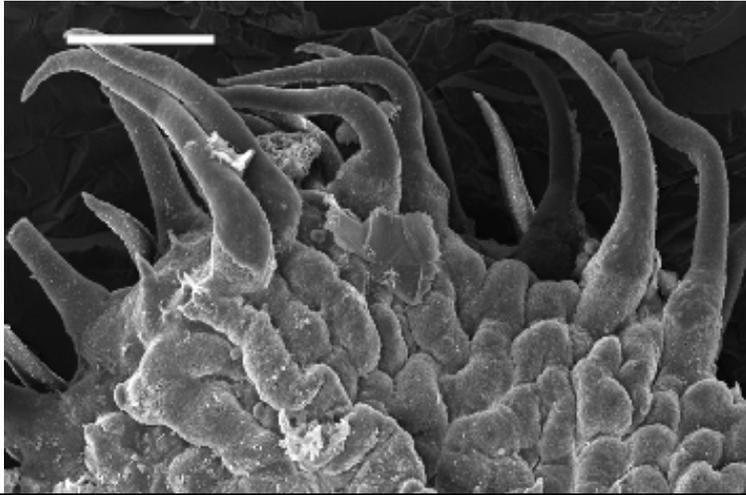




**Newsletter**  
**Winter 2010**  
**No. 78**



Detail of the proximo-equatorial ornamentation of the new variety of the megaspore *Corystisporites (Heliotriletes) acutispinosus* (Fuglewicz and Prejbisz) Turnau, which will be published soon in RPP. This Lybian megaspore is Givetian in age. Scale bar: 50  $\mu\text{m}$

Photo: Philippe Steemans

**Commission Internationale de Microflore du Paléozoïque**

President: Marco Vecoli  
Past President: John Marshall  
Secretary General & Newsletter Editor: Gary Mullins  
Treasurer: Philippe Steemans  
Webmaster: Philippe Steemans, Nominations requested  
I.F.P.S. representatives: Zélia Pereira

CIMP homepage:  
<http://www.cimp.ulg.ac.be>

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**MESSAGE FROM THE PAST  
PRESIDENT**

This is my final report in my transition from CIMP President to Past President. I am pleased to be able to tell you that Marco Vecoli has agreed to be next President of CIMP. I offer him best wishes for success with CIMP over the next four years. We also need to thank Florentin Paris who is now retiring as CIMP Past President.

As regards the last four years I think that CIMP has become more aware of its role. We are seeing the transition from a larger society with many original members to a smaller more specialist group that will promote CIMP both within the organisation and externally in other larger scientific meetings. There is a place for both activities. What matters is not our size but the activity of our members. So, best wishes for 2011 and beyond. We don't have many CIMP meetings formally scheduled in the next few years. We may not formally meet at the next IPC in Japan as not many members may get there. As regards 2014 there was some discussion in Warsaw and hopefully an offer will crystallise in due course.

John Marshall  
CIMP (Past) President  
[jeam@noc.soton.ac.uk](mailto:jeam@noc.soton.ac.uk)

**MESSAGE FROM THE PRESIDENT**

Dear CIMP members,

I am very pleased to have been elected new president of the CIMP for the next four years. I would like to thank John Marshall for his contribution to our society and I hope to be able to benefit from his experience. The next CIMP general meeting will take place in 4 year time, but it is never too early to start thinking about

a suitable locality for holding this important event and give the opportunity to as many palynologists as possible to attend and present their research. In the next newsletter I will inform you about possible choices for the host city for the CIMP 2014 meeting. In addition, I would like to promote the participation to CIMP members to as many scientific meetings as possible. In the short term, the next AASP meeting will take place in Southampton, U.K., in September 2011, and I think it is the role of CIMP to promote participation of as many Palaeozoic palynologists as possible to this important venue. Thus, I would like very much that CIMP appear as an official organizing partner for the 2011 AASP meeting.

I wish everybody a successful year of palynological research.

Marco Vecoli [marco.vecoli@univ-lille1.fr](mailto:marco.vecoli@univ-lille1.fr)  
CNRS, University of Lille 1  
Lille, France

**MESSAGE FROM THE GENERAL  
SECRETARY**

I would also like to express my thanks to John Marshall for all his hard work during his term as President of the CIMP and wish Marco Vecoli all the best for the next four years as president. I would also like to thank all of the scribes who have submitted reports and articles for this newsletter, particularly Marzena Oliwkiewicz-Miklasińska and Marzena Stempień-Sałek for the Warsaw CIMP report, photographs, and abstract volume.

I would also like to remind everyone that Philippe Steemans would like to stand aside as CIMP Webmaster. Please contact me, Marco or Philippe to volunteer.

Thank you,  
Gary Mullins  
[gary.mullins@fugro-robertson.com](mailto:gary.mullins@fugro-robertson.com)



Delegates assembled for the CIMP meeting, Warsaw (Photo: Andrzej Wilamowski)

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MINUTES OF THE CIMP BUSINESS MEETING, WARSAW, POLAND  
SEPTEMBER 13th-19th, 2010  
By John Marshall

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As both the Secretary and Treasurer were unavoidably absent from the meeting it fell to me to act in all roles at the CIMP Business Meeting.

The meeting was held on 15th September, at 11:00 in the Kyriad Prestige Hotel and organised by the local committee.

