

International Geoscience Programme (IGCP) Project 503
Ordovician Palaeogeography and Palaeoclimate

Newsletter 2 (2005)

Edited by *Olle Hints* and *David A.T. Harper*

With contributions from *Thomas Servais, Tõnu Meidla, Ian Percival, Leonid E. Popov, Lars E. Holmer, Bertrand Lefebvre, Alain Blic, Luc Hance, Guillermo L. Albanesi, and Thijs Vandenbroucke*

Photographs were kindly provided by *Thomas Servais, Tõnu Meidla, Olle Hints, Helje Pärnaste, Zhan Renbin* and others

IUGS
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Project 503



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Editorial

The first newsletter of IGCP 503 “Ordovician Palaeogeography and Palaeoclimate” was issued in early 2005 and distributed to more than 500 people, including over 230 official participants in the project (it is, of course, still available for download on the project website).

In December 2005, the project leaders compiled a full report to the IUGS covering the first two years of the project. That report included overviews of the main achievements and future plans, financial statement, lists of publications and participants and summaries of past meetings and major upcoming events.

Inevitably, the current newsletter reproduces significant part of the official report. But here you will also find participants' views of the main meetings in 2005, including the IGCP 503 Annual Meeting and Field Excursion in Cincinnati and Milwaukee, the Fifth Brachiopod Congress in Copenhagen, 6th Baltic Stratigraphical Conference in St. Petersburg, and Gondwana 12 Conference in Mendoza. Authors of all these contributions are greatly acknowledged!

Since December 2005, the participants' list and publication list have been slightly updated. Regarding

the latter, the response was less active than expected and thus the list is not complete. Should you note any missing references, please let us know and they will be listed on the website and included in the next official report.

The current newsletter is slightly late, especially considering that the deadlines of several upcoming meetings are very close. We nevertheless hope that this does not constitute a problem since most of the information you will find here has already been available on the project website and/or on other relevant web resources for quite some time. Although data on major upcoming events are provided below, we encourage you to check also the project website at <http://sarv.gi.ee/igcp503> – the newsletter still acts as a snapshot rather than the freshest source of information.

Should you have any questions regarding the project website and this newsletter or ideas on how to improve them, please do not hesitate to contact Olle Hints (Olle.Hints@gi.ee) or the project leaders.

Olle Hints and Dave Harper

IGCP Project 503: Who's who?

The project leaders

Thomas SERVAIS

Laboratoire de Paléontologie et de Paléogéographie du Paléozoïque,
Université de Lille, Lille, France; <thomas.servais@univ-lille1.fr>



Thomas is a specialist on Lower Palaeozoic organic-walled micro-phytoplankton.

As the chair of the project, Thomas is responsible for co-ordinating project work of all other leaders and also is responsible for communication with the IGCP headquarters and UNESCO. But he also leads the working groups on palaeogeographical reconstructions and climate modelling.

David A.T. HARPER

Geological Museum, University of Copenhagen, Copenhagen, Denmark;
<dharper@snm.ku.dk>



David's research interests include fossil brachiopods, history of biodiversity, and computer-based methods for the analysis and modelling of fossils and their distributions.

For the project, David leads the team that has to develop Ordovician sea-level curves. But he is also the leader of the Brachiopod Clade group.

Axel MUNNECKE

Institut für Paläontologie, Universität Erlangen-Nürnberg, Erlangen,
Germany; <axel.munnecke@pal.uni-erlangen.de>



Axel's main research fields include diagenesis of carbonate rhythmites, Palaeozoic micro- and nanofossils, stable isotopes and Silurian climate.

Within the frame of IGCP 503, Axel agreed to be coordinator of a working group on isotope geochemistry in the Lower Palaeozoic.

Jun LI
Nanjing Institute of Geology and Palaeontology, Chinese Academy of
Sciences, China; <junli@nigpas.ac.cn>

Jun is working mostly on Ordovician palynomorphs. He agreed to establish and coordinate the working group on biostratigraphy and correlations, in cooperation with the chairmen of the Ordovician (Chen Xu) and Silurian subcommissions (Rong JiaYu).



Peter M. SHEEHAN

Department of Geology at the Milwaukee Public Museum, Milwaukee, USA;
<sheehan@mpm.edu>



Peter's research focus is on evolutionary patterns and paleoecology. His main speciality is mid-Palaeozoic brachiopods but also sequence stratigraphy.

Peter will be the coordinator of a working group on palaeoecological changes during the Lower Palaeozoic.

Alan W. OWEN

Division of Earth Sciences, Centre for Geosciences, University of Glasgow,
Glasgow, Scotland, UK; <a.owen@earthsci.gla.ac.uk>

Alan's expertise encompasses trilobite palaeontology, biodiversity change, palaeobiogeography, Caledonide terrane evolution, and sedimentary geochemistry and stratigraphy.

Within Project 503, Alan has responsibility for the work on patterns of biodiversity change and corresponding databases.



Project Secretary

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Participants of the project

As of December 31, 2005 **246** persons have shown their interest and registered as participants of the project. The full list of participants is provided below in this newsletter; for a continuously updated version check <http://sarv.gi.ee/igcp503>).

Leaders' Corner

Our project IGCP 503 «Ordovician Palaeogeography and Palaeoclimate» was projected to run from 2004 to 2008. From the beginning of 2006, the project thus already entered in its third year, and should soon reach its cruising speed.

The project was accepted in February 2004 by the International IGCP Board, and we received financial support of 6000 USD to start up the project. This money was used to sponsor the attendance of over 20 scientists, mostly from eastern Europe, to attend the Official Opening Meeting of the project at Erlangen, Germany, where over 100 scientists attended the congress on «Early Palaeozoic Palaeogeography and Palaeoclimate» in September 2004, organised by Axel Munnecke and his colleagues.

The six leaders met for the first time during this meeting and decided to continue with the clade teams and regional teams set up by the IGCP project 410 «The Great Ordovician Biodiversification Event». In addition, the leaders decided to set up further, more focussed, working groups during this congress. The meeting was followed by the first Field Meeting of IGCP 503, that allowed some 25 scientists to visit the (type-) sections of Ordovician and Silurian rocks in southern Sweden.

In the first year of IGCP 503, the project also co-sponsored the 8th WOGOGOB (Working Group on the Ordovician Geology of Baltoscandia) Meeting at Tallinn, Estonia, which was the first meeting of the Baltic regional team.

During 2004, the project also set up its own homepage, originally installed by Axel Munnecke at the University of Erlangen (webpages of the Palaeontological Institute), and now hosted at Tallinn, Estonia, and updated regularly by Olle Hints, our

webmaster and newsletter editor, who also compiled the 2nd Newsletter that you are now reading.

In the second year of the project, 2005, we continued to promote our new project, but we received only limited support from the IGCP 503 (5000 US Dollar). In Paris, the International Committee of the IGCP was fighting to «survive», as discussions to abandon the «geological» programme commenced, and attempts were made to integrate the IGCP (originally *International Geological Correlation Programme*, but subsequently, and still today named *International Geoscience Programme*) into a larger programme including hydrology and environmental research.

Nevertheless, in 2005 we managed to organise the main annual meeting at Milwaukee, Wisconsin, USA (despite the fact that the host institution, the Milwaukee Public Museum, where this second meeting was organised by Peter Sheehan, suffered dramatic budget cuts), and to sponsor three other meetings of regional (Baltic Stratigraphical Meeting at St. Petersburg, Russia; the South American *Gondwana* Congress at Mendoza, Argentina) or clade teams (Brachiopod Congress at Copenhagen, Denmark). Our finances assisted the attendance of some 20 young scientists and colleagues from developing countries.

At the end of 2005, we had to provide the first progress report to the IGCP board, so that our project 503 could be evaluated in February 2006. It seems (we are currently waiting for the official letters and the exact amount of support for the third year) that our project was evaluated as «very good» and that we will receive for the third year of the project, 2006, «medium-high» financial support.

At the end of 2005, there were a total of 246 scientists who contacted us in order to be included in the list of participants of IGCP 503. We are now a large and significant group of workers in IGCP terms (most projects are usually some 20 to 50 scientists grouped together within a project).

