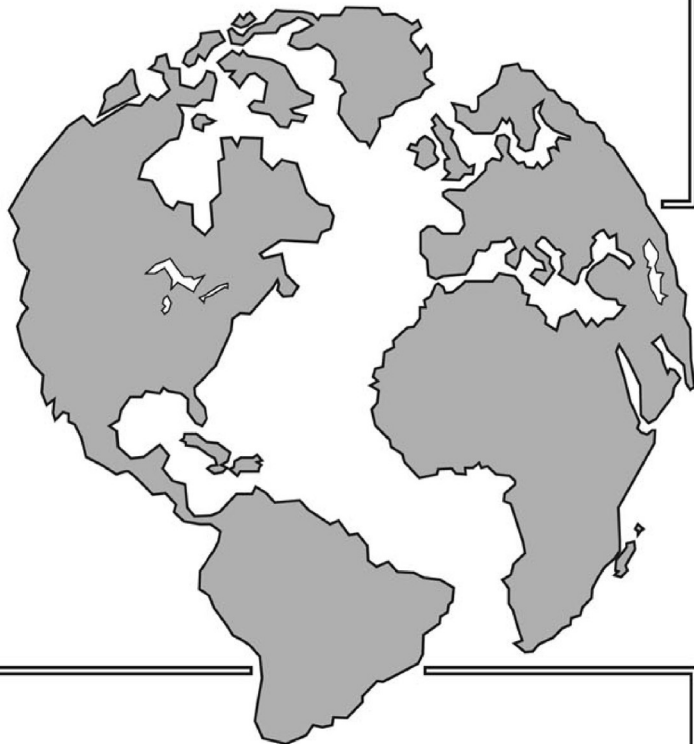




Chitinozoan Newsletter

Subcommission on Chitinozoans

Oliver Chang Paris



Chitinozoan Newsletter 27

Commission Internationale de Microflore du Paléozoïque Subcommission on Chitinozoans Chitinozoan Newsletter 27, January 2008

Edited by Thijs Vandenbroucke & Ken Dorning

Online at <http://www.cimp.ulg.ac.be/archnews.html>
CIMP home page <http://www.cimp.ulg.ac.be/>

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Nanjing, China
Home of 10th ISOS, 3rd ISSS, 4th IGCP503



Editorial

First of all, all my best wishes for the New Year, be it a bit belated maybe. Judging by the contributions, 2007 hasn't been a bad year for chitinozoan studies. I was especially pleased to read that Tang Peng has obtained his PhD (dealing with Ordovician chitinozoans from Tarim) and has consequently obtained a permanent position at the Nanjing Institute of Geology and Palaeontology in China. You can find the abstract of his work further in this newsletter, which contains all the usual items. In addition, my colleagues from Ghent announce their review of the published chitinozoan species, to be further discussed at the upcoming meeting in Bonn. Many thanks to all who wrote something for this newsletter and I hope to see you all in Bonn in September!

Thijs

From the President

2008 promises to be a busy year for palynology related conferences. The CIMP chitinozoans webpage will contain an update on these events.

<http://www.cimp.ulg.ac.be/Chitinozoans.html>

Of particular note are the back to back conferences in Lille, France 23-31 August 2008 (in this newsletter) and IPC/IOPC in Bonn, Germany, 30 August – 6 September 2008.

<http://www.paleontology.uni-bonn.de/congress08/index.htm>

At the IPC/IOPC meeting in Bonn, research on chitinozoans forms part of the theme in two general symposia, (37.) Palaeozoic palynostratigraphy: Lower Palaeozoic and Upper Palaeozoic and (53.) Palaeozoic oceanic and climate change: evidence from the palynologic record.

For those working on the Arabian Plate, (40.) Palaeozoic palynology of the Arabian Plate and adjacent areas, may be more appropriate.

I hope that many chitinozoan workers will feel able to contribute to one of these symposia – details of the two general symposia are in the next section.

Ken Dorning

Future meetings

►► Development of Early Palaeozoic Biodiversity: Role of biotic and abiotic factors and event correlation

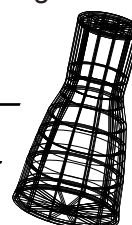
Olga Obut and Nikolay Sennikov would like to announce the International conference “Development of Early Palaeozoic Biodiversity: Role of biotic and abiotic factors and event correlation” to be held within the framework of the IGCP Project 503 and the Scientific Research Programs of the Presidium of the Russian Academy of Sciences “The Origin and Evolution of the Biosphere” & “Biodiversity and Dynamics of Genetic Pools” in Moscow, Russia, 26 - 28 June, 2008 with a post-conference field excursion in Altai, Russia, 30 June - 11 July, 2008.

Please find the circulars for the conference and field excursion attached at the back of this newsletter

►► Palaeozoic Climates IGCP 503 / 497 / 499

Thomas Servais announces the Palaeozoic Climates International Congress to be held in Lille, France, August 23-31, 2008.

Climate change is currently one of the most debated and discussed scientific topics. Ancient climate changes are extremely useful to understand the global changes that we live



today. The scientific meeting on Palaeozoic Climates is focused not only on ancient climate and sea-level changes (Ordovician glaciation, end-Devonian extinction, Late Palaeozoic glaciation ; greenhouse-icehouse transitions), but also on their modelling, their understanding and their impact on the biodiversity.

The Congress will serve as Closing Meeting of the International Geoscience Programme (IGCP) n° 503 'Ordovician Palaeogeography and Palaeoclimate' and is also related to the IGCP n° 497 'The Rheic Ocean : its Origin, Evolution and Correlatives', and IGCP n° 499 'Devonian land-sea interaction : evolution of ecosystems and climate'.

During the pre-conference excursion outcrops and sections of the Cambrian to Silurian sections of Belgium will be visited. The post-conference excursion will allow the participants to visit some of the famous sections of the Belgian Upper Palaeozoic, including those from localities such as Givet, Frasnes, Famenne, Tournai, Namur, Dinant, and others, including outcrops in the classical section of the Meuse Valley.

The conference topics are designed to address various subjects related to Palaeozoic Palaeogeography, Palaeoclimate and Palaeoecology, including all geological systems from the Cambrian to the Permian. The major aim of the congress is to analyze and understand the factors driving diversifications, extinctions and radiations of Palaeozoic faunas and floras.

Please find the full second circular for this meeting attached at the back of this newsletter.

►► 12th International Palynological Congress

30 Aug - 6 Sept 2008, Bonn, Germany

<http://www.paleontology.uni-bonn.de/congress08/index.htm>



Contact: Thomas Litt: t.litt@uni-bonn.de

Ken Dorning provided the details of the two general symposia that might be of interest:

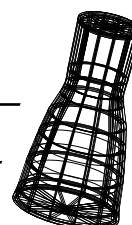
Symposium 37. Palaeozoic palynostratigraphy: Lower Palaeozoic and Upper Palaeozoic

Conveners: John Marshall, University of Southampton, UK. [jeam@noc.soton.ac.uk] & Marco Vecoli, Université des Sciences et Technologies de Lille, Villeneuve d'Ascq, France [marco.vecoli@univ-lille1.fr].

This is a traditional CIMP organised symposium to take account of our membership whose interests and indeed employment is within the remit of stratigraphic palynology. We will try and emphasise the high resolution aspects of zonation but the symposium is to showcase what we can do in terms of time correlation. We see this as essential as we have many members from central and eastern Europe who are traditional biostratigraphers. The IPC/IOPC is in Bonn and we expect to have many of these members attending so we need to give them a symposium at which to present. Equally we want them to attend the Palaeozoic Oceans and Climate Change symposium to expose them to leading-edge science. We again envisage several blocks of time that would split the sessions into Lower and Upper Palaeozoic with any Precambrian temporarily included in the former. We hope to showcase the revision of the CIMP sponsored Carboniferous spore zonal scheme.

Symposium 53. Palaeozoic oceanic and climate change: evidence from the palynologic record.

Conveners: Reed Wicander, Central Michigan University, Mt. Pleasant, MI, USA [reed.wicander@cmich.edu] & Ken J.



Dorning, Pallab Research, Sheffield, England
[k.j.dorning@sheffield.ac.uk]

Significant changes in global climate documented throughout the Phanerozoic can be recognized from the palynological, palaeobotanical, and palaeoenvironmental record in marine and terrestrial sedimentary sequences.

The phytoplankton record, which primarily includes acritarchs and prasinophytes, shows changes during the Cambrian, Ordovician, Silurian, and Devonian, which may be attributable to fluctuations in temperature, nutrient supply, and other environmental factors. The Carboniferous is an interval with remarkably low phytoplankton diversity, and is followed by increased diversity in the Permian and Triassic. Significant events in long-term phytoplankton diversity, as documented in the PhytoPal project for the Palaeozoic, may also be linked to generally wetter or drier episodes.

Changes in diversity and abundance in the Mesozoic and Cenozoic phytoplankton record, including dinoflagellate cysts, acritarchs, and prasinophytes, may also be associated with climate change.

The palaeoenvironmental changes during the Palaeozoic can also be documented from variations in abundance and diversity of chitinozoans for the Ordovician to Devonian, spores from the Ordovician, and pollen from the Carboniferous. Furthermore, stomata density can be used to document changes in CO₂. Some of these variations seen in the palynologic record may be linked with climate change, including warm and cool intervals, as well as changes associated with glacial intervals during the late Ordovician, Carboniferous, and Permian.

Past meeting reports

►► Yangtze Conference on the Ordovician and Silurian (27-30 June, 2007) in Nanjing, China.