1. Apologies for absence were given by Gary Mullins (Secretary) and Philippe Steemans (Treasurer).
2. The Secretary was thanked for continuing to produce 2 CIMP Newsletters a year. Obviously it is only as good as the material that you send to put in the Newsletter. So, please respond to his requests. Mike Stephenson was also formally thanked for his contribution as a past Secretary. He retired in 2008 because of his enhanced role inside BGS (Head of Energy) and the external commitment of becoming palaeopalynology editor of *Review of Palaeobotany and Palynology*. We wish him well in both these tasks.
3. Philippe Steemans produced an entertaining Treasurer's report. Please send him the money if your subscription is not up to date. If you don't know your subscription status, then please ask him. The President also collected money at the meeting and forwarded this onto the Treasurer via Maurice Streel. The subscription income was used to support the meeting in Warsaw. This included a contribution to seven students (Ellen Stolle, Gilda Lopes, Irfan Jan, Brian Pedder, Janine Pendleton, Wenhui Wang, and Andrzej Wilamowski) plus a contribution to the conference dinner. The Treasurer also reported that he wished to relinquish the CIMP Webmaster role. So, volunteers please to the Secretary, new President or Treasurer who can explain what it involves.
4. **Pollen/Spore Report:** this 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. The former/latter resulted in 8 pp in the JPGS. 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.

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5. **Acritarch Report:** Reed Wicander was absent from the Warsaw Meeting, 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 remaining as Secretary. Catherine Duggan was thanked for taking on the role of Secretary until 2008.
6. **Chitinozoan Report:** This was given by Thijs Vandenbroucke as Secretary, the new Secretary Jacques Verniers. Ken Dorning was thanked as retiring Chair from the Subcommission. He has served for some 12 years as both Chair and Secretary.
7. The next meeting we know about is the IPC in Tokyo but it is unclear if enough CIMP members will attend to give sufficient presentations for a formal session. Beyond 2014 we have nothing formally planned. There was a possibility of ?Ghent/Liege, alternatively/plus a meeting as part of IGCP 503 (mostly Silurian). The next European Palaeobotanical meeting is in northern Italy in 2014. So, another possibility is to meet jointly/concurrently with them.
8. The President then reported that AASP were meeting in 2011 in Southampton, England (3<sup>rd</sup>-7<sup>th</sup> September). This will have a Palaeozoic session. All are invited.
9. The search was on for a new President. In answer to suggestions the President noted that the constitution of CIMP restricted the role to a single non-consecutive term of office. He wasn't proposing to change this and is, in fact, unable to do so without appropriate notification and agreement of CIMP members. Note of interest were to be given to Gary Mullins. It was also reported that Marco Vecoli had volunteered for the post. There was some discussion in the meeting and Reed Wicander was given strong support for the position (general acclaim). It was unfortunate that neither Reed nor Marco were able to be present at the meeting.
10. Any Other Business: There was a general discussion about CIMP activity. The President noted that we had met three times in 2010. At the EUG in Strasbourg (Marco Vecoli) and the other IPC in London (John Marshall). 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.
11. The organisers reminded the CIMP members that there was a possibility to publish a conference volume in *Geological Quarterly*. Manuscripts were required by Marzena and Monika before the end of November, 2010.
12. Jiri Bek reported that the IFPS Counsellor is Zélia Pereira. Our number of councillors has dropped from 2 to 1 as there are now less than 200 paid up IFPS members. Whilst this might appear to be a reduction in influence at IFPS meetings it was costing us real money for the IFPS subscription for phantom members who never pay subscriptions.
13. Finally thanks were given to the local organisers. The meeting was very well organised as evidenced by the fact that everything happened in order, and on time. A testament to excellent planning and attention to detail. Special thanks were given to Marzena Stempień-Sałek, Marzena Oliwkiewicz-Mikłasińska, Monika Masiak and Anna Górecka-Nowak (Wrocław University).

The meeting closed and then went to lunch at 13:00. The group then had a tour of Warsaw at 15:30.

John Marshall 30<sup>th</sup> December 2010 CIMP (Past) President



The Past President John Marshall at the Gala Dinner, Warsaw (Photo: Marzena Stempień-Sałek)

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## A SUMMARY OF THE WARSAW CIMP MEETING

By Marzena Oliwkiewicz-Mikłasińska

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CIMP General Meeting 2010 was held in Warsaw, Poland from September 13th, 2010 to September 16th, 2010. 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 this year (first was IPC3 in London, second was 8th EPPC in Budapest) we were afraid as organizers about the possible 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](http://www.ing.pan.pl/CIMP-2010/Graph_Attach/CIMP-2010_list.pdf)

The theme of CIMP Warsaw 2010 was “Palynology and its possibilities: record of climate and environmental changes”, but the programme was open to all Palaeozoic and even Precambrian palynology topics. The scientific meeting began at the civilized hour of 10 am with an opening ceremony conducted by the Director of the Institute Geological Sciences PAS Prof. Marek Lewandowski, CIMP President John Marshall and Prof. Maurice StreeL from Liège University. During three days of scientific sessions, 25 talks were given in all and 14 posters were presented at the Tuesday 14th September afternoon session. The venue

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consisted of two morning sessions and one or two afternoon sessions each day, with two to four talks per session. The convenors of the scientific sessions were John Marshall, Maurice Streel, Kenneth Higgs, Patricia Gensel and Charles Wellman. After the opening ceremony two invited talks were presented:

“Acritarchs: a fresh look at the old stuff” by Prof. Józef Kazmierczak from Institute of Palaeobiology PAS (co-author Dr Barbara Kremer).

“Palynological data analysis - modern methods and how to use them” by Dr Øyvind Hammer from the Natural History Museum of Oslo University.