We were able to include in our first report a series of IGCP 503 meetings in 2004 and 2005 that were attended by a large number of scientists, including colleagues from developing countries and many students. However, the number of publications related to the IGCP 503 was not very high for the two first years 2004 and 2005. Only few of the 246 scientists acknowledged the IGCP 503 project in their publications, and we need many more publications in order to attain a higher evaluation by the IGCP



Project leaders Axel Munnecke, Thomas Servais and Dave Harper during the round-table discussion after the successful Annual Meeting in Milwaukee, USA (June 2005)

Committee in the coming years! One of the reasons of the low number of publications is the fact that most scientists have not yet acknowledged the new project in their articles (that were partly written before the beginning of IGCP 503 in 2004). More interestingly, a series of publications in 2004 and 2005 still acknowledged the IGCP project n° 410, our «mother» project (that was completed in 2002!) instead of acknowledging IGCP 503.

We therefore ask you here again, please, do not forget to acknowledge our project 503 (and not 410) in your manuscripts and papers that you intend to publish in 2006 and in the coming years.

This year, 2006, is going to be a very active year, too, with three meetings (including field trips) organised or sponsored by our project. The session programmed for the EUG meeting at Vienna has unfortunately been cancelled, because insufficient numbers of registrants in the session proposed by Marco Vecoli and his colleagues. However, the session T4, dedicated to the Ordovician and to IGCP 503 (conveners Li Jun and Thomas Servais) at the 2nd International Palaeontological Congress at Beijing will take place in June, since a sufficient number of talks have already been registered now (a month before the deadline of abstract submission!). In August, we will sponsor a congress in Novosibirsk and the joint field meeting in Siberia (organised by Nikolay Sennikov and colleagues), before organising the main annual meeting during the end of August and the beginning of September in Glasgow, Scotland, UK. This latter meeting, organised by Alan Owen and his colleagues, will be the major event of our project this year, and we expect an attendance of over 80 participants at this congress and the related field trips.

In 2006, we will also see the publication of our first special issue. Based on the Erlangen meeting, Axel Munnecke and Thomas Servais have co-edited a volume of *Palaeogeography, Palaeoclimatology and Palaeoecology*, including 17 papers related to Early Palaeozoic Palaeogeography and Palaeoclimate. We estimate that this issue (of which you will find the content elsewhere in this newsletter) will be printed during the summer of 2006.

But before you see the publication of this special issue, you have now received our Second Newsletter, that includes all current information relating to our project IGCP 503.

We would like to thank Olle Hints who compiled the news included here, but also his efficient work

on our homepage, that has become a very attractive door to our project. The homepage is continuously updated and you should bookmark this page on your computer.

Please continue to send your news and information to the leaders and/or the webmaster. Our newsletter and our projects survives only on your contributions.

We also invite all scientists from developing countries, but also young scientists and students with financial difficulties to contact us in order to apply for financial support to attend one of our 2006 meetings.

But most importantly, do not forget to send us your list of publications related to the IGCP 503, and do not forget to acknowledge our project in your scientific articles! Our evaluation and the financial support to allow colleagues with limited financial resources to attend our meetings depends on this!

Looking forward to seeing you at our meetings this year 2006, and we eagerly await your news,



With best wishes,

Thomas Servais and the co-chiefs
March 2006

Past meetings

IGCP 503 Field Excursion, Cincinnati Arch region

Ohio, Kentucky, Indiana, U.S.A, 12–14 June 2005

The IGCP 503 Annual Meeting in Milwaukee, June 15–18, 2005, was preceded by a field trip to the Cincinnati Arch region. The participants arrived in Cincinnati on June 10–11. At a welcoming meeting on June 11th, guidelines of geology of the Cincinnati area were introduced to the participants. The field programme started early on June 12th.

We started on Saturday in the rain. We travelled south to Kentucky, passing Frankfort and Georgetown. Weather conditions improved during the day and we were impressed by the fascinating sections of the upper Mohawkian to basal Cincinnati. Successions of undisturbed rocks and richly fossiliferous bedding planes were easily accessible in a series of road cuts. Guided by Patrick McLaughlin, Carlton Brett and Steven Holland, we started with the boundary interval of the Lexington Limestone and the overlying Kope Formation and continued into the older strata step by step, finally reaching the High Bridge Group/Lexington Formation unconformity. The excursion also passed the small, abandoned Deadhorse Rd. Quarry, where the Deike K-bentonite bed was exposed.

The second day brought us to upper Mohawkian to Maysvillian in northern Kentucky. It was a day dedicated to the Kope Formation. High, majestic road cuts expose a thick succession of shales, with several clusters of thicker limestone beds, and also exposed the Fairview and Bellevue formations in



Our field guides Carlton Brett, Steven Holland, and Patrick McLaughlin at the Upper Monterey East and Swallowfield North road cuts, Kentucky, where upper Mohawkian rocks are exposed.

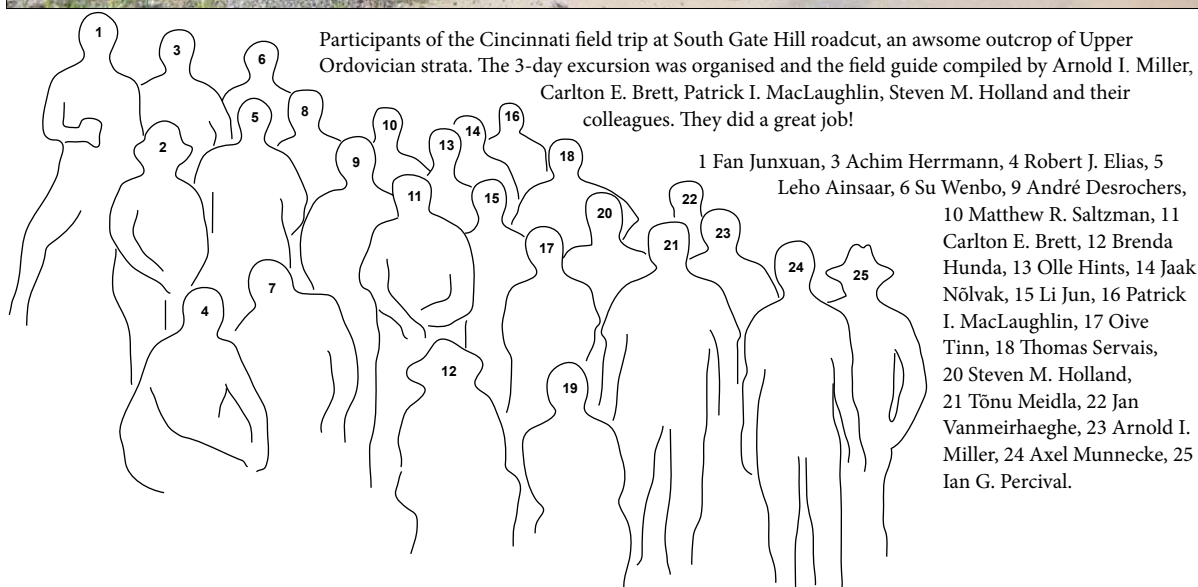
their upper parts. We recognized several marker levels and event beds and observed cyclic pattern in the shale-dominated sequence. The description of the biofacies succession, from the deeper-water crinoid-dominated strata to the shallowest beds dominated by *Rafinesquina* and *Strophomena* impressed us with the thorough and detailed palaeontological



Group at the Lower Frankfort North road cut studying Mohawkian rocks. A few hundred meters downhill a small road turns to Deadhorse Road Quarry where Deicke K-bentonite can be seen.



Flexicalymene, a nice trilobite that was shown to us by Brenda Hunda. A few tiny rolled specimens of this genus were found during the excursion at the South Gate Hill road cut, Indiana.



Participants of the Cincinnati field trip at South Gate Hill roadcut, an awesome outcrop of Upper Ordovician strata. The 3-day excursion was organised and the field guide compiled by Arnold I. Miller, Carlton E. Brett, Patrick I. MacLaughlin, Steven M. Holland and their colleagues. They did a great job!

1 Fan Junxuan, 3 Achim Herrmann, 4 Robert J. Elias, 5 Leho Ainsaar, 6 Su Wenbo, 9 André Desrochers, 10 Matthew R. Saltzman, 11 Carlton E. Brett, 12 Brenda Hunda, 13 Olle Hints, 14 Jaak Nõlvak, 15 Li Jun, 16 Patrick I. MacLaughlin, 17 Oive Tinn, 18 Thomas Servais, 20 Steven M. Holland, 21 Tõnu Meidla, 22 Jan Vanmeirhaeghe, 23 Arnold I. Miller, 24 Axel Munnecke, 25 Ian G. Percival.

and palaeoecological investigation performed in the area. The day culminated with the exposure with deformational “ball-and-pillow structures” in the vicinity of Maysville.