The 10th International Symposium on the Ordovician System • The 3rd International Symposium on the Silurian System • The 4th Annual meeting of the IGCP 503 Project

by Thijs Vandenbroucke



This time, the joint ISOS, ISSS and IGCP 503 meeting was organized in Nanjing, (SE China) by our colleagues of the Nanjing Institute of Geology and Palaeontology. Quite a number of chitinozoan workers were present



▲ Tang Peng sampling the Kuanyinchiao Bed in the Wangjiawan River Section for chitinozoans, during the post-conference field trip; Mike Melchin watching.





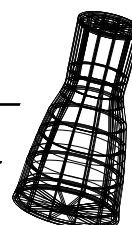
and talks and posters on (or including) our favourite microfossil group were presented by Florentin Paris (with Kheira Boumendjel, Marie-Pierre Dabard, Jean-François Gienne, Alfredo Loi, Tang Peng, Blaise Videt and Aïcha Achab), Tang Peng (with Liang-Yu Geng, Shenghui Deng, Shi-Ben Zhang, Florentin Paris and Huai-Cheng Zhu), Olle Hints (with Jaak Nõlvak, Peep Männik and Helje Pärnaste), Olga Obut, Daniel Goldman (with Stephen Leslie, Jaak Nõlvak and Seth Young), Jan Vanmeirhaeghe, Zhang Shi-ben (with Geng Lian-yu, Du Pinde, Tang Peng and Deng Shenghui) and yours truly (with Jan Vanmeirhaeghe) (my apologies to the authors of any contributions I might have missed). I gladly refer to the special

issue of *Acta Palaeontologica Sinica* (vol. 46, suppl.) for the more detailed proceedings of this meeting. The conference also saw the finalization of the renewed Ordovician global chronostratigraphy with the instalment of the new name for its third stage, the Dapingian.

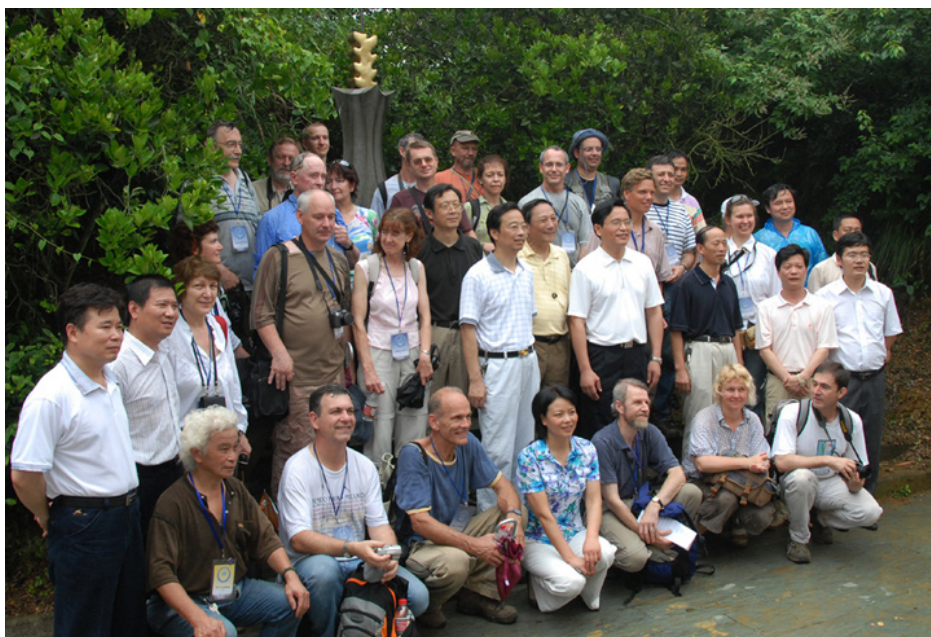
Prior to the congress, an excellent excursion was organized to the NW Zhejiang and NE Jiangxi provinces, to study the Ordovician and Silurian slope-facies deposits; the highlight of this excursion was the visit to the GSSP of the base of the Middle-Ordovician at Dawangou. Following the conference, the delegates could enjoy the 7-day field trip to the Ordovician and Silurian outcrops of the Yangtze platform.



Some chitinozoan workers at the inauguration ceremony of the GSSP of base of Middle Ordovician Series (or the Dapingian Stage).



Group picture at the GSSP of the Base of Darriwilian during the pre-conference excursion of the Yangtze Conference on the Ordovician and Silurian.



During this field trip, we visited amongst others the new GSSP's of the bases of the Hirnantian and Dapingian, and were witness of the official inauguration of the latter stratotype.

I would like to thank Li Jun and his entire team for the flawless organisation of the conference

and field trips! The next ISOS meeting (2011) will be organised in the Iberian Peninsula, by Juan-Carlos Gutiérrez-Marco and Arthur Sá.

More pictures can be found Helje Parnaste's web site: <http://www.gi.ee/~helje/>

Members reports

Aïcha ACHAB (INRS-Eau, Terre, Environnement) &

Esther ASSELIN (Geological Survey of Canada-Division Québec)

Aïcha Achab and Esther Asselin are reassessing chitinozoan assemblages from the Ordovician-Silurian boundary on Anticosti Island in collaboration with André DESROCHERS (University of Ottawa, Ontario). Sedimentological work carried out at the O/S boundary by A. Desrochers had led to the recognition of discontinuities and the object of our work is to evaluate their significance. Another object is a better stratigraphic definition of the type strata of *Ancyrochitina ellisbayensis* in order to have a more precise definition of stratigraphic range of this important species.

Moreover, in collaboration with Florentin PARIS, Jaak NÖLVAK and Thijs VANDENBROUCKE, additional investigations are being carried out on the Ordovician regional chitinozoan databases. The objective here is to document the evolution through time of the species common to the various palaeo-plates and their relationship to palaeogeography.

Stig BERGSTRÖM (School of Earth Sciences - The Ohio State University)

Stig lets us know that he has not done any chitinozoan work himself during 2007 but that he has referred to chitinozoan data in an article on isotope dates in the Llandovery, which is currently in review in *Episodes*. He has also referred to chitinozoan data in a paper published this summer by the Geological Survey of Sweden. The reference is:



Bergstrom, S.M., 2007: The Ordovician conodont biostratigraphy in the Siljan region, south-central Sweden: A brief review of an international reference standard. *In* WOGOGOB 2007, 9th Meeting of the Working Group on Ordovician geology of Baltoscandia. Field guide and Abstracts. *Sveriges Geologiska Undersökning. Rapporter och Meddelanden* 128: 26-41 and 63-78.

Susana DE LA PUENTE (IANIGLA - CRICYT Mendoza, Argentina)

I'm finishing my studies on the chitinozoans of the Ordovician successions from northwestern Argentina. In 2007, some of these results have been presented in different international meetings. A summary of the present data has been exposed at the 4th European Meeting on the Palaeontology and Stratigraphy of Latin America, in Madrid.

During September-October I spent one month training with Dr. Florentin PARIS at the Géosciences Université de Rennes 1, Rennes. As last year, this activity is part of a joint project (SECyT-ECOS), in the frame of the scientific cooperation between Argentina and France: "Evolution de la biodiversité des palynomorphes (acritarches, chitinozoaires, miospores) ordoviciens de la marge gondwanienne: biofaciès versus paléogéographie et paléoclimat" (Projet ECOS-Sud A05U0, 2006-2008).

Suryendu DUTTA (Department of Earth Sciences, Indian Institute of Technology, Bombay)

I would like to inform our colleagues about our contribution to the knowledge of the chemistry of the chitinozoan wall. This year (2007), we have published a paper on chitinozoan chemistry in the journal '*Organic geochemistry*'. The reference of the publication is: "Highly aromatic character of biogeomacromolecules in Chitinozoa: A spectroscopic and pyrolytic study" by Suryendu Dutta, Rainer Brocke, Christoph Hartkopf-Fröder, Ralf Littke, Heinz

Wilkes, Ulrich Mann. *Organic Geochemistry* 38 (2007) 1625–1642. I hope our contribution will be interesting for our colleagues who are involved in chitinozoan research.

I am also investigating the chemical composition of different palynomorphs, e.g., scolecodonts, spores, prasinophytes, etc.

Yngve GRAHN

My project to achieve an integrated chitinozoan-miospore biostratigraphic framework for the intracratonic basins of Brazil was finished 2006, and now continues with more detailed studies. There is no shortage of interesting projects. During 2007 I have been able to do some more work on the Ordovician of Baltoscandia, and recently I submitted a monograph, dealing with Ordovician Chitinozoa and biostratigraphy of Sweden, together with Jaak NÕLVAK (Tallinn, Estonia). My co-operation with Jaak will continue the years to come. At UERJ (Universidade do Estado do Rio de Janeiro) in Rio de Janeiro two students have shown interest to work with chitinozoans in their graduate theses, and chitinozoans also are a part of a Ph.D-thesis by Paula MENDLOWICZ-MAULLER, which will be presented next year.

Viiu NESTOR (Institute of Geology at Tallinn University of Technology)

I continue my studies on taxonomy, ecology and biostratigraphy of Silurian chitinozoans. Collaboration with Peep MÄNNIK (conodonts) and D. LOYDELL (graptolites) on integrated biostratigraphy of the Kolka core (Latvia) is in progress. Joint work on correlation of chitinozoan biozones with Silurian K-bentonites together with Tarmo KIIPLI is also underway.

Jan MORTIER (Ghent University)

Jan Mortier has started his Ph.D. project on the Silurian basin evolution of northeastern Avalonia. His work focuses on the lithostratigraphy and chitinozoan



biostratigraphy of the Silurian of the Condroz Inlier, Belgium.

