Eco-clogites are rocks that record a history of subduction and collision tectonics. Their fascinating characteristics have, once again, brought together scientists from all over the world at the International Eclogite Conference (IEC). The 12th edition of the IEC was held 20-29 August 2017 in Åre (Sweden) at the foot of Mt. Åreskutan in the Scandinavian Caledonides, the place where, in 1888, Elis Törnebohm identified a major thrust that carried high-grade metamorphic rocks over fossiliferous sediments.

Some 121 participants from 18 countries and 5 continents convened in Sweden for the 12th IEC, which had the title, “High- and Ultrahigh-Pressure Rocks – Keys to Lithosphere Dynamics through Geologic Time”. The delegates contributed 58 oral presentations and 65 posters, which made for a densely packed program arranged in seven sessions over the three days.

Delegates at the 12th International Eclogite Conference. PHOTO: MATIA GIGLIO.

Junior researchers and graduate students formed a large part of the delegates, with 25 of the students excelling in oral and poster contributions, something that impressed the scientific committee when making its decision on awards. After a tough selection between many outstanding presentations, the committee awarded the best student talk to Michał Bukała (AGH University of Science and Technology, Kraków, Poland).

The winners of the student awards were Iwona Klonowska and Michal Bukala, pictured here with the current IEC President, Charlotte Möller (left), and the Past President, Hans-Peter Schertl (right). PHOTO: MATIA GIGLIO.

Eco-clogites are intimately related to subduction and orogenic processes and their study is relevant to mineralogy, petrology and tectonics. Therefore, the topics for scientific exchange were many. Each of the seven conference sessions offered many points for discussion and are summarised here. "The Scandinavian Caledonides and its Eclogites" was the title of the first session, and here, keynote lectures from David Gee (Uppsala University) and Hannes Brueckner (Columbia University, USA) beautifully illustrated research milestones over the last few decades in the understanding of this complex orogeny. “The Microstructures and Microchemistry of High Pressure and Ultra-High-Pressure Minerals” discussed everything from the presence of diamonds in ophiolites (keynote talk by Jingsui Yang, Chinese Academy of Geological Sciences) to garnet and polycrystalline inclusions. “The Chronology of Eco-clogites Metamorphic Rocks” included talks on the most robust chronometries that are currently used, such as zircon, garnet and rutile. “Subduction and Continental Underthrusting” discussed the formation of high-pressure rocks and included two keynotes, one by Gisela Rebay (University of Pavia, Italy) and the other by Patrick O’Brien (University Potsdam, Germany). The “Garnet Peridotites” session saw William Griffin (Macquarie University, Australia) discuss the connection between garnet peridotites and the mantle. The “Fluids and Melts” session discussed the relation between metamorphism and subduction processes. The composition and dynamics of fluids and melts were subject of another session that included a keynote by Håkon Austrheim (Oslo University, Norway) on the role of fluids in producing intermediate-depth earthquakes. Finally, the session “The Chemical Dynamics of Subduction Zones” included keynote talks by Suzanne Baldwin (Syracuse University, USA) and by Yong-Fei Zheng (University of Science and Technology of China).

Following tradition, the 12th IEC had a strong field component, and the 3 days of scientific presentations were enriched by a pre-conference, a syn-conference and a post-conference field trip. A memorable pre-conference field trip – led by Herman van Roermund, Jaroslaw Majka, Marian Janák, and Iwona Klonowska – took delegates to the Seve Nappe Complex in northern Jämtland (Sweden). On Day 1 we visited the type locality of central Seve belt eclogites and their migmatitic kyanite host gneisses. On Day 2, delegates honed their cross-country navigation and bog-avoidance skills during a vigorous hike and were rewarded by eclogite outcrops and beautiful views of the surrounding landscape from the top of Tjeliken mountain. A helicopter, skillfully landed by the windy mountaintop and shuttled delegates between Tjeliken and the basalt of the Friningen garnet peridotite outcrop.

The local geology of the Caledonian suture in central Jämtland was explored during the mid-conference excursion, which was led by Iwona Klonowska, Jaroslaw Majka, Marian Janák, and David G. Gee. The post-conference excursion was led by Herman van Roermund, Dirk Spengler and Hans Vrijmoed and took the delegates to Molde (Norway). This trip was blessed by good weather. Hopping across fiords and little islands by ferry, the participants visited a small portion of one of the largest high-pressure terranes in the world: the Western Gneiss Region. Participants appreciated seeing spectacular kyanite eclogites and gneisses, as well as unique garnet websterites.