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

1. Małgorzata Moczyłowska-Vidal - Proterozoic acritarchs and divergences of green algae
2. Hartmut Jäger, Guy H. Spence, Thilo Bechstädt - Palynology of glacial intervals in the Neoproterozoic of Namibia – new facts on ‘Snowball Earth’
3. Monika Jachowicz-Zdanowska - Palynological investigations of the Proterozoic-Cambrian succession in the Małopolska Blok (southern Poland)
4. Thijs R. A. Vandenbroucke, Howard A. Armstrong, Mark Williams, Florentin Paris, Jan A. Zalasiewicz, Koen Sabbe, Jaak Nölvak, Thomas J. Challands – Zooplankton biotopes, climate belt contraction and polar front shift towards the glacial maximum of the Early Palaeozoic icehouse
5. Brian E. Pedder - Large spinose acritarchs (LSAs) from Cambrian Laurentian sediments in the USA
6. Wenhui Wang, Jacques Verniers – Chitinozoans in *Adelograptus tenellus* graptolite Zone of the Late Tremadocian (Early Ordovician) from Yiyang, South China
7. Hareshwar Narain Sinha, Jacques Verniers, Thijs R. A. Vandenbroucke – First report of Ordovician Chitinozoans from the Shiala Formation of Tethys Himalaya, India
8. Mohammad Ghavidel-syooki - Biostratigraphy and Paleogeography of Ordovician Strata, in Kabirkuh well#1, in Lurestan area, Southwestern Iran
9. Mutasam Al-Ghammari - Ordovician-Silurian palynology of Oman
10. Jacques Verniers, Monika Masiak - Silurian chitinozoans from the Prągowiec Ravine, Holy Cross Mountains, Poland and calibration with the graptolite biozonation
11. Nuno Vaz, Florentin Paris, J. Tomás Oliveira - Chitinozoans of Upper Silurian of Amêndoa - Mação Syncline
12. Kenneth Higgs, B.P.J. Williams - Palynology and palaeoenvironments of the Silurian rocks of the Dunquin Inlier, Dingle Peninsula, Co. Kerry
13. Gilda Lopes, Nuno Vaz, António J.D. Sequeira, José M. Piçarra, Paulo Fernandes, Zélia Pereira - Palynomorphs from the Gorstian (Silurian) of Sazes Formation (Buçaco Syncline), Central Iberian Zone, Portugal – Preliminary results
14. Charles H. Wellman, Patricia G. Gensel, Wilson A. Taylor - Late Silurian-Early Devonian palaeophytogeographical differentiation: the French/Spanish connection

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15. Patricia G. Gensel, Charles H. Wellman, Wilson A. Taylor - Ultrastructure of *in situ* spores of Early Devonian Lycopphytina
16. Zelia Pereira, J. X. Matos, Paulo Fernandes, J. T. Oliveira – Palynostratigraphic study of the Caveira mine (NW sector of the Iberian Pyrite Belt, Portugal)
17. Wilson A. Taylor, Charles H. Wellman, Patricia G. Gensel - What can spore wall ultrastructure tell us about affinity and evolution of the Devonian form genera *Emphanisporites* and *Camarozonotriletes*?
18. John E. Marshall, Huaicheng Zhu, Charles H. Wellman, Yi Wang, C.M. Berry – *Archaeoperisaccus*
19. Jiří Bek, Tania Dimitrova – Taxonomy and stratigraphic importance of the Carboniferous miospore genus *Vestispora*
20. Jenny Brittain - Palynological biostratigraphy and correlation of Tournaisian (Mississippian) synsedimentary deformation and reworking events in southern Ireland and South Wales
21. Janine Pendleton – Palaeobotanical investigation of a neglected coalfield: the Coalpit Heath Basin of the Bristol Coalfield
22. Irfan U. Jan, Michael H. Stephenson – Palynology of the ?glacigenic Carboniferous Tobra Formation of Pakistan
23. Paulo Fernandes, Joaquim Luís, Sandra Rodrigues, Manuela Marques, Bruno Valentim, Deolinda Flores - The Measurement of Vitrinite Reflectance using Matlab

The abstracts of talks and posters are available as a pdf file on conference website:

[http://www.ing.pan.pl/CIMP-2010/Graph\\_Attach/CIMP-2010\\_abstract%20.pdf](http://www.ing.pan.pl/CIMP-2010/Graph_Attach/CIMP-2010_abstract%20.pdf)

The last conference session was dedicated to the CIMP Business Meeting, and is presented in Message from the Past President John Marshall.

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) allowed for fruitful discussions of our small palynological society. Also the Gala Dinner on Tuesday 14th September, at the charming Halka Restaurant with excellent meals and very rich-caloried dessert, was the next occasion for further interchange between the CIMP 2010 attendees.



Ken Higgs, Olga Telnova, Monika Jachowicz-Zdanowska, Anna Górecka-Nowak at the Gala Dinner, Warsaw (Photo: Marzena Stempień-Sałek)

Because for many of the participants the CIMP 2010 in Warsaw was their first opportunity to visit Poland, the organizers also tried to present to our guests the touristic attractions of our capital city during a guided sight-seeing tour. This last event was very successful despite the cold and rainy weather thanks to the young guide who spoke many languages and who told very interesting stories about Warsaw's history and monuments.



The CIMP delegates at Plac Zamkowy, Warsaw (Photo: Marzena Stempień-Sałek)

On Friday 16th September, the last day of the CIMP meeting, a workshop was held at the conference room of the Institute of Geological Sciences PAS, with two microscope sessions separated by a multimedia presentation on the newest NIKON equipment. The workshop

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allowed the individual consultations on microscope slides and fruitful discussions concerning taxonomy, palynomorphs' state of preservation, and laboratory methods.

In the afternoon of the 16<sup>th</sup> September, attendees departed to the post-conference field trip in the Holy Cross Mountains. The participants represented a small, but varied, international group (Belgian, Chinese, English, German, Indian, Irish, Polish and Russian), with special share of the Englishman Ken Higgs representing Ireland, with his wonderful sense of humour. The main organisational effort of this field trip was made by the team from 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 most of the stops to the Palaeozoic outcrops and quarries. During the first day of the field trip the participants visited the big operating quarries in Wiśniówka Duża, Bukowa Góra and Kowala, with Cambrian sandstones and Devonian carbonate rocks, and the small quarry in Kajetanów with Permian limestones. The afternoon was dedicated to visiting the PGI- NRI Geological Museum in Kielce, as well as the core collections of Proterozoic and Lower Palaeozoic deposits from the boreholes drilled on Upper Silesia and Małopolska Blocks. Monika Jachowicz-Zdanowska, Zbigniew Szczepanik and Wiesław Trela presented the lithology and palynology with numerous, excellent preserved and taxonomically diversified acritarchs illustrated on many plates. The next day, Saturday 18<sup>th</sup> September, was dedicated to the natural outcrops of Cambrian, Ordovician and Silurian rocks in Zbelutka, Zalesie Górne and Bardo, with an impressive, full of fossils, profile of the Prągowiec ravine. Finally, visiting the Holy Cross Monastery and looking at the Pleistocene peri-glacial boulder cover at Łysa Góra (Bald Mount) was followed by the making of a photo group (see below), which ended this active day.