Olga T. OBUT (Institute of Petroleum Geology and Geophysics SB RAS) & **Nikolay V. SENNIKOV** (Institute of Petroleum Geology and Geophysics SB RAS)

Last year we revived studies of the chitinozoans from the Gorny Altai. Large amounts of rock material have been collected from the key section mainly Ordovician and few Lower Silurian. At present samples are under chemical treatment. During the field excursion to be held at 30, June-11, July 2008 (see attached Circular) in the Gorny Altai (South of West Siberia, Russia) participants will visit sections where Lower-Middle Ordovician chitinozoans have been recovered from and preliminary biozonation have been proposed.

Please note that Olga's e-mail address has changed.

Helga PRIEWALDER (Geologische Bundesanstalt / Geological Survey of Austria)

I finished my long-termed (caused by several interruptions due to other duties) studies on palynomorphs from metamorphic rocks of Tyrol (Austria):

PRIEWALDER, H. (2007): Silurian chitinozoans and other palynomorphs from quartz phyllites of the Steinach Nappe, Tyrol (Austria). With a contribution of M. ROCKENSCHAUB. *Jb. Geol. B.-A.*, 147 (3+4), 7 text-figs.; 6 plates (in press).

I intend to go on with the interrupted revision of BACHMANN & SCHMID's (1964) Silurian chitinozoans in thin sections in the near future.

Florentin PARIS (Rennes University, France).

Most of my activities are developed within the IGCP n° 503, CIMP/ARAMCO and ECLIPSE projects.

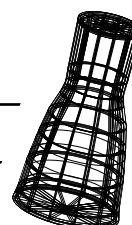
1) After the publication of the paper on the chemical composition of the chitinozoans (see JACOB *et al.* 2007, *Organic Geochemistry*), I continued these investigations started several years ago, especially on the chemical signature at different taxonomic levels. Several sets of chitinozoans sorted by genera, and at specific level for some of them, have been analysed.

2) The second project (initiated two years ago) deals with sea-level variations recorded during the Ordovician (already investigated), the Silurian and the Devonian in northern Gondwana regions (TOTAL oil company contract for Blaise VIDET, Rennes University). The chitinozoans are used for the time calibration of the third order cycles and for documenting inter-regional correlations. This opportunity is taken for checking and illustrating previously described chitinozoan taxa from Algeria (e.g. Taugourdeau's species).

3) The work on the $\delta^{13}\text{C}$ excursions during the Ordovician and Silurian, using the chitinozoan vesicles as a carbon source, has significantly progressed. One paper concerning the $\delta^{13}\text{C}$ curve for the late Katian and Hirnantian of Morocco is submitted (ECLIPSE project led by J.F. GHIEFFE) and another set of samples is prepared from the Late Ordovician chitinozoans recovered in the QUSAIBA shallow core in Saudi Arabia (CIMP/ARAMCO project with J. VERNIERS and C. WELLMAN).

4) The last project listed in 2007 is progressing. It focuses on the potential of chitinozoans for adjustments of palaeogeographical reconstructions, especially on the impact of plate and microplate amalgamations on the oceanic circulation and on the climate during the Ordovician and the Silurian (project led by T. VANDENBROUCKE).

5) I continued my investigations on the chitinozoan biostratigraphy (Oman, Saudi Arabia, Libya, Algeria, Morocco, Turkey, France...).



Beside these academic scientific activities I am also acting as a biostratigraphic expert for several major oil companies.

Peng TANG (Nanjing, China).

In September 2007, I got a permanent position in the *Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences*. My PhD project concentrated on Ordovician chitinozoans in the Tarim Basin, northwestern China. Now, I am involved in a project sponsored by SinoPec to study Silurian stratigraphy in South China. In the following 2 years, I will work on Late Ordovician and early Silurian chitinozoans, including taxonomy, chitinozoan biostratigraphy, palaeoecology and biodiversity changes through the Katian-Hirnantian-Rhuddanian in China. The localities I am focusing on are distributed in several areas, mainly in South China and northwestern China (Tarim Basin). My present research activities include the latest Ordovician-early Silurian chitinozoans from South China; Late Ordovician-early Silurian chitinozoans from the Tarim Basin, NW China; early Silurian (Llandovery) chitinozoans in South China. The GSSP of the Hirnantian Stage was established in the Wangjiawan North section, China in 2006. However, chitinozoan results from the Wangjiawan North section were less positive. Recently, I made a preliminary study of the Hirnantian rocks from several other sections in South China, and obtained some flattened, and 3-D preserved chitinozoans. Knowledge of Hirnantian chitinozoans in China can contribute to global Hirnantian correlation, especially in places where no characteristic graptolite, conodont or shelly fossils are obtained.

Thijs VANDENBROUCKE (Ghent University, Belgium / University of Leicester, UK)

The main objective of my current postdoc project is to examine the potential of several methods for ground-truthing Ordovician climate models. Our main focus remains on trying to use the distribution patterns of planktonic chitinozoans and graptolites to

ground truth Ordovician climate model (GCM) predictions of ocean state. Several well-defined timeslices in the Upper Ordovician (the *N. gracilis* biozone, GICE, BODA, HICE) are currently under scrutiny and our first results have been presented at two meetings in December 2007 (AGU in San Francisco & Pal. Ass. in Uppsala). In addition, the potential of a number of geochemical methods to reconstruct sea water properties are being evaluated. The research is conducted at the Universities of Leicester (UK), Durham (UK) and Ghent (Belgium), in close cooperation with Mark WILLIAMS (University of Leicester), Howard ARMSTRONG (Durham University), Jan ZALASIEWICZ (University of Leicester) and Jaques VERNIERS (Ghent University). Jaak NÖLVAK and Florentin PARIS (see above) are involved in the chitinozoan side of the project.

We also have a couple of irons in the fire looking to solve some outstanding biostratigraphical problems, including the correlation difficulties at and around the *linearis* biozone level: this includes a detailed study of the chitinozoans through the graptolitic Bornholm succession (Denmark, together with Arne NIELSEN), the Whitehouse Group on the Girvan Foreshore and inland sections (Scotland, together with Keith INGHAM), and the Welsh Frongoch section (together with the BGS Welsh mapping crew). Jan HENNISSSEN and myself are finalising our chitinozoan work on the Chinese Dawangou section and hope to publish this soon.

2008 should see the publication of a series of papers dealing with results of the research during my PhD, amongst others an overview of the new Upper Ordovician chitinozoan biozonation in Great Britain (*Lethaia*), papers on the historical type Caradoc (*Geol. Mag.*) and Hirnantian (*Geol. Jl.*), and a monograph of Palaeontographical Society (London) formally describing the species used in the new biostratigraphic schemes.

Next to the Ordovician projects, I am currently



involved in several projects dealing with the Silurian System. Jeremy DAVIES (BGS), Richard WATERS (National Museum of Wales), Stewart MOLYNEUX (BGS), Mark WILLIAMS (University of Leicester), Jan ZALASIEWICZ (University of Leicester), Jacques VERNIERS (Ghent University), Tom CHALLANDS (Durham University) and myself are attempting a critical but constructive revision of the stratigraphy and facies architecture of the Llandovery type area in South Wales, as part of a 2 year (2007-2009) BGS project. Together with Olle HINTS (Technical University of Tallinn) and Axel MUNNECKE (Erlangen University), I am trying to evaluate the differences in carbon isotope values between several groups of palynomorphs, using the Ireviken Event on the Isle of Gotland as a test case.



▲ Field work on the Girvan Foreshore (Ayrshire, Scotland, UK) with Keith Ingham; sampling the 'barren' mudstones of the Shalloch Formation (Ashgill) for chitinozoans (September 2007).

Marco VECOLI (University of Lille1, France)

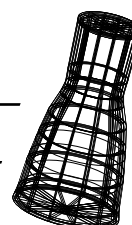
My chitinozoan-related projects are the following;

1- Cambrian to Silurian of Iran. This work in collaboration with Dr. GHAVIDEL-SYOOKI of the Iranian National Oil Company aims at a high-resolution palynostratigraphic dating of the Early Palaeozoic rock formation in Iran and to the establishment of a palynozonation which will serve as reference for future deep drilling programs for oil exploration. This research concerns acritarchs as well as chitinozoans. One paper has been published (Ghavidel syooki and Vecoli, 2007; *Review of Palaeobotany and Palynology*, see below) and two others on Late Ordovician chitinozoans (and acritarchs) of the eastern Alborz Range of northern Iran are in progress.

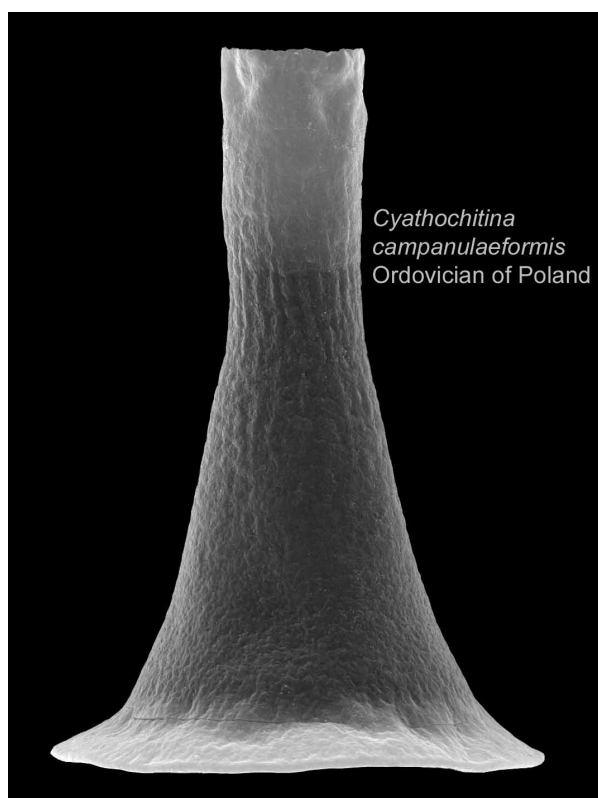
2 - Integrated acritarch, miospore, and chitinozoan zonation of terminal Ordovician to earliest Devonian strata in Libya, Tunisia, and Algeria's subsurface. This project aims not only at the refinement of existing palynozonations, but also at a detailed palaeo-environmental analysis, involving the use of carbon isotopes, biomarkers, and palynofacies data. First results of this project have been presented at the EGU General Assembly 2007 in Vienna, and one paper is in press (Vecoli, in Press; *Review of Palaeobotany and Palynology*: DOI 10.1016/j.revpalbo.2006.11.004) and another one is currently under revision. I am also supervising a Master project (Mr. Christian CESARI, University of Lille1) dealing with integrated chitinozoan palynozonation of Ordovician-Silurian boundary beds in the subsurface of southern Tunisia.