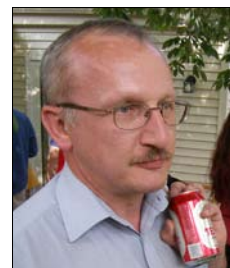
The third day took our group to the west. We started in southern Ohio and continued to Indiana. We stopped at the Trammel Fossil Park, the unique locality of edrioasteroids in the Miamiotown Shale, and continued upward in the section, finally reaching the uppermost Richmondian and base of the Silurian at Madison, in a road cut of the U.S. route 421.

The preface of the guidebook by Carl Brett and co-authors describes how the development of a modern view of the stratigraphy of the Upper Ordovician of Cincinnati Arch resulted in a kind of “Stratigraphic renaissance” in the area. The field trip

in the Cincinnati region was a most enjoyable event which brought us the details of this fascinating story. This was further enhanced by good planning of the trip which kept us busy throughout these three very long days. The guidebook of the field trip, where the detailed descriptions of the travel routes and sections are accompanied with thorough case studies, gives an excellent overview of the geology of the Cincinnati Arch region.

This was an event to remember. Sincerest thanks to all organizers!

Tõnu Meidla, University of Tartu, Estonia



IGCP 503 Annual Meeting,

Milwaukee, Wisconsin, U.S.A., 15–18 June 2005

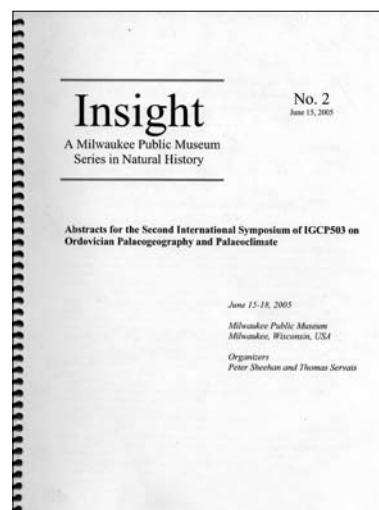
The Milwaukee Symposium was attended by 34 geoscientists from 12 countries, including U.S.A. (making up about half the participants), Canada, United Kingdom, France, Germany, Belgium, Denmark, Estonia, Spain, Romania, China, and Australia. Unfortunately, difficulties in obtaining visas for some delegates from Russia, Poland and China prevented a greater overseas participation. Almost all attendees were employed by universities, museums or government research institutes, and geological surveys, but it was pleasing to note the attendance of one specialist in sequence stratigraphy who worked in private industry as a petroleum exploration consultant – thus indicating the wider relevance of IGCP 503.

Staff at the Milwaukee Public Museum hosted the Symposium under immense difficulty caused by a funding crisis at the Museum that did not come to light until the beginning of June, just prior to the meeting. The following press release from Dr Peter Sheehan, who was the Symposium Chair, explains the situation: “During the last 4 months the Milwaukee Public Museum (MPM) has gone through a monumental budgetary crisis. An aggressive expansion of programs designed to increase funding failed catastrophically. We suddenly found that all funds, including our endowments, had been spent. The museum did not have enough funds to meet the next payroll. This occurred without being noticed by our board of directors or the museum president. It became a front-page scandal in Milwaukee. A massive layoff followed, which cut the curatorial staff in half, especially at the higher salary levels. We went from a staff with 12 PhDs to two PhDs. The exhibits staff suffered similar losses. The Geology Department now has only two members. Patricia (Coorough) Burke, is the collections manager, and I am the curator.”



The IGCP 503 Annual Meeting was organized by Peter Sheehan and hosted at the Milwaukee Public Museum.

Photo: Olle Hints



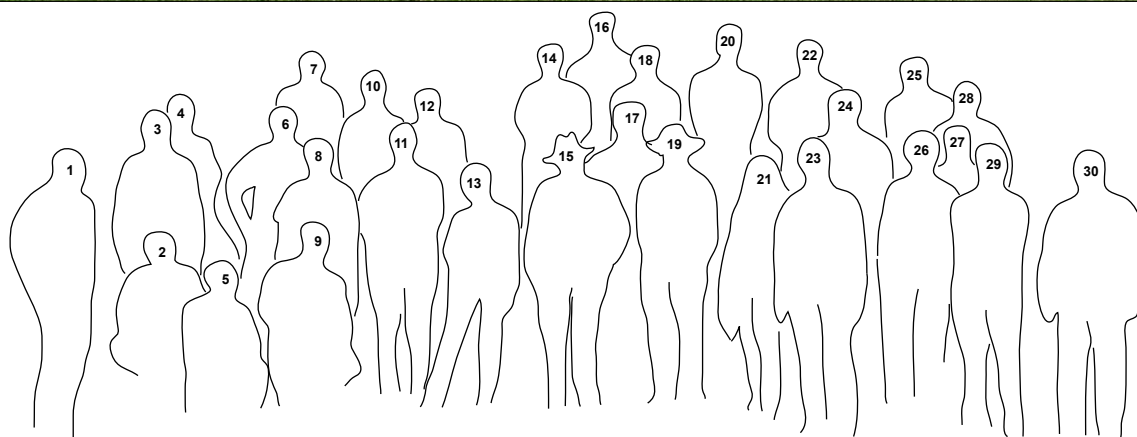
It is a great tribute to Dr Sheehan's organisational ability that the Symposium proceeded successfully, almost as if this crisis hadn't occurred. In no small part this was due to former staff and students who, despite having been dismissed the preceding week, returned to assist in running the Symposium in a voluntary capacity.

The theme of the meeting was evolutionary paleoecology of Early Paleozoic onshore to offshore transects. This allowed for a diverse range of interesting presentations, taking us to all parts of the Ordovician-Silurian world. A total of 29 talks were given and 6 posters exhibited by Symposium participants. Abstracts of all presentations were published in Issue No. 2 of *Insight*, the Milwaukee Public Museum's series in Natural History (available on the IGCP 503 website). About one-third of presentations dealt with application of carbon isotope studies to high-precision resolution of regional and international stratigraphic correlations in the Late



Silurian reef was only a tiny fraction of the Milwaukee Public Museum's excellent display, but the one the Lower Paleozoic people liked most.

Photo: Thomas Servais



Members of the mid-conference excursion at Stop 5, Oakfield Brick Plant, outcrop of the Late Ordovician Maquoketa Shale. The excursion was lead by Toni Simo and his colleagues.

1 David A.T. Harper, 2 Thomas Servais, 3 Robert J. Elias, 5 Su Wenbo, 6 Mark T. Harris, 8 Norlene Emerson, 9 Olle Hints, 11 "Toni" J.A. Simo, 13 Oive Tinn, 14 Owen E. Sutcliffe, 15 Ian G. Percival, 16 Fan Junxuan, 17 André Desrochers, 18 Li Jun, 19 Peter Sheehan, 20 Jan Vanmeirhaeghe, 21 Marioara Vaida, 22 Seth Finnegan, 23 Axel Munnecke, 25 Jaak Nõlvak, 27 Matthew R. Saltzman, 28 Leho Ainsaar, 29 Seth A. Young, 30 Tõnu Meidla.

Ordovician to Early Silurian interval. The remainder of papers concentrated on more traditional research into the biostratigraphic utility of various fossil groups and implications for palaeobiogeographic reconstructions.

The Milwaukee Public Museum is a truly magnificent venue, regardless of its current difficulties, with brilliant displays. The relatively small number of attendees comfortably fitted into the voluminous lecture hall. The Museum also served as the setting for the Ice-Breaker, and the Conference Banquet. The farewell event was a barbecue held at the home of Peter & Carolyn Sheehan in the northern suburbs of Milwaukee. To them, all the former staff and students of MPM who so generously provided assistance, and joint conference organiser Thomas Servais, the meeting participants are grateful for their hospitality.

A mid-Symposium field excursion to the Ordovician cratonic interior succession of central Wisconsin occupied a full day, with geologists from the University of Wisconsin (Toni Simo, Norlene Emerson and colleagues) guiding us to outcrops in three working quarries and an abandoned brickpit. The scenic bus journey through the Wisconsin farmland was supplemented by a detailed field guidebook. Lunch was taken at the Madison campus of the University of Wisconsin on the lakeshore.