In the Zbelutka quarry during the Holy Cross Mountains field trip (Photo: Marzena Stempień-Sałek)



The Kowala quarry during the Holy Cross Mountains field trip (Photo: Marzena Stempień-Salek)



The group photo, Holy Cross Mountains field trip (Photo: Marzena Stempień-Salek)

The last day, Saturday 19th September, a special attraction for the participants was visiting the Zachełmie quarry, where the oldest Tetrapoda footprints were found. This place pretends to be the most famous Polish geosite, with the nice landscape of an abandoned quarry enriched by explanation plates presenting the palaeogeography and biosphere of this part of the Holy Cross Mountains during Palaeozoic times. The observation of Tetrapoda footprints

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in the Zachelmie quarry was the excuse to present the rich photo documentation of Irish Tetrapoda footprints by Ken Higgs from Cork University. The Irish prints were the oldest ones, until the discovery by Polish geologists in the Zachelmie quarry, and their quantity and preservation state is really impressive.



At the Zachelmie quarry during the Holy Cross Mountains field trip (Photo: Marzena Stempień-Sałek)

The next stop was in the abandoned Czerwona Góra quarry with Permian conglomerates, which participants saw earlier in polished form in Warsaw (Sigismundus Pillar on Castle Square) and on the walls of PGI- NRI Geological Museum in Kielce. The last stop of the field trip was at the Archeological Museum and Reserve at Krzemionki. It was Europe's biggest site of a complex of flint mines. The mining field in Krzemionki is located in an area of Jurassic (Upper Oxfordian) limestone outcrop in a syncline edge, with a perfectly preserved above ground landscape and underground structure. More information is available at website: [http://www.en.krzemionki.pl/index\\_x.php](http://www.en.krzemionki.pl/index_x.php)

During the three-days of the field trip the participants had the opportunity to admire the touristic attractions of the Holy Cross Mountains, like Chęciny Castle, Holy Cross Monastery, ancient axis cult on Łysa Góra, Kadzielnia amphitheatre, and Bishop Palace in Kielce. The field trip programme with photos and guidebook pdf file are available at website: [http://www.ing.pan.pl/CIMP-2010/index\\_cimp.htm](http://www.ing.pan.pl/CIMP-2010/index_cimp.htm)

Marzena Oliwkiewicz-Mikłasińska

[ndmiklas@cyf-kr.edu.pl](mailto:ndmiklas@cyf-kr.edu.pl)

## THE WARSAW CIMP MEETING

By Brian Pedder

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Undertaking a PhD (as I am, studying Cambrian acritarchs) requires, amongst other things, a relatively frugal existence. So, given the often financially challenging nature of conferences, I wish to thank the CIMP (and associated fraternity) wholeheartedly for their generous financial support for my attendance at the 2010 CIMP meeting in Poland.

25 talks, a poster session (14 posters), the gala dinner, a sightseeing tour, microscope sessions and a workshop, organised lunches, numerous gatherings in restaurants and drinking holes (followed by mornings of regret!) and a group photo all took place over a period of four days in the capital city of Poland, Warsaw. This was my first CIMP conference and forgettable it was not! It of course gave me the opportunity to meet fellow acritarch workers and discuss the various aspects of our little, rather esoteric field of study. It's quite rare, I think, to have so many Cambrian acritarch workers all together in one room and at the same time, even at a CIMP meeting! I think we nearly attained some kind of bizarre critical mass! It was great to see Teodoro Palacios again and meet for the first time Małgorzata Moczyłowska-Vidal, Monika Jachowicz-Zdanowska and Zbigniew Szczepanik, all formidable Cambrian acritarch scrutineers. I very much enjoyed giving them a guided tour of Cambrian acritarchs from the USA (actually, as it turned out they ended up guiding me) and of course this is what meetings are all about. And because of the plethora of acritarch workers there was an abundance of presentations and posters about acritarchs which were of particular interest to me.

Another positive aspect for me was being able to discuss acritarchs without being heckled in some way, for it seems to me that acritarchs seem to have a bit of a bad press. Over the past few years I have heard acritarchs variously described as 'little brown blobs', 'small brown smears' and 'little bits of snot' and worse! 'Pointless' was a good one as were 'not worth the effort' and 'oh for goodness sake, is there not something else you can do'! On the odd occasion when I have told people I study acritarchs the responses have been equally condemning with 'well someone has to' or 'you have my sympathy'! So what is it about acritarchs that prompt such bile? Well frankly I don't really know! May be its just me! Possibly it's that we don't really know what they are, or that they have a more limited application as environmental proxies than other groups. But then should not these be reasons TO study them? Anyway, (rant over) the CIMP meeting gave a wonderful stage upon which the proud acritarch worker (and others) could strut and shout from the roof tops. Many thanks CIMP.

In short, a fantastic meeting organised with great flare and zeal by the Warsaw team. I returned home with a notebook full of new taxa to check, new contacts and well, yes, a hangover!!

Brian Pedder, University of Sheffield

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Crossing makeshift bridges on the Holy Cross Mountains field trip (Photo: Marzena Stempień-Sałek)

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## THE WARSAW CIMP MEETING

By Janine Pendleton

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The conference opened with a warm reception in a cosy room deep within the Institute of Geological Sciences of the Polish Academy of Sciences. Over wine and nibbles, I wandered around catching up with familiar faces. From the outset the conference had a welcoming feel, which is often missing in the larger and more generalised palaeontology meetings. It made a welcome change not to feel ostracised and overwhelmingly outnumbered by vertebrate and mollusc workers!