Jacques VERNIERS (Ghent University, Belgium)

Jacques Verniers was again mainly busy with teaching. In our lab Thijs was active (see his report). Jan HENNISSSEN finished his DEA in Master in Applied palynology at the University of Liège in collaboration with our university



and Jan MORTIER finished his M.Sc. looking for chitinozoans in the Ashgill to Llandovery section of Tihange (Condroz Inlier). He found brachiopods that David HARPER determined as possibly Hirnantian in the newly described Tihange Member. Unfortunately no diagnostic chitinozoans are present in that part of the section. In October he started his Ph.D. study on chitinozoans from the Silurian of the Condroz inlier. My own research on chitinozoans continues on the Ashgill to Llandovery succession in the Lonstorp and Rostanga boreholes (Sweden) with graptolites studied by Arne NIELSEN and Tanya KOREN and on Upper Ordovician material from a borehole of the Arabian Peninsula together with Florentin PARIS. Our lab technician started dissolving samples from the upper Wenlock of Belgium and from Poland together with M. MASIĄK.



*Cyathochitina
campanulaeformis*
Ordovician of Poland

▲ A nice specimen of *Cyathochitina campanulaeformis* from the Ordovician of Poland, as sent by Ryszard Wrona.

Jan Hennissen tried to finish his manuscript with Thijs on the section in Dawangou and he was also busy for two months updating the database in our lab of the holotype descriptions and also our database of chitinozoan references in *Endnote*.

Ryszard WRONA

I am continuing study on the chitinozoan biostratigraphy and palaeogeography of the Ordovician up to Devonian deposits from the Holy Cross Mountains (Central Poland), and from the subsurface of the Malopolska Massif (Southern Poland) and the East European Platform (North-Eastern Poland). The results were presented at the Paleontological Symposium in Romania and in Poland

New taxa

Published by Tang Peng:

Belonechitina zhejiangensis Tang, 2007, p. 93, Plate V, 1-4; Plate VI, 14, 17

Belonechitina chenjiawuensis Tang, 2007, p. 95, Plate V, 5, 6, 10

Bursachitina laminaris Tang, 2007, p. 89, Plate VI, 1-4, 6, 7, 10

Lagenochitina praepirum Tang 2007, p. 96, Plate II, 1-6, 9, 10

Euconochitina hengtangensis Tang 2007, p.91, Plate III, 1-9, 12; Plate VI, 15

Published by Yngve Grahn:

Ancyrochitina pachycerata Gaugris & Grahn 2006

Ancyrochitina brevicornuta Gaugris & Grahn 2006

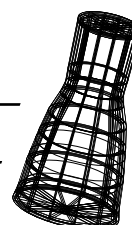
Ancyrochitina maacki Gaugris & Grahn 2006

Ancyrochitina n. sp. A Gaugris & Grahn 2006

Ancyrochitina n. sp. B Gaugris & Grahn 2006

Ancyrochitina n. sp. C Gaugris & Grahn 2006

Angochitina pseudoavelinoi Gaugris & Grahn 2006

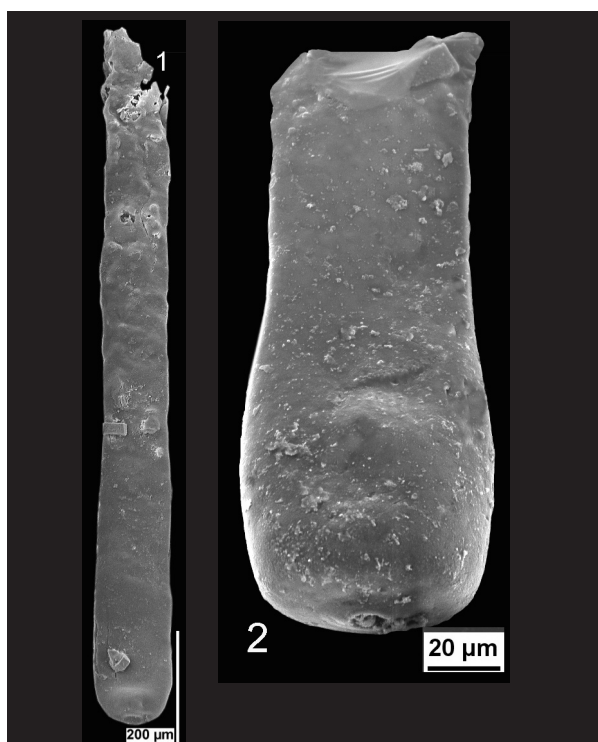


Conochitina scabra Grahn & Nolvak 2007b
Fungochitina glarisentosa Gaugris & Grahn 2006

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Published by Viuu Nestor:

Rhabdochitina sera Nestor, 2007
 HT- Ventspils core, Latvia, depth 655 m, Lower
 Ludlow (1)
Conochitina postarmillata Nestor, 2007
 HT- Ventspils core, Latvia, depth 647 m, Lower
 Ludlow (2)



▲ *Rhabdochitina sera* (1) ; *Conochitina postarmillata* (2)

Pictures provided by Viuu Nestor (Ventspils Core)

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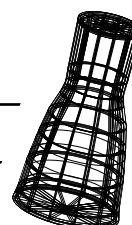
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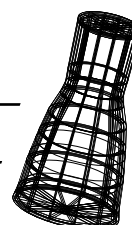
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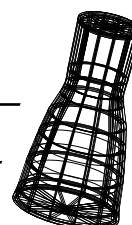
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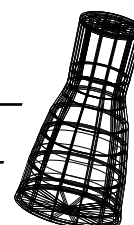
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## Abstract of PhD

### ***Middle and Late Ordovician Chitinozoan Biostratigraphy in the Northern Marginal Areas of the Tarim Basin***

**Peng Tang**

Peng TANG defended his PhD on 25/06/2007. Here is the abstract of his PhD thesis.

Supervisor: Huai-cheng ZHU

In the Tarim Basin, Ordovician strata mainly crop out at the northwestern and northeastern margins, namely the Kalpin and Kuruktag areas. Subdivision and age determination of the subsurface Ordovician strata are made by stratigraphic correlation between the subsurface and outcrops areas. The present work represents the first chitinozoan study in the Kuruktag area.

Eleven sections at the northwestern and northeastern margins were investigated, and a total of 399 samples were collected from the top of the Ying'an, Lower Member of the Kalpintake formations at the northwestern margin, and the Heituao, 1st member of the Charchaq, Yuanbaoshan, and Yinpingshan formations at the northeastern margin. Thousands of specimens were obtained. Biometric analysis is applied in identifying and classifying species, which are 61 species (including 3 newly established species) belonging to 18 genera. 25 characteristic species are described herein.

According to the appearance of characteristic species, 5 local biozones, i.e. *Lagenochitina* cf. *praepirum*, *Lagenochitina* *pirum*, *Belonechitina* sp. A, *Kalochitina* cf. *multispinata*, and *Belonechitina* *convexa*-*Kalochitina* *parvicolla* local biozones are established in the Heituao, Queerqueke, Yuanbaoshan, and Yinpingshan formations at the northeastern margin. Another

5 local biozones, i.e., *Belonechitina* *convexa*-*Kalochitina* *parvicolla* concurrent biozone, *Belonechitina* *dawangouensis* biozone, *Armoricochitina* *yinganensis*, *Kalochitina* sp. 1, and *Spinachitina* sp. A-*Conochitina* *electa* are established at the northwestern margin. A comprehensive Mid to Late Ordovician chitinozoan succession of the Tarim Basin has been proposed provisionally.

In the middle part of the Lower Member of the Kalpintake Formation, the *Belonechitina* *dawangouensis* and *Armoricochitina* *yinganensis* local biozones are recognized. They show a strong endemic signature, and are hard to correlate with other known chitinozoan assemblages around the world. However, chitinozoans of these two biozones are abundant, and the index species have a distinctive morphology and a limited stratigraphic range within the basin. Therefore, *Belonechitina* *dawangouensis* and *Armoricochitina* *yinganensis* are good markers for stratigraphic correlation. In addition, chitinozoan biostratigraphy shows that the base of the *Spinachitina* sp. A-*Conochitina* *electa* biozone is close to the base of Silurian, and the Ordovician-Silurian boundary is suggested to be located in the Lower Member of the Kalpintake Formation.

The study of the reworked fossil *Eremochitina* sp. shows that the original material of the Kalpintake Formation may be from the mid-Tianshan Islands. The discovery of cool-water related chitinozoans, i.e. *Sagenachitina*, *Eremochitina*, and *Siphonochitina* in the Tarim Basin provides first-hand data for palaeobiogeographical study, which suggests that the Tarim and South China palaeoplates belong to the same palaeobiogeographic realm.

