

Acritarch Subcommittee Newsletter



Commission Internationale de la Microflore du Paléozoic
<http://cimp.weebly.com/>

No. 26 March 2011

Chairman's Column

Dear Fellow Acritarch Colleagues,

First of all, I would like to thank Reed for his enthusiasm, patience, and devotion during his eight-year service of chairmanship of the Acritarch Subcommittee of CIMP. Secondly, I want to say, I think being the new chairman of the Acritarch Subcommittee of CIMP is an honor and a challenge for me. I am not sure I will be able to do it as well as my predecessors, but I will try my best to serve this group.

Lastly, I want to thank and congratulate the organizers, Monika Masiak, Marzena Oliwkiewicz-Miklasinska, and Marzena Stempień, for the excellent CIMP 2010 General Meeting in Warsaw. More than 40 people from 19 countries took part in the conference. During three days of scientific sessions (September 14-16), 25 talks concerning Precambrian palynology, Lower and Upper Palaeozoic palynology, taxonomy, and palynological data analysis were presented, as well as 14 posters showing different aspects of Palaeozoic palynology.

The organizers also provided opportunities to enjoy the cuisine and various tourist attractions Poland has to offer. I would not be surprised if some participants who joined the post-conference field trip in the Holy Cross Mountains consider the field trip to be the highlight of their stay in Poland. I am sure that all who attended the excursion were impressed by the good sections, detailed researches, and nice plates of acritarchs.

We all know our group is a small one. But, I am sorry to say, it seems our group is becoming even smaller now. There were about 100 participants at the CIMP 2002 meeting in Lille, France whereas there were only about 40 participants at the CIMP 2010 meeting in Warsaw,

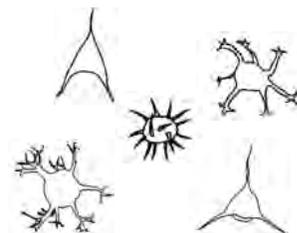
Poland. Some colleagues are retired, some have left us, and some are not as active as before. I appeal to all of my acritarch colleagues: *Please be as active as possible! Please attend meetings and present the results of your research! Please contact and communicate with each other!* The Acritarch Newsletter is an excellent means of staying in touch with the acritarch community. If you have any ideas and suggestions about the organizations please share them with either Sarah or myself.

Is it too early to consider the next CIMP General Meeting-2014? Anyway we should think of that, and we need proposals.

Best Wishes For 2011,

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Special Interests:

- NEW OFFICERS!
- HIGHLIGHTS FROM CIMP 2010, WARSAW
- STUDENT GRANT

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Secretary's Column

Dear Acritarch Colleagues and Friends,

Please accept my apologies for the late publication of this year's newsletter, but I hope that you are pleased with the new style and formatting. Comments and suggestions are always welcome and I look forward to hearing from you throughout the year!

A warm thank you is extended to everyone who sent me submissions. Otherwise, this newsletter would not be so full of news. I am thrilled with the support you have shown the subcommission!

Additionally, may I please encourage you all to continue to *invite* students to join the Acritarch Subcommission and/or CIMP, and to attend the large variety of meetings that are held throughout the year? They will be inspired to see how active our members are!

Sarah de la Rue

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(Attachments up to 25Mb accepted)



Maranhites mosesii
Upper Devonian Itacua Formation,
Bolivia
(Wicander, R., Clayton, G., Marshall,
J.E.A., Troth, I. and Racey, A.
(in press).
Palaeogeography,
Palaeoclimatology,
Palaeoecology)

*The Acritarch
Subcommission
Newsletter welcomes
contributions from
members and non-
members alike. Please
continue to submit
items to your
secretary throughout
the year.*

*The Acritarch
Newsletter is
published yearly and
is distributed to all
CIMP members.*

New Members & Updated Addresses

*New members
to the Acritarch Subcommission
are always welcome!*



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GSA 2011 Topical Sessions of Interest to Palynologists

T2. The Ediacaran Period: Tectonic, Climatic, and Biological Enigmas.

T50. Applications of Bio- and Chemostratigraphy to Sequence Stratigraphy.

T51. Phanerozoic Palynology.

T52. Species and Speciation in the Fossil Record.

T53. The Triassic: Turning Point for Phanerozoic Life.

T54. Multidisciplinary Approaches to Studying the Causes and Consequences of Mass Extinction: Geochemistry, Paleocology, and Paleoenvironments

T55. New Horizons in Precambrian Palynology and Paleobiology

T56. From Organic Detritus to Coal: Tracing the Terrestrial Decomposer Community in Permineralized Peat, Lignite, and Coal

T63. Permian-Triassic Changes and Extinction Event: New Insights from Sedimentary, Geochemical, and Paleobiological Records and Modeling Approaches

I'm sure there are other sessions that will be of interest to you!

<http://www.geosociety.org/meetings/2011/sessions/topical.asp>



Exochoderma sp.
24 μ m, 400x.
Frasnian, Upper Devonian
Illinois Basin, Indiana USA
(Sarah de la Rue, 2010, Implications for an Anoxia-Related Control on Green Algal Distributions at the Frasnian/Famennian Boundary. University of Idaho.
Unpublished Ph.D. dissertation)

Upcoming Meetings & Short Courses 2011-2012

2011

- 31 March - 1 April TMS Silicofossil-Palynology Group Meeting - Tromsø, Norway.
http://www.nhm.ac.uk/hosted_sites/tms/silicopoly2011.htm
- 3 - 8 April EGU, Early Earth: from deep dynamics to surface life - Vienna
<http://meetingorganizer.copernicus.org/EGU2011/session/7145>
- 9 - 13 May 3rd ICCP Training Course in Organic Petrology Gondwana Flavour - Johannesburg, South Africa. www.iccop.org
- 20 - 23 June Industrial Palynology Course, "Applied Palynology or the Oil Industry"- University of Milano, Italy [See flyer at back of newsletter]
- 3 - 8 July XVII ICCP, International Congress on the Carboniferous and Permian - Perth, Australia. <http://www.iccp2011.org>
- 3 - 8 July ORIGINS 2011 - ISSOL with Bioastronomy - Montpellier, France.
<http://www.origins2011.univ-montp2.fr/index.php/scientific-program/>
- 23 - 30 July XVIII IBC2011, International Botanical Congress - Melbourne, Australia. <http://www.ibc2011.com/Default.htm>
- 31 July - 4 August TSOP 28th Annual Meeting (in partnership with CSCOP) - Halifax, Nova Scotia, Canada. www.tsop.org/2011Halifax
- 28 Aug - 2 Sept DINO9 - Liverpool, England. <http://pcwww.liv.ac.uk/~dino9/index.htm>
- 4 - 7 September 44th Annual AASP Palynological Society Meeting (in partnership with TMS & CIMP?) - Southampton, England.
www.palynology.org/meetings.html
- 7 - 9 September 63rd ICCP Annual Meeting & Training Course on Dispersed Organic Matter - Porto, Portugal. www.iccop.org
- 7 - 9 September Pan-European Correlation of the Triassic 8th International Field Workshop (Permian-Triassic Boundary workshop) - Toulon, France.
<http://paleo.cortland.edu/sts/>
- 15 - 23 September 6th International Conference EMMM-2011, Environmental Micropaleontology, Microbiology & Meiobenthology (including palynology with Peta Mudie, CGS) - Moscow & St. Petersburg, Russia.
www.paleo.ru/EMMM-2011
- 9 - 12 October Geological Society of America (GSA) Annual Meeting - Minneapolis, Minnesota, USA. www.geosociety.org/meetings/2011/

2012

- 23 - 30 August IPC XIII / IOPC IX 2012 - Tokyo, Japan.
<http://wwwsoc.nii.ac.jp/psj3/ipc13japan/IPC-IOPC/index.html>

Circulars for meetings and short courses can be found
 at the back of the newsletter



Pollen Notes Of Interest...(yes, that's right... "pollen"!)



Jonathan Drori, director at Changing Media Ltd., a media and education consultancy, and is a visiting professor at University of Bristol.

http://www.ted.com/speakers/jonathan_drori.html

Presenting a talk on pollen
to a room full of
non-palynologists
soon?

Watch
Jonathan Drori's
attention-grabbing video
«*Every pollen grain has a story*»:

http://www.ted.com/talks/jonathan_drori_every_pollen_grain_has_a_story.html

Do you use silicone oil
for slide-making purposes?

You may want to review the newest article on
the preservation of pollen grains,
or the lack thereof, in silicone oil:

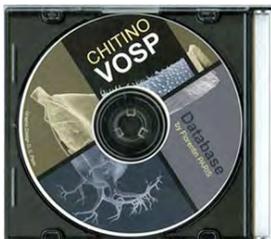
Cushing, E.J., 2011. Longevity of reference slides
of pollen mounted in silicone oil. *Review of Palaeobotany and Palynology*, Vol. 164, (1-2), pp. 121-131.

Milestones

Dear Acritarch Readers,

I am not exactly an acritarch worker, even if some 40 years ago I started my career on Ordovician acritarchs!

I retired recently and I used my spare time to complete a database on the chitinozoans. This is not of course the scope of your newsletter but acritarch researchers may observe chitinozoans in their palynological slides, and thus they can be interested to have a broad but rapid idea on the encountered chitinozoans. Consequently I submit the attached flyer.



<http://www.geosciences.univ-rennes1.fr/spip.php?article1093>

Please note my new E-mail address as I am no longer at Rennes University:

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Best wishes, and Happy New Year

Florentin Paris

--
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<http://www.geosciences.univ-rennes1.fr/spip.php?rubrique36>

CHITINO VOSP

**a database recording the
chitinozoans species (by F. Paris)**

A new version of **CHITINO VOSP** database exists now in English. This database recording all the chitinozoan species described since the first taxonomic paper on the group by Eisenack (1931) is available as a CD (see photo).

It may be of some help for chitinozoans workers. It should be also useful for Palaeozoic palynologists not very familiar with the chitinozoan group, but wanting to have a broad idea on chitinozoans they encounter in their palynological preparations.

CHITINO VOSP runs on FileMaker Pro™ software. It includes an illustration of the holotype of most of the 1240 species and subspecies recorded so far in the group. It contains taxonomic information (species, sub-species, genus, updated generic assignment) and bibliographic data (author(s), year of description of the taxon and the related full reference, including the figure numbers of the type material).

Other helpful data concerning the chronostratigraphy (range of the species by System, Series and Stages, as well as its FAD and LAD when accurately known) and the palaeogeographical location (locality/country and palaeoplate) of the recorded species are also provided.

This database gives therefore an easy and immediate access to the main information concerning the chitinozoans.

**Terms and condition of sale for academic
researchers (500 €),
or for industrial utilization (1500 €),
can be obtained from
"Creation Graphic"
by E-mail: oliv-chang.paris@orange.fr**

Highlights from the General CIMP 2010 Warsaw Meeting

The last CIMP General Meeting 2010 was held in Warsaw, Poland from September 13, 2010 to September 16, 2010. The organizers of CIMP 2010 were the Institute of Geological Sciences of the Polish Academy of Sciences, the Polish Geological Institute – National Research Institute and the **Institute of Geological Sciences of the Wrocław University**. The conference venue was the Kyriad Prestige Hotel as well as the conference room of the Institute of Geological Sciences, Polish Academy of Sciences, where the ice-breaking party and microscopic workshop were held. Because the Warsaw meeting was the third important conference of the Palaeozoic palynology this year (first was IPC3 in London, second was 8th EPPC in Budapest) the organizers were afraid of the scarcity of participants. But finally, more than forty active members from twenty countries (Belgium, China, Czech Republic, France, Germany, Great Britain, India, Iran, Ireland, Italy, Norway, Oman, Pakistan, Poland, Portugal, Russia, Saudi Arabia, Spain, Sweden, United States) attended the CIMP 2010 meeting. A full list of participants with affiliations and e-mail addresses is available at the conference website: http://www.ing.pan.pl/CIMP-2010/Graph_Attach/CIMP-2010_list.pdf



*Group Photo
CIMP 2010 Warsaw!*

The theme of CIMP Warsaw 2010 was „Palynology and its possibilities: record of climate and environmental changes”, but the program was open to all Palaeozoic and even Precambrian palynology topics. The scientific meeting began at the civilized hour of 10 am with the opening ceremony conducted by the

Director of the Institute of Geological Sciences PAS Prof. Marek Lewandowski, CIMP President John E. Marshall and one of the **CIMP “fathers of founders” - Prof. Maurice Streel from Liège University**.

During three days of scientific sessions 25 talks were given in all (6 concerning acritarcha) and 14 posters (7 concerning acritarcha) were presented at Tuesday 14th September, afternoon session. The venue consisted of two morning sessions and one or two afternoon sessions each day,



with two to four talks per session. The conveners of the scientific sessions were John E. Marshall, Maurice Streel, Kenneth Higgs, Patricia Gensel and Charles H. Wellman. After the opening ceremony two invited talks were presented:

“Acritarchs: a fresh look at the old stuff” by Prof. Józef Kaźmierczak from the Institute of Palaeobiology PAS (co-author dr **Barbara Kremer**), and *“Palynological data analysis - modern methods and how to use them”* by dr Øyvind Hammer from the Natural History Museum of the Oslo University.

In the scientific sessions dedicated to Precambrian, Lower Palaeozoic, Upper Palaeozoic and taxonomy, the following acritarcha-oriented talks were presented:

Małgorzata Moczydłowska-Vidal - *Proterozoic acritarchs and divergences of green algae.*

Monika Jachowicz-Zdanowska - *Palynological investigations of the Proterozoic-Cambrian succession in the Małopolska lok (southern Poland).*

Brian E. Pedder - *Large spinose acritarchs (LSAs) from Cambrian Laurentian sediments in the USA.*

Mohammad Ghavidel-syooki - *Biostratigraphy and Paleogeography of Ordovician Strata in Kabirkuh well #1, in Lurestan area, Southwestern Iran.*

Mutasam Al-Ghamman - *Ordovician-Silurian palynology of Oman.*

Abstracts of talks and posters are available as a pdf file on the conference website: http://www.ing.pan.pl/CIMP-2010/Graph_Attach/CIMP-2010_abstract%20.pdf

Highlights from the General CIMP 2010 Warsaw Meeting - Cont'd

The last conference session was dedicated to the CIMP Business Meeting and was held on 15th September, at 11:00 in the Kyriad Prestige Hotel. The Past President John E. Marshall acted in roles of the Secretary and Treasurer who were unavoidably absent from the meeting. The Secretary was thanked for continuing to produce 2 CIMP Newsletters a year. Mike Stephenson was also formally thanked for his contribution as a past Secretary until 2008. Philippe Steemans produced an entertaining **Treasurer's report, presented by John E. Marshall.** The Treasurer also reported that he wished to relinquish the CIMP Webmaster role. So, volunteers are directed to the CIMP Secretary, and the new or past President or Treasurer, who can explain what is involved with those positions.

