry, Soil Pollution and Remediation (12 oral and 10 posters, moderator – David Pinskiy, Institute of Physico-chemical and Biological Problems in Soil Science, Pushchino, Russia),
- Section 4 - Soil Fertility, Plant Nutrition and Fertilization (6 oral and 17 posters, moderator – Gennady Glazunov, MSU, Moscow, Russia),
- Section 5 - Soil Genesis, Classification and Mapping, Geostatistics, Remote Sensing and GIS (8 oral and 3 posters, moderator – Nikolay Khitrov, Dokuchaev Soil Science Institute, Moscow, Russia),
- Round table “Food security and degradation of soils” (moderator – Pavel Krasilnikov, MSU, Moscow, Russia)
- Field excursion “Soils of the Caucasus Black Sea coast and the cultivation problems of fruit and ornamental crops” at the experimental station of the All-Russian Research Institute of Floriculture and Subtropical Crops, Sochi.

Topics of plenary lectures were

- Soil Organic Matter: New Paradigm is Needed, by Nicolay Panikov, Dept. of Immunology & Inf. Diseases, Harvard School of Public Health, US,
- Soil structure stability and erosion in a semi-arid agro-ecosystem, by Amrakh Mamedov, Institute of Soil Science & Agrochemistry, and Institute of Botany, ANAS, Baku, Azerbaijan,
- Physical, Chemical and Biological Attributes in Soil Quality, by Gülser Coşkun, Ondokuz Mayıs University, Faculty of Agriculture, Department of Soil Science and Plant Nutrition, Samsun, Turkey,
- Food Security and Land Degradation (scientific introduction to the roundtable), by Pavel Krasilnikov, MSU, Moscow, Russia.

All the participants of the Congress noted a consistently high level, greater interest and willingness to share their views, with new data and procedures for the meetings, excursions, during the discussion of poster papers.

The situation was extremely friendly and joyful. A reference for photos is:  
<https://cloud.mail.ru/public/KUVZ/ZZ8GKrFpe>

**National Conference with International Participation and School of Young Scientists on "Modern methods of investigation of soils and soil cover", November 9-11, 2015, V.V. Dokuchaev Soil Science Institute, Moscow, Russia (special topic).**

National Conference with International Participation and School of Young Scientists on "Modern methods of investigation of soils and soil cover" was held at the V.V. Dokuchaev Soil Science Institute, Moscow, Russia, November 9-11, 2015, sponsored by Russian Foundation for Basic Research and organized by V.V. Dokuchaev Soil Science Institute and Dokuchaev Soil Science Society of Russia.

The conference was attended by leading scientists, Academicians, Corresponding Members, Doctors of Sciences, professors and young scientists from different research institutes and universities, members of the business community, suppliers of modern appliances and equipment. The conference gathered more than 100 people: participants and guests. 74 oral reports of employees from 29 scientific organizations, universities and businesses were presented.

In the first day of the conference (November 9) plenary reports were made on conceptual and methodological aspects of the use of modern instruments and equipment for soil research in the fields of physical chemistry and chemistry, physics, organic matter studies, molecular genetic research of microbial communities, micromorphology, mapping and monitoring, soil management and protection.

In the second day the following breakout sessions took place:

Section 1. Modern methods of studying the content and forms of chemical elements in soils: prospects and limitations.

Section 2. New technologies and methods for the study of soil physical properties.

Section 3. Soil organic matter, humus compounds, organo-mineral interactions in soils and methods of their study. Application of molecular genetic methods for soil microbial communities and the prospects for use of their results.

Section 4. Methods of micromorphology and mineralogy of soils.

Section 5. New in digital soil mapping. Regional inventories of soil resources and land cadastral valuation system USRSR (Unified State Register of Soil Resources).

On the same day, and on November 11, the School for Young Scientists took place. Topical issues of the use of modern methods of soil research were discussed.