**Key words:** Chitinozoans, Biostratigraphy, Middle and Upper Ordovician, Tarim Basin.





## Taxonomic issues:

### *Activities in the Research Unit Palaeontology of Ghent University*

By Jacques Verniers

**D**uring November and December 2007, Jan HENNISSSEN has been updating the list of all the chitinozoan species, in our research unit in Ghent. This list was already started 5-6 years ago and Florentin PARIS had put the species list, alphabetically by species name, on the CIMP website. Unfortunately, this file disappeared from the web a bit more than a year ago. Jan H. has added the new species described since 2001. He has also applied a code of validity (or usefulness) for the majority of the species, as described by F. Paris in 2001 (*manuscript*).

#### Usable and valid taxa:

**\*Code A1\*** - Taxa correctly described according to the International Code of Zoological Nomenclature, with a holotype still accessible for control and with well-described and well-illustrated type material (included in this category the new species described in Laufeld, 1974).

**\*Code A2\*** - Taxa correctly described according to the International Code of Zoological Nomenclature but with poor description and/or bad illustration.

#### Unusable but valid taxa:

**\*Code B1\*** - Taxa correctly described according to the International Code of Zoological Nomenclature, with a lost holotype but still with access to the original rock sample for the designation of a neotype (e.g. Cramer 1964).

**\*Code B2\*** - Taxa correctly described according to the International Code of Zoological Nomenclature, with a lost holotype but without access to the type sample or to the

type level for the search for a neotype (see art. 75 c.5 of the Code of Zoological Nomenclature) (e.g. some of Eisenack's 1931 species). N.B. the case of Eisenack's neotypes is sometime confusing because he had no possibility (erratic bolders) to get his neotypes from the same samples or horizons as his holotypes.

**\*Code B3\*** - Taxa where the description is restricted to the holotype specimen only: e.g. *poculum*.

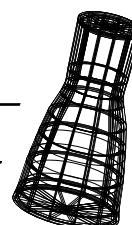
**\*Code C\*** - Taxa correctly described according to International Code of Zoological Nomenclature but which are considered as 'junior synonyms' of well known and previously described species. Such species names should disappear from the literature, if everybody agrees with the synonymy. But this may be a subjective decision because true objective synonyms might not exist in the field of chitinozoans (a sample is normally not studied several times by different researchers).

#### Invalid taxa:

**\*Code D\*** - Invalid taxa according to the code of nomenclature; these names have to be clearly excluded from the chitinozoan species list (e.g. "nomina nuda", "forms", "forma", "variant" described after 1960) because they are of infrasubspecific status and therefore do not belong to the species.

**\*Code E\*** - Taxa to be excluded from the chitinozoans (ex: Parachitina).

Jan H. has pointed out several taxonomic problems that still haunt our group. The older researchers are well aware of this: three times the same species name is given to two completely different species. This needs attention. Furthermore we have 63 taxa described as subspecies, which need to be redefined as species (8 are described before 1960 and should be valid). We can send a provisional list of the about 1200 species to chitinozoan researchers who want to check this database as an MS Access database (please





contact us). It can also be provided in pdf or MS Word format. After control by some of us, we will put the list on the chitinozoan website, which is in preparation in our department in Ghent, and which will be linked to the CIMP website.

These taxonomic problems could be discussed at a CIMP Chitinozoan Subcommission meeting in Bonn.

Jan has also updated the reference list of all chitinozoan publications. We are thinking of putting a PDF and Word file of all the chitinozoan references in a publication reference list format on the chitinozoan website in Ghent in the near future. Comments are welcome.

## New tools

*By Thijs*

I would like to introduce a new item in the newsletter. Seen as this is the digital age and most of us spend more time behind a computer screen than looking through a microscope, I thought it would be interesting to have a section in the newsletter devoted to interesting applications and tips. So, if you discovered a piece of interesting freeware you would like to share with your colleagues, have written a useful plugin for a software package, want to share database-templates, and so on, this is the place to put them. Obviously, this is not meant to promote companies you are a shareholder of...

### Papers 1.x. (by mekentosj)

I have found this a particularly useful piece of software to organise, read and sort the numerous pdf files (of articles, theses, ...) I had in heaps of different folders on my computer. Unfortunately, this is not freeware anymore, although it still is very cheap (as from 28 €). Have a look at:

<http://mekentosj.com/papers/>

Mac only for the time being, I'm afraid.

### Pay Pal

It is now possible to pay your dues for the CIMP membership online! Have a look at our homepage <http://www.cimp.ulg.ac.be/>

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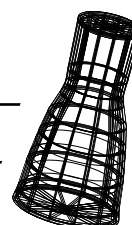
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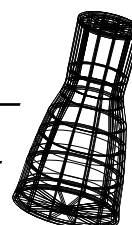
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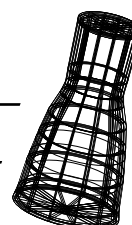
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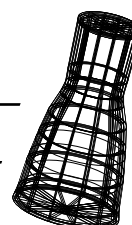
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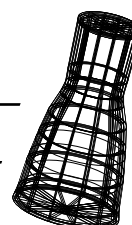
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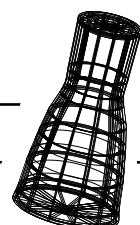
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## Circulars for future meetings

Please see following pages.





**Palaeozoic Climates***International Congress***August 23-31, 2008, Lille, France****SECOND CIRCULAR***Call for papers***Purpose of the conference**

**Climate change** is currently one of the most debated and discussed scientific topics. Ancient climate changes are extremely useful to understand the global changes that we live today. The scientific meeting on **Palaeozoic Climates** is focused not only on ancient climate and sea-level changes (Ordovician glaciation, end-Devonian extinction, Late Palaeozoic glaciation ; greenhouse-icehouse transitions), but also on their modelling, their understanding and their **impact on the biodiversity**.

The Congress will serve as Closing Meeting of the **International Geoscience Programme (IGCP) n° 503 'Ordovician Palaeogeography and Palaeoclimate'** and is also related to the IGCP n° 497 'The Rheic Ocean : its Origin, Evolution and Correlatives', and IGCP n° 499 'Devonian land-sea interaction : evolution of ecosystems and climate'.



During the **pre-conference excursion** outcrops and sections of the Cambrian to Silurian sections of Belgium will be visited. The **post-conference excursion** will allow the participants to visit some of the famous sections of the Belgian Upper Palaeozoic, including those from localities such as Givet, Frasnes, Famenne, Tournai, Namur, Dinant, and others, including outcrops in the classical section of the Meuse Valley.

The conference topics are designed to address various subjects related to **Palaeozoic Palaeogeography, Palaeoclimate and Palaeoecology**, including all geological systems from the Cambrian to the Permian. The major aim of the congress is to analyze and understand the factors driving **diversifications, extinctions and radiations of Palaeozoic faunas and floras**.

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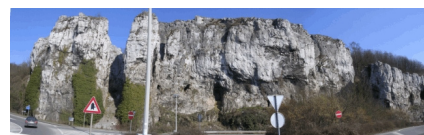
The congress is an event of the **International Year of Planet Earth**, aiming at contributing to the scientific topic : *Earth & Life – the Origins of Diversity and Climate Change*.

**Venue**

The meeting, organized by the CNRS research unit **UMR 8157 Géosystèmes** will take place in the city centre of Lille, scientific sessions will be organized at the **Catholic University of Lille (UCL)** in the **Institut Supérieur d'Agriculture (ISA)** buildings. Some events will take place on the campus of the **Université des Sciences et Technologies (USTL)**, close to Lille, at Villeneuve d'Ascq.

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**Lille**, in northern France, can easily be reached from London (90 minutes), Paris (60 minutes) and Brussels (40 minutes) by high speed trains (Eurostar, TGV, Thalys).



1

**Important dates**

**December 2007** : Distribution of the Second Circular, Call for Papers, Registration starts.

**May 1<sup>st</sup> 2008** : Deadline for abstracts, registration and payment of regular fee.

**June 20<sup>th</sup> 2008** : Third circular, travel information, distribution of the scientific programme.

+ + +

**August 23-24** : Pre-conference excursion (**Excursion A**) : Lower Palaeozoic of Belgium and northern France (Brabant, Condroz)

**August 25-26** : Early Palaeozoic Climates, Sea-Levels and Biodiversity (including Closing Session IGCP 503).

**August 27 : Plenary Session** : Palaeozoic Climates and Biodiversity

**August 28-29** : Late Palaeozoic Climates, Sea-Levels and Biodiversity

**August 30-31**: Post-conference excursion (**Excursion B**) : Upper Palaeozoic of Belgium and northern France (Avesnois, Meuse Valley, Ardenne)

**Organizers**

**Alain Blicek** (USTL, CNRS, Lille)  
**Benoît Hubert** (UCL, Lille)  
**Bruno Mistiaen** (UCL, Lille)  
**Nicolas Tribouvillard** (USTL, Lille)  
**Marco Vecoli** (USTL, CNRS, Lille)  
**Jacques Verniers** (Univ. Gent, Belgium)

**Björn Krüger** (USTL, Lille), *secretary*  
**Thomas Servais** (USTL, CNRS, Lille), *chair*

**Scientific committee**

**Michael Bassett**, Cardiff  
*(The Palaeontological Association)*  
**Taniel Danelian**, Paris  
*(Association Paléontologique Française, APF)*  
**David T. Harper**, Copenhagen  
*(Subcommission Ordovician Stratigraphy)*  
**Alain-Yves Huc**, Paris  
*(Fédération Française de Géologie, FFG)*  
**John Marshall**, Southampton  
*(Subcommission Devonian Stratigraphy)*  
**Shanchi Peng**, Nanjing  
*(Subcommission Cambrian Stratigraphy)*  
**Christian Ravenne**, Paris  
*(Société Géologique de France, SGF)*  
**Francis Robaszynski**, Mons  
*(Société Géologique du Nord, SGN)*  
**Michael J. Melchin**, Antigonish  
*(Subcommission Silurian Stratigraphy)*  
**Denis Vaslet**, Orléans  
*(Comité National Français pour l'Année Internationale de la Planète Terre)*

**Organizing institutions**

**UMR 8157 Géosystèmes du CNRS**

**Université des Sciences et Technologies de Lille (USTL)**

**Université Catholique de Lille (UCL)**

**Centre National de la Recherche Scientifique (CNRS)**

**Conseil Régional du Nord, Lille**

**The Palaeontological Association**

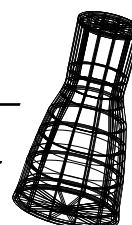
**Association Paléontologique Française**

**Société Géologique de France**

**Société Géologique du Nord**



2





### Keynote speakers

The following speakers accepted to present a keynote talk. Other keynote speakers will be added to this list.