Pollen/Spore Subcommittee Report was given by Zélia Peria. She reported two successful meetings held in Lisbon (2007) with 50 attendees and Faro (2009, organised by Paulo Fernandes) with 35 including 15 on a 2 day fieldtrip. Zélia thanked Marco Vecoli for his contribution as secretary. He is being succeeded by Hartmut Jäger. The assembled group applauded Zélia for her efforts on behalf of the Spore/Pollen Subcommittee.

Acritarch Subcommittee Report wasn't given because Reed Wicander was absent in Warsaw, having been delayed en route to the airport by a traffic accident (Reed was only in the traffic jam, not the accident) that caused him to miss his flight. Jun Li is incoming Acritarch Chair, with Sarah de la Rue as Secretary. Catherine Duggan was thanked for taking on the role of Secretary until 2010.

Chitinozoan Subcommittee Report was given by Thijs Vandenbroucke. Ken Dorning was thanked as retiring Chair from the Subcommittee. He has served for some 12 years as both Chair and Secretary.

There was also discussion concerning the CIMP activity in the future conferences (IPC in Tokyo, IGCP 503 (mostly Silurian) in Ghent/Liege, the next European Palaeobotanical meeting in northern Italy in 2014). The President then reported that AASP was meeting in 2011 in Southampton, England (4th-7th September), with a Palaeozoic session.

The search was on for a new President, with candidacies of Gary Mullins, Marco Vecoli and Reed Wicander (finally, the new CIMP President is Marco Vecoli). Later there was a time for any other business, like discussion about CIMP activity. John Marshall noted that CIMP members met three times in 2010: at the EUG in Strasbourg (Marco Vecoli) and the other IPC in London (John Marshall), and at the Warsaw General Meeting. At the IPC3 there were many more Palaeozoic palynology presentations by CIMP members outside the CIMP session. It was noted that it was activity, not size, that counted. The request for a new webmaster was reiterated. The organisers reminded the CIMP members that there was a possibility to publish a conference volume in *Geological Quarterly*. Jiri Bek reported that the IFPS Counsellor is Zélia Pereira. Number of councillors has dropped from 2 to 1 as there are now less than 200 paid up IFPS members. Finally thanks were given to the local CIMP 2010 organisers.

During the conference, lunches were provided at Karczma Zachcianek serving typical Polish cuisine as well as vegetarian meals. Quite long lunch breaks (1.5-2 hours) as well as the Gala Dinner on Tuesday 14th September, at the charming Halka Restaurant allowed fruitful discussions between the CIMP 2010 attendees.

*Gala Dinner -
photos by
Gilda Lopez*



*Acritarcha workers
from China & India*

Because the CIMP 2010 in Warsaw was the first opportunity for many participants to visit Poland, the organizers tried to present the guests with the Warsaw touristic attractions during a

Highlights from the General CIMP 2010 Warsaw Meeting - Cont'd

sight-seeing guided tour. This last event was very successful although cold and rainy weather prevailed, thanks to the *young guide* who spoke many languages and told very interesting tales about the history and monuments of Warsaw.



Lunch-time participants:

Top left- Mohammad Ghavidel-syooki, and Marzena Oliwkiewicz-Miklasinska and daughter Ola.

Bottom right- Polish acritarcha and miospore workers: (from left) Zbigniew Szczepanik, Anna Gorecka-Nowak, Monika Jachowicz-Zdanowska, Teodoro Palacios, & Malgorzata Moczydlowska-Vidal.

On Friday 16th September, the workshop was held during the last day of CIMP meeting in the conference room of the Institute of Geological Sciences PAS, with two microscopic sessions separated by a multimedial presentation of the newest NIKON equipment. The workshop allowed individual consultations on microscope slides and fruitful discussions concerning taxonomy, palynomorphs' state of preservation and laboratory methods.

Afternoon Friday 16th September, some of the attendees went on the post-conference field trip to the Holy Cross Mountains. The participants represented a small, but varied international group (Belgian, Chinese, English, German, Indian, Irish, Polish and Russian). The main organisational effort of this field trip was made by the team from the Polish Geological Institute – National Research Institute (PGI- NRI), Holy Cross Mountain Branch in Kielce (Wiesław Trela, Zbigniew Szczepanik, Anna Fijałkowska-Mader, Jan Malec) and Upper Silesia Branch (Monika Jachowicz-Zdanowska). They guided the most stops of the Palaeozoic outcrops and quarries. During the first day of the field trip the participants visited big, operating quarries in **Wiśniówka Duża, Bukowa Góra and Kowala, with Cambrian sandstones and Devonian carbonate rocks, and a small quarry in Kajetanów with Permian limestones.**

The **Wiśniówka Duża quarry** was the interesting place for the acritarcha specialists, with the excellent presentation of the Cambrian acritarcha assemblages made by Zbigniew Szczepanik. Afternoon was dedicated to visiting PGI- NRI geological museum in Kielce, as well as a cored collection of the Proterozoic and Lower Palaeozoic deposits from the boreholes drilled on the **Upper Silesia and Małopolska Blocks.** **Monika Jachowicz-Zdanowska, Zbigniew Szczepanik and Wiesław Trela** presented the lithology and palynology of these deposits, with numerous, excellently preserved and taxonomically diversified acritarchs illustrated on many plates.

The next „acritarcha-admirers” day, Saturday 18th September, was dedicated to the natural outcrops of Cambrian, Ordovician and Silurian in Zbelutka, Zalesie Górne and Bardo, with impressive, full of fossils profile of the Prągowiec ravine.

The acritarcha workers Zbigniew Szczepanik and Monika Masiak

Highlights from the General CIMP 2010 Warsaw Meeting - Cont'd

were the main guides this day, with great help from Wiesław Trela who presented the regional geology and sedimentology of the outcrops. Finally, a visit to the Holy Cross Monastery and looking at the Pleistocene peri-glacial boulder cover at Łysa Góra (Bald Mount), followed by the taking of the group photo concluded the end of this very active day.



Wiśniówka Duża quarry



Zachemnie quarry

The next stop was the abandoned Czerwona Góra quarry with Permian conglomerates, which participants saw in Warsaw (Sigismundus Pillar on Castle Square) and on the walls of the PGI-NRI geological museum in Kielce. The last stop of the field trip was the Archeological Museum and Reserve at Krzemionki. It is Europe's largest complex of flint mines. The mining field in Krzemionki is located in an area of Jurassic (Upper Oxfordian) limestone outcrops in a syncline edge, with



Group Photo at
Łysa Góra
(Swietokrzyskie Mountains)

Highlights - Cont'd

perfectly preserved ground landscape and underground structure. More information is available at website:

http://www.en.krzemionki.pl/index_x.php

During the three-day field trip, the participants had the opportunity to admire the tourist attractions of the Holy Cross Mountains, like Chęciny Castle, Holy Cross Monastery, ancient axis cult remains on Łysa Góra, Kadzielnia amphitheatre, and the Bishop Palace in Kielce. The field programme with photos and guidebook pdf file are on the website:

http://www.ing.pan.pl/CIMP-2010/index_cimp.htm

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[Unless otherwise noted, all photos are courtesy of Marzena Stempien-salek.]

Members' Forum

Student Theses

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During the past year, I studied at the Research Units of Palaeontology at Ghent University under the supervision of Jacques Verniers and Thijs vandenbroucke. I worked on the Late Tremadocian chitinozoans from the Nanba Section, South China. The Nanba section, in which graptolite biozones have been well-established, provides an opportunity for the calibration between the earliest chitinozoan biozones versus graptolite biozones.

This year, with the guidance of Marco Vecoli and Jun Li, I

am trying to establish a cross correlated acritarch–chitinozoan–graptolite biozonation in the Tremadocian for the Jiangnan slope region in South China Terrence.

Members' Research

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Aurélien Delabroye defended his PhD thesis in Lille on March 2010 (France) on acritarch dynamics across the Ordovician–Silurian boundary. Several papers from his manuscript are currently in press or have been submitted. Now, working at the GET (Géosciences Environnement Toulouse) since September as a teaching assistant in Palaeontology, he focuses on the problematical "Late Palaeozoic Phytoplankton Blackout" with his colleague, Dr Markus Aretz.

Sarah de la Rue

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I successfully defended my PhD dissertation at the University of Idaho, USA, in May 2010. My research concerned the relationship between the timing of anoxia, intensity of stratification, and prasinophyte optimal growth strategies in high- and low-latitude basins across the Frasnian–Famennian Upper Devonian stage boundary. Papers based on my research are in various stages of completion. I could not attend the 3rd IPC meeting in London this past summer but a colleague of mine presented our talk [see the Members' Publications section beginning page 15.] Currently I am teaching and searching for my optimal job position!

ABSTRACT OF DISSERTATION

IMPLICATIONS FOR AN ANOXIA-RELATED CONTROL ON GREEN ALGAL DISTRIBUTIONS AT THE LATE DEVONIAN FRASNIAN / FAMENNIAN BOUNDARY

Two Upper Devonian thermally-immature shale successions of the Illinois (Laurentia) and Madre de Dios (Western Gondwana) basins were investigated with a suite of biogeochemical proxies (palynology, $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and trace elements) to

Members' Forum - Cont'd

determine the growth environment of organic-walled phytoplankton in the basins. Results from this high-resolution study show that sea-level rise in the intracratonic basins initiated stratification of the water masses with oxygen-depleted bottom waters, resulting in organic-carbon rich mud deposition. Anoxic bottom-waters brought about significant changes in sea-water chemistry by modifying the distributions and concentrations of redox-sensitive macro- and trace elements in the water column. Abiotic and biotic remineralization processes increased the concentrations of P, NH_4^+ , Cu, and Ni in the water column, allowing them to become available for use by phytoplankton.

The consequence of this change in sea-water chemistry, following the onset of anoxia, was a shift in the dominant components of the surface-water phytoplankton assemblages (from acritarchs to green algae), an increase in the cell size of the prasinophycean green alga *Tasmanites* (to > 300 μm), and the absence of all but the most cosmopolitan of acritarch species, e.g., *Michystridium*. Often cited as a 'disaster' or 'opportunistic' species following extinction events, *Tasmanites* is instead considered a biotic proxy for anoxia and a resource or "bottom-up" control on biomass flow. Oligotrophic waters with large pools of reduced nitrogen (specifically, ammonium [NH_4^+]) promoted an optimal growth environment for prasinophytes whose modern representatives have large cellular quotas for reduced nitrogen. Cell growth in acritarchs was inhibited by heavy metal toxicity due to low cellular quotas for select nutrients not normally found in large quantities.

The inference of competition between algal types is less a relevant argument when inherent species-specific metabolic pathways, bio-limiting intracellular elemental quotas, and genetic tolerances to physical parameters (turbulence and UV irradiance) appear to be a more compelling explanation for the palynofloral turnover. Partially restricted water masses and unique geochemistry fostered prolonged stability and suitable environment for green algal dominance, optimal growth and biomass production. Sea-level change would trigger a return to previously oxygenated conditions.

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I am still working on Devonian and Carboniferous rocks material from the Upper Silesian Block, the Małopolska Block and the Holy Cross Mountains; southern Poland) and lately I started work on the Upper Silurian and Lower Devonian boundary (material from the Podolia, Ukraine; but it is just a beginning). A list of articles are included [see Members' Publications section]; these are not strictly devoted to acritarcha but in some way are connected with them.

I wish you a peaceful, good and successful year in 2011.

Kathleen Grey

Chief Paleontologist

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Acritarch studies have taken a bit of a back seat recently as I concentrate on other projects. The management plan for some of Western Australia's most vulnerable and significant geoheritage sites was finally completed. Two papers on *Horodyskia* (the enigmatic string of beads fossils), abundant in the Mesoproterozoic Backdoor and Stag Arrow Formations of the Bangemall Supergroup and now recognized in northern Tasmania, were published. Stan Awramik (UCSB) and I have been working on a microbialite handbook. The text is now nearly complete and I am in midst of the monumental task of assembling illustrations of descriptive methods and terminology from selected photos taken from our combined eighty years of study of stromatolites and other microbialites.

One of my main focuses this year has been on databases. One database will document all fossils in the Geological Survey of Western Australia collection (some 14 000 records) and will include a large collection of palynology samples. Data capture is time-consuming, especially when it comes to determining site coordinates. It is amazing how few drillholes have ever had their locations properly recorded. The other database covers stromatolites, acritarchs and microfossils mainly from the Precambrian in Western Australia, and now contains nearly 1800 records.

In between all this, I continue working on a detailed subdivision of the Australian Neoproterozoic using chert microfossils, palynology and stromatolites.

Members' Forum - Cont'd

Emmanuelle Javaux

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I am a professor at the university of Liège (Belgium), head of the PPM (Paleobotany, Paleopalynology and Micropaleontology) research unit and chair of the Geology Department. Several axes of research are developed in the lab regarding the evolution of the marine and terrestrial biosphere, mostly in the Precambrian and lower Paleozoic, but also in Tertiary and Quaternary deposits. My research interests include Precambrian geobiology (early eukaryote evolution, cyanobacteria evolution and microbial mats in siliciclastics) and astrobiology. In order to determine the biological affinities of acritarchs and filamentous organic-walled microfossils, my collaborators and I combine microscopic, micro-chemical and ultrastructural analyses of single microfossils with information from the geological context and molecular biology. This multidisciplinary approach aims to improve our understanding of the early biosphere evolution in relation with environmental and ecological changes.