Ian Percival, Geological Survey of New South Wales, Australia



6th Baltic Stratigraphical Conference

St. Petersburg, Russia, 19–28 August 2005

The 6th Baltic Stratigraphical Conference was organised by Tatiana Koren and her colleagues in Saint-Petersburg, Russia. It is the first time that a BSC has been held out of the three Baltic states. This meeting was co-organised by IGCP projects n°491 (Middle Palaeozoic Vertebrate Biogeography, Palaeogeography, and Climate), 499 (Devonian Land-Sea Interaction : Evolution of Ecosystems and Climate – DEVEC), and 503 (Ordovician Palaeogeography and Palaeoclimate). Parallel indoor sessions took place on 23–25 August in both the VSEGEI (A.P. Karpinsky All-Russian Geological Research Institute; IGCP 499 and 503), and the historical buildings of Saint-Petersburg University (IGCP 491). The geographical “dispersion” of parallel indoor sessions sometimes obliged the participants to make difficult choices. However, the meeting was clearly a success, as suggested by the presence of about 60 delegates coming from various European countries (Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Germany, Ireland, Latvia, Lithuania, Poland, Russia, Sweden, UK), China and North America (USA), and the very convivial and friendly atmosphere of both the ice-breaker party and conference dinner. During the three days of indoor sessions, various aspects of the stratigraphy of both the Palaeozoic (Ordovician to Carboniferous) and Quaternary of Baltic regions were treated (e.g., sequence stratigraphy, event stratigraphy, lithostratigraphy, biostratigraphy, K-bentonites) in the oral communications of both the plenary and parallel



Geologists-stratigraphers from Baltica (left) and Laurentia (right) arguing about Ordovician stratigraphy before leaving for the Lower Paleozoic field trip to the St. Petersburg region.



A huge asaphid trilobite was found in the Sablino caves during the Lower Paleozoic field trip.



Participants of the pre-conference Lower Paleozoic field trip in Putilovo quarry. The excursion was lead by Andrey Dronov.

sessions, as well as in the posters. Finally, two pre-conference field excursions were also organized, on 19–21 August 2005 (“Lower Palaeozoic of Leningrad District” and “Lower Carboniferous of the NW part of the Moscow Syncline”), as well as one post-conference field excursion, on 26–28 August 2005 (“Devonian of Leningrad and Pskov Districts”).

The pre-conference Lower Palaeozoic field trip was led by Andrey Dronov. The first day was devoted to the Cambrian, and to the Lower and Middle Ordovician of Saint-Petersburg region. The most picturesque stop of the day was certainly the “refreshing” visit to Sablino caves (8°C instead of about 25°C outside). The galleries of these caves were mined as early



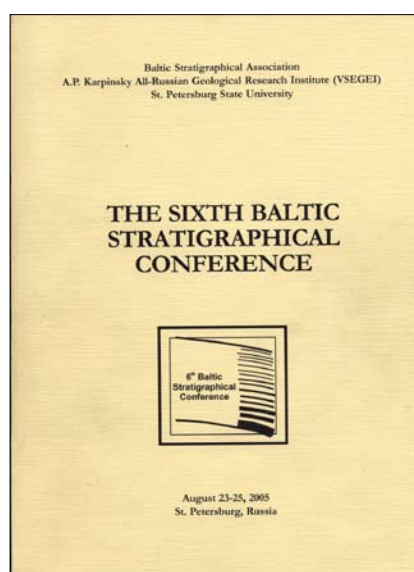
Closing session of the Sixth Baltic Stratigraphical Conference. Final words were said by the chief organiser Tantiana Koren, among others. The next meeting will be held in Estonia in 2008.

as the 18th Century during the reign of Catherine the Great, so as to extract the very pure, white, fine grained quartzitic sand of the Sablino Formation (Middle Cambrian), which was used for the glass industry. Apart from remarkable sedimentary structures (e.g., "herringbone stratification"), several other more unexpected observations were made during the visit to these caves: actual false prehistoric paintings on the walls, a Christmas tree, as well as very realistic reconstitutions of Cromagnons and of a giant trilobite... The second day was devoted to tropical carbonate facies of the Upper Ordovician of Saint-Petersburg area. The palaeoenvironmental interpretation proposed for the deposits of the last outcrop of the day – shallow, frequently emerged lagoon – was severely questioned by the discovery... of an exquisitely preserved, fully articulated specimen of trilobite!

The next Baltic Stratigraphical Conference will take place in Estonia in May 2008.

Publications related to 6th BSC:

Dronov, A., Tolmacheva, T., Raevskaya, E. & Nestell M. (eds) 2005. Cambrian and Ordovician of St. Petersburg region - Guidebook of the pre-conference field trip (6th Baltic Stratigraphical Conference & IGCP 503 Meeting): 62 p., 24 fig., 4 pl.; St. Petersburg State University & VSEGEI.



Koren, T., Evdokimova, I. & Tolmacheva, T. (eds) 2005. The Sixth Baltic Stratigraphical Conference (August 23-25, 2005, St. Petersburg, Russia). Abstracts: 150 p.; VSEGEI, St. Petersburg.

Bertrand Lefebvre, Université de Bourgogne
Alain Blieck, Université des Sciences et Technologies de Lille
Luc Hance, Carmeuse, Belgium

The 5th International Brachiopod Congress

Copenhagen, 3–7 July 2005

After four successive and very successful meetings in Brest, France (1985), Dunedin, New Zealand (1990), Sudbury, Canada (1995) and London, United Kingdom (2000) this time the International Brachiopod Congress was held in the Geological Museum of the University of Copenhagen with financial support from the Palaeontological Association, the Systematics Association, the Natural History Museum of Denmark (Geological Museum), University of Copenhagen, the IGCP 503 and the Carlsberg Foundation. Almost 90 delegates attended the Congress, some from as far away as Australia, New Zealand, Thailand and Iran. South America was unfortunately not represented this time; however some information on the ongoing brachiopod studies in that part of the Globe can be found in the book of abstracts edited by David Harper, Sarah Long and Maureen McCorry.

The pre-congress field excursion (27 June – 3 July) led by Michael Bassett (National Museum of Wales) and Lars Holmer (Uppsala University) explored the outstanding Silurian brachiopod world of Gotland. There were also two post-congress excursions (both 9 July – 12 July). The first one was led by Eckart Håkansson and David Harper (University of Copenhagen) to investigate the Upper Cretaceous and Danian of North Jutland; whereas the main destination of the second field excursion led by Ivar Puura (University of Tartu) was the Lower Palaeozoic of North Estonia. Most of the delegates enjoyed also a brief visit to the classic localities at Stevns Klint and Fakse Quarry to discover that the famous Iridium layer in the Fish Clay had mostly been taken out by previous visitors.

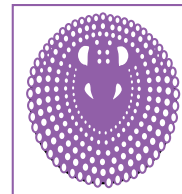
The main events, lectures and posters, took place in the Geological Museum of the University of Copenhagen and all talks were presented without parallel sessions. The papers dealing with the Ordovician and Silurian and, consequently, with the topics related to the main goals of IUGS Project 503 constituted a relatively minor part of those presented at the Congress. Various causes related to the terminal Ordovician

extinction were presented by Jusuo Jin and Paul Cooper in their paper reviewing brachiopod community evolution during the multiple Late Ordovician mass extinction events on Anticosti Island, eastern Canada, and by Linda Hints together with David Harper who reviewed the Hirnantian brachiopod faunas across the Baltoscandia. Rong Jiayu and Zhan Renbin paid attention to the history of brachiopod faunas of South China in the earliest Silurian through the survival phase that followed the major extinction. Consequences of the Mid Ordovician catastrophic event in a much smaller scale were outlined in the poster by Åsa Frisk and Lars Holmer showing repopulation of the Tvären Impact Crater.

Papers dedicated to Ordovician biostratigraphy, palaeobiogeography and palaeoenvironments were presented by David Harper with co-authors, Zhan Renbin and Rong Jiayu, and by Michal Mergl. They paid attention mainly to the initial steps of the Ordovician Biodiversification in various parts of the World during the Early and Mid Ordovician. This topic found also reflection in some posters. The poster on the Early to Mid Ordovician lingulate brachiopod faunas of Alborz Mountains of Iran presented by the Iranian research team led by Mansoureh Ghobadi Pour deserves a special mention as a good sign of the progress in Ordovician studies in that part of the World.