**Robin Cocks** (The Natural History Museum, London) : *Lower Palaeozoic palaeogeography*  
**Yves Godd  ris** (Univ. Toulouse, France) : *Global biogeochemical cycles*  
**Michael Joachimski** (Univ. Erlangen, Germany) : *Upper Palaeozoic carbon and oxygen isotopes*  
**Arnold I. Miller** (Univ. Columbus, Ohio, USA) : *Palaeoenvironmental impact on diversity over time*  
**Christian Klug** (Univ. Z  rich, Switzerland) : *Evolution of the marine food web in the Devonian*  
**Alexander N  tzel** (Bayerische Staatssammlung, M  nchen, Germany) : *Evolution of planktotrophy*  
**Alberto P  rez-Huerta** (Univ. Glasgow, UK) : *Palaeoclimatic impact on Late Carboniferous marine ecosystems*  
**Kevin J. Peterson** (Dartmouth College, Hanover, NH, USA) : *Molecular palaeobiology*  
**Matthew R. Saltzman** (Univ. Columbus, Ohio, USA) : *Lower Palaeozoic carbon and oxygen isotopes*  
**J  rg Schneider** (Univ. Freiburg, Germany) : *Upper Palaeozoic ecosystems*  
**Charles Wellman** (Univ. Sheffield, UK) : *Land plant evolution and terrestrialization*

### Conference proceedings

We are currently discussing with several editors (*Geological Society London, Special Publications ; Palaeogeography, Palaeoclimatology, Palaeoecology*) the possibility of producing thematic sets based on papers presented at the meeting. Further information will be available in the third circular.

### Talks and posters

**Talks** will be included during the five days of the conference and each will last **20 minutes** (including five minutes of discussion). Talks on Lower Palaeozoic topics will be concentrated on the sessions of Monday and Tuesday, August 25th and 26th. Talks on Upper Palaeozoic topics will be concentrated on the sessions of Thursday and Friday, August 28th and 29th. Parallel sessions will be avoided. Talks of general interest will be placed in the general session of Wednesday, August 27th.

**Posters** should be of standard DIN A0 size, portrait.

### Abstracts

**Talks and posters** on any area of the conference topics are invited, including palaeogeography, palaeoclimatology, palaeoecology, and related disciplines.

**Abstracts**, not exceeding one A4 page, should be sent to the address below by May 1st, 2008. State whether the abstract is for an oral or poster presentation. In case of multi-authored talks, please, indicate the speaker.

Please, use 12pt serif font (such as Times New Roman), with 2.5 cm margins. The title should be in capitals. Provide authors' names in full, with affiliations and e-mail addresses of all contributors.

Abstracts should be written in correct English. The organizing Committee reserves the right to accept or refuse any submission.

Please, note that abstracts are only accepted for print and included in the programme if the registration fee is paid before the registration deadline (May 1st 2008).

Abstracts should preferably be submitted as an e-mail message or attachment to **Bjorn.Kroger@univ-lille1.fr**.

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### Excursions

Two geological field trips will be organized. Both excursions will take place, independent from the number of participants.



All pictures in this circular are from <http://www.ulg.ac.be/geolwed/geolwal/geolwal.htm>



#### Excursion A :

**August 23-24** : Pre-conference excursion: Lower Palaeozoic of Belgium (Brabant, Condroz, Ardennes).

**Field guides** : J. Verniers (Gent), T. Servais (Lille), T. Vandenbroucke (Gent) and others.

The excursion will leave from Lille on Saturday, August 23, in the morning and visit Cambrian to Silurian outcrops from the Brabant Massif and the Condroz Inlier, Belgium. Outcrops to be visited include Cambrian deposits with ichnofossils, Upper Ordovician volcanics and graptolitic shales, and several highly fossiliferous horizons of the Ashgill, as well as several Silurian sequences. **Touristic stops** include localities at Waterloo (Napoleon's Battlefield), Villers-la-Ville (Cistercian Order Abbey, 12<sup>th</sup> century), and the city of Namur.

**Fee : 200 Euros.** The excursion fee includes participation in the welcoming party (evening before departure, August 22), accommodation in Namur (1 night), all meals (two lunches, one dinner, one breakfast), transport, field-guides and field-guide booklet.

#### Excursion B :

**August 30-31**: Post-conference excursion: Upper Palaeozoic of Belgium and northern France (Avesnois, Meuse Valley).

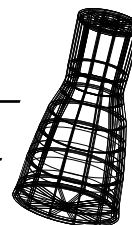
**Field guides** : B. Hubert, B. Mistiaen, T. Servais (Lille) and others.

The excursion will leave from Lille on Saturday, August 30, in the morning and visit Devonian and Carboniferous outcrops from the northern France and Belgium. The field trip includes localities to be visited such as **Givet** (historical type-locality of the Givetian),

**Frasnes-lez-Couvin** (historical type-locality of the Frasnian), other localities in the **Famenne** region (historical type-locality of the Famennian), **Namur** (historical type-locality of the Namurian) and **Dinant** (historical type-locality of the Dinantian), including **touristic stops** at Dinant and Namur.

**Fee : 200 Euros.** The excursion fee includes accommodation in Givet (1 night), all meals (two lunches, one dinner, one breakfast), transport, field-guides and field-guide booklet.

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**Accommodation**

**Accommodation is not organized and should be arranged individually.** There is a wide range of hotels in and around Lille (some of them in the historical city centre 'Vieux Lille'). You can book a hotel in the city centre of Lille from which you can easily walk to the campus site of the *Université Catholique de Lille*. Rooms (standard rooms with single and double occupancy usually range from 40 to 70 Euro). Further information will be available in the Third Circular

**Meals**

During the excursions, all meals are organized. During the conference, lunches are organized (five lunches for a total of 45 Euro), but evening dinners are not arranged. There is a wide range of restaurants available in town.

A gala dinner is organized on the evening of Wednesday, August 27 in the historical city centre of Tournai, type locality of the Tournaisian limestone of the Lower Carboniferous. The evening includes transport to Tournai, a guided tour through the historical part of the town, and a French style gala dinner (50 Euro).

**Social events**

Friday, August 22 : welcoming party for all participants of Excursion A.

Sunday, August 24 : Icebreaker party  
Wednesday, August 27 : Gala Dinner in Tournai.

Friday, August 29st : closing party and information session for Excursion B.

**Arrival information**

Lille is about 1 hour from Paris, 90 minutes from London and 40 minutes from Brussels by high speed trains (TGV, Thalys, Eurostar).

The campus site of the *Université Catholique de Lille* in the city of Lille can be reached easily. It is in walking distance (10 minutes from the historical part of the city and 20 minutes from the railway stations of Lille Flandres and Lille Europe).

Precise arrival information will be provided in the Third Circular.

**Grant aid to attend the Congress**

Grant aid is available from both the organizing committee and IGCP 503.

IGCP 503 supports members from developing countries and students to assist the congress at Lille.

In addition, the organizing committee is providing support, that will preferably be given to (young) scientists travelling from outside the European Union.

Awards are limited to those making an oral or poster presentation.

Applications for grant aid should be made to Thomas Servais ([Thomas.Servais@univ-lille1.fr](mailto:Thomas.Servais@univ-lille1.fr)).

**Please, contact also your national IGCP committee, that might be able to support your attendance at the Lille Congress.**

**Conference and excursions Fees**

CONFERENCE: (5 days)

**Registration Fee:**

120 Euro (before May 1st, 2008)  
150 Euro (after May 1st, 2008)

**Student Registration Fee :**

60 Euro (before May 1st, 2008)  
75 Euro (after May 1st, 2008)

The registration fee includes attendance to all scientific sessions from Monday, August 25, to Friday, August 29, coffee and tea-breaks, ice-breaker party, and conference wallet with abstract volume and tourist information.