Last year, Andrey Bekker (Univ Manitoba), Craig Marshall (Univ Kansas) and I reported the discovery of large (up to 300 µm) acritarchs from the 3.2 Ga marine shallow-water Moodies Group, BGB, South Africa (Javaux et al, Nature 2010, 463, 934-938). I have also contributed to the study of 2.1 Ga pyritized remains of complex microbial colonies discovered by Abder El Albani in the Francevillian of Gabon (El Albani et al, Nature 2010, 466, 100-104). With Philippe Steemans and Kevin Lepot, researchers in my lab, and other colleagues, we have used infrared spectroscopy to characterize the chemical composition of Silurian cryptospores from Gotland, Sweden (Steenmans et al 2010, RPP 162, 577-590). Recently, I reviewed the record of early eukaryotes in Precambrian oceans and proposed a three steps-pattern for their evolution (Javaux EJ, 2011, In: Gargaud, M, P Lopez-Garcia, H Martin (Eds): Origin of Life: an astrobiology perspective. Cambridge University Press). Concerning the field of Astrobiology, a review paper discussing the

geobiology and geodynamic aspects of habitability was published recently (Javaux EJ and Dehant V. 2010. Astronomy & Astrophysics Reviews 18, 383-416) and I am field editor of the Encyclopedia of Astrobiology, that will be printed in June 2011 (Gargaud, M., et al (Eds.), Springer. 1600 p).

Among ongoing studies, I am participating in the FAR-DEEP project, an international intracontinental deep drilling in Russia aiming to characterize the Archean-Paleoproterozoic boundary (a chapter on paleoproterozoic microfossils is in press; Javaux EJ, et al, In: Melezhik V, Lepland A, Strauss H, the FAR DEEP project, Springer). I am also PI of a 4 year FRFC (Belgian National Funds for Research) project on the Fossilisation of cyanobacteria: phylogenetic, micropaleontological and sedimentological approaches, and implications for early biosphere evolution. K Lepot has a 3 year postdoctoral position in my lab to work on this project and on nanoscale analyses of Precambrian microorganisms, for which he will spend a year at Madison University. P Gerrienne, paleobotanist in the lab, and I are co-I of a another FRFC led by a ULg geochemist N Fagel (PI) on paleoenvironmental changes in Holocene peat bogs of the Haute-Fagnes (Belgium). I am also participating on a CAB (Centro de Astrobiologia)-lead project (identification of potential habitats for life on Early Mars using recent planetary data, terrestrial analogs and experimental modeling); and working on Proterozoic acritarch assemblages from various areas of Africa.

Working on early life evolution is fascinating! I am always looking for highly motivated PhD students and postdocs, interested in the topics above. Please do not hesitate to contact me!

Alain Le Hérisse

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I am still active in the study of organic-walled microphytoplankton and related forms from the Ordovician to upper Devonian, of western and north Gondwana, middle East and Baltica. Recent papers provide an idea about some of the efficient and friendly collaborations of the past two years. [See

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Members' Publications section.]

A long time has been devoted to the proposal of a paly-nostratigraphy for the Devonian of Bolivia, and the Amazon and Parana Basins in Brazil. This concerned the PHD of M. Perez-Leyton and a collaboration with TOTAL for a part, but also a continuous collaboration with PETROBRAS. These studies are extended now for the next three years to the basins north of Brazil. Some results have been presented to the 4th French Congress on Stratigraphy STRATI 2010, Paris, August 30-September 2.

Main papers in preparation concern: the Upper Ordovician of Saudi Arabia (in collaboration with M. Al Ruwaili, M. Miller and S. Molyneux); the Ordovician/Silurian boundary of Chad (in collaboration with F. Paris and P. Steemans); the Ordovician/Silurian boundary of the Sbaa basin, Algeria (in collaboration with E. Portier GDF-Suez, F. Paris and B. Videt); the upper Ordovician of the Northeast Algeria and comparisons with sections of Morocco and Mauritania; the upper Devonian of the Amazon basin (in collaboration with J.H.G. Melo and R. Rodriguez, Petrobras); and a Paly-nozonation of the Devonian of Bolivia (in collaboration with J.H.G. Melo). It can also be mentioned the synergy biogeochemistry and palynology, developed in collaboration with E. Javaux, P. Steemans of Liege, Belgium, and C. Marshall, University of Kansas, Lawrence, USA, using non-diagenetic material of acritarchs. We have finished at this time the revision of *Arpylorus antiquus*, the end of a myth as proto-dinoflagellate, with E. Masure, Paris VI, France, E. Javaux and C. Marshall.

Recent research revisits the global evaluation of the acritarch biodiversification from the Ordovician/Silurian boundary up to the upper Silurian in the Gotland succession of Sweden. The specificities of the group Acritarch are examined with relation to biological, isotopic, climatic and oceanological events (a first re-evaluation for the upper Silurian of Gotland was discussed in the paper of 2009, in collaboration with R. Wicander, K. Dorning and G. Mullins).

In 2010 I have also been working for the "Lange commemorial volume", with Yngve Grahn and other colleagues from Brazil.

All my best wishes for research and the new year.

Leonard Olaru

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I have been a member of APLF-France and CIMP since 1980, and a professor at the university since 1961. In 2004, I became Professor Emeritus. My scientific specialization is palynology and palynostratigraphy of Proterozoic and Paleozoic metamorphic formations from the East Carpathians and North Dobrogea County in Romania. Originally, I analyzed Quaternary-age palynological deposits, then began working with Neogene deposits from the Moldavian Platform of Romania, which is part of the reat East European Platform). My work later ventured into Paleogene flysch deposits from the East Carpathians. I am now working on correlating the Proterozoic and Paleozoic sedimentary formations (which contain trilobite, graptolite, and conodont assemblages) from the East European Platform with those sedimentary and metamorphic formations in Romania, which lack fossil assemblages.

All of my scientific results have been published in scientific Romanian and foreign journals. Recently (2008) I published the "Palynology and palynostratigraphy of sedimentary and metamorphic formations of Romania", Editura Universitatii "Al.I.Cuza" Iasi (Vol. I, 806 pg) which represents the partial results of my work. I hope to publish Volume no.2 this year. Also I plan to publish my scientific results in a special monograph concerning the palynology and palynostatigraphy of the East Carpathians of Romania.

Best wishes.

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This year I mainly continue research on the early Ediacaran acritarchs from the East European and Siberian platforms.

First, (together with Natasha Vorob'eva GIN RAS and Andrew Knoll, Harvard University, USA) the Pertatataka-like organic-walled microfossil assemblage from the Ura Formation of the south-east margin of the Siberian platform has been described in detail, and a complete list and palaeontological description of the fossil microorganism taxa were provided. The so-called Ediacaran Complex Acanthomorph Palynoflora (ECAP) contains abundant and taxonomically diverse acanthomorph acritarchs that earlier were described from the Lower Ediacaran (Vendian) deposits of Australia, the East European Platform, China and some other localities, but these taxa are unknown in Riphean rocks. The finds of ECAP acritarchs in the Upper Precambrian deposits of the Baikal-Patom Uplift (the Patom Supergroup), which were earlier believed to be Middle – Upper Riphean (Tonian-Cryogenian) in age or considered to be a special regional Riphean unit named Baikalian, have now drastically changed the stratigraphic interpretation of the Siberian platform sedimentary succession. The Ura microbiota contains 38 taxa (including one new genus and two new species, as well as five forms described informally) belonging to 24 genera of acanthomorph and sphaeromorph acritarchs, and filamentous and coccoidal microfossils which are microscopic remains of eukaryotes and prokaryotes.

Second, (together with D.T. Johnston, A.H. Knoll, D.P. Schrag, Harvard University, USA; S.W. Poulton, T. Goldberg, Newcastle University, UK; A. Bekker, University of Manitoba, Canada; Natasha Vorob'eva, GIN RAS; V. Podkovyrov, Institute of Precambrian Geology and Geochronology, Sanct-Petersburgh, Russia) acritarchs ECAP are interpreted as diapause egg cysts, and their appearance in the Lower Ediacaran is explained as a result of a significant increase of atmospheric oxygen by the end of Proterozoic (Nursall, 1959, Cloud and Drake, 1968, Raff and Raff, 1970).

Diapause egg cysts were formed by animals able to survive the unfavorable conditions of the Lower Ediacaran (Vendian) while development of well-aerated basins in the Late Ediacaran resulted in a significant increase in Metazoan diversity (Cohen et al., 2009). This hypothesis was recently tested by new data on iron speciation chemistry used to characterize geochemical envir-

onments of the Kel'tminskya-1 borehole succession from the East European platform passive margin, and supplemented with stable carbon and sulphur isotopic analyses. The ECAP assemblage has previously been described in detail (the Kel'tma microbiota; Vorob'eva et al., 2006, 2007, 2008, 2009 a, b).

During the next year I am planning to concentrate mainly on a joint Indo-Russian monograph, with the Indian scientists Mukund Sharma and Yogmaya Shukla, BSIP, Lucknow, India, describing the taxonomy and classification of Proterozoic cyanobacteria. The work was conducted during a joint ILTP-RAS research program and the monograph is to be completed and probably submitted to the press next year. The purpose of the monograph is to join together all data describing the majority of the taxa of Proterozoic cyanobacteria currently used in the palaeobiological research of ancient microorganisms that have survived numerous taxonomic revisions. The work could be of significant interest not only for researchers working in the field of Precambrian paleobiology, but also for microbiologists studying modern cyanobacteria and other relict prokaryotic communities. The monograph will be of interest, as well, to paleontologists and stratigraphers who have broader interests and who have been keeping a keen eye on research concerning Proterozoic paleontology.

In general, the problem with the classification of Proterozoic cyanobacteria is similar to the situation when numerous taxa of modern cyanophyceae were first described, but then their number was reduced significantly due to subsequent revisions. Cyanobacteria demonstrate quite complicated life cycles that should be reconstructed for both modern and fossil forms. Moreover, fossilized microorganisms that suffered significant post-mortem alteration that often significantly changed their morphology has complicated this reconstruction of life cycles and making a synthesis of all observed microscopic fossils.

The monograph contains descriptions of genera, as well as a discussion of their type, and of some other very important species. The information concerning other species (size, type specimen, distribution, and so on) is given in a table as an attachment to all described genera. All valid taxa described from the

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Proterozoic microbiota are incorporated in this monograph and problematic remains of Archean cyanobacteria are not included because their true biogenic origin is still uncertain and disputed. The illustrated material came mainly from the reference sections of North Eurasia and India.

Thomas Servais

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Thomas Servais (Lille) is currently head of the department of geology and palaeontology of the University Lille1, France. After having been president of the associations of French palynologists (2005-2009) and the French palaeontologists (2007-2009), and after having served as Vice-President of the Palaeontological Association (2009-2010), Thomas is currently (2008-2012) President of the International Federation of Palynological Associations (IFPS), that will organise the next IPC at Tokyo in summer 2012, and a vice-president of the International Paleontological Association (IPA) from 2010 to 2014.

In the moments that are not occupied with administration, scientific work partly concerns studies on acritarchs, based on several projects. Studies on taxonomy and biostratigraphy on Chinese Ordovician acritarchs continues with Yan Kui and Li Jun (Nanjing). The dataset of Baltic Ordovician acritarchs was published in 2010 (Hints et al.) showing a diversity of the phytoplankton that was very similar to that of marine invertebrates. Other papers published or in preparation concern the importance of the radiation of Lower Palaeozoic acritarchs during the Ordovician biodiversification (Ordovician plankton revolution), but also the Devonian nekton revolution (Klug et al., 2010).

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Due to the day job, 2010 was a quiet year with respect to research. The first paper summarizing some of the work John

Marshall and I have been doing in Bolivia (Troth *et al.* 2010: Devonian sea-level change in Bolivia: A high palaeolatitude biostratigraphical calibration of the global sea-level curve) was accepted by P3 and is currently in press. The paper will be part of an upcoming special volume on Mid Devonian sea-level changes.

Sadly, I didn't get time to do any fieldwork in Bolivia last year. However, whilst driving from Brazil to Chile, I managed to make a short detour to look at the Devonian Zorritas Formation just south of the Salar de Atacama in northern Chile. A bit of logging and sampling was a welcome distraction from driving. Thanks to Hans Niemeyer from UCN in Antofagasta for his help while I was in Chile.

This year's plans are to keep busy with some more fieldwork in South America and writing up the Bolivian material.

SEBASTIAN WILLMAN

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My research continues to focus on Australian acritarchs from the Ediacaran but, although I am still working at Uppsala University, I am now employed as a coordinator for an EU-funded geo-tourism project and not a researcher. In the geo-tourism project we are trying to show our geological heritage to the interested public in the form of books and video films. At the moment we have published four books which are available for free download at the project website to those who might be interested (<http://www.centralbalticgeotourism.eu/>). Expect two more books in the coming year!

When I find time I will return to working with the acritarchs.

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My interests continue to involve Devonian and Ordovician ,

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acritarchs. A joint study with Geoff Clayton, John Marshall, Ian Troth, and Andrew Racey on an Upper Devonian palynomorph assemblage from Bolivia and its implications for South American glaciation during the Late Devonian was completed and submitted for publication.

I will be on sabbatical during the 2011-2012 academic year. During this time I will be working on a variety of projects, one of which will be a joint study with Dr. Geoff Playford at the University of Queensland involving several sections from Upper Devonian North American localities.

I must also admit that I don't miss sending out reminder emails to everyone to contribute to the Newsletter. I hope Jun Li and Sarah de la Rue are extremely successful in getting lots of contributions for this issue of the Newsletter, and I wish them the best during their tenure as Chairman and Secretary respectively of the Acritarch Subcommittee.

Kui Yan

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I mainly worked on Ordovician acritarchs this year. I continuously worked with Thomas Servais in Lille University until July 1st, 2010, on the acritarch diversity pattern preserved in South China. I attended the 3rd International Palaeontological Congress in London this past June-July, and CIMP2010 in Warsaw this past September. I am now working on the systematics of some acritarch taxon, such as *Barakella*. I am also concentrating on the acritarch biostratigraphy of South China and its global correlation potential during the Ordovician.