The meeting was organized by an international team, including Charlotte Möller (Lund University, Sweden), Jaroslav Majka and Iwona Klonowska (Uppsala University, Sweden), Herman van Roermund (University Utrecht, The Netherlands), Marian Janák (Slovak Academy of Sciences, Slovak Republic), Dirk Spengler (Technical University Berlin, Germany), and Hans Vrijmoed (Free University Berlin, Germany). The eclogite community acknowledges the mighty effort by the organizing committee and thanks them for a perfectly run conference.

The preparations for the next, 2019, edition of the IEC are under way. The eclogite crowd will then gather in Karelia (Russia) and visit the Belomorian high-pressure localities, which are some of the oldest eclogites on Earth.

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The first Sino-German symposium on nuclear waste, entitled “Radiation Damage and Nuclear Waste Forms”, was held 13–17 October 2017 in Chengdu (China). The symposium was funded by the Sino-German Science Center and was supported by the National Science Foundation of China (NSFC) and the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation). The symposium was organized by Professor Ulrich Bismayer of the Universität Hamburg (Germany) and Professor Ming Zhang of the Institute of Materials, China Academy of Engineering Physics (China).

More than forty participants, which included experts on the subject, young researchers and local graduate students, attended the symposium. They came from more than twenty university and research institutes from China, Germany, and the UK. The talks covered research areas such as the synthesis and characterization of nuclear waste forms, the geological disposal of high-level nuclear wastes, the effect of radiation on materials, the impact of ion implantation on physical and chemical properties of materials, the application of radiation effects in Earth sciences, the applications of new analytic methods, and the modelling of nuclear waste immobilization via computer simulations.

Participants also visited the new laboratories of the Advanced Materials Research Center at the Chengdu Base of the China Academy of Engineering Physics (China).

The participants all agreed that the symposium was a great success. The presented research was at a high scientific level, important issues were discussed in detail, and the symposium offered Chinese and German scientists excellent opportunities for future international cooperation.

BURNS, GREW, AND HAZEN ELECTED AS FOREIGN HONORARY MEMBERS OF THE RUSSIAN MINERALOGICAL SOCIETY

At its 200th Anniversary Meeting in St. Petersburg (Russia), held 10–13 October 2017, the Russian Mineralogical Society elected Peter C. Burns, Henry Massman Professor at the University of Notre Dame (Indiana, USA); Edward S. Grew, Research Professor at the University of Maine (USA); and Robert M. Hazen, Senior Staff Scientist of the Geophysical Laboratory (Washington D.C., USA) and Executive Director of the Deep Carbon Observatory, as Foreign Honorary Members of the society.

Burns was elected for his “outstanding contributions to mineralogy and crystallography, especially in the field of uranium minerals.” Previous awards for Burns include the Peacock, Young Scientist, and Hawley Medals from the Mineralogical Association of Canada and the MSA Award from the Mineralogical Society of America. Burns is currently President of the International Mineralogical Association.

Grew was elected for “outstanding contributions to mineralogy and geochemistry of boron and beryllium and long-term fruitful collaborations with Russian mineralogists.” These collaborations began in 1972 with Grew’s participation as an exchange scientist on Soviet Antarctic Expeditions and continued with participation in interacademy exchanges. Grew is the author of over 170 articles and editor of the MSA’s Reviews of Mineralogy and Geochemistry volumes on boron (1993, volume 33) and beryllium (2002, volume 50). The Mineralogical Society of Great Britain and Ireland awarded him the Collins Medal.

Hazen was elected for “outstanding contributions to crystal chemistry of minerals under extreme conditions and theories of mineral evolution and ecology.” Hazen is author of more than 400 articles and 25 books. He received the 2016 Roebling Medal, the MSA Award, and the Distinguished Public Service Medal from the Mineralogical Society of America, as well as the Ipatieff Prize from the American Chemical Society.

Founded in 1817 as the Mineralogical Society of Saint Petersburg, the Russian Mineralogical Society is the oldest of the still-active national mineralogical societies (Elements, v11 p271 2015). The society’s motto “Mineralogy in all the space of this word” expresses its broad definition of mineralogy to include not only professional mineralogists but also amateurs and others whose interest in minerals has been aroused by their beauty, relevance to other sciences, or practical use. Over the course of its 200 year history, the society has recognized 145 mineralogists worldwide as Foreign Honorary Members.