The next day we all assembled in a conference room at the Kyriad Prestige Hotel, as the conference began proper. Over the three days of talks, the full spectrum of Palaeozoic palynology was covered. From marine to terrestrial, Cambrian to Carboniferous; every taxa and continent seemed to be duly and enthusiastically represented. Talks ranged from the purely taxonomic and biostratigraphic, to reconstructing palaeoenvironments and timings of important large-scale climate changes. Coming from a geological background, this provided me with the perfect chance to expand my palynological knowledge beyond the remits of my own research and palynomorph group.

Towards the end of the conference, was the fantastic gala dinner at the Halka Restaurant. Here we got to sample various culinary delights including żurek, a delicious fermented rye soup with huge chunks of egg and sausage lurking within. On the following day we were whisked off on a wonderful guided tour around the city by bus and foot. As a first time visitor to

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Poland, I thoroughly enjoyed the chance to sample traditional Polish food and learn more about the city and its history.

I would like to whole-heartedly thank Monika, Marzena and all the other organisers who pieced together and seamlessly managed a truly memorable conference which sets the bar exceptionally high for next year. Many thanks for CIMP for their gratefully received financial aid which enabled me to attend this unforgettable conference and visit such a unique city.

Janine Pendleton, University of Sheffield



At the Wiśniówka Duża quarry during the Holy Cross Mountains field trip (Photo: Marzena Stempień-Sałek)

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FUTURE MEETINGS AND CONFERENCES

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**AASP 44<sup>th</sup> Annual Meeting**  
**Southampton, England**  
**September 5<sup>th</sup>-7<sup>th</sup>, 2011**

This meeting will immediately follow DINO9 at the University of Liverpool between the 28<sup>th</sup> August and 2<sup>nd</sup> September (<http://pcwww.liv.ac.uk/~dino9/index.htm>)

Two theatres have been made available for the AASP meeting to allow for concurrent sessions. Provision has also been made for meeting rooms, laboratories, etc. at the National Oceanographic Centre (NOC), Southampton. This will be a joint meeting with The Micropalaeontological Society and the Linnean Society – Palynology Group.

Hotel accommodations are up to individuals to make, though there are many choices covering a range of costs. Student residences have been secured at area colleges and can provide very inexpensive lodging. The canteen at the NOC can provide breakfasts, and the HMS Warrior will be the venue for the banquet.

Pre- and post-meeting day-long fieldtrips are being planned for the Dorset Jurassic coast and Isle of Wight.

Registration will be handled by personnel at Southampton University.

<http://www.palynology.org/meetings.html>



**L'ASSOCIATION DES  
PALYNOLOGUES DE LANGUE  
FRANÇAISE**

**Palynologie et Diversités : marqueurs,  
milieux, méthodes, modèles, applications**

The Association des Palynologues de Langue Française will have their 22<sup>nd</sup> meeting in Meudon/Paris between the 20<sup>th</sup> and 22<sup>nd</sup> of September 2011. Full details can be found at <http://w3.laplf.univ-tlse2.fr/annonces%20conferences/1ereCirculaireSymposiumMeudon.pdf>



**IPCXIII/IOPC IX 2012**

**Palynology and Palaeobotany in the  
century of the environment**

**23rd-30th August 2012**

**Tokyo, Japan**

The Congress will be held as the joint of IPC/IOPC on August 23<sup>rd</sup>-30<sup>th</sup>, 2012 at Chuo University, Korakuen Campus, Kasuga, Bunkyo-ku, central Tokyo.

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. Please visit our web site (<http://wwwsoc.nii.ac.jp/psj3/>) for more detail information. Also, you can download the first circular from our web site.

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## NEWS FROM THE MEMBERSHIP

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**Dr Aurélien Delabroye, Université Paul Sabatier, Toulouse**

### LMTG

Aurélien Delabroye defended his PhD thesis at Lille (France) in March 2010 on acritarch dynamics across the Ordovician-Silurian boundary. Several papers extracted from his manuscript are currently in press or have been submitted. Now, working at the “Laboratoire des Mécanismes et Transferts en Géologie” (Toulouse) since September as a teaching assistant in Palaeontology, he begins to focus on the problematical “Late Palaeozoic Phytoplankton Blackout” with his colleague, Dr Markus Aretz.

### Publications:

Delabroye, A., Vecoli, M., Hints, O. & Servais, T. In press. Acritarchs from the Ordovician-Silurian boundary beds of the Valga-10 drill core, southern Estonia (Baltica), and their stratigraphical and palaeobiogeographical implications. *Palynology*. DOI: 10.1080/01916122.2010.491636

Hints, O., Delabroye, A., Nõlvak, J., Servais, T., Uutela, A. & Wallin, Å. 2010. Biodiversity patterns of Ordovician acritarchs in Baltica: comparison with other palynomorphs and sea level changes. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 294, 161-173.

Delabroye, A. & Vecoli, M. 2010. The end-Ordovician glaciation and the Hirnantian Stage: A global review and questions about late Ordovician event stratigraphy. *Earth-Science Reviews*, 98, 269-282.

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### Dr Mercedes di Pasquo

Since 2010 she is working at the CICYTTP - CONICET, Diamante, Entre Ríos, Argentina. See more information

about this place at the website: <http://www.cicyttp.org.ar>. She keeps working mainly on Late Paleozoic Palynofloras (and megafloras) from Bolivia, Argentina and related areas. If you want to know more about her work, please go to the website:

<http://www.cicyttp.org.ar/mdipasquo.htm> and <http://palino.com.ar> (to download her pdf's you will need to use: username=palino, password=palino2005).

Sol Noetinger is close to defending her PhD on "Studies of palynoassemblages and megaflora from the Devonian of southern Tarija basin, northern Argentina and southern Bolivia: age, correlation and palaeoenvironment of deposition", with the direction of Dr Mercedes di Pasquo.