Kui Yan

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I continue to study on microfossils (including organic-

walled acritarchs) from Proterozoic and early Paleozoic strata of China. In the summer of this year, I would like to participate "The 16th Field Conference of the Cambrian Stage Subdivision Working Group, International Subcommittee on Cambrian Stratigraphy Southwest United Stage". The abstract of a paper, which will publish in the latter half of the year, is attached as follows:

DIVERSE SMALL SPINOSE ACRITARCHS FROM THE EDIACARAN DOUSHANTUO FORMATION, SOUTH CHINA

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Abstract

The Ediacaran Doushantuo Formation in South China is underlain by the Cryogenian Nantuo Formation (glacial rocks) and overlain by the late Ediacaran Dengying Formation. It is characterized by well-preserved, large (normally > 100 µm in size) spinose acritarchs (LSAs), which have been shown to be probably the only useful biostratigraphic tool for the global correlation of the early- and middle-Ediacaran. Acritarchs are organic microfossils normally known as single-celled eukaryotic organisms (protists). Although recent research suggests that some large spinose acritarchs may represent diapause egg cysts of metazoans, the biological affinities of the Ediacaran spinose acritarchs, especially for those displaying remarkable size ranges, are still debatable.

Recently, smaller specimens of the Ediacaran spinose acritarchs have been found in cherts and phosphorites of the Doushantuo Formation in South China. It is noted that many described Ediacaran spinose acritarch taxa display large size variation (from tens to hundreds of microns in vesicle diameter), but some taxa only have smaller (< 70 µm) specimens. The morphological comparison with Paleozoic counterparts indicates that some Ediacaran spinose acritarchs may have phylogenetic affinity to eukaryotic algae. More evidence, including wall ultrastructure, geochemical analysis and comparison with modern analogs, is needed to understand the biological affinity of the Ediacaran spinose acritarchs. The remarkable radiation of planktonic protists, characterized by abundant, diverse spinose acritarchs, occurred as early as in the late Neoproterozoic, i.e., 40-60 million years earlier than previously thought.



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Members' Publications

Editor's Note: The following articles were sent to me by the bolded correspondent.

Thank you all so much for your submissions!!

Calver, C and **Grey, K** and Laan, M., 2010. The 'string of beads' fossil (*Horodyskia*) in the mid-Proterozoic of Tasmania. *Precambrian Research*, v. 180, p. 18-25.

Delabroye, A. 2010. Dynamiques du phytoplancton à travers la limite Ordovicien-Silurien aux faibles paléolatitudes (Laurentia : Île d'Anticosti, Québec, Canada ; Baltica : Valga, Estonia). Compléments aux données des hautes latitudes glaciaires du Gondwana. [Phytoplankton dynamics across the Ordovician-Silurian boundary at low palaeolatitudes (Laurentia: Anticosti, Island, Québec, Canada; Baltica: Valga, Estonia). An additional contribution to data on the high-latitude glacial areas of Gondwana]. PhD thesis, Université de Lille 1, France, 460 pp. (51 plates, 33 figures, 4 tables + appendices)

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de la Rue, S.R., 2010. Implications for an Anoxia-Related Control on Green Algal Distributions at the Late Devonian Frasnian/Famennian Boundary. PhD dissertation. University of Idaho, Idaho, USA.

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Johnston D.T., Goldberg T., Poulton S.W., **Sergeev V.N.**, Podkovyrov V., Vorob'eva N.G., Schrag D.P., Bekker A., Knoll A.H. In Press. Late Ediacaran environmental stability and metazoan diversification.

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Le Herisse, A., & Plusquellec, Y., 2010. Les collections de Paléontologie de Brest : intérêt scientifique et perspectives. *Journal de l'APF*, N°58, Juillet 2010, p. 24-26.

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- Wicander, R.**, Clayton, G., J.E.A. Marshall, **Troth, I.**, and

Members' Publications

Racey, A., *In Press*. Was the latest Devonian glaciations a multiple event? New palynological evidence from Bolivia.

Palaeogeography, Palaeoclimatology, Palaeoecology.

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Yan Kui, Li Jun, 2010. The palaeoenvironmental implication of Early-Middle Ordovician acritarch communities from South China. *Chinese Science Bulletin*, **55 (10): 957–964**.

Yan Kui, Li Jun, Thomas Servais, 2010. The Ordovician acritarchs assemblages in South China and its biostratigraphical implications. CIMP2010, Warsaw. p., 100-101.

Yan Kui, Servais, T., **Li Jun**, 2010. Revision of the Ordovician acritarch genus *Ampullula* Righi 1991. *Review of Palaeobotany and Palynology*, 163: 11-25.

Yan Kui, Thomas Servais, **Li Jun**, 2010. Biodiversity patterns of lower - middle Ordovician marine microphytoplankton in south china: relation to the evolution of the marine invertebrates. International Palaeontological Congress 2010, London. 418.

Yan Kui, Thomas Servais, **Li Jun**, Wu Rongchang; Tang Peng, 2011: Biodiversity patterns of Early - Middle Ordovician marine microphytoplankton in South China. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 299:318-334.299: 318-334.

Student Grant, 2011

2011 TSOP GRADUATE STUDENT GRANT PROGRAM, THE SPACKMAN AWARD

The Society for Organic Petrology (TSOP) invites applications for graduate student research grants, the Spackman Award. The purpose of the grants is to foster research in organic petrology (which includes coal petrology, kerogen petrology, organic geochemistry and related disciplines) by providing support to graduate students from around the world, who demonstrate the application of organic petrology concepts to research problems.

Student Grant, 2011 - Cont'd

Size of the Spackman Award:

Monetary awards up to a maximum of \$1,000.00 US will be granted. TSOP will also provide Merit Awards, in the form of certificates redeemable for TSOP publications, to top-ranking applicants not receiving grants. The program awards a maximum of two grants each year. All applicants are invited to apply for a year's free Student Membership in TSOP.

Use of the Spackman Award:

Grants are to be applied to expenses directly related to the student's thesis program, such as fieldwork, laboratory analyses, etc. A portion (not to exceed 25%) of the funds may be used to attend TSOP Annual Meetings. Funds should not be used to purchase capital equipment, to pay salaries, tuition, room, or board during the academic year. Funds must be spent by the end of the academic year. Funds must be spent by the end of the calendar year following granting of the award, and an account of expenditure with copies of receipts should be provided by the end of that year (December 31, 2012 for awards granted in 2011).

Review and Ranking of Applications:

A committee of at least three TSOP members (and/or external experts when needed) will review the pool of applications. The reviewers will be drawn from people having no association with the host institution of any applicant. Each reviewer will independently rank each proposal according to established merit criteria, using the Application Evaluation Form included in the application packet. The cumulative score from all of the reviewers will be used to determine the final ranking of the applications. Winners will be notified prior to the 2011 Annual Meeting, and all applicants will be informed by e-mail of the final status of their applications.

Application Deadline:

TSOP Spackman Award application deadline is

May 16, 2011.

Grants will be awarded in September, 2011.

Detailed information and an application form are on the TSOP web site: www.tsop.org/grants.htm or applications may be obtained from:

Prof Colin Ward
Chair, TSOP Research Committee
School of Biological, Earth and Environmental Sciences
University of New South Wales
Sydney, NSW, 2052
Australia
E-mail: c.ward@unsw.edu.au

3RD ICCP TRAINING COURSE

Organic Petrology Gondwana Flavour

9 – 13 May 2011

Johannesburg, South Africa



Course Venue: WITS Professional Development Hub

University of the Witwatersrand

Empire Road, Johannesburg, South Africa

Instructors

Dr Alan Cook (Australia)
Prof (em) Claus Diessel (Australia)
(International experts & appointed
by the ICCP)

Course Coordinators

Prof Nikki Wagner (South Africa)
Prof Lopo Vasconcelos (Mozambique)
Prof Rosemary Falcon (South Africa)

The course is specifically aimed at postgraduate students and people new to the field of organic petrology

Programme (Broad Outline)

1. Introduction to Petrology
 - History of organic petrology and the ICCP
 - The petrographic microscope
 - Practical session & techniques
2. Coalification & Classification
 - Coal deposits globally and in Gondwana specifically
 - Coalification, stratigraphy, classification
3. Applications
 - Sedimentological aspects
 - Interpretation for exploration
 - Applications to oil & gas exploration
 - Char petrology & practical session
4. Applications, Case Studies & Extended Practical Session
 - Char petrology
 - Coke petrology
 - Extended practical session
 - Students are welcome to bring along own sample for discussion

Field Trip 13 May 2011

Explore the wonder of power generation. At Lethabo Power Station Visitor's Centre you will be introduced to the Story Behind the Switch!

Registration Fees

Company / Professional	€1000
Government / Non profit	€500
Full-time students	€320

Costs exclude travel & accommodation.

Costs include teas, lunches, field trip & notes.

Course language: English

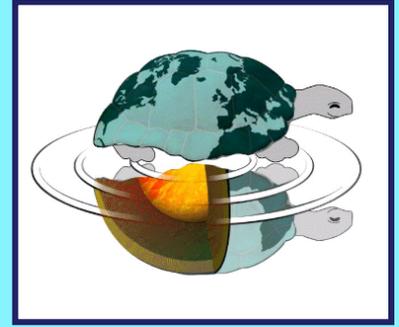
Space limited to 25 participants

For further details visit www.iccop.org activities or
Professor Lopo Vasconcelos, Vice President of the ICCP loloivasconcelos@gmail.com or
Professor Nikki Wagner for local organization enquiries Nicola.wagner@wits.ac.za
Registration enquires robbie@rca.co.za

Università degli Studi di Milano

Scuola di Dottorato
TERRA, AMBIENTE, BIODIVERSITA'

Corso di Dottorato in Scienze della Terra



Dipartimento di Scienze della Terra "Ardito Desio"
Visiting Professors 2010-11

Milano - June 20-23, 2011

A Four-day course by **M. H. Stephenson** on

Applied Palynology for the oil industry

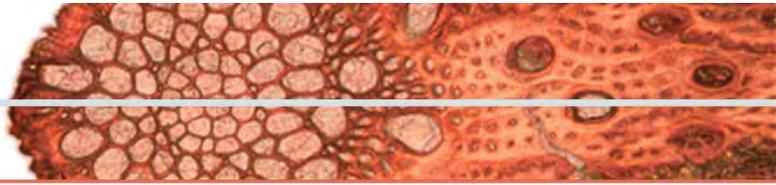
- The anatomy of spores, pollen, acritarchs and dinoflagellates
- Main trends in palynomorphs
- Palaeozoic palynology and its use in the Middle East
- Mesozoic palynology and the North Sea
- Cenozoic palynology



Course Tutor: Prof. M H Stephenson (Head of Science,
British Geological Survey; Editor-in-Chief, Review of
Palaeobotany and Palynology, and experienced commercial
palynologist
(mhste@bgs.ac.uk)

For details contact Prof.ssa Lucia Angiolini
lucia.angiolini@unimi.it

ICCP 2011
PERTH



XVII INTERNATIONAL CONGRESS ON THE CARBONIFEROUS AND PERMIAN

3-8 July, 2011

UWA, Perth, Australia

SECOND CIRCULAR



Website:

<http://www.iccp2011.org>



1. INVITATION

Scientists interested in all aspects of the Carboniferous and Permian are invited to meet in Perth, Australia, between July 3–8 2011 to discuss recent advances in understanding one of the most dynamic intervals in Earth History.

The 100 my Carboniferous-Permian interval includes the final amalgamation and initial breakup of the Pangea supercontinent, the last major ice-ages before those of the Quaternary, the proliferation of terrestrial vegetation as shown in the world's major coal deposits, and at the end of the Permian — the greatest known global mass extinction of animals and plants.

The Congress offers an opportunity to place local and regional research in a global context and to renew and initiate links with colleagues from other parts of world. At the 16th ICCP held in Nanjing China during June 2007, Perth was selected as the venue for the 17th Congress. Congresses are run every four years. Perth is the capital of Western Australia, the boom state of the Australian mineral and energy industries.

We invite you to enjoy our beautiful campus at the University of Western Australia, the venue for ICCP2011, located along the Swan River. Researchers at UWA and at the Geological Survey of Western Australia have long been involved in studies of the Carboniferous and Permian. Perth lies in the Perth Basin, which was part of the East Gondwana rift system that extended from the north far into the interior of Gondwana. The Western Australian basins of this rift system (Perth, Carnarvon, Canning, Browse, Bonaparte basins) have excellent Carboniferous and/or Permian successions, some of which will be examined on the ICCP field excursions. These have been selected to illustrate the effects of Permo-Carboniferous climate and sea-level changes along a north-south transect into the Gondwanan interior.

IMPORTANT DATES

Last Date For Submission Of Abstracts: 1 April 2011

Close Of Early Bird Registration: 1 April 2011

Pre-Congress Excursion to Canning Basin: 28 June - 2 July 2011

Congress (Including Mid Conference Excursions): 4-8 July 2011

Post-Congress Excursion to Perth/Carnarvon Basin: 10-16 July 2011

2. SPONSORS AND ORGANIZERS

Sponsors

The University of Western Australia

Geological Survey of Western Australia

Woodside Energy Ltd.

Petroleum Exploration Society of Australia

Centre for Petroleum Geosciences and CO₂ Sequestration, UWA

Geological Society of Australia WA Branch

Association of Australasian Palaeontologists

International Commission on Stratigraphy (ICS)

ICS Subcommittee on Permian Stratigraphy

ICS Subcommittee on Carboniferous Stratigraphy

International Paleontological Association (IPA)
IGCP 572 (Permian–Triassic Ecosystem)

Organizer

School of Earth & Environment, The University of Western Australia, Perth

Co-organizer

Geological Survey of Western Australia, Perth;

3. INTERNATIONAL PERMANENT COMMITTEE ICCP

Charles Henderson (Chairman, ICS International Subcommittee on Permian Stratigraphy;
Convenor of ICCP1999)

Barry Richards (Chairman, ICS International Subcommittee on Carboniferous Stratigraphy)

Xiang Dong Wang (Convenor of ICCP2007)

Shu Zhong Shen (Convenor of ICCP2007)

Henk Pagnier (Convenor of ICCP2003)

Tadeusz Peryt (Convenor of ICCP1995)

4. ORGANIZING COMMITTEE

Convenor: Zhong Qiang Chen

Co-ordinator of Excursions and Technical Program: Arthur Mory

Conference detailer: Mignonne Clark

Registration administrator: Jae Beird (UWA Extension)

Committee: John Backhouse, Jenny Bevan, Matthew Dixon, Annette George, Klite Grice, David Haig, Eckart Håkansson, Eujay McCartain, Eric Tohver, Julie Trotter

CONTACT US

Email address: ICCP-conference@uwa.edu.au

Postal address:

ICCP, School of Earth & Environment (M004),

The University of Western Australia,

35 Stirling Highway, Crawley

WA 6009, Australia

Phone: +61 8 6488 1924 or +61 8 6488 1926

5. LANGUAGE OF THE CONFERENCE

The official language of the conference will be English.