**EXCURSIONS****Pre-conference excursion (Excursion A):**

2 days, Lower Palaeozoic of Belgium: 200 Euro

**Post-conference excursion (Excursion B):**

2 days, Upper Palaeozoic of Belgium and northern France: 200 Euro

**MEALS****Lunches**

45 Euro for 5 lunches from Monday to Friday, August 25 to 29

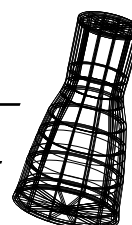
**Gala Dinner**

50 Euro, including transport to Tournai, by bus, guided tour, and French style dinner.

**Web page of the congress**

The following web-page will be continuously updated : <http://www.univ-lille1.fr/geosciences/>

All information will also be available at and can be downloaded from : <http://sarv.gi.ee/igcp503/>





**REGISTRATION**

**Please send your registration before May 1st 2008 preferably by e-mail to:**

Thomas Servais, USTL - Sciences de la Terre  
UMR 8157 Géosystèmes, Cité Scientifique SN5  
F-59655 Villeneuve d'Ascq cedex (FRANCE)  
Fax: (+33) (0)3 20 43 69 00

e-mail: Thomas.Servais@univ-lille1.fr

**Abstracts should be submitted before May 1st 2008 preferably by e-mail to:**

Björn Kröger, USTL - Sciences de la Terre  
UMR 8157 Géosystèmes, Cité Scientifique SN5  
F-59655 Villeneuve d'Ascq cedex (FRANCE)  
Fax: (+33) (0)3 20 43 69 00

e-mail: Bjorn.Kroger@univ-lille1.fr

**PAYMENTS**

**Payments** must arrive before May 1st 2008 by **international bank transfer** on the following bank account. Cheques are not accepted (except for French participants). Credit card payment is not possible. Transfer costs must be covered by the participants.

**Bank** : La Poste (France)

**Bank Address** : La Banque Postale – Centre de Lille, 599000 Lille Cedex 9 France

**Bank account holder** : Société Géologique du Nord

**Account number** : 20041 / 01005 / 0005247Y026 70

**IBAN (international account code)** : FR89 2004 1010 0500 0524 7Y02 670

**BIC (International Bank Code)** : PSSTFRPLIL

We confirm the arrival of your payment and abstract by e-mail, as soon as it arrived.

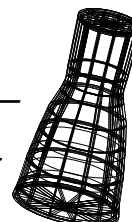
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**REGISTRATION FORM**

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| NAME :                                                                     | .....    |
| ADDRESS :                                                                  | .....    |
| Phone:                                                                     | .....    |
| Fax:                                                                       | .....    |
| E-mail:                                                                    | .....    |
| I would like to present a paper/poster with the following title :<br>..... |          |
| <b>Please book the following :</b>                                         |          |
| <b>Registration Fee:</b>                                                   |          |
| (before May 1st, 2008)                                                     | 120 Euro |
| (after May 1st, 2008)                                                      | 150 Euro |
| <b>Student Registration Fee</b> (provide student status, please)           |          |
| (before May 1st, 2008)                                                     | 60 Euro  |
| (after May 1st, 2008)                                                      | 75 Euro  |
| <b>Pre-conference excursion</b> (Lower Palaeozoic)                         | 200 Euro |
| <b>Post-conference excursion</b> (Upper Palaeozoic)                        | 200 Euro |
| <b>Lunches</b> for August 25th – 29th:                                     | 45 Euro  |
| <b>Gala dinner</b> , August 27th:                                          | 50 Euro  |
| -----                                                                      |          |
| TOTAL :                                                                    |          |

**Please return this form by May 1st 2008,**  
With abstract and payment, to the organizers

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**International conference**  
**“DEVELOPMENT OF EARLY PALEOZOIC BIODIVERSITY:**  
**ROLE OF BIOTIC AND ABIOTIC FACTORS, AND EVENT CORRELATION”**  
**(IGCP Project 503)**

**Moscow, Russia, 26 - 28 June, 2008**

**Altai, Russia, 30 June – 11 July, 2008 (*post- conference field excursion*)**

**SECOND CIRCULAR OF CONFERENCE**

**Organizers**

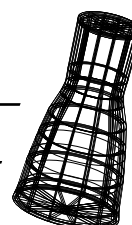
Paleontological Institute of the Russian Academy of Sciences (PIN RAS)  
 Siberian Branch of the Russian Academy of Sciences (SB RAS)  
 Institute of Petroleum Geology and Geophysics, SB RAS (IPGG SB RAS)  
 Interdepartmental Stratigraphic Committee of Russia (ISC)  
 IGCP Project 503 – "Ordovician Paleogeography and Paleoclimate"  
 Subcommittee on the Ordovician Stratigraphy (SOS) of the International Commission on Stratigraphy  
 Subcommittee on the Silurian Stratigraphy (SSS) of the International Commission on Stratigraphy

**Sponsors**

Russian Academy of Sciences  
 Presidium of the Siberian Branch of Russian Academy of Sciences  
 Russian Foundation for Basic Research (RFBR)  
 Scientific Research Program \_ 18 of the Presidium of RAS «The Origin and Evolution of the Biosphere»  
 Scientific Research Program \_ 11 “Biodiversity and Dynamic of Genetic Pools”  
 National IGCP Committee of Russia  
 Siberian Regional Interdepartmental Stratigraphic Committee (SRISC)

**International Scientific Committee**

|                           |                                                                            |
|---------------------------|----------------------------------------------------------------------------|
| S.V.Rozhnov, Co-Chairman  | Paleontological Institute RAS, Moscow, Russia                              |
| N.V.Sennikov, Co-Chairman | Institute of Petroleum Geology and Geophysics, SB RAS, Novosibirsk, Russia |
| A.Achab                   | Canada                                                                     |
| CHEN Xu                   | China                                                                      |
| L.R.M.Cocks               | UK                                                                         |
| A.V.Dronov                | Geological Institute RAS, Moscow, Russia                                   |
| O.Fatka                   | Czech Republic                                                             |
| J.C.Gutierrez-Marco       | Spain                                                                      |
| D.A.T.Harper              | Denmark                                                                    |
| D.Kaljo                   | Estonia                                                                    |
| A.V.Kanygin               | IPGG, SB RAS, Novosibirsk, Russia                                          |
| T.N.Koren                 | VSEGEI, St. Petersburg, Russia                                             |
| A.Munnecke                | Germany                                                                    |
| A.W.Owen                  | UK                                                                         |
| RONG Jiayu                | China                                                                      |
| T.Servais                 | France                                                                     |
| P.M.Sheehan               | USA                                                                        |





**Organizing Committee**

|                                                                     |                                                                       |
|---------------------------------------------------------------------|-----------------------------------------------------------------------|
| S.V. Rozhnov, Co-Chairman                                           | Paleontological Institute RAS, Moscow                                 |
| N.V. Sennikov, Co-Chairman                                          | Institute of Petroleum Geology and Geophysics, SB RAS                 |
| V. Kushlina,<br>Scientific Secretary of conference                  | Paleontological Institute RAS, Moscow                                 |
| O. Obut, Scientific Secretary of<br>post-conference field-excursion | Institute of Petroleum Geology and Geophysics, SB RAS,<br>Novosibirsk |
| A. Madison                                                          | Paleontological Institute RAS, Moscow                                 |
| A. Pahnevich                                                        | Paleontological Institute RAS, Moscow                                 |
| S. Nikolaeva                                                        | Paleontological Institute RAS, Moscow                                 |
| O. Lebedev                                                          | Paleontological Institute RAS, Moscow                                 |

**Three-day scientific program of the International conference “Development of Early Paleozoic Biodiversity: Role of Biotic and Abiotic Factors and Event Correlation”**

- International Ordovician and Silurian Stratigraphic Scale
- Zonal scales and the problem of their correlation
- Bio- and sedimentary events
- Paleogeographic and paleoclimatologic reconstructions
- Evolution of taxonomic diversity
- Reconstruction of food chains and evolution of trophic structure of communities
- Sedimentary basins and environments
- Chemostratigraphy

**Language**

The official languages of the Conference are English and Russian.

**Registration Fee**

€ 200

**Accommodation**

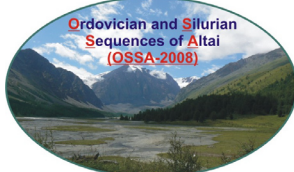
Hotel in Moscow (breakfast included): € 85 per night, single room.

**Social program**

The excursions to the Moscow Kremlin, Armoury Chamber and Diamond Fund.





**SECOND CIRCULAR OF POST- CONFERENCE FIELD EXCURSION**

**ORDOVICIAN-SILURIAN SEQUENCES  
IN THE SOUTH OF WEST SIBERIA  
(KEY SECTIONS AND PALEOGEOGRAPHY, GORNY ALTAI)  
(OSSA-2008)  
June 30 – July 11, 2008**

**Organizers**

Siberian Branch of the Russian Academy of Sciences (SB RAS)  
 Institute of Petroleum Geology and Geophysics, SB RAS (IPGG SB RAS)  
 Paleontological Institute of the Russian Academy of Sciences (PIN RAS)  
 Interdepartmental Stratigraphic Committee of Russia (ISC)  
 IGCP Project 503 – "Ordovician Paleogeography and Paleoclimate"  
 Subcommission on the Ordovician Stratigraphy (SOS) of the International Commission on Stratigraphy  
 Subcommission on the Silurian Stratigraphy (SSS) of the International Commission on Stratigraphy

**Sponsors**

Russian Academy of Sciences  
 Presidium of the Siberian Branch of Russian Academy of Sciences  
 Russian Foundation for Basic Research (RFBR)  
 Scientific Research Program \_ 18 of the Presidium of RAS «The Origin and Evolution of the Biosphere»  
 National IGCP Committee of Russia  
 Siberian Regional Interdepartmental Stratigraphic Committee (SRISC)

**Subjects emphasized in the conference and field trip:**

1. International Ordovician and Silurian Stratigraphic Scale
2. Zonal scales and the problem of their correlation
3. Bio- and sedimentary events
4. Paleogeographic and paleoclimatologic reconstructions
5. Sedimentary basins and environments

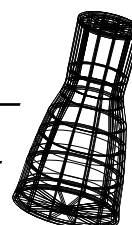
**General schedule** (dates are tentative and could be changed due to the Scientific Committee members propositions)

29.06.08                      Arrival in Novosibirsk, accommodation in the hotel, registration for excursion in the IPGG, brief introductory information.  
 30.06.08 – 11.07.08      Post-Conference Field Trip. Duration – 12 days.  
 12.07.08 – 13.07.08      Departure

**Costs (in Euros)**

Accommodation (hotel in Novosibirsk)                      about 60 Euro (per 1 night and reservation, without breakfast)  
Field excursion                                                              575 Euro  
                          Accommodation in field camps, field meals, transportation, guide book

**Start** of the Field excursion from Novosibirsk. Route from Novosibirsk to the first camp in the North-Western Altai is about 650 km.