#### Recent publications:

Amenábar, C. R. and di Pasquo, M. M. 2009. Nuevos datos palinológicos de las Formaciones Codo (Devónico) y El Ratón (Carbonífero Inferior), Precordillera Occidental de Argentina. *Discusión cronológica y paleoambiental*. Lilloa (Acta Geológica Lilloana, Fundación Miguel Lillo), 45(1-2): 3-22.

Amenábar, C. R., di Pasquo, M. and Azcuy C. L. 2009. Palynofloras of the Chigua (Devonian) and Malimán (Mississippian) formations from the Precordillera Argentina: Age, correlation and discussion of the D/C boundary. *Revista Española de Micropaleontología*, 41(3): 217-239.

Anderson, H., di Pasquo, M, Grader, G. and Isaacson, P. 2010. Ice-proximal stratigraphy and active tectonics: an example from southern Bolivia. GSA 62nd Annual Meeting (21-23 April 2010, South Dakota), GSA Online Abstracts.

Breuer, P., Steemans, P. and di Pasquo, M., 2009. Global palaeogeography of Devonian miospore assemblages. The CIMP Faro'09, II Joint Meeting of Spores/Pollen and Acritarch CIMP

Subcommissions (Faro, Portugal, 20-24th September 2009), CIMA (University of the Algarve), pp. 4.

di Pasquo, M. M. 2010. Unidades estratigráficas del Devónico del norte de Argentina. En: *Léxico Estratigráfico de la Argentina*. Sistema Devónico. Asociación Geológica Argentina y SEGEMAR. [http://www.segemar.gov.ar/P\\_Lexico/index.htm](http://www.segemar.gov.ar/P_Lexico/index.htm). in press.

di Pasquo, M. 2009a. Primer registro de megafloras y palinología en estratos de la Formación Tarija (Pennsylvaniano), Arroyo Aguas Blancas, Provincia de Salta, Argentina. *Descripción de dos especies nuevas*. *Andean Geology*, 36 (1): 95-123. (ex *Revista Geológica de Chile*)

di Pasquo, M. M. 2009b. The Pennsylvanian palynoflora from the Pando X-1 Borehole, northern Bolivia. *Review of Paleobotany and Palynology*, 157, 266–284.

di Pasquo, M., Amenábar, C. R. and Noetinger, S. 2009. Middle Devonian microfloras and megafloras from western Argentina and southern Bolivia. Its importance in the palaeobiogeographical and palaeoclimatical evolution of western Gondwana. In: Königshof, P. (ed.) *Devonian Change: Case Studies in Palaeogeography and Palaeoecology*. The Geological Society, London, Special Publications, 314, 191–211. ISBN 0305-8719/09.

di Pasquo, M. M., Caviglia, N. and Oller, J. 2009. Nueva información palinológica del Givetiano – Frasniano del área de Yesera, Departamento de Tarija, Bolivia. 14 Simposio Argentino de Paleobotánica y Palinología (Mar del Plata, 6-9/12/2009), Resúmenes: 9.

di Pasquo, M. M. and Ottone, E. G. 2009. Las colecciones de Paleobotánica y Palinoestratigrafía de la Facultad de Ciencias Exactas y Naturales (FCEN), Universidad de Buenos Aires (UBA), Argentina. *Boletín de la Asociación*

Latinoamericana de Paleobotánica y Palinología, 13: 25-42. ISSN 0325-0121.

di Pasquo, M. M., Souza, P. A., Grader, G. and Díaz Martínez, E. 2009. Early Devonian and Permian (Titicaca Group) palynology from Bolivia: The Apillapampa section revisited for stratigraphic assessment. AASP 42nd Annual Meeting (Septiembre, Tennessee), East Tennessee State University. The Palynological Society, Abstracts: 23.

di Pasquo, M. M., Vergel, M. M., Noetinger, S., Aráoz, L. and Aceñolaza, G. F. 2011. Estudios palinoestratigráficos del Paleozoico en Abra Límite, Sierra de Zenta, Provincia de Jujuy, Argentina. XVIII Congreso Geológico Argentino (Neuquén, 2-6/05/2011), Actas, 2p.

di Pasquo, M. M., Vergel, M. M. and Azcuy, C. L. 2010. Pennsylvanian and Cisuralian palynofloras from the Los Sauces area, La Rioja Province, Argentina: chronological and palaeoecological significance. International Journal of Coal Geology "Special Issue: Hermann Pfefferkorn" 83: 276-291. ISSN-0166-5162.

di Pasquo, M. M., Vergel, M. M., Aceñolaza, G. F., Noetinger, S. and Aráoz, L. 2010. Nueva información palinológica de la Formación Lipeón en Abra Límite, Sierra de Zenta, Jujuy. XIII Simpósio Brasileiro de Paleobotânica e Palinologia (Salvador de Bahia, 14-17 Noviembre), Brasil. Resúmenes.

Noetinger, S. 2010. Middle-Upper Devonian palynoflora in the Tonono X-1 Borehole, Salta Province, Argentina. *Ameghiniana*, 47(2): 165-184.

Noetinger, S. 2010. Unidades estratigráficas del Devónico del norte de Argentina. En: *Léxico Estratigráfico de la Argentina. Sistema Devónico. Asociación Geológica Argentina y SEGEMAR.* [http://www.segemar.gov.ar/P\\_Lexico/index.htm](http://www.segemar.gov.ar/P_Lexico/index.htm). in press.

Noetinger S. and di Pasquo M. M., 2010. Devonian palynofloras of the San Antonio x-1 borehole from the Tarija Basin, northwestern Argentina. *Geologica Acta* (in press).

Noetinger, S. and di Pasquo, M. M. 2010. Datos palinológicos de la Formación Cerro Piedras, provincia de Jujuy, Argentina. X Congreso Argentino de Paleontología y Bioestratigrafía y VII Congreso Latinoamericano de Paleontología (La Plata, 09/2010). Universidad Nacional de La Plata y Museo. Resúmenes.