5. PRELIMINARY SCHEDULES

6. SCIENTIFIC PROGRAM

Plenary Sessions:

Plenary Keynote Lectures:

1. Charles Henderson: The Permian World - Ice House to Extinction and Everything in Between
2. Barry Richards: The Carboniferous World (title to be confirmed)
3. Mike Benton: Impact of the End-Permian Mass Extinction on Land
4. Hongfu Yin: Permian-Triassic Mass Extinction: New Advancement
5. Thomas Algeo: The Early Triassic Cesspool: Marine Conditions Following the End-Permian Mass Extinction
6. Roger Summons: title to be confirmed
7. Bruce Waterhouse: Life Evolution In A Cold World
8. Hermann Pfeffer: Boundary Stratotypes, Evolutionary Theory, and Paleobiogeography
9. Arthur Mory: Late Paleozoic in Western Australia (to be confirmed)
10. Richard Lane: The Current State and Future of Stratigraphy
11. Gregory Webb: Application of trace element geochemistry to ancient limestones: palaeoceanography, palaeogeography and palaeoecology

Technique Sessions:

- S1:** SPS session: **Permian Stage Boundaries: GSSPs and Correlation** (Charles Henderson, Shuzhong Shen, Vladimir Davydov et al., Presiding);
- S2:** SCS session: **Carboniferous Stage Boundaries: the Present State and Future** (Barry Richards, Xiangdong Wang, John Groves, Katsumi Ueno, Presiding);
- S3:** IGCP572 session: **Latest Permian mass extinction: causes and impact on ecosystems** (Kliti Grice, Thomas Algeo, Presiding);
- S4:** IGCP572 session: **Ecosystem rebuilding from the Permian-Triassic mass extinction** (Jinnan Tong and Margaret Fraiser, Presiding);
- S5:** **Palaeozoic-Mesozoic Palynology session in honour of Prof. Basil Balme** (John Backhouse, Clinton Foster and Wolfram Kuerschner, Presiding);
- S6:** **Gondwana and Peri-Gondwana: biotas, stratigraphy, palaeoclimate and palaeogeography** (Shuzhong Shen and G.R. Shi, Presiding);
- S7:** **Eustatic variations during Carboniferous and Permian** (Poty Edouard and Markus Aretz, Presiding);
- S8:** **Paleotemperature, Paleocirculation, and Chemistry of Carboniferous and Permian Oceans** (Ethan Grossman, Mike Joachimski and Horng-sheng Mii, Presiding);
- S9:** **Middle Permian Events and Palaeobiology** (Xulong Lai and Yukio Isozaki, Presiding);
- S10:** **Permo-Carboniferous Climates and their Significance to Interpreting Modern Climate Change and Ecosystem Response** (Rich Lane and Isabel Montanez, Presiding);
- S11:** **Carboniferous and Permian basins: Biostratigraphy, radiometric dating, palaeogeography, and resources** (Eric Tohver, Xiaochi Jin, Matt Dixon, Presiding);
- S12:** Woodside Session (industry session): **Gondwanan Petroleum** (Simon Lang, Presiding);
- S13:** Industry session: **Unconventional resources in Australian basins (shale gas, tight gas, coal geology)** (Annette George, Presiding);

S14: Reef complex and Carbonate Platforms in Late Palaeozoic (Gregg Webb and Ian Somerville, Presiding);

S15: Palaeozoic Foraminifera: Systematics, biostratigraphy, palaeoecology and palaeobiogeography (David Haig and others, Presiding);

S16: Carboniferous and Permian terrestrial ecosystems and palaeontology (Session Chairs to be recruited);

S17: Late Palaeozoic marine invertebrate systematic, biostratigraphy, palaeoecology and palaeobiogeography (Session Chairs to be recruited).

7. FIELD EXCURSIONS

For more info on each excursion sees ICCP2011 website [<http://www.iccp2011.org>]

Pre-congress excursion [northern Canning Basin](#) Tuesday 28 June – Saturday 2 July

Mid- congress excursion [Perth Core Library](#) Wednesday 6 July

Mid- congress excursion [Collie Basin and Lake Clifton](#) Wednesday 6 July

Mid- congress excursion [The Pinnacles and Lake Thetis](#) Wednesday 6 July

Post- congress excursion [Perth–Carnarvon Basins](#) Sunday 10 – Saturday 16 July

Thrombolites, [Lake Clifton](#).



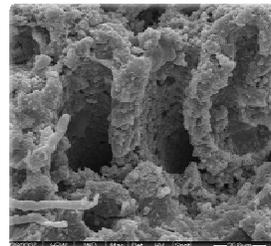
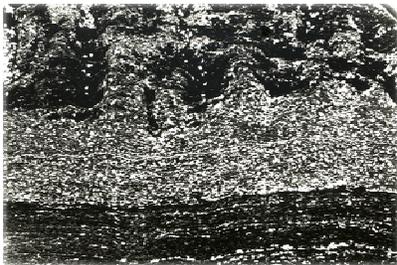
Pinnacles, [Nambung National Park](#).



Shell beach, *Shark Bay*



Lower Triassic stromatolites, Perth Basin



Devonian reef complex, Windjana Gorge, Canning Basin



8. ABSTRACTS and PUBLICATIONS

The final date for abstract submission will be April 1, 2011. All abstracts received by the committee will be peer-reviewed and edited, and will be published in the conference abstract proceedings. After the ICCP2011, we will organize several thematic issues in various *SCI*-cited international journals and select some papers presented at this conference to be published in these special issues.

9. REGISTRATION FEES AND PAYMENT POLICY

More information sees the attached registration form.

10. WEBSITES AND CONTACT

CONTACT US

Email address: ICCP-conference@uwa.edu.au or zqchen@cyllene.uwa.edu.au

Postal address:

ICCP, School of Earth & Environment (M004),

The University of Western Australia,

35 Stirling Highway, Crawley

WA 6009, Australia

Phone: +61 8 6488 1924 or +61 8 6488 1926

11. ACCOMMODATION

Please visit our website [<http://www.iccp2011.org>] to obtain information about reserving your accommodation.

12. CONFERENCE VENUE

The University of Western Australia, Perth, Australia [<http://www.uwa.edu.au>]



MELBOURNE AUSTRALIA | 23-30 JULY 2011



Registration now open

Register Online

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Key Dates

Venue

Committees

Scientific Program

Invited Speakers

Social Program

Registration

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Travel Assistance

Field Trips

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Accommodation

Sponsorship and Exhibition

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Invitation



The Australian botanical community invites you to Melbourne, Australia in July 2011 to participate in the XVIII International Botanical Congress. Australia has a vibrant scientific community active across all botanical disciplines and its researchers play a prominent and highly collaborative role in international biological sciences.

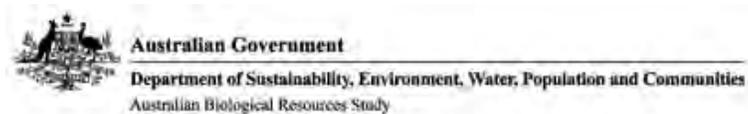
The Australian flora, with its many endemics and strong Gondwanan element, provides a unique opportunity full of inspiring experiences for the botanical visitor. Its ancient landscape includes vast deserts, tropical and temperate rainforests, floristically rich heathlands and unique eucalypt forests. Marine environments include a rich flora and the most extensive coral ecosystem, the Great Barrier Reef.

Australia's botanical community is eager to welcome our colleagues from around the world to the 2011 IBC for an intellectually stimulating and socially memorable occasion.

Judy West, Congress President

The IBC Committee would like to thank the following supporters of IBC2011:





IUBS

The XVIII IBC will be held under the auspices of the International Union of Biological Sciences (IUBS), through the International Association of Botanical and Mycological Societies (**IABMS**) of the IUBS.



TSOP is an international society for scientists and engineers involved with coal petrology, kerogen petrology, organic chemistry and related disciplines

ANNUAL MEETING ANNOUNCEMENT AND CALL FOR PAPERS

Halifax, Nova Scotia, Canada
World Trade and Convention Center

July 31 - August 4, 2011

Conference Theme:

Energy Resources and Petroleum Systems in the 21st Century

Short Course: Geochemistry, maturation, and petroleum system modelling related to shale gas resource evaluation

Field trip to Joggins Fossil Cliffs and shale gas evaluation
in the Elgin and Moncton subbasins

TECHNICAL PROGRAM AND ABSTRACTS, GENERAL INQUIRIES AND REGISTRATION

Prasanta Mukhopadhyay
muki@global-geoenergy.com

or

Mike Avery
mavery@nrcan.gc.ca

ABSTRACT SUBMISSION DEADLINE: APRIL 30, 2011

Meeting and abstract submission details:

<http://www.tsop.org/2011Halifax>

TSOP: www.tsop.org

TSOP student research grant
(deadline May 16, 2010)



**9th INTERNATIONAL CONFERENCE
ON
MODERN AND FOSSIL DINOFLAGELLATES**

28th August-2nd September 2011



The international conference on modern and fossil dinoflagellates is a longstanding conference series which began in 1978 in Colorado Springs, Colorado with a Penrose Conference organised by Bill Evitt. The overarching aim of the series is to bring together researchers working on present day dinoflagellates with those working on dinoflagellates in the fossil record to foster interdisciplinary understanding and collaboration. Over the years the conference has attracted dinoflagellate workers from across the world who have come together to deepen their understanding of this fascinating group of organisms and gone away with new perspectives and new research avenues to explore. It is in this spirit we offer the 9th conference in the series and cordially invite you to Liverpool to participate in the dynamic social spirit of the city alongside a stimulating intellectual endeavor.

Fabienne Marret

Jane Lewis

<http://pcwww.liv.ac.uk/~dino9/index>

**AASP - The Palynology Society
44th Annual Meeting,
Southampton 2011**



**Sunday September 4th to Wednesday September 7th, 2011
National Oceanography Centre, University of Southampton, England**

Conference website (live 1st April 2011): www.southampton.ac.uk/aasp2011

This year's AASP Annual Meeting will be held at the National Oceanography Centre, University of Southampton, England, and will be a joint meeting with *The Palynology Group* of *The Micropalaeontological Society*. The National Oceanography Centre, a collaboration between the Natural Environment Research Council and the University of Southampton is the largest institution of its kind in Europe, a £50m purpose-built centre which opened in 1995.

Southampton is located centrally on the south coast of England, and is within easy reach of both Heathrow and Gatwick airports (both around an hour and a half away). Southampton Airport (www.southamptonairport.com) is a hub for the European regional airline Flybe (www.flybe.com), with direct connections to many European Cities. The city is just over an hour from London by train and the Eurostar Terminal from Europe.

The AASP meeting will run consecutively after *Dino 9* at the University of Liverpool (<http://pcwww.liv.ac.uk/~dino9>).

Costs (in UK pounds sterling): pre-registration will be £75, students £45. On-site registration will be £125, students £75.

Delegates will be responsible for booking their own accommodation for the conference, from the selection of student residences, hotels, etc., listed on the conference website.

Deadlines: for pre-registration, abstract submission and field trip bookings - 1st August 2011. Online pre-registration, abstract submission and fieldtrip booking will be available by the beginning of April 2011.

Technical Sessions. The two day technical program (Monday 5th- Tuesday 6th September) will accommodate more than 60 talks (in two concurrent sessions), including keynotes. Two themed sessions are currently planned, and suggestions for additional sessions are welcomed:

1. Industrial applications of palynology
2. Palaeozoic palynology symposium

Poster sessions will be convened during tea and coffee breaks.

Ice-breaker, Sunday 4th September: there will be a pre-conference welcome reception with refreshments and nibbles, followed by a keynote invited lecture.

Conference dinner, Tuesday 6th September.



The conference dinner will take place on board *HMS Warrior*, the second and largest iron-clad warship in the world, commissioned in 1861, and now berthed at Portsmouth Historic Naval Dockyard (www.hmswarrior.org). After being piped aboard and welcomed with a tot of rum, delegates will have dinner on tables placed between the cannon on the gundeck. There may be an opportunity to visit the *Mary Rose* Museum (Henry VIII's flagship raised from beneath the Solent) prior to the meal.

AASP Business Luncheon: this will take place on Tuesday 6th September at a local restaurant, and will cost approximately £20.

Field Trips. Two field trips are planned:

Field trip 1. Pre-conference: Isle of Wight, Sunday 4th September.



This trip will visit classic areas of English geology, ranging from non-marine Wealden (Cretaceous: Hauterivian/Barremian, which has yielded some of the earliest well-dated angiosperm pollen), through the marine middle Cretaceous (e.g. Atherfield Clay), to the Chalk and into the Paleogene succession of Whitecliff Bay (left: Eocene-Oligocene). These successions have been extensively studied in terms of their palynology.

Costs will be about £40, inclusive of transport, lunch and entrance fee to the *Sandown Dinosaur Museum*.

Field Trip 2. Post-conference: UNESCO World Heritage Jurassic Coast of Dorset, Wednesday 7th September.



This trip will take in the world-famous localities of Lulworth Cove and Stair Hole, developed in Upper Jurassic to Upper Cretaceous sediments and including the Lulworth Fossil Forest. Other localities to be visited will include Kimmeridge Bay (above), the type locality of the Kimmeridgian Stage, and the Middle Jurassic of Osmington Mills. Costs will be about £40, inclusive of transport and lunch.

The host city: Southampton



The city of Southampton has a long involvement with the sea, as both the *Titanic* and the D-Day armada sailed from here. Even today the arrival of a cruise liner like *Queen Mary II* is a noteworthy local event. The city is big on history – you can walk around the beautifully preserved Norman city walls which date from the 1100's – or visit the Archaeology or Maritime museums, the Tudor House Museum, or the Solent Sky aircraft museum (the Spitfire, the most famous World War two fighter aircraft

was designed and first flew in Southampton, and many flying boats were also built here). There are two trails around the city which visit places of historic importance related to the *Titanic* and to Jane Austen, who resided in Southampton from 1807-9. (For more information visit www.visit-southampton.co.uk).