Diplomas for the best paper among young scientists and certificates of short-term professional conference participants who have completed the master class were presented; the Resolution of the Conference was adopted at the closing session of the conference.

The conference participants unanimously noted that the modern physical and technical basis is an important component for the positioning of soil science at the international level, participation in the formation of the global trend of development and its impact on the development trend of agricultural production.

**All-Russian Conference "Soil Resources and Problems of Food Security"** is being held at the Geology Institute (GI) of Dagestan Scientific Center of Russian Academy of Sciences (DSC RAS) in cooperation with Caspian Institute of Bioresources (CIB) of DSC RAS, Dagestan State University (DSU), Dagestan Regional Division of DSSS, Makhachkala, Republic Dagestan, Russia, December 4-6, 2015.

Conference Presidents are Prof. Sergey Shoba (MSU), Prof. Murtazali Rabadanov (DSU), Prof. Vasiliy Cherkashin (GI DSC RAS), Prof. Magomed-Rasul Magomedov (CIB DSC

RAS), Scientific secretaries – Dr. Surkhay Mamaev (GI DSC RAS) and Dr. Akhmed Biarslanov (CIB DSC RAS).

The topics of symposia: (1) Modern state of soil resources and their role in food security; (2) Anthropogenic impact on soil cover in arid lands; (3) Digital soil mapping; (4) Biogeography, pedodiversity and biodiversity of arid lands.

Web-site about conference is <http://www.igdncran.ru>

Besides the soil conferences and congress other forms of activities took place in Russia for the International Year of Soils.

Section of Agricultural Sciences in the Central Club of Scientists RAS (Chair – Prof. Nikolay Khitrov, DSSI, Moscow) organized 5 public lectures on several problems of study and use of soils. They are as follows:

Prof. Galina Koptsyk (MSU) Problems and perspectives of remediation of soils contaminated by heavy metals, January 15, 2015;

Dr. Olga Rukhovich (Pryanishnikov All-Russian Research Institute of Agrochemistry, Moscow) Models of natural factors impact on spatial distribution of cereal crop, February 9, 2015;

Dr. Maria Bronnikova (Institute of Geography RAS, Moscow) Cryoaridic soils and their neoformations as “archive” of Holocene natural changes in intermontane depressions of South-Eastern Altay, March 12, 2015;

Prof. Petr Sapozhnikov (MSU) and Dr. Alexander Ogleznev (DSSI) Informative resource about soils is a base for state cadastral evaluation of agricultural lands, April 6, 2015;

Prof. Vladimir Romanenkov (Pryanishnikov All-Russian Research Institute of Agrochemistry, Moscow) Organic carbon dynamics modelling and evaluation of possibility to manage carbon storage in plowed soils, October 12, 2015.

Khakassia Regional Division of DSSS held two exhibitions. The first exposition “Soil is a base of life on the Earth” was held at Minusinsk Interregional N.M. Martanov Museum of local lore in January 2015. It comprised monoliths of main soils typical of the south of Middle Siberia, photos of landscapes, books about soils and their role in nature and human life. Drs. Ludmila Ermolaeva, Nataliya Soldatova, Nataliya Kutkina and Inna Eremina presented public lectures about advances of soil science and sustainable agriculture. The second exposition “Soil is a base of agriculture” was held at the National N.G. Domozhakov Library of the Republic Khakassia in Abakan in March, 2015. It comprised books about soils of Khakassia and adjacent regions, photos and brief biographies of soil scientists. Public lectures about the role of soils in sustainable agriculture were presented by Drs. Nadezhda Marakova, Tatiana Kzyngasheva and Nataliya Kutkina.

Ulyanovsk Regional Division of DSSS opened A.N. Panasenko soil museum on February 4, 2015 at Ulyanovsk State P.A. Stolypin Academy of Agriculture. Web-site about the event is <http://agrovuz.ru/prepodavateljam/konferencii/item/8823-ugskha-otkryt-pochvennyui-muzeui-imeni-a-panasenko>