Noetinger, S. and di Pasquo, M. M. 2009. Nuevos datos palinológicos de la Formación Rincón, en la provincia de Salta, Argentina. 14 Simposio Argentino de Paleobotánica y Palinología (Mar del Plata, 6-9/12/2009), Resúmenes: 2.

Noetinger, S. and di Pasquo, M. M., 2010. First Devonian palynological assemblage from the Zenta Range, eastern Cordillera, northwestern Argentina. *Revista Brasileira de Paleontologia*, 13(1):13-20.

Vergel, M., di Pasquo, M., Beri, A. and Andreis, R. 2010. Actualización palinológica de la sucesión pérmica en la perforación Fraile Muerto (Fm2), Noroeste de Uruguay. XIII Simpósio Brasileiro de Paleobotânica e Palinologia (Salvador de Bahia, 14-17 Noviembre), Brasil.

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### **Dr Gil Machado, Aveiro University**

I recently finished my PhD thesis at Aveiro University, Portugal. The thesis addresses Devonian and Carboniferous marine metasediments and terrestrial sediments of the Ossa-Morena Zone (western and south western Iberia). Palynology was the main method used throughout for biostratigraphy and paleoenvironmental interpretation, but additional methods were used such as lithofacies analysis, MSEC stratigraphy, XRD analysis, conodont biostratigraphy amongst others.

Some of the results are already published and the remaining data will be submitted

for publication during 2011. Please contact me if you would like to receive a copy (or the pdf).

Currently I'm working at Galp Energia, a Portuguese oil & gas company which still works mostly the downstream business but plans to expand decisively into the production side, with prospects in the Brazilian pre-salt and several West and East Africa projects.

Gil Machado  
[machadogil@gmail.com](mailto:machadogil@gmail.com)

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### Malgorzata Moczydlowska

Recent publications:

Moczydlowska, M. 2010. Life cycle of early Cambrian microalgae from the *Skiagia*-plexus acritarchs. *Journal of Paleontology* 84(2), 216-230.

Moczydlowska, M., Schopf, J.W. and Willman, S. 2010. Micro- and nano-scale ultrastructure of cell walls in Cryogenian microfossils: revealing their biological affinity. *Lethaia* 43, 129-136.

Conference Abstracts:

Moczydlowska, M. 2010. Diversification of Proterozoic phytoplankton and its impact on the oxygenation of marine environments. International Conference and Field Meeting on Precambrian Life, Time and Environment, February 2-9, 2010, Lucknow, India. IUGS-ICS Neoproterozoic Subcommission. Abstracts, 16-18.

Moczydlowska, M. 2010. Proterozoic microfossils revealing the time of algal divergences. *Geophysical Research Abstracts*, Vol. 12, EGU2010-0, 2010, EGU General Assembly 2010.

Moczydlowska, M. 2010. Proterozoic acritarchs and divergences of green

microalgae. CIMP General Meeting 2010, September 13-18, 2010 – Warsaw, Poland. Book of Abstracts, 42-44.

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### Florentin Paris

Florentin has a new email address: [florentin.paris@orange.fr](mailto:florentin.paris@orange.fr)

Details of Florentin's chitinozoan database (CHITINOVOSP) appear below.

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### Philippe Steemans, Liège, Belgium

1) Recent research. I'm working on miospores ranging from the Ordovician up to the Early Devonian from Argentina with my colleague Claudia Rubinstein (Mendoza).

Charlie Wellman (Sheffield), Merrell Miller (Dhahran) and I are writing an expanded paper on the Ordovician material from the QSAIBA borehole (Saudi Arabia) in which we have found the oldest trilete spores. We have published in a paper in *Science*.

Pierre Breuer (Dhahran) and I are writing a huge paper on Late Pragian up to the Givetian/Frasnian boundary from Saudi Arabia. This paper concerns mainly the spore systematics. The paper is based on the PhD thesis of Pierre.

<http://bictel.ulg.ac.be/ETD-db/collection/available/ULgetd-02082008-134323/>

Emmanuelle Javaux, Kevin Lepot and I (everybody from Liège) are working on the chemical composition, ultrastructure, FTIR analysis on the enigmatic *Gloeocopsomorpha prisca*. This material has been collected during a field trip I have done in the Saint Petersburg area with Lena Raevskaya (Saint Petersburg). This research is financially supported by the NFSR.

2) Publications 2009-2010

Gerrienne, P. & Steemans, P. (2010, November 30). *Miscellanea palaeontologica* 2010. Paper presented at Groupe de contact FNRS - MVP et PPMB. <http://hdl.handle.net/2268/78105>

Rubinstein, C., Garcia Muro, V. J. & Steemans, P. (2010, November). Edad de las esporas de la Formacion Los Espejos, Silurico de la Precordillera de San Juan, Argentina. Paper presented at XIII Simposio Brasileiro de Paleobotanica e Palinologia, Salvador, Bahia, Brasil. <http://hdl.handle.net/2268/78493>

Steemans, P., Lepot, K., Marshall, C. P., Le Hérisse, A. & Javaux, E. (2010). FTIR characterisation of the chemical composition of Silurian miospores (cryptospores and trilete spores) from Gotland, Sweden. CIMP Poland 2010 General meeting. <http://hdl.handle.net/2268/73850>

Steemans, P., Wellman & Gerrienne, P. (2010). Palaeogeographic and palaeoclimatic considerations based on Ordovician to Lochkovian vegetation. Geological Society, London, Special Publications, 339, 49-58. <http://hdl.handle.net/2268/71594>

Rubinstein, C. V., Gerrienne, P., de la Puente, G. S., Astini, R. A. & Steemans, P. (2010). Early Middle Ordovician evidence for land plants in Argentina (eastern Gondwana). *New Phytologist*, 188, 365-369. <http://hdl.handle.net/2268/72757>

Steemans, P., Lepot, K., Marshall, C., Le Hérisse, A. & Javaux, E. (2010). FTIR characterisation of the chemical composition of Silurian miospores (cryptospores and trilete spores) from Gotland, Sweden. *Review of Palaeobotany & Palynology*, 1-14.