After the conference you might also wish to explore the nearby Hampshire villages, the New Forest (where William II was murdered in 1100), or the historic cathedral cities of Salisbury (close to Stonehenge) and Winchester (former capital of England) only a few minutes drive away. (For more information visit (www.visit-hampshire.co.uk)).

For more information, contact John Marshall (jeam@noc.soton.ac.uk) or Ian Harding (ich@noc.soton.ac.uk)



ICCP Training Course on Dispersed Organic Matter September 7-9, 2011, Porto, Portugal

1. Introduction

A three-day Training Course on Dispersed Organic Matter (DOM) organized by the ICCP will be held, under the 63rd ICCP Annual Meeting, in Porto (Portugal), in September 7-9, 2011. The course venue is the Departamento de Geociências, Ambiente e Ordenamento do Território, Faculdade de Ciências da Universidade do Porto (Porto, Portugal). At the end of the course it will take place a one and half day field trip (September, 10-11, 2011) will take place, jointly organized with the ICCP Meeting.

The course has 18 hours of theoretical and 8 hours of practical sessions. Instructors will be Prof. João Graciano from Brazil and Dr. Alan Cook from Australia and materials for the course will be distributed at the beginning of the course during registration. Powerpoint presentations of the lectures will be also available in a digital format.

The ICCP Training Course in DOM is aimed at ICCP members and non-members, postgraduate students, researchers, geologists and other professionals working in oil companies. The maximum number of participants is 30, taking into account that the practical sessions will be performed on imaging projector mode.

A Certificate of participation will be awarded to each person completing this course.

2. Program and Schedule (still subject to changes)

The items covered in the course, instructors and the distribution of the theoretical and practical sessions (see Table 1) are as follows:

1. Dispersed Organic Matter (DOM): Concepts and definitions - João Graciano (1:30h - T1)
 - 1.1. OM production, processing and sedimentation
 - 1.2. OM evolution and chemical composition of biomass

2. Transmitted light microscopy techniques (white and fluorescence lights) – João Graciano (6h – T2 to T4 + 3h practical session - P1)

2.1. Sample preparation

2.2. Classification of OM

2.3. Maturation: SCI-Spore Colour Index; spectral fluorescence

2.4. Applications: organic petrography, palynology and palynofacies

2.5. Organic facies

3. Reflected light microscopy techniques (white and fluorescence lights) – Alan Cook (6h – T5 to T7 + practical session 3h – P2)

3.1. Sample preparation and Standardization

3.2. Petrography of OM: Nomenclature and applications

3.3. Maturation: huminite/vitrinite reflectance and spectral fluorescence

4. Case studies (Alan Cook 2h – T8 and João Graciano 2h – T9)

Practical session T3 for questions (Alan Cook and João Graciano). Participants are suggested to bring as mounted samples their own materials that are of interest to them.

Practical session facilities will be provided by Carl Hilgers Technisches Büro using a microscope coupled to an image projector. Another microscope from the Department of Geosciences will be also available.

Table 1. Schedule of the ICCP Training Course in DOM.

Time	Wednesday 07-Sep	Thursday 08-Sep	Friday 09-Sep	Saturday 10-Sep	Sunday 11-Sep
8:00-8:30	Registration				
8:30 - 9:00	Welcome				Field trip
9:00 - 9:30	T1 - JG	T4 - JG	T7 - AC		
9:30 - 10:00					
10:00 - 10:30					
10:30 - 11:00	Coffee break	Coffee break	Coffee break		
11:00 - 11:30					
11:30 - 12:00	T2 - JG	T5 - AC	P3 - AC and JG		
12:00 - 12:30					
12:30 - 13:00					
13:00 - 13:30	Lunch break	Lunch break	Lunch break	ICCP Registration	
13:30 - 14:00					
14:00 - 14:30				Field trip	
14:30 - 15:00	T3 - JG	T6 - AC	T8 - AC		
15:00 - 15:30					
15:30 - 16:00					
16:00 - 16:30	Coffee break	Coffee break	Coffee break		
16:30 - 17:00					
17:00 - 17:30			T9 - JG		
17:30 - 18:00	P1 - JG	P2 - AC			
18:00 - 18:30					
18:30 - 19:00					Vinho Verde Ice-Break Party ICCP and TCourse
19:00 - 19:30					
19:30 - 20:00					
20:00 - 20:30					

T1 to T9 - Theoretical sessions

P1 to P3 – Practical session

A one and half day field trip entitled “**The Lower Jurassic of the west coast of Portugal: Stratigraphy, geological heritage and organic matter record**” will take place in conjunction with the 63rd ICCP Annual Meeting just at the end of the ICCP Training Course. The field trip will be conducted by Luis Duarte and Ricardo Silva (Coimbra University), and João Graciano (Federal University of Rio de Janeiro). One of the case studies that will be presented by João Graciano is the Peniche Lower Jurassic (Vale das Fontes Formation).

1st day, 10th September – after lunch

Porto – Óbidos (sightseeing visit) – Peniche (dinner and overnight stay).

2nd day, 11th September

Morning (3/4 hours): Visit to the Peniche peninsula where, framed in one of the most emblematic places of the Portuguese coast (Fig. 1), the most complete sequence of the Lower Jurassic of the Lusitanian Basin can be observed. The Lower Jurassic of Peniche is materialized by a succession of carbonates of marine origin, illustrating organic-rich hemiplagic facies (black shales) and turbidite deposits. The Pliensbachian succession (Vale das Fontes Formation) of Peniche has been the most studied area of the Lusitanian Basin for potential hydrocarbon generation. In addition, the Lower Jurassic of Peniche is an international reference, because it is the only candidate to the Pliensbachian-Toarcian stratotype, still presenting great arguments on the oceanic anoxic event from the lower Toarcian.

Nazaré (lunch)

Afternoon (2h): Visit to the Jurassic Calcareous cliffs of S. Pedro de Moel (Fig. 2). Being the depocenter of the Lusitanian Basin, this sector of the basin shows the thickest succession of marl-limestone rich in organic matter, involving the Sinemurian (Água de Madeiros Fm) and Pliensbachian (Vale das Fontes Fm). This sequence has a set of other sedimentary geology structures, as unique examples of fossilized marine invertebrates.

Return to Porto (20h)



Fig. 1. General view of the open marine organic-rich carbonate succession of the Lower Jurassic at Peniche.



Fig. 2. Calcareous cliffs of the Sinemurian (Lower Jurassic) at S. Pedro de Moel.

3. Registration Fees

Fees for the course include course materials, coffee-breaks and lunches. Field trip is paid separately and includes guide-book, accommodation and dinner in Peniche and lunch in Nazaré. The price for the course and field trip is as follows:

Company / Professional	750 €
Government / non-profit	400 €
Students	200 €
Field Trip	180 €

Payment should be settled at the latest on 31st May 2011. Payments can be made by credit card or money order. After registration, participants will receive an invoice with further details.

Those interested in participating in this course are advised to contact the coordinator, Prof. Lopo Vasconcelos, Vice-President of the ICCP, email lopovasconcelos@gmail.com to record their interest. Updated information about the course will be available in the ICCP webpage www.iccop.org.

For information or inquiries concerning the local organization contact Deolinda Flores mailing to dflores@fc.up.pt.

4. Accommodation and Transport information

Campo Alegre area has a set of hotels ranging in quality from 3 to 5 stars. Hotels from the “HF Hotéis Fénix” Chain (www.hfhotels.com) are recommended as they provide accommodation for participants at special rates. Hotels near the Faculty of Sciences (Fig. 3) are Ipanema Park Hotel (5 stars – 75 Euros Twin/Single), Ipanema Porto Hotel (4 stars – 70 Euros Twin/Single); Fénix Porto Hotel (4 stars – 70 Euros Twin/Single) e Tuela Porto Hotel (3 stars - 65 Euros Twin/Single). These hotels are at a walking distance from the course venue. Participants must make their own reservations directly online by a link specifically created to the Course participants. The link and codes that allow access to special rates granted to the Course will be available soon in the ICCP webpage.

The Seminário de Vilar, Casa Diocesana (Rua Arceidiago Van Zeller, 50, 4050-621 Porto, about 15 minutes walking) offers accommodation at cheaper prices (40-60 Euros). Reservations must be made directly via email: info@seminariodevilar.pt.

Francisco Sá Carneiro Airport (OPO) is about 15km from Campo Alegre/Boavista area. After arrival at the Francisco Sá Carneiro Airport, Porto may be reached by:

Taxi - just outside the Airport building - rate about 25 euros; or,

Metro - just outside the Airport building till Casa da Música stop (about 3 euros) + taxi to hotel (less than 10 euros) or walking to some of the hotels.

Campo Alegre area has also a public transport network (bus and subway) that will facilitate travelling to several parts of the city.

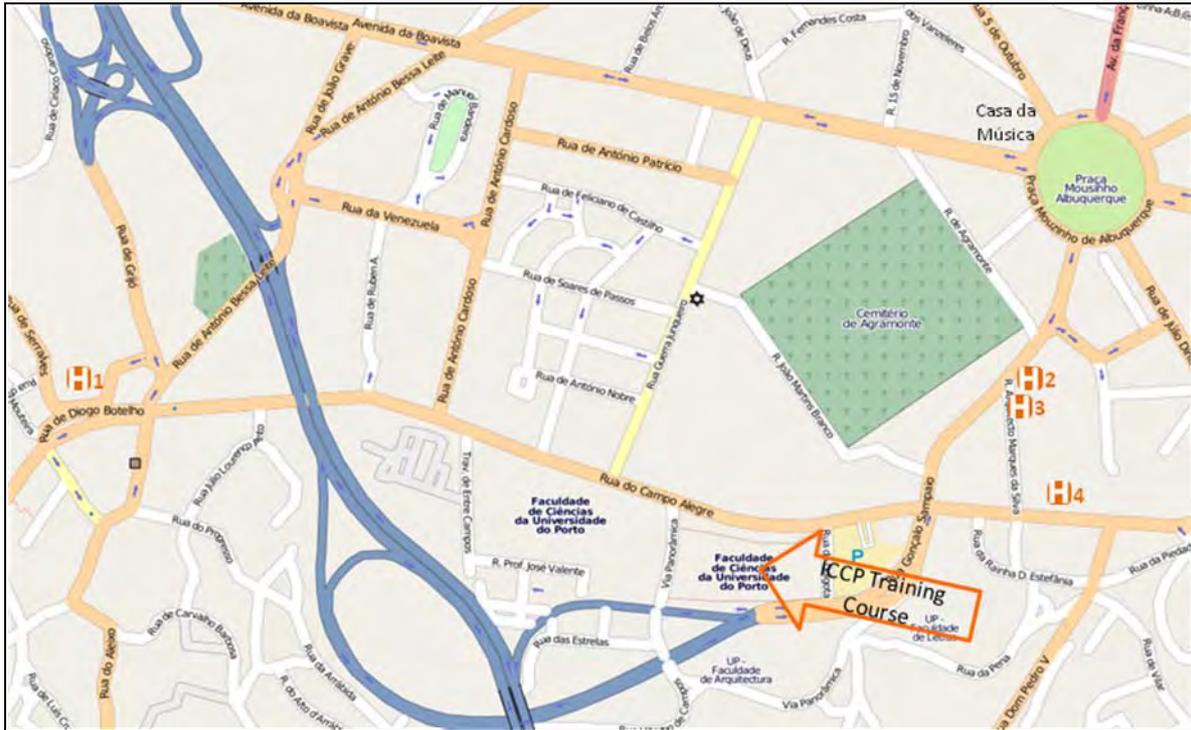
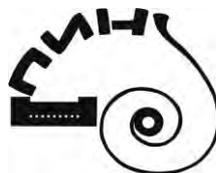


Figure 3. HF Hotels and the ICCP Training Course on DOM localization. H1 - Ipanema Park Hotel (5 stars); H2 - Fénix Porto Hotel (4 stars); H3 - Tuela Porto Hotel (3 stars); H4 - Ipanema Porto Hotel (4 stars).



International Society of Environmental



Sixth International Conference
«Environmental Micropaleontology, Microbiology and Meiobenthology»
EMMM-2011
September 19–22, 2011

FIRST CIRCULAR

ORGANIZATION

A.A. Borissiak Paleontological Institute of the Russian Academy of Sciences (PIN RAS)
Federal State Unitary Enterprise "A.P. Karpinsky Russian Geological Research Institute" (FGUP "VSEGEI")
S.N. Winogradsky Institute of Microbiology of the Russian Academy of Sciences
Russian Academy of Natural Sciences (RANS)
Geological Faculty, M.V. Lomonosov Moscow State University, Russia (MSU)
Avalon Institute of Applied Science, Canada

SPONSORSHIP

Russian Academy of Sciences
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INTRODUCTION

The EMMM-2011 will be carried out by Russian Branch of ISEMMM in Moscow and St. Petersburg, Russia on September 15–23, 2011, and will consist of two parts.

The first part will include a field trip to be carried out by the FGUP "A.P. Karpinsky Russian Geological Research Institute" in the St. Petersburg and Leningrad region on September 15–18, 2011.

The second part will include technical sessions conducted at the A.A. Borissiak Paleontological Institute, Russian Academy of Sciences, on September 18–23, 2011.

The First Circular of EMMM-2011 contains important information on the logistics of the meeting. It is also available at www.paleo.ru/EMMM-2011

AIMS AND SCOPE

The main goals of the EMMM-2011 are:

- to enhance further the exchange of ideas in the fields of environmental micropaleontology, meiobenthology, and microbiology on global and regional scales as initiated by previous EMMM conferences through the joint efforts of international, multidisciplinary specialists;
- to promote innovative multidisciplinary research in recent and fossil micro- and meioorganisms;
- to encourage the utilization of micro- and meioorganisms by a broader audience and to bridge the gap between academia, industry, national governments, and interactive organizations;
- to increase our knowledge in environmental fields and our awareness of the world's environmental problems.

