

Baltic stratigraphical conferences foster geological cooperation and research in the area



The current special issue of the *Estonian Journal of Earth Sciences* is devoted to the Seventh Baltic Stratigraphical Conference (BSC) held in Tallinn, Estonia, on 15–22 May 2008. Having had already seven conferences, we can call these traditional meetings and it seems educating to cast a glance at their history and implications.

Baltic *sensu stricto* or East Baltic cooperation in geology, particularly in the field of regional stratigraphy, has been many-sided and active during the last four decades since the foundation of the Baltic Regional Stratigraphical Commission (BRSC) in 1969. This was a regional unit of the Interdepartmental Stratigraphical Committee of the former Soviet Union organizing regular meetings, field excursions, examination of palaeontological collections, etc. In such way the BRSC served for a better understanding between geologists and elaboration of stratigraphical classifications of geological systems on the territory of Estonia, Latvia, and Lithuania. The First BSC in Vilnius, 1976, adopted the primary version of the unified stratigraphical classification with correlation charts for the entire Phanerozoic represented in the area.

With increasing independence of the Baltic states, in 1990 the BRSC was reorganized into a less regulated body – the Baltic Stratigraphical Association (BSA) with the main goal of ensuring cooperation in regional stratigraphy. The three national commissions constituting the association became later decision-making bodies in the stratigraphy of the respective countries. The BSA served as a link between them, with the main task of convening the BSCs. Since the Second Conference in Vilnius, 1993, the BSCs have become true international meetings, open for everybody. The Third BSC in Tallinn, 1996, was mainly devoted to the topic ‘High-resolution biostratigraphy and Baltic regional stratigraphy’, the Fourth BSC in Riga, 1999, to ‘Problems and methods of modern regional stratigraphy’, and the Fifth BSC in Vilnius, 2002, to ‘Basin stratigraphy – modern methods and problems’.

In 2003 the Regional Stratigraphical Commission of the northwestern part of Russia joined the BSA and they organized the Sixth BSC in St Petersburg in 2005 with a wider selection of geological topics, not only stratigraphy. The same was true also for the Seventh BSC held in Tallinn in May 2008. This BSC was organized by the BSA, Geological Society of Estonia, Institute of Geology at Tallinn University of Technology, Institute of Ecology and Earth Sciences, University of Tartu, and Estonian Geological Survey and supported by the Environmental Investment Centre.

The abstract volume of this conference contains 66 papers (see Hints, O., Ainsaar, L., Männik, P. & Meidla, T. (eds). 2008. *The Seventh Baltic Stratigraphical Conference, 15–22 May 2008, Estonia. Abstracts and Field Guide*. Geological Society of Estonia, Tallinn, 158 pp.; available online at <http://www.gi.ee/7bsc>). A quarter of all papers were devoted to palaeontological topics, a fifth to stratigraphy, and a bit less than a fifth to sedimentology. The remaining ones were dealing with other topics like biodiversity, biogeography, Quaternary geology, isotopes, and bentonites. Some 45% of contributions concerned the Ordovician Period, ca 35% the Silurian and Devonian, and 10% the Quaternary. The above brief statistics seem to be in good harmony with the current research trends in the area depending, indeed, strongly on the specific geological structure of the region.

The Baltic conferences have been frequently run in conjunction with meetings of other international bodies, particularly IGCP projects. The 7th BSC was an official meeting of IGCP Project 503 ‘Ordovician Palaeogeography and Palaeoclimate’. Moreover, the conference was labelled as an event of the International Year of Planet Earth.

This special issue publishes only a fraction of conference papers, whereas very much like at the conference, palaeontological papers are dominating. Hopefully several others will get published in this or other international journals in near future.

Anna A. Suyarkova and Tatyana N. Koren’ (both St Petersburg) discuss recent advances in the Ordovician graptolite biostratigraphy of the St Petersburg area, Russia. Graptolites are generally very rare in carbonate rocks, yet, may be rather common in some marly intervals and help to improve stratigraphical correlations. In this respect finds of *Pterograptus elegans*, *Archiclimacograptus antiquus lineatus*, and *Nemagraptus gracilis* are particularly important.

Helje Pärnaste (Tallinn), Adrian Popp (Tallinn & Kassel), and Robert M. Owens (Cardiff) review the distribution of the trilobite order Proetida in the Ordovician of Baltoscandia and in glacial erratic boulders found in northern Germany and adjacent areas. The genus-level analysis shows a bimodal diversity curve with peaks in Kukruse time

(early Sandbian) and in the Pirgu–Porkuni interval (late Katian to Hirnantian). Explaining the distribution of proetide trilobites in Baltoscandia, the authors stress that besides climatic and palaeogeographical factors, also sea level changes need to be taken into account.

Freek Rhebergen (Emmen) discusses Baltic Ordovician sponges (Porifera) recovered from erratic boulders in Neogene fluvial deposits of The Netherlands and northern Germany. Comparison with material from the outcrop area revealed that the boulders have originated from the drainage area of the Pra Neva River, which is considered as a tributary of the Eridanos falling into the North Sea.

Oive Tinn, Tõnu Meidla, Leho Ainsaar, and Tõnu Pani (all Tartu) describe a diverse thallophytic algal flora from the new Silurian Lagerstätte in Kalana, Estonia. These peculiar fossils have been classified as dendroid graptolites, dubious graptolites, or possible algae by several earlier authors. This paper sets the beginning for a detailed taxonomical study promising interesting results on a poorly known, yet ecologically important group of organisms.

Using modern techniques, Tiiu Märss (Tallinn) and Valentina Karatajūtė-Talimaa (Vilnius) redescribe the late Silurian–early Devonian tessellated heterostracan *Oniscolepis* Pander, 1856 from the East Baltic and North Timan. The authors suggest several taxonomic refinements and establish a new family Oniscolepididae.

Liisa Lang and Ivar Puura (both Tartu) studied the systematic position, distribution, and shell structure of the Devonian linguloid brachiopod *Bicarinatina bicarinata* (Kutorga, 1837). The authors show that several other species of the genus described later are all junior synonyms. The above only valid species of *Bicarinatina* occurs in the Middle Devonian on the Baltic plate, and is known from Estonia, Latvia, and northwestern Russia.

Studying the roundness and surface features of quartz grains in Middle Devonian rocks of the East Baltic, Anne Kleesment (Tallinn) shows that the morphology of sediment particles and their variability in space and time can help to restore the history of basin evolution and palaeogeography. For example, the concentration of rounded grains in the basal beds of the Leivu Formation indicates zones of sediment reworking and refers to possible stratigraphical discontinuities.

Postglacial history of the Baltic Sea has been a topic of different studies and debates in North Europe for more than a century. Leili Saarse, Atko Heinsalu, and Siim Veski (all Tallinn), authors of the paper ‘Litorina Sea sediments of ancient Vääna Lagoon, northwestern Estonia’, reinvestigated an ancient klint bay near Tallinn. Their new many-sided results show a single Litorina Sea transgression, denying the hypothesis of two-fold transgression that has been suggested earlier.

The next Baltic Stratigraphical Conference will be organized in Riga, Latvia.

Dimitri Kaljo and Olle Hints



Participants in the Seventh Baltic Stratigraphical Conference held in Tallinn, Estonia, on 15–22 May 2008. Altogether the conference attracted 73 scientists from 10 countries. Photo by Gennadi Baranov.