Among the papers of general interest several papers on the molecular brachiopod phylogeny presented by Bernard Cohen and his research team require a special mention. It seems very much likely from molecular data that phoronids constitute an ingroup within the brachiopods clustering together

Fifth International Brachiopod Congress



Copenhagen 2005



Participants of the Fifth International Brachiopod Congress at Stora Banne outcrop, Gotland. The Excursion was led by Mike Bassett (second from the right) and Lars Holmer (fourth from the right).

with rhynchonelliformeans and linguliformeans. Estimated point of divergence between this clade and rhynchonelliformeans some 570 Ma, deeply in the Ediacaran raises the obvious question: Were brachiopods around by that time as a grade able to filter with their lophophore inside their bivalved shells?

Garry Freeman and Judith Lundelius provided the most comprehensive ever account of the early ontogeny in the Palaeozoic brachiopods. They came to the conclusion that the most if not all early Palaeozoic brachiopods prior to the emergence of rhynchonellides were planktotrophic. This verdict may have important implications in present understanding of the Ordovician brachiopod palaeogeography but the evidence available is still somewhat controversial.

Michal Streng and Lars Holmer tried to break through the ancient brachiopod past in attempting to reconstruct a stem-group brachiopod. It seems that

not unlike humans brachiopod took their start from nice hairy creatures.

Finally Howard Brunton gave updated information on the recent state of affairs with revised brachiopod volumes of the *Treatise on Invertebrate Paleontology*. The old dream to get it published before the 5th International Brachiopod Congress did not come to realization and there are at least two additional volumes to follow.

The Brachiopod Congress was efficiently arranged and run thanks to the Copenhagen Team led by David Harper. Presented papers will be published in a special volume of 'Fossils & Strata'. The next conference is scheduled for 2010 probably in Australia.

Leonid E. Popov, Department of Geology, National Museum and Galleries of Wales, U.K.

Lars E. Holmer, Uppsala University, Sweden

Gondwana 12 Conference

Mendoza, Argentina, 6–11 November 2005

The Gondwana 12 Conference was held in Mendoza, Argentina, 6–11 November 2005, co-organized by Argentina, Brazil and Chile (web site: <http://cig.museo.unlp.edu.ar/gondwana>). The important community of geoscientists from these countries is developing different aspects of Gondwana research, which were presented at diverse sessions of the meeting. Over 200 colleagues attended Gondwana 12, representing many countries from different continents; including North and South America, Europe, Asia, Africa, and Australia. From these, about 40 Ordovician workers attended the symposium. In addition to the geological disciplines usually involved in the Gondwana conferences, this meeting has incorporated diverse palaeontological topics considering that Argentina has the largest community of palaeontologists in South America. Incidentally, many of these colleagues are working on the evolution of the Gondwana flora and fauna, and related issues to the main theme of the IGCP project 503. A significant amount of these contributions were gathered in Session 7: "Palaeozoic biota: biogeography and diversity patterns". As part of the commitments for the development of project 503 during 2005, the leaders decided to support the registration for five young researchers. The awarded candidates, all of them PhD students from Argentine universities and research centres, were: Gilda Collo (National University of

Córdoba), Larisa Marengo (National University of Córdoba), Federico Martina (National University of Córdoba), Mariana Raviolo (CRICYT, Mendoza), Pamela Such (National University of Tucumán). These graduate students presented their contributions at different special sessions, regarding diverse themes, such as: "the age of the basement at Famatina – a protoandean Gondwanan margin", "temporal trends in shell bed accumulation in Cambrian-Ordovician environments at Eastern Cordillera", "the northern boundary of the Precordillera terrane", "Episodic storms in the Early Ordovician of the Precordillera", "palaeoenvironmental analyses of Cambrian-Ordovician deposits in northwestern Argentine basin", "Sacabambaspis janvieri: records and paleogeographic implications for the late Middle Ordovician Gondwanan margin". On the first day of the symposium, in a particular meeting with awarded students, we commented on different contributions presented at the symposium. In a friendly environment, the Argentine students were informed about the purpose, structure and specific objectives of the IGCP projects supported by IUGS-UNESCO. Finally, they were notified about the upcoming programme of the IGCP project 503, for continued participation.

Guillermo L. Albanesi, CONICET – Universidad Nacional de Córdoba, Argentina

The joint ECLIPSE / IGCP 503 meeting

Lille, France, 15–16 November 2005

The Eclipse project (Environment and Climate of the Past: History and Evolution) is a mainly French project studying the end-Ordovician glaciation, co-ordinated by Jean-François Ghienne (Centre de Géochimie de la Surface, Strasbourg) and is particularly focused on depositional environments, dynamics of biological communities and palaeoclimatological modelling. This time, the Eclipse meeting was co-organised together with some participants of the IGCP 503 project, and consisted of one day of short, scientific presentations at the University of Lille (France), followed by a day in the field in the Belgian Condroz Inlier. People attending included O. Averbuch, J. Boucquet, S. Clausen, P. Courville, C. Cronier, T. Danielan, A. Delabroye, M. Denis, L. Francois, J.F. Ghienne, J. Hennissen, V. Lefebvre, E. Nardin, A. Neyt, F. Paris, T. Servais, T. Vandenbroucke, J. Vanmeirhaeghe, M. Vecoli, E.

Vennin, B. Videt and J. Verniers, giving a wide range of talks on the various aspects of the Hirnantian glaciation. The second day of the meeting took us into the field, where Jan Vanmeirhaeghe showed us around the Sart Eustache area in the nearby Condroz Inlier. It turned out to be a cold but pleasant day in the field (see pictures), where everybody present had the opportunity to study the Hirnantian outcrops of Belgium, now for the first time described in detail in Jan's PhD. Many thanks to the organisers of the meeting and of the fieldtrip for a job well done!



Thijs Vandenbroucke, Ghent University, Belgium



After an indoor session in Lille, French/Belgian members of the IGCP 503 visited the Upper Ordovician of the Condroz Ridge, Belgium. The excursion was lead by Jan Vanmeirhaeghe (in green).

Upcoming events

IGCP 503 Third Annual Meeting “Changing palaeogeographical and palaeobiogeographical patterns in the Ordovician and Silurian”

University of Glasgow, Scotland, U.K., 30 August – 1 September 2006

Deadline for abstracts and registration: 1 May 2006

Website: <http://sarv.gi.ee/igcp503>

Contact: Alan Owen <a.owen@ges.gla.ac.uk>



This is the main meeting for 2006 of IGCP 503 “Ordovician Palaeogeography and Palaeoclimate”.

Conference Location

The conference will take place at Glasgow University (<http://www.gla.ac.uk/>) in the west end of this vibrant and friendly city (<http://www.glasgowguide.co.uk/index.shtml>). The area around the University includes a great variety of places to eat and drink, the botanic gardens and the City Museum & Art Gallery and is a short journey on the Underground from the city centre with its many cultural and gastronomic delights. The city has excellent rail and motorway links to the rest of the UK. The nearby international airports are served by a wide range of carriers, including budget airlines. Glasgow Airport is 7 miles (11 km) from the University and there is an airport bus to the city centre. Prestwick Airport is 22 miles (35 km) away and has a rail connection to the city centre.

Information on how to get to Glasgow and schematic maps of the city and the campus are given at: <http://www.gla.ac.uk/general/maps/> The conference will be centred on the Gregory Building; D2 on the campus map.

Visitors to Britain from outside the EU should check with their travel agent about visa requirements for the UK.

Oral and Poster sessions

Two and half days (30 August – 1 September) of presentations are scheduled. Whilst the main emphasis of the conference is on palaeogeography and palaeobiogeography, contributions on any topic relevant to the aims of IGCP 503 will be welcome. There will be some open sessions and thematic sessions are envisaged on:

- Ordovician palaeobiogeography and plate tectonics
- Early Palaeozoic plankton
- Ocean dynamics
- Early Palaeozoic climate reconstructions

There will also be a joint session on the palaeogeography of Circum-Atlantic plates and terranes during the Early Palaeozoic with our sister project, IGCP 497 ‘The Rheic Ocean: its origin, evolution and correlatives’ (<http://www.snsd.de/igcp497/>) for which contributions are also invited.