The EMMM-2011 focuses on the progress of our knowledge acquisition in EMMM with special attention to:

- (1) Environmental problems and concepts, investigated through correlative studies of a wide range of sites that would provide better understanding of the interrelation between environmental change and the behavior of micro- and meioorganisms;

- (2) Improvement of standards in research methods and techniques;

- (3) Delineation of the main areas of natural risk in order to assist environmental management using micro- and meioorganisms;

- (4) Further elaboration of a complete bibliographic database on EMMM.

The meeting brings together multidisciplinary scientists from all over the world and enhances West-East scientific dialogue by providing a supportive background for collaborative correlation and integration of EMMM discoveries relating to climate change and other environmental cataclysms.

SCHEDULE

September 15: Arrival in St. Petersburg and visit to the Geological Museum.

September 16–18: Field Trips and visit to the Geological Museum.

September 18: Arrival in Moscow.

September 19–22: Registration, technical sessions, and visit to the Paleontological Museum.

September 23: Departure from Moscow to respective countries.

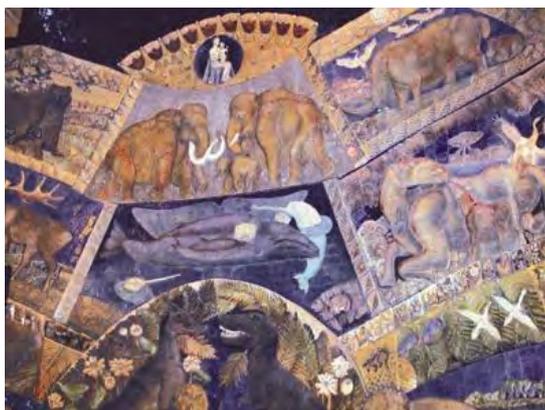
VENUE

The scientific sessions will be held in Moscow at the A.A. Borissiak Paleontological Institute of the RAS on September 19–22, 2011.

The A.A. Borissiak Paleontological Institute of the RAS was established in 1930.

Presently, it is a unique and specialized scientific research institution in Russia.





The Paleontological Museum, named after Yu.A. Orlov, is reckoned among the five most famous museums of natural history.

The history of its establishment goes back to the Kunstkammer of Peter the Great.

There are over 5000 unique natural objects and 1500 graphic reconstructions at the Museum exhibition.

The present exposition is displayed in four large halls over an area of 4500 sq/m, documenting stages in the evolution of life on Earth.



The showcases exhibit collections of the major representatives of organisms that have existed, for example: Foraminifera and Radiolaria, different plants, cephalopods, and others.

Among the exhibitions of the Late Paleozoic and Mesozoic Halls, there are articulated skeletons of Permian reptiles, Jurassic and Cretaceous dinosaurs up to 6 m in height. The Cenozoic Hall is dedicated to mammals. Among them a huge rhinoceros, *Indricotherium*, Mammoths and humans are presented.

TOPICS

1. Micro- and meioorganisms as indicators of environments:
 - the adaptation of micro- and meioorganisms to extreme environments, including anoxia: evidence, history, proxies;
 - micro- and meioorganisms as indicators of climate and sea-level change;
 - sensitivity of micro- and meioorganisms as paleotemperature proxies;
 - micro- and meioorganisms as indicators of pollution;
 - marine microfossils and their role in the cycling and uptake of greenhouse gases, nutrients, and carbon.
2. Bacteria and micro- and meioorganisms
3. Ecological turnovers and the evolution of Phanerozoic biota
4. Prediction and interpretation of environmental issues:
 - evidence from the fossil record to predict/interpret current/future environmental issues;
 - validation of models for the interpretation of present and future environmental responses;
 - environmental and paleoenvironmental biostratigraphy.
5. Micro- and meioorganisms and the derivation of life on Earth:
 - conodonts,
 - radiolarians,
 - foraminifera,
 - microalgae,
 - nannoplankton,
 - spores and pollen,
 - micro- and meioorganisms of coral reefs.
6. Morphology and biodiversity of micro- and meioorganisms:
 - geochemistry of shelled micro- and meioorganisms;
 - pathology of micro- and meioorganisms as environmental indicators;
 - environmental application of biodiversity among micro- and meioorganisms.

7. Degassing of the Earth, biosphere and environment.
8. Petroleum and micro- and meioorganisms:
 - petroleum microbiology;
 - micro- and meioorganisms in oil and gas generation.
9. Applications of micro- and meioorganisms:
 - aeropalynology and medical palynology;
 - applications of micro- and meioorganisms to archaeology, agriculture and industrial needs.
10. Methodology and computer technology:
 - ecotoxicological experiments with micro- and meioorganisms;
 - methodology and scientific devices used in the study of micro- and meioorganisms;
 - quantitative methods of data analysis in the ecology of micro- and meioorganisms;
 - computer technology.

LANGUAGES

The official conference languages are English and Russian. Abstracts must be submitted in English with Russian resume. No synchronous translation from either language will be provided at the meeting. As such, contributors have their choice of presentation language to relate their discoveries to conference participants.

PRESENTATIONS

Each speaker will have 15 minutes for presentation and 5 minutes for discussion. Authors are allowed to present no more than two papers. However, it is permissible to be listed as the co-author in another contribution.

Poster presentations are welcome. Poster format is 120x160 cm.

The final number of ORAL and POSTER technical sessions will depend upon the number of participants and accepted presentations. To be accepted, the presentation must deal with results obtained from applications of micro- and meioorganisms to environmental problems. Topics that go beyond data description to address interpretation and broader understanding of the issues are especially encouraged.

The conference room will be equipped with a computer and projector for presentations: Adobe PDF, Microsoft Office PowerPoint, Open Office Impress, tabletop 35-mm slide projectors, and overhead projectors are available. If other or additional equipment is requested by a presenter, reasonable attempts will be made to accommodate the request.

ABSTRACTS

Accepted abstracts will be published in the Conference Materials.

Extended abstracts up to 4 pages long, including figures and tables of high printing quality, are welcome.

Short and non-informative abstracts will not be considered.

Abstracts must be submitted ELECTRONICALLY by **01 April 2011**. No abstracts will be accepted without registration of at least one of the authors. Every registered participant has the right to submit up to two extended abstracts. Abstracts must be submitted in Microsoft Word format using the abstract template available at the EMMM-2011 website: www.paleo.ru/EMMM-2011.

The best 20 papers on Paleontology and Biosphere Evolution could be published in a Special Volume of the Paleontological Journal. Manuscripts in both Russian and English language will be considered, and those written in Russian will be translated into English by interpreters from MAIK "Nauka/Interperiodica" Publishing House.

PRE-CONFERENCE FIELD TRIPS

The Field Trips will be carried out in the St. Petersburg and Leningrad region on September 15–18, 2011 to examine the Cambrian, and Lower and Middle Ordovician sequences, the famous Sablino Caves and Holocene travertine-like freshwater carbonates. The price list can be seen on the "Registration Form" and at the EMMM-2011 website: www.paleo.ru/EMMM-2011

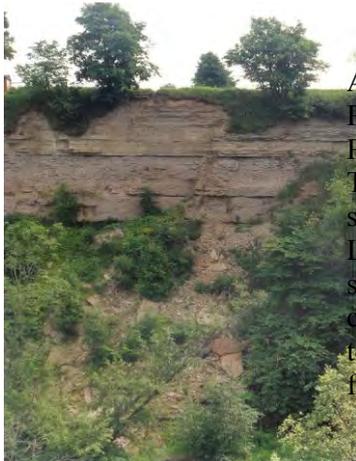
September 15, 2011. Arrival in St. Petersburg, Hotel of the A.P. Karpinsky Russian Geological Research Institute (VSEGEI Hotel), registration for the pre-conference field trips. Visits to the Geological Museum.

The F.N. Chernyshev Central Research Geological Exploration Museum, established in 1882, is the largest geological museum in Russia. Its collection numbers more than 80,000 objects illustrating and documenting the geological history and mineral resources of the vast territory of Russia and other countries of the former USSR. The museum exhibition that occupies the uppermost floor in the VSEGEI building is subdivided into two large blocks: "Regional Geology" and "Mineral deposits."

One of the unique objects of the collection is a 26.6 m² panel containing a geographical map of the USSR at a scale of 1:1,500,000. It was made in early 1930s in the style of a Florentine mosaic with precious and semiprecious stones.



September 16, 2011. Field Trip to the Ordovician sections in the vicinity of St. Petersburg.



A one-day excursion will examine the Lower Paleozoic successions in the vicinity of St. Petersburg.

This trip will provide opportunities to visit several classical localities of the Cambrian, and Lower and Middle Ordovician where you will see the transition from the terrigenous and carbonate condensed cold water sediments to temperate water limestones with numerous fossils.



The famous Sablino Caves on the beautiful Tosna River with the waterfall will be visited on the way. The man-made caves at Sablino near St Petersburg are a unique underground complex consisting of a number of labyrinths with lakes and enormous chambers. The caves were formed when pure quartz sand was mined from this location for the famous Russian glass and crystal industry.

Even the Emperor's crystal was made from this very sand. The sand was initially mined by hand resulting in the formation of a complex system of tunnels.



Guided: by Andrey V. Dronov

Duration: 9-10 hours. Meal: packed lunches. Route: VSEGEI Hotel – the Putilovo Quarry – the Lava River valley – the Sablino Caves – VSEGEI Hotel. Transportation: a bus.

September 17, 2011. Excursion to the Biochemogenic Holocene travertine freshwater carbonates of the Izhorsk Plateau

Subject matter of one-day excursion. Microbiolitic sedimentation in the springs of the Izhorsk plateau. Genetic types of freshwater biochemogenic carbonates. Holocene history of the Izhorsk Plateau fixed in local paratravertines. Springs of Ingermanland.

The Izhorskaya land, Ingermanland, and Ingria are historical names of the Izhorsk plateau. This is a small historic region in the eastern Baltic, now part of Russia to the southwest of St. Petersburg, comprising the southern bank of the river Neva, between the Gulf of Finland, the Narva River, Lake Peipus in the west, and Lake Ladoga and the western bank of the Volkhov River in the east. The area has a maximum elevation of 176 meters (Duderhof heights).

Ordovician carbonate rocks play a leading role in the geological structure of the plateau. They end in the northern part as a steep escarpment (limestone cliff) and descend gently to the southeast. This area reveals an extremely structural deployment. Systems of disjunctives and folds form a complex picture, and their genesis has been the subject of discussions over almost 200 years. Numerous streams and small rivers are oriented according to the tectonic organization. Specific microbiolitic carbonates were deposited in these rivers during the Holocene. They are similar to travertines to some extent but, at the same time, have a biogenic nature. Their formation is connected with the metabolic activity of bacteria and cyanobacteria. The name "Izhorsk paratravertines" has emerged, and the most intensive phase of formation for these paratravertines falls within the first half of the Holocene. In the past, these rocks were used for architectural decoration in St. Petersburg and called "limy tuff."

Varied types of paratravertines contain numerous paleontologic remains of Charophyta, mosses, mollusks, ostracodes, and insects. By investigating these fossils, we have an opportunity to learn much about the state of ecosystems, conditions of life, the landscapes, and the climates of ancient epochs. These carbonates have long been declared nature sanctuaries, but their modern state requires immediate action from the international scientific community.

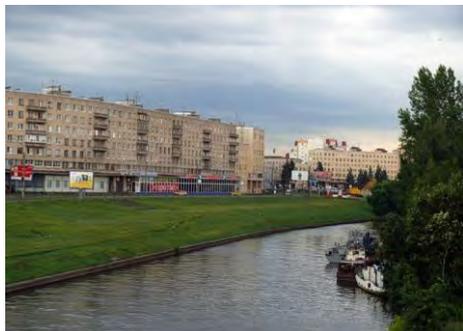


Guided: by Michael Nikitin

Duration: 9-10 hours. Meal: packed lunches. Route: VSEGEI Hotel – the village of Krasnoye Selo – the village of Kavelakhta – the village of Pudost' – the village of Kipen' – the town of Ropsha – the Shingarka River – the village of Gostilitsy – the village of Lopukhinka – the town of Kopor'e – VSEGEI Hotel. Transportation: a bus.

September 18, 2011. Excursion to the Okhta River in St. Petersburg

This river is one of the most polluted rivers in St. Petersburg. As recently as 2009, official environmental control agencies found six sources of industrial pollution within the city. During this field trip, we will try to study the water in the lower streams of the Okhta River with a geochemical multidetector probe. The multidetector will allow us to measure the conductivity of water, pH, Eh, T°, and concentration of dissolved oxygen, ammonium, and nitrites. We will demonstrate the complex of data that permits detection of industrial and domestic pollution.



Guided: by Vadim A. Shakhverdov

Duration: 4.5 hours. Meal: packed lunches. Route: VSEGEI Hotel – the Okhta River – VSEGEI Hotel.

Transportation: a bus

September 18 (in the evening). Departure from St. Petersburg to Moscow by train.

TRAVEL

AIR: from the majority of the airports around the world.

RAIL: Moscow and St. Petersburg are well connected with Eastern and Western Europe as well as Siberia and Asia.

ROAD: Moscow and St. Petersburg are well connected to all European cities.

METRO, CARS and BUSES can be used for transportation within Moscow and St. Petersburg.

BUS will be used for transportation of participants during the field trips.

ACCOMMODATION

In St. Petersburg (pre-conference field trips) – Hotel of FGUP "A.P. Karpinsky Russian Geological Research Institute" (FGUP "VSEGEI").

In Moscow – Hotel "Uzkoe," located within a 15–20 min walk from the venue of the conference in the A.A. Borissiak Paleontological Institute, RAS, and within 10 min by minibus from the metro station "Yasenevo."

Prices are given in the "Registration Form" and are also available at www.paleo.ru/EMMM-2011

Participants who prefer to stay in other Moscow hotels have to arrange their accommodation by themselves.

REGISTRATION FEE

Registration fee	Prices in Euros		
	before June 30	after June 30	after August 1
Participant	100	110	120
Accompanying person	25	30	35
Student	50	55	60

The registration fee covers the conference kit, coffee/tea breaks twice a day, Paleontological and Geological Museum entrance fees, use of lecture room, demonstration equipment, and services of assisting personnel.

It does not cover hotel accommodation, field trips, lunches and dinners during the conference, publishing of abstracts and conference proceedings.

REFUND POLICY

Fifty percent refund before June 30, 2011. No refund is possible after June 30, 2011.