**Transport and food**

For transportation in the field there will be the following vehicles: bus, 4WD tracks and jeeps. Excursion costs including food supply (breakfast, lunch packages, dinner, beverages).

**Clothing and field facilities**

You are advised to bring your field boots, warm sweaters, raincoats, swimming suit, caps, hammer and others. Participants will be provided with tents, sleeping bags and other field gear. It is planned to stay in four field camps during the excursion, with distances between camps about 250-450 km.

**Weather conditions**

Novosibirsk is situated in the southern part of West Siberia E89 N55. Typical temperatures in the Gorny Altai are about +20-25<sup>0</sup> C (day), rarely +30<sup>0</sup> C, and +5-15<sup>0</sup> (night). Occasional rain is possible. Heavy dew on the grass in the morning.

**Geographical settings**

Low and medium high mountains, taiga, mountain meadows. Exposures are along the river banks, on the slopes and tops of hills and mountains, in trenches and quarries.

**Geochronology**

All Ordovician and Silurian stages.

Age of most Ordovician stages is dated mainly by graptolites and rarely by conodonts.

Ordovician regional stages (in Russian terminology – horizons) in Altai are established on the basis of graptolites, trilobites and brachiopods.

As to Silurian stages, Rhuddanian, Aeronian, Telychian and Sheinwoodian stages are recognized mainly by graptolites, and in less by conodonts, Homerian and Ludlowian and Pridolian – mainly by trilobites and brachiopods, with few conodonts.

Silurian regional stages (in Russian terminology – horizons) in Altai are established on the basis of graptolites, trilobites and brachiopods.

**Sedimentary types**

- Oceanic
- Shelf

**Rocks:**

1. siliceous-terrigenous,
2. terrigenous,
3. carbonate-terrigenous,
4. carbonate (including reefal)

**Paleogeographycal zones:**

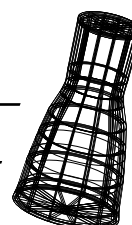
1. near-shore, including rivers' delta front,
2. inner shelf,
3. inner slope of the carbonate platform,
4. central part and outer slope of the carbonate platform,
5. deep-water shelf,
6. continental slope.

**Fossils**

Graptolites, conodonts, chitinozoans, radiolarians, trilobites, brachiopods, gastropods, crinoids, scolecodons, tabulate and rugose corals, bryozoans, algae.

**Cultural program**

1. Kolyvan' stone working factory founded in 1802. World-famous giant ovoid vases from the Remnyov jaspers stored in Paris and Sankt-Petersburg (Hermitage) have been





produced there at the beginning of 19 century. In XX century they have created the mosaic panels decorated Novosibirsk subway stations.

2. Archeological monuments reflected history of ancient Siberian tribes:
  - The Denisova Cave in the Anui River valley is one of the most ancient dwelling places of humans in the Altai Mountains (more than 200 thousand years). It is believed to be evidence for the occupation of this territory by early *Homo sapiens*.
  - Scythians burial mounds. New ways of living and production – nomadic and semi-nomadic cattle breeding become wide-spread at the middle of the 1<sup>st</sup> millennia B.C. on the vast territories from Carpathians to Pacific Ocean. Thus, the early Iron Age or epoch of early nomads has began. These Indo-Europeans-nomads spoken one of the ancient Iranian languages were called Scythians. Most of them lived in Trans-Urals. Unique artifacts of Scythian culture were discovered from the burial mounds in the Gorny Altai. Among them Pazyryk cultural heritage (IV-III centuries B.C.).
3. Teletskoe Lake (“Ataian Baikal”), boat trip. In shape, water and air cleanness Teletskoe Lake resembles Baikal. Extension of the lake is 70 km, its area - 22 300 hectare, with maximum depths 325 m. Altitude is 436 m.

### Medical Care

The participants should have health insurance for the journey. All foreign participants are required to bring with them health insurance contracts, for the time of the trip, from the insurance company that provide international insurance policy program. This information can be obtained from your travel agency. There will be first aid in Novosibirsk, then Barnaul and Gorno-Altai. You should take along necessary medicine.

### Travel and visa information

The Organizing Committee requires about 1,5 month for preparation of the Invitation Letter to obtain VISA and time for posting it by surface mail. Originals of the Invitation Letters will be sent by air-mail in the first half of May.

The participants can get to Novosibirsk directly after the Conference in Moscow (there are several flights a day from Moscow to Novosibirsk), or in case they will participate only in the Field excursion - flight directly to Novosibirsk via Frankfurt am Mine, Hanover, Beijing, Moscow, Sankt Petersburg and Seoul.

**The Third circular** with the additional information on the meeting and iternary of the field excursion will be sent in April.

### Contact address for the conference:

Rozhnov, Sergey: [Rozhnov@paleo.ru](mailto:Rozhnov@paleo.ru)

Kushlina, Veronica: [vkush@paleo.ru](mailto:vkush@paleo.ru)

Paleontological Institute RAS

Profsoyuznaya ul., 123

Moscow, 117997

Russia

Tel. +7 (495) 339 9888, 339 0822

Fax +7 (495) 339 1266

### Contact address for the post-conference excursion:

Obut, Olga: [ObutOT@ipgg.nsc.ru](mailto:ObutOT@ipgg.nsc.ru)

Institute of Petroleum Geology and Geophysics, SB RAS

Acad. Koptuyg av., 3

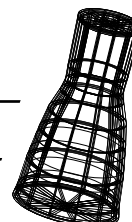
Novosibirsk, 630090

Russia

Tel. +7 (383) 333 2431

Fax +7 (383) 333 2301

**Contact address for all members of Organizing Committee:** [pz-conference@mail.ru](mailto:pz-conference@mail.ru)





## REGISTRATION FORM

**International conference**  
**“DEVELOPMENT OF EARLY PALEOZOIC BIODIVERSITY:**  
**ROLE OF BIOTIC AND ABIOTIC FACTORS, AND EVENT CORRELATION”**  
**(IGCP Project 503), Moscow, Russia, 26 - 28 June, 2008**

**Post- conference field excursion in the Gorny Altai, Russia,**  
**ORDOVICIAN-SILURIAN SEQUENCES**  
**IN THE SOUTH OF WEST SIBERIA**  
**(KEY SECTIONS AND PALEOGEOGRAPHY, GORNY ALTAI)**  
**(OSSA-2008), June 30 – July 11, 2008**

*Please complete and return by 1st April, 2008 by E-Mail to:*  
[pz-conference@mail.ru](mailto:pz-conference@mail.ru) (or [vkush@paleo.ru](mailto:vkush@paleo.ru) ); [ObutOT@ipgg.nsc.ru](mailto:ObutOT@ipgg.nsc.ru)

First name: ..... Family Name: .....  
 Sex: (M/F) .....  
 Institution: .....  
 Address: ..... City: .....  
 State/Province: ..... Country: ..... Postal code .....  
 Phone: ..... Fax: ..... E-mail: .....

**Please indicate your participation:***in conference*

|          |                          |          |                          |           |                          |
|----------|--------------------------|----------|--------------------------|-----------|--------------------------|
| possibly | <input type="checkbox"/> | probably | <input type="checkbox"/> | certainly | <input type="checkbox"/> |
|----------|--------------------------|----------|--------------------------|-----------|--------------------------|

*in field excursion*

|          |                          |          |                          |           |                          |
|----------|--------------------------|----------|--------------------------|-----------|--------------------------|
| possibly | <input type="checkbox"/> | probably | <input type="checkbox"/> | certainly | <input type="checkbox"/> |
|----------|--------------------------|----------|--------------------------|-----------|--------------------------|

**I will submit:**

|                   |                          |
|-------------------|--------------------------|
| Oral presentation | <input type="checkbox"/> |
|-------------------|--------------------------|

Author(s) and title(s): .....  
 .....

*For your oral presentation please specify your requirements:*

|                         |                          |                 |                          |                    |                          |
|-------------------------|--------------------------|-----------------|--------------------------|--------------------|--------------------------|
| PowerPoint presentation | <input type="checkbox"/> | slide projector | <input type="checkbox"/> | overhead projector | <input type="checkbox"/> |
|-------------------------|--------------------------|-----------------|--------------------------|--------------------|--------------------------|

|        |                          |
|--------|--------------------------|
| Poster | <input type="checkbox"/> |
|--------|--------------------------|

Author(s) and title(s): .....  
 .....

**Official invitation needed:**

|     |                          |    |                          |
|-----|--------------------------|----|--------------------------|
| yes | <input type="checkbox"/> | no | <input type="checkbox"/> |
|-----|--------------------------|----|--------------------------|

**I intend to be accompanied:**

|     |                          |    |                          |
|-----|--------------------------|----|--------------------------|
| yes | <input type="checkbox"/> | no | <input type="checkbox"/> |
|-----|--------------------------|----|--------------------------|

Date





Chitinozoan newsletter 27 has been edited by:

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&

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[Thijs.vandenbroucke@UGent.be](mailto:Thijs.vandenbroucke@UGent.be)  
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*Chitinozoan Newsletter 27*