The language of the conference will be English. Most talks will be scheduled for 20 minutes (including discussion) but there will also be keynote presentations at the start of many of the sessions. Meetings of the Ordovician and possibly the

Programme

Monday 28 August 2006:

Afternoon: Early registration for people attending the pre-conference excursion

Tuesday 29 August 2006

Pre-conference excursion to the Southern Uplands
Afternoon: Main registration and poster set-up
Evening: Icebreaker

Wednesday 30 August 2006

Registration, lectures & poster presentations; including joint lecture session with IGCP 497.
Evening: Reception (provisional)

Thursday 31 August 2006

Morning: Lecture & poster presentations
Afternoon: Coach trip to the southern edge of the Scottish Highlands; a complex Ordovician terrane boundary
Evening: Whisky tasting

Friday 1 September 2006

Lectures & poster presentations
Evening: Conference Dinner

Saturday 2 September 2006

Post-conference field excursion. Ordovician & Silurian of Girvan

Sunday 3 September 2006

Post-conference field excursion. Ordovician & Silurian of Girvan and travel to Edinburgh

Monday 4 September

Post-conference field excursion. Silurian of the Pentland Hills
Evening: Return to Glasgow

Silurian subcommissions may also take place during the conference.

If there is sufficient interest, a selection of papers from the conference will be published as rapidly as possible in a thematic set in an international journal.

Field excursions

Please note that the number of places on these excursions will be limited, so book early to avoid disappointment.

Whilst every effort will be made by the excursion leaders to ensure the safety of the party, participants take part in the excursions entirely at their own risk and must take responsibility for their own safety.

Pre-conference – this one-day excursion (29 August) to the Southern Uplands will visit the Ordovician-Silurian boundary stratotype at Dob's Linn and the section at Hartfell Score that was one of the candidates for the base of the middle stage of the Upper Ordovician Series. The excursion will involve 6-7km of easy walking on hill tracks. A packed lunch will be provided.

Post-conference – this three day excursion (2-4 September) will visit the classic Ordovician and Silurian successions of the Girvan District and the Pentland Hills. The first two days will be spent at Girvan where the locations to be visited require only short walks on farm tracks or along the rocky foreshore. The final day, in the Pentlands, will involve walking about 7km on tracks and hillsides. The party will return to Glasgow directly from the Pentlands and should arrive in the city in the early evening of 4 September. Delegates should ensure that if they are not leaving that evening, they should book overnight accommodation in Glasgow.

Bed & breakfast accommodation for the night at Girvan will be in twin rooms in hotels and for the night in Edinburgh in single rooms in a recently refurbished student hall of residence. The registration for the excursion will also include packed lunches but not evening meals.

Abstracts

Abstracts should be e-mailed to the conference organiser as MS Word or RTF files by **1 May 2006**. They should not exceed 500 words and should not include illustrations or tables. Please indicate the affiliations of all co-authors and the e-mail address of the senior author. Also indicate whether you would prefer an oral or poster presentation. Members of the Scientific Committee will decide on the balance between oral and poster presentations after the receipt of abstracts and reserve the right to accept or refuse any submission. Participants will be informed in June whether their presentation has been accepted for an oral or poster presentation. Lecture presenters will be informed of projection facilities and arrangements at that stage. Posters should be no larger than A0 (841 x 1189 mm) in either portrait or landscape format (please indicate which you require). If possible, please

include a photograph of the author(s) on the poster to aid subsequent communication from its readers.

When sending your abstract, please indicate whether you are interested in submitting a contribution for consideration for publication in a thematic set of papers from the meeting. Note that in order to ensure quick publication, the submission deadline for manuscripts for such a thematic set will be in early October.

Registration

The registration form for the conference and field excursions is included with this circular. Please note that the **deadline for registration is 1 May 2006**. Late registration (at a higher rate) for the conference (**but not the field excursions**) is possible up to 7 July, but places may not be available at the conference dinner. The 1 May deadline for receipt of abstracts will be strictly adhered to.

There is a reduced registration rate for students and, as part of the normal IGCP arrangements, it is likely that limited funds will be available to IGCP 503 to assist participation by scientists from developing countries. Delegates intending to give an oral or poster presentation at the meeting who wish to apply for consideration for such support should contact Dr Thomas Servais (Thomas.Servais@univ-lille1.fr) by **1 May**. Decisions on support will be made in May.

Payment for the Conference is by cheque in GB pounds drawn on a British bank and made payable to 'University of Glasgow'. If this presents major problems, please fax the completed registration form to the conference organiser as soon as possible (**before the 1 May deadline**) and he will arrange for an invoice to be sent to you and which should enable your bank to make an electronic transfer to the University of Glasgow. Payment by credit card is not possible.

Conference Scientific Committee: David Harper (Copenhagen, Denmark), Jun Li (Nanjing, China), Ulf Linnemann (Dresden, Germany), Axel Munnecke (Erlangen, Germany), Alan Owen (Glasgow, Scotland, UK), Rong Jiayu (Nanjing, China), Peter Sheehan (Milwaukee, USA), Thomas Servais (Lille, France) and Chen Xu (Nanjing, China)

Conference Organiser and Contact Address: Dr Alan Owen, Department of Geographical and Earth Sciences, University of Glasgow, Gregory Building, Lilybank Gardens, Glasgow G12 8QQ, Scotland, U.K. [e-mail: a.owen@ges.gla.ac.uk; Fax +44-(0)141-330-4817]

Second International Palaeontological Congress “Ancient Life and Modern Approaches”

Peking University, Beijing, China, 17–21 June 2006

Deadline for pre-registration: 1 March 2006

Deadline for abstracts: 31 March 2006

Website: <http://www.ipc2006.ac.cn>

Contact: Congress Secretary <IPC2006@nigpas.ac.cn>, **IGCP 503 Session organisers** <junli@nigpas.ac.cn>



This congress follows the highly successful first IPC2002 held in Sydney, and will focus on a series of scientific sessions and symposia to discuss new research findings relating to fossil organisms, with emphasis upon the convention theme “Ancient Life and Modern Approaches”. A series of scientific sessions including plenary and special sessions, general and topic symposia, short courses and special group meetings will be arranged. In addition, pre-, post congress and mid-conference field excursions will be organized to examine the best-exposed strata and well-preserved fossil localities in China. Social events and programs are also being arranged and focus on tours of Beijing’s historic attractions, museums, art and galleries.

The session T4 is sponsored by IGCP

503: Ordovician World: temporal and spatial changes in physical and biotic environments (IGCP 503). This session will be convened by Li Jun and Thomas Servais. The aim of the symposium is to provide an interdisciplinary discussion in order to better understand the changes of the marine diversity in the Ordovician and Silurian (including the oldest and second largest of the “Big Five” Mass Extinctions) in relation to palaeogeographical and palaeoclimatic changes (<http://www.ipc2006.ac.cn>).

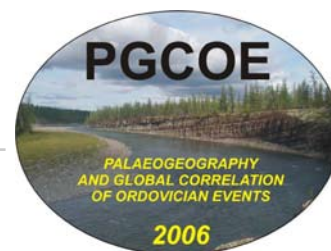
Symposium “Paleogeography and Global Correlation of the Ordovician Events (PGCOE)”

Institute of Petroleum Geology, Novosibirsk, Russia, 5–15 August 2006.

Deadline for pre-registration: 1 January 2006

Deadline for abstracts: 15 February 2006

Contact: Alexander V. Kanygin <kanyginav@uiggm.nsc.ru>



The Regional Team of Russia and states of the former Soviet Union agreed to organise a Symposium entitled “Paleogeography and Global Correlation of the Ordovician Events” (PGCOE) at Novosibirsk, Russia, 5–15 August 2006

This congress will take place in collaboration with the Palaeontological Institute of the Russian Academy of Sciences of Moscow. The meeting, co-sponsored by IGCP 503, includes a field trip to the Kulumbe

River section. More information is currently available at the website of the Ordovician Subcommittee of Stratigraphy: <http://www.ordovician.cn>.

It provides not only an opportunity to participants from the former Soviet Union to meet scientists from all over the world, but it also gives the possibility to visit outcrops from an area that remains unknown to most scientists.

The First International Conodont Symposium

University of Leicester, Leicester, U.K., 17–27 July 2006

Website: <http://www.le.ac.uk/gl/conodont/ICOS2006/ICOS2006.html>

Contact: <ICOS2006@leicester.ac.uk>

The conodont specialists will meet during the International Conodont Symposium at Leicester, UK on July 12–27 (including several pre-and post-conference excursions). Howard A. Armstrong will lead the Ordovician-Silurian excursion (fishing

across the Iapetus Ocean) and organise meeting of Ordovician-Silurian conodont workers.