FINANCIAL SUPPORT

The Organizing Committee has NO money for financial support to attend EMMM-2011. Therefore, applicants should seek funds from elsewhere to help underwrite the costs of attendance.

VISA

Visitors from other countries must carry a valid passport and, in most cases, a visa to be able to enter Russia. For more information on visa and other required travel documents, please contact the Russian Embassy or Consulate in your area before your departure.

An Invitation Letter required for obtaining a Russian visa will be provided upon your request. To obtain such a letter you must provide a jpg or pdf copy of your passport and send the Registration Form (available at the conference website) as soon as possible but not later than **01 March 2011** as the Organizing Committee will require time to prepare and post this letter by surface mail.

CLIMATE

Typical temperatures for the middle of September are 15°C (day) and 7°C (night). Rainy days are possible.

SOCIAL PROGRAM FOR ACCOMPANYING PERSONS

The organizing committee can organize excursions in some historical objects and museums of Moscow and St.-Petersburg for all accompanying persons. Please, send your demands for excursions in advance EMMM-org@paleo.ru.

For the visit in the Grand Kremlin Palace you must provide personal passport data **until 15 January 2011**: a copy of passport pages with full name, date and place of birth, passport number, place of issue and expiry date, nationality.

CORRESPONDENCE

All correspondence and questions should be addressed to the Organizing Committee:

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Abstract submission: EMMM-abstract@paleo.ru
Registration: EMMM-registration@paleo.ru
Visa and Invitation Letter: EMMM-visa@paleo.ru
Other questions: EMMM-org@paleo.ru

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Sredny prospect 74, St. Petersburg 199106, Russia.
Tel.: +7(812)321-57-06, Fax: +7(812)321-30-23.

DEADLINES

January 15, 2011	Registration (see special file "Registration-Form-EMMM-2011")
March 01, 2011	Personal data for the Invitation Letter
April 30, 2011	Abstract submission closes
June 30, 2011	Deadline for early registration
July 1, 2011	Notification of abstract acceptance
July 15, 2011	Second Circular on EMMM-2011 website www.paleo.ru/EMMM-2011
August 1, 2011	Deadline for total payment through the bank account or the postal order
August 31, 2011	Conference Programme on EMMM-2011 website www.paleo.ru/EMMM-2011

CONFERENCE INFORMATION

All conference information is available on the website of the A.A. Borissiak Paleontological Institute, RAS (PIN RAS): www.paleo.ru/EMMM-2011

Pan-European Correlation of the Triassic 8th International Field Workshop

Triassic of Southeast France (Provence: Var and Alpes-maritimes)

September 7- 9 2011

First circular

Marc DURAND ¹, Jean-Paul CARON ², Hans HAGDORN ³

² Marseille, France

¹ Laxou, France

³ Muschelkalkmuseum Ingelfingen, Germany

This field workshop builds upon earlier international Triassic meetings held in England (2004), Central Germany (2005), Eastern France (2006), Western Poland (2007), Hungary (2008), Southwest Germany (2009), and Northern Italy (2010).

It offers participants the opportunity to study, through a variety of landscapes (from coastal cliffs of the Toulon area up to mountains about 2,000 m asl of the Dôme de Barrot), various modes of Permian-Triassic unconformable boundary, and a Triassic series that presents both “Germanic” characters by its lithofacies, and “Sephardic” (Tethyan) characters by its palaeontological content.

Tentative fieldtrip schedule

Sept. 4th evening : Arrival of the participants at Toulon; overnight in Toulon.

Sept. 5th : Spectacular *Buntsandstein* outcrops along the coast, from basal conglomerate yielding ventifacts up to muddy playa-lake deposits with terminal lobes, through fluvial sandstones hosting various palaeosols. *Muschelkalk* typical outcrops: ichnofacies, macrofauna, Ladinian volcanites, tectonic problems. Overnight in Toulon.

Sept. 6th : Facies evolution towards the north-east, on the outskirts of the Maures and Tanneron Variscan massifs. Overnight in Le Muy, within the Bas-Argens Permian basin.

Sept. 7th : Scattered outcrops in the hinterland of Cannes - Nice: *Buntsandstein* (point bar deposits with Anisian palynoflora), *Muschelkalk* (limestones and dolomites), *Keuper* (site of a former coal mine in an equivalent of the *Schilfsandstein*). In the afternoon, presentation of the Triassic series of the Permian Dôme de Barrot. Overnight in Guillaumes-Valberg.

Sept 8th : Triassic outcrops along the Gorges de Daluis (canyon of the Var River): Permian-Triassic unconformable boundary, incised valley fill beneath the “basal” conglomerate, Anisian macroflora in fluvial sandstones, ?Ladinian carbonates. In the afternoon, return to Toulon via Nice.

As with previous field-workshops, transport will be arranged by private cars and possibly some mini-buses. Registration fees (accommodation in the hotels in double room) will be announced in the **second circular by the end of April 2011**. For those of you that require a single room the price will be higher than the standard one ; please tell us in advance if you require a single room.

If you intend to participate, you are kindly requested to **pre-register**, as soon as possible, using the attached pre-registration form.

Dear colleague,

We are pleased to invite proposals for symposia for IPC XIII / IOPC IX 2012, the joint meeting of the 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference to be held on August 23-30 2012 at Chuo University in Tokyo, Japan.

The theme of the IPC/IOPC 2012 is

"Palynology and Palaeobotany in the Century of the Environment".

Proposed symposia could come from various disciplines such as Palaeobotany, Palaeoecology, Palaeoclimatology, Biostratigraphy, Plant taxonomy, Plant morphology, Cell biology, Aerobiology, Allergology, Melissopalynology, Forensic palynology, etc.

We also welcome symposium proposals including leading-edge techniques.

If you are interested in organizing a symposium, please prepare a "pre-proposal" that briefly describes the symposium in English.

This pre-proposal should include the followings.

1. A descriptive title
2. One or two paragraphs explaining the purpose of symposium
3. A tentative list of speakers (unconfirmed), their institutions or affiliations, and preliminary presentation titles

We will accept only one symposium proposal from each individual.

Please send the pre-proposal to the program committee (program.ipc.iopc.2012@gmail.com) by **31 May, 2011**.

Please use the subject heading: IPC/IOPC 2012 Symposium proposal.

The program committee will review the pre-proposals and may make suggestion in view of organization of whole symposia.

For example, the committee may request merging of proposed symposia with similar topics.

We also welcome workshop proposals.

More information about the IPC/IOPC 2012 is available at

<http://wwwsoc.nii.ac.jp/psj3/jp/index.htm>

We look forward to receiving your contributions.

Best wishes

Organizing committee

IPC XIII / IOPC IX 2012

Email: program.ipc.iopc.2012@gmail.com

IPC XIII / IOPC IX 2012

Tokyo, Japan

August 23-30, 2012

Palynology and Palaeobotany in the Century of the Environment



First Circular



Objective

Palynology and Palaeobotany in the Century of the Environment

Our world is changing dramatically. There are many urgent environmental issues, such as pollution, climate change, landscape and land-use changes, that have affected ecosystem, biological diversity and human life. Palynology and Palaeobotany have provided baseline information on the past biological and environmental changes, which have in turn become critical for sustainable environmental management and nature conservation. In Japan and elsewhere more medical doctors are actively involved in Aerobiology and Palynology to prevent further spread of pollen-related allergies influenced by human-induced environmental changes. Our disciplines now have wider implications and applications relevant to the modern society than ever. The main theme "Palynology and Palaeobotany in the Century of the Environment" is thus timely for the IPC/IOPC 2012 meeting in Tokyo, Japan.

Venue

Venue: Chuo University, Tokyo

The Campus is located at central Tokyo where various transport, accommodation, and touristic services are provided. It is within five-minutes walk from Metro Stations (Korakuen, Kasuga) of several lines connecting to major Metro and train networks. Many historical, cultural and touristic spots such as Imperial Palace, Meiji Shrine, Asakusa Sensoji Temple, Botanical Gardens of the University of Tokyo, National Museum of



Science and Nature, Tokyo Bay-area, Akihabara Electric Town are within 30 minutes distance.

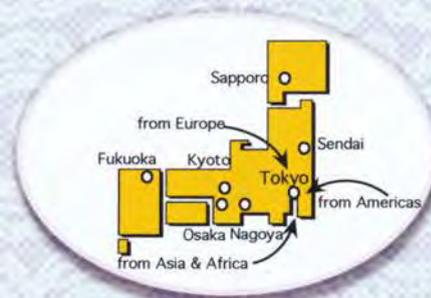
Accommodation, meal & shopping

Tokyo used to be one of the most expensive cities in the world decades ago, but that is not true now. There are a variety of accommodation types, including well-equipped five-stars (>20,000 yen) to medium class hotels (15,000-6,000 yen), so-called business hotels (9,000-4,000 yen), typical Japanese style inn (Ryokan) with Tatami-mat (room charge varies), and much economical multi-bed type sharing rooms for bag-packers (3,000-1,000 yen). There are several Youth Hostels in Tokyo. Tokyo is a well-known gourmet metropolis, providing various national and international foods to fulfill a variety of demands of visitors. Many convenience stores offer economical and sufficient



meals, such as sandwiches, rice-balls (Onigiri) and lunch-box type foods. Convenience stores are open all day, some are 24 hours.

Easy International Access



Major airlines arrive at Narita International Airport about 60 km air-distance from central Tokyo, whereas some international flights from Asia and most domestic flights land at Tokyo International Air Port (Haneda), which is fairly close to Tokyo.

Schedule

Schedule

The joint meeting of IPC and IOPC will be held from August 23 to August 30, 2012 and composed mainly of Plenary session, poster session, oral session and attractive social events.

Aug.	am	noon	pm	ev
23			Plenary session	ice breaker
24	Plenary session	poster session 1	session 1-6	
25	session 7-12	poster session 1	session 13-18	
26	one day excursion	one day excursion	one day excursion	
27	session 19-24	poster session 2	session 25-30	Banquet
28	session 31-36	poster session 2	session 37-42	
29	session 43-48	poster session 3	meetings	
30	session 49-54	poster session 3	Closing ceremony	Farewell party

Symposium

Symposia will be planned for interest topics from various disciplines such as Palaeobotany, Palaeoecology, Palaeoclimatology, Biostratigraphy, Plant taxonomy, Morphology, Cell biology, Aelobiology, Allergology, Melissopalynology, Forensic palynology, etc.

Proposals for sessions are welcome. We will give you information for the proposals in our web page (<http://www.soc.nii.ac.jp/psj3/>).

International Metropolis, Tokyo

Tokyo is the center of politics and economics of Japan and one of leading cultural centers of the world. There are a lot of attractions such as the Tokyo Disneyland and large-scale downtown areas such as Ginza where famous big-name brand shops from the world stand. On the other hand, the scenery of Asakusa is reminiscent of the former Edo era.



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Domestic traffi

The Shinkansen Super Express is the safest and fastest way to move between major cities. Various domestic flights from Haneda Airport connect major cities, too. For foreign travelers, Japan Rail Pass is economical and convenient. You can visit cities (to Kyoto 2.5hrs, Nagoya 2 hrs, Sendai 2 hrs by Shinkansen Super Express, Fukuoka and Hokkaido by 1 hour flight.



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Sophisticated Japanese Culture

Kyoto and Nara are ancient capitals of Japan. Heiankyo (the capital in Kyoto) was established in 794 AD. It has been the center of culture in Japan. There are many temples and shrines including 17 World Cultural Heritage Sites such as Kinkaku-ji temple and Byoudoin temple. You may see Maiko with long hanging-sleeved kimono who act as Japanese dancer and waitresses at parties in the special restaurant in the Gion area.



Maiko in Kyoto

©City of Kyoto©JNTO

You can see more detail in web site of JNTO and TCVB : <http://www.jnto.go.jp/>, <http://www.tcvb.or.jp/>

Field Trips and Nature

Possible Field Trips

Pre-/Post-conference

- Yakushima Island (World Heritage Site: Old growth forests of *Cryptomeria japonica*)



©Harufumi Nishida

Huge old growth forests of *Cryptomeria japonica* in Yakushima island

- Lake Biwa (largest lake of Japan) and human impact on vegetation around an ancient capital in Kyoto



©Hikaru Takahara

Mire in the subalpine zone, Hakkoda Mountain in Northern Japan

©Hikaru Takahara



Kinkaku-ji temple surrounded by evergreen trees

- Mesozoic and Neogene floras in central Honshu, visit to Fukui Dinosaur Museum, and warm temperate mixed forests



©Hikaru Takahara

Beech forest in the cool-temperate zone

- Paleoethnobotany at archaeological site, beech forest, and subalpine conifer forest in Northern Japan
- Cretaceous and Tertiary plant fossil sites and cool-temperate mixed forests in Hokkaido, visiting hot springs

- Other optional excursions to Korea and/or China will be programmed in cooperation with Korean and Chinese colleagues.

One-day tours

- Mt. Fuji and the natural forests
- Hakone National Park and hot springs



©JNTO

Mt. Fuji

- Yokohama and China Town gourmet tour
- Kamakura historical tour
- Nikko, cool-temperate mixed forests and historical sites



©Hikaru Takahara

Hemerocallis meadow in subalpine zone

Organizing Committee

Organizing Committee:

- President
Norio Sahashi
- Vice-President
Kazuhiko Uemura, Harufumi Nishida
- International Advisory Committee
Harufumi Nishida
- Fund Committee
Reiko Kishikawa
- Finance Committee
Teiji Kondo
- Public Relations Committee
Harufumi Nishida
- Program Committee
Takeshi Saito
- Excursion & Event Committee
Arata Momohara

- Excursion & Event Committee
Arata Momohara
Venue and Equipment Committee
Harufumi Nishida

- Secretary General
Hikaru Takahara

Organizer:

- The Palynological Society of Japan (PSJ)
- The International Federation of Palynological Societies (IFPS)
- The International Organisation of Palaeobotany (IOP)

Co-organizer:

- Following scientific societies will co-organize the congress.
- The Botanical Society of Japan
- The Palaeontological Society of Japan
- The Japanese Society for Plant Systematics
- Japanese Association of Historical Botany
- Japan Association for Quaternary Research

Please visit our web site for updated information. <http://wwwsoc.nii.ac.jp/psj3/>