12th International Echinoderm Conference

University of New Hampshire, Durham, NH, U.S.A., 6–12 August 2006

Deadline for abstracts: 1 May 2006

Deadline for registration and housing: 2 June 2006

Website: <http://www.iec2006.unh.edu/index.htm>

Contact: Larry G. Harris <lharris@cisunix.unh.edu>, Bertrand Lefebvre <Bertrand.Lefebvre@u-bourgogne.fr>

The 12th International Echinoderm meeting is a bi-annual scientific conference that provides a forum for hundreds of scientists and students to update colleagues on the latest echinoderm research developments. This year the meeting will be held in the beautiful town of Durham, New Hampshire, USA

and will bring together researchers from around the world for social and scientific interactions.

An IGCP 503 sponsored clade team session and meeting has been accepted by the organisers of this conference.

CIMP General Meeting “Palaeozoic palynology in space and time”

Prague, Czech Republic, 2–6 September 2006

Deadline for early registration: 10 April 2006

Deadline for late registration: 31 August 2006

Deadline for abstracts: 31 May 2006

Website: <http://www.cimp2006.wz.cz/index.htm>

Contact: Jiří Bek <bek@gli.cas.cz>

The CIMP Meeting 2006 will convene in Prague, the capital of the Czech Republic and a traditional centre of palaeobotanical research, September 2 through September 6, 2006. The conference is open to all persons interested in any aspect of Palaeozoic palynology. The scientific program will include symposia, contributed papers, poster sessions, and meetings of working groups, associated with workshops. Pre- and post-conference field trips to the Barrandian Early Palaeozoic are planned as well.

Participants of IGCP 503 working in the different fields of palynology (acritarchs, chitinozoans, spores, scolecodonts, etc.) will meet at the CIMP (Commission Internationale de Microflore du Paléozoïque) meeting at Prague, September 4–6, 2006, that will be followed by the European Palaeobotany and Palynology Congress, also at Prague (September 6–11, 2006).



Yangtze Conference on Ordovician and Silurian 4th IGCP 503 Annual Meeting, 10th International Symposium of the Ordovician System, and 3rd International Symposium on the Silurian System

Nanjing Institute of Geology and Palaeontology, Nanjing, China, June 2007

Deadline for pre-registration and payment for field trips: 1 March 2007

Website: <http://www.ordovician.cn>, <http://www.silurian.cn>, <http://sarv.gi.ee/igcp503>

Contact: Li Jun <junli@nigpas.ac.cn>

The international Symposia on the Ordovician and Silurian Systems will be convened together. Additionally, the IGCP 503 annual meeting will be held in conjunction with them. A series of scientific sessions including plenary and special sessions, general and topical symposia, workshops and special group meetings; in addition, pre-, post- and mid-conference field excursions will be organized. Social events and programs will also be arranged.

Some thematic sessions and workshops are outlined below. However, we welcome any suggestions for alternative or additional themes to the formal sessions or workshops. Each formal session will invite co-conveners and chairpersons to assist in assembling an attractive program.

You are welcome to recommend conveners and chairpersons for the formal sessions:

- (1) Biostratigraphy, Chronostratigraphy and Stratotypes,
- (2) Event-stratigraphy,

(3) Geochemistry and Magnetism,

(4) Geochronology,

(5) IGCP 503 Session: Palaeogeography, Palaeobiogeography, Palaeoclimate and sea-level changes,

(6) Palaeontology and Biodiversification,

(7) Quantitative Palaeontology and Stratigraphy,

(8) Sedimentology and Basin Analysis.

Field trips are arranged for pre-, mid-, and post-conference excursions according to the responses from participants. These trips will provide opportunities to visit classical Ordovician and Silurian sections of South China, to collect Ordovician and Silurian fossils and samples (however, some localities of the GSSP sections should be applied in advance), and to visit famous Chinese cultural relics and natural parks. Field guidebooks will be available and detailed arrangements and a day by day schedule will be given in the second circular.

Other meetings

IGCP 503 will also co-sponsor the **1st International Palaeobiogeography Symposium**, that is scheduled for Paris, France, 10–13 July 2007. The co-leaders of IGCP 503 have agreed to organise a special session dedicated to the Lower Palaeozoic.

The **9th WOGOGOB** (WOWorking Group on the Ordovician Geology Of Baltoscandia), will be held at Uppsala, Sweden, in August 2007. Preliminary dates are August 16th to 20th, including a pre-meeting field trip in the Siljan District on the 17th, and a post-meeting field trip to Jämtland on the 20th. There will also be two days of technical sessions, to be held in Rättvik in the Siljan area.

The 4th European Meeting on Palaeontology and Stratigraphy of Latin-America will be organised

in Madrid, Spain, 12–15 September 2007, including technical sessions at the Spanish Geological Survey and a selection of fieldtrips. This meeting should also include a session dedicated to IGCP 503.

This meeting will immediately be followed by the **IGCP 503 Regional Meeting and Fieldtrip**, 17–19 September 2007, that will include indoor sessions at Zaragoza, Spain, and a field meeting to the Early Palaeozoic of the Iberian Ranges.

IGCP 503 closing meeting at Lille, France. The meeting aims at the reconstruction of sea-level fluctuations and a final synthesis of the IGCP Project 503.

IGCP 503 meets Galathea 3

The Galathea 3 expedition is a major research initiative by the Danish Government planned for August 2006 – April 2007 [<http://www.galathea3.dk/uk>]. The expedition, building on the previous Galathea 1 (1845-47) and 2 (1950-52) voyages, will circum-navigate a large part of world, providing a floating platform for a range of natural science research programmes from the poles to the tropics. The previous expeditions focussed very much on marine life, however this time, a number of geological projects have been awarded places on the expedition, among one involving members of the Palaeozoic Research Group at the Geological Museum in

Copenhagen. Dave Harper, Jan Audun Rasmussen and Christian Mac Ørum Rasmussen (Geological Museum) together with Lars Stemmerik (Geological Survey of Denmark and Greenland) plan to visit localities in North Victoria Land, Antarctica. The project will also involve cooperation with colleagues in Australia, New Zealand and Sweden and it is hoped the project will attract some students. The primary focus is the Cambrian but results will of course be communicated, where appropriate, through IGCP 503.

David Harper

Financial Report for 2005

In the second year of IGCP 503 (2005) we received financial support of 5000 USD as our funding from IGCP. In a similar way to the first year, we used the funds to help participants from developing countries and students to attend the different meetings. Financial support was distributed to sponsor five participants at the Milwaukee meeting (one scientist from Romania and four students). Three young scientists from eastern Europe (Estonia, the Czech Republic, Russia) and a student from Norway received financial support to attend the clade team meeting at the Brachiopod Congress in Copenhagen. Three scientists from Estonia and Russia received financial support to attend the 6th Baltic Stratigraphical

Congress, and five Argentinian students were supported to attend Gondwana 12.

All scientists who received IGCP funds signed a receipt acknowledging the financial support. All receipts have been retained by the leader of IGCP 503.

The funds provided by the IGCP were thus not sufficient to organise the meetings and to finance the attendance of the vast majority of the participants. Additional support was provided in many cases by national IGCP committees or other institutions and sponsors.

Thomas Servais and co-leaders



Links to resources on the Internet

The collection below of links is a far from complete list of all web sites relevant to the IGCP Project 503. However, it still includes some of the most useful resources, many of which have also been recently redesigned and continuously updated.

- United Nations Educational, Scientific and Cultural Organisation (UNESCO), <http://www.unesco.org>
- International Union of Geological Sciences (IUGS), <http://www.iugs.org>
- International Geosciences Programme (IGCP), http://www.unesco.org/science/earth/igcp/index_igcp.html
- IGCP 410, <http://www.es.mq.edu.au/MUCEP/igcp410/>
- IGCP 503, <http://sarv.gi.ee/igcp503/>
- IGCP 499, Devonian land-sea interaction: evolution of ecosystems and climate - DEVEC, <http://www.senckenberg.de/igcp-499/>
- IGCP 497, The Rheic Ocean: its origin, evolution and correlatives, <http://www.snsd.de/igcp497/>
- International Commission on Stratigraphy, <http://www.stratigraphy.org>
- Subcommission on Ordovician Stratigraphy, <http://www.ordovician.cn>
- Subcommission on Silurian Stratigraphy, <http://www.silurian.cn>
- The Paleobiology Database, <http://paleodb.org>
- Faunal database of the Ordovician of Baltoscandia, <http://asaphus.uio.no/search.html>
- Scotese's Paleomap Project, <http://scotese.com>
- PAST (a free excellent palaeontological statistics software package), <http://folk.uio.no/ohammer/past/>
- Commission Internationale de Microflore du Paléozoïque (C.I.M.P.), <http://www.shef.ac.uk/~cidmdp/>
- C.I.M.P. Newsletters, Acritarch Newsletters, Chitinozoan Newsletters, <http://www.shef.ac.uk/~cidmdp/archnews.html>
- Pander Society, <http://www.le.ac.uk/geology/map2/pander/>
- The Palaeontological Association, <http://www.palass.org>
- International Palaeontological Association (IPA), <http://ipa.geo.ku.edu/index2.html>
- The Paleontological Society, <http://www.paleosoc.org>
- The PaleoNet Pages, http://www.nhm.ac.uk/hosted_sites/paleonet/
- The Geological Society of London, <http://www.geolsoc.org.uk>
- The Geological Society of America, <http://www.geosociety.org>

List of participants

As of December 31, 2005, **246 participants** from **34 countries** have joined the project. During 2005, the list has increased by 15 new participants, making a 6 % growth per year.

United States, United Kingdom, Argentina, Russia, France, Estonia, Canada, Germany, Sweden and Italy make up the top 10 list. Considering the number of participants in relation to population, Estonia stands out with about 10 participants per million inhabitants, followed by Sweden, Czech Republic, Denmark, Australia, Belgium and others.

The list is open, so if you don't find your name here and feel like you could contribute to the project, please let Axel Munnecke <axel.munnecke@pal.uni-erlangen.de> know about this.

For an updated list and e-mail addresses please check the project website at <http://sarv.gi.ee/igcp503>.

Algeria

Abdessalam-Roughi, Farida

Argentina

Aceñolaza, Florencio G. (Univ. Tucuman)
 Aceñolaza, Guillermo F. (Univ. Tucuman)
 Albanesi, Guillermo L. (Univ. Cordoba)
 Araoz, Lucia (Univ. Tucuman)
 Astini, Ricardo A. (Univ. Cordoba)
 Baldig, Aldo Luis (Univ. San Juan)
 Benedetto, Juan L. (Universidad Nacional de Córdoba)
 Beresi, Matilde S. (CRICYT, Mendoza)
 Brussa, Edsel D. (Univ. La Pampa)
 Cañas, Fernando L. (Univ. Rio Cuarto)
 Carrera, Marcelo G. (Universidad Nacional de Córdoba)
 Cingolani, Carlos (Univ. La Plata)
 Heredia, Susana (Univ. Buenos Aires)
 Ortega, Gladys (CONICET - Museo de Paleontología, Universidad Nacional de Córdoba)
 Peralta, Silvio H. (Univ. San Juan)
 Rubinstein, C. V. (CRICYT, Mendoza)
 Sanchez, Teresa M. (Universidad Nacional de Córdoba)
 Toro, Blanca A. (Dpto. de Geol. y Paleontol., Mendoza)
 Waisfeld, Beatriz G. (Univ. Cordoba)

Australia

Glen, Dick (Geol. Surv. Australia)
 Percival, Ian (Geological Survey of New South Wales)
 Trotter, Julie A. (Austr. Nt. Un., Canberra)
 Turner, Sue (Queensland Museum)
 VandenBerg, Fons (Geol. Surv. Victoria)
 Webby, Barry (Macquarie Univ., Sydney)

Austria

Suttner, Thomas (Inst. für Paläontologie, Wien)

Belgium

François, Louis (Université de Liège)
 Herbosch, Alain (Univ. Libre Bruxelles)
 Steemans, Philippe (Univ. de Liège)
 Vandenbroucke, Thijs (Univ. Gent)
 Vanmeirhaeghe, Jan (Univ. Gent)
 Verniers, Jacques (Univ. Gent)

Bulgaria

Lakova, Iskra (Inst. of Geol., Acad. of Sciences, Sofia)
 Yanev, Slavcho (Inst. of Geol., Acad. of Sciences, Sofia)

Canada

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Publications

Please note that the publication list is not complete. Should you find your publication(s) missing, please send the reference(s) to Axel Munnecke. Note also that chapters of the "Webby Book" (2004) and conference abstracts are not included in this list.

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Ph.D. theses

Ludovic Stricanne (Tübingen, Germany): Lower Palaeozoic acritarchs as proxies for the reconstruction of palaeoenvironments. Eberhard Karls Universität Tübingen. Dissertation Dr. rer. nat. 2004.

Helje Pärnaste (Tallinn, Estonia): Early Ordovician trilobites of suborder Cheirurina in Estonia and NW Russia: systematics, evolution and distribution. University of Tartu. Ph.D., Defended 17. December 2004.

Enli Kiipli (Tallinn, Estonia): Modelling Seawater Chemistry of the East Baltic Basin in the Late Ordovician - Early Silurian. Tallinn University of Technology. Ph.D., Public Defense, 19. December 2005.

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Sarah Stewart (Glasgow, UK) : Distribution, palaeoecology and biodiversity of neglected taxa in the Ordovician of Girvan, SW Scotland. University of Glasgow. Ph.D., 2005.

Thijs R.A. Vandenbroucke (Ghent, Belgium): Upper Ordovician Global Stratotype Sections & Points and The British Historical Type Area: A Chitinozoan Point of View. Ghent University. Ph.D., Public Defence 21. September 2005.

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International Year of Planet Earth

It is my great pleasure to announce that the General Assembly of the United Nations, at its Plenary Session of 22nd of December 2005, proclaimed 2008 as the UN Year of Planet Earth by consensus. This UN Year is the core year of the 2007-2009 triennium during which the International Year of Planet Earth (Earth Science for Society) will operate. This will be the first ever UN Year for the Earth Sciences.

The International Year of Planet Earth aims to demonstrate the great achievements made in the geosciences and to urge politicians and decision-makers to apply such knowledge for the benefit of humankind. Now that this IUGS and UNESCO initiative has collected the political support of 191 UN member countries, our fund-raising campaign will begin with approaches to a broad sweep of the private sector including extraction industries, governments, foundations, insurance companies, banks et cetera.

The International Year of Planet Earth will soon be incorporated as a legal entity with tax exempt status for donations. It will consist of a Board of Stakeholders (IUGS, UNESCO, Chairs of the Outreach, Science and Development Committees, Founding Partners, Sponsors, donors and regional representatives) and a Secretariat.

The Secretariat will be outsourced, and the call for proposals will be open until 15th of April 2006. We invite all professional geoscientific and other qualified bodies to consider hosting the International Year's Secretariat. For more details, please go to the Year's website: www.yearofplanetearth.org.

National implementation of the Year of Planet Earth is essential for its success. We kindly invite all of you to approach your national IUGS representative, UNESCO Commission or any other relevant geoscience body in your country to start preparations for your own national Year of Planet Earth in connection and cooperation with the International Year's Secretariat. For that purpose you may wish to select 2007, 2008 or 2009, as best suits your national needs. As the preparation for UN proclamation and promotion of the International Year has been the joint responsibility of IUGS and UNESCO and of the Founding Partners, we propose that representatives of these bodies be included in your National Committee. In order to maximize advantages to be gained from the International activities and the services provided by the international Secretariat of the Year's Corporation, as well as adding an



"By a draft on the International Year of Planet Earth, 2008, which the Committee approved without a vote on 11 November, the Assembly would declare 2008 the International Year of Planet Earth. It would also designate the United Nations Educational, Scientific and Cultural Organization (UNESCO) to organize activities to be undertaken during the Year, in collaboration with UNEP and other relevant United Nations bodies, the International Union of Geological Sciences and other Earth sciences societies and groups throughout the world. Also by that draft, the Assembly would encourage Member States, the United Nations system and other actors to use the Year to increase awareness of the importance of Earth sciences in achieving sustainable development and promoting local, national, regional and international action."

international dimension and outreach component to your national activities, we propose to formalize such relations through written agreements. Suggestions for developing national committees for the Year of Planet Earth can be downloaded from the Year's website: www.yearofplanetearth.org.

Calls are open now for submitting international project proposals on the outreach programme and on selected science themes. Again, please go to our website for downloading Expression of Interest forms and submit these to the (IUGS) Secretariat.

Finally, I invite you to 'spread the word' about this major global event in the history of the Earth Sciences; never before have all nations of the world explicitly invited our geoscience communities to convey their knowledge to society with a view to having decision-makers and governments make use of that knowledge for the benefit of all humankind. Let us work hard together to ensure that this unique triennium will be the greatest (geo)show on Earth!

by Eduardo F.J. de Mulder, Chair of the Management Team of the International Year of Planet Earth, Past-President IUGS