Strullu-Derrien, C., Ducassou, C., Ballèvre, M., Dabard, M.-P., Gerrienne, P., Lardeux, H., Le Hérisse, A., Robin, C., Steemans, P. & Strullu, D.-G. (2010). The

early land plants from the Armorican Massif: sedimentological and palynological considerations on age and environment. *Geological Magazine*, 147(6), 830-843.

<http://hdl.handle.net/2268/74444>

Gerrienne, P., Petus, E. & Steemans, P. (2009, December 04). *Miscellanea palaeontologica*. Paper presented at PPMB-MVP meeting, Liège, Belgique. <http://hdl.handle.net/2268/30260>

Breuer, P., Steemans, P. & Di Pasquo, M. (2009, September). Paleophytogeographic distribution of Devonian miospore assemblages. <http://hdl.handle.net/2268/22377>

Steemans, P., Javaux, E., Breuer, P., Le Hérisse, A., Marshall, C. & de Ville de Goyet, F. (2009). Description and microscale analysis of some enigmatic palynomorphs from the Middle Devonian (Givetian of Libya). *Palynology*, 33, 101-112.

<http://hdl.handle.net/2268/21503>

Steemans, P., Le Herisse, A., Melvin, J., Miller, M., Paris, F., Verniers, J. & Wellman, C. H. (2009). Origin and radiation of the earliest vascular land plants. *Science*, 324, 353.

<http://hdl.handle.net/2268/15579>

3) Future research

I'm hand picking Silurian cryptospores and trilete spores from Götland, from the same locality on which I have published with co-authors this year in RPP. This material will be sent to my colleague Suryendu Dutta (Bombay) for a geochemistry analysis in using pyrolysis-GC-MS.

I progressively moved my research into the field of geochemical and FTIR analysis done on different fossil palynomorphs to compare with extant ones to better characterise the biological affinity of what we observed under microscope.

4) "Wherever I go, people are waving at me. Maybe if I do a good job, they'll use all their fingers". - Frank King, Winter

Olympic Games organizing committee chairman.

5) Other subjects

I'm building with my assistant, Elodie Petus, a database on the most important species from the Ordovician up to the Carboniferous. This work has begun in 2009 and will continue up to end of 2002. This database is financially supported by a petroleum society from Brazil (I let you guess).

I take this opportunity to ask you if you would have available samples from the Late Devonian up to the Bashkirian to get into this database. You may contact me by email [p.steemans@ulg.ac.be](mailto:p.steemans@ulg.ac.be). Of course expenses will be refunded.

6) I would like to stop my job of CIMP webmaster. I can continue to host the web site. Who is interested?

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**Marco Vecoli, Lille**

Recent research:

With my research group at the CNRS laboratory "Geosystems" and collaborators, we have been active in Ordovician to Silurian miospore palynology in several areas worldwide.

1. We have now completed a research project on Hirnantian cryptospores from Estonia and Anticosti Island and a paper detailing the taxonomy and phytogeographic significance of the assemblages is ready for submission in the next days; this project has been developed in collaboration with my former PhD student Aurélien Delabroye (now teaching and researching in Toulouse), with Dr Amalia Spina, former postdoctoral fellow under my mentorship and now working at the CNR of Perugia, Italy, and with Olle Hints from the Geological Institute of Tallin, Estonia.

2. A field trip to Utah in 2009 with Paul Strother from the Weston Observatory of the Boston College, has provided the opportunity to research in to lowermost Ordovician cryptospores; some exciting discoveries of new types of cryptospores will shed new lights into hypotheses on origin and early evolution of land plants. Part of the results have been presented in several meetings, and papers are now being prepared.

3. In the past three to four years I have been developing applications of geochemical (*in situ*, multi-spot isotopic analyses on single specimens, and biomarker extraction and analyses) and spectroscopy (multi-source micro-Raman, TFIR, synchrotron radiation) techniques to organic-walled microfossils and in particular to cryptospores and miospores with the objective to better characterize the geochemical signatures of palynomorphs of different (continental vs. marine) origin, and also to help understand the impact of the evolution of the vegetation cover on global biogeochemical cycles on Earth. One PhD thesis has just been completed on this topic (Maria Fernanda Romero Sarmiento), and new research funding has been obtained to further developing these techniques. This research is conducted in collaboration with partner laboratories in France and abroad (e.g., Germany, Marum, University of Bremen, Dr Gerard Versteegh).

4. A complete revision of the cryptospore and pre-cryptospore record (Cambrian to Ordovician) in the Gondwana region, especially from North Africa is also being investigated. This includes the first report of cryptospores of earliest Ordovician age from Iran, soon to come!

Papers published:

Vecoli, M., Clément, G. and Meyer-Berthaud, B., (eds.), 2010. The terrestrialization process: Modelling complex interactions at the biosphere-

geosphere interface. Geological Society of London, Special Publication, 339, 187 pp.

Strother, P. K., Servais, T. and Vecoli, M., 2010. The effects of terrestrialization on marine ecosystems: The fall of CO<sub>2</sub>. In: Vecoli, M., Clément, G., Meyer-Berthaud, B., (eds.), 2010. The terrestrialization process: Modelling complex interactions at the biosphere-geosphere interface. Geological Society of London Special Publication, 339, 37-48.

Vecoli, M., Riboulleau, A. and Versteegh, G., 2009. Palynology, organic geochemistry, and carbon isotope analysis of a latest Ordovician through Silurian clastic succession from borehole Tt1, Ghadamis Basin, southern Tunisia, North Africa: palaeoenvironmental interpretation. – Palaeogeography, Palaeoclimatology, Palaeoecology, 273 (3-4), 378-394.

Spina, A. and Vecoli, M., 2009. Palynostratigraphy and vegetational changes in the Siluro-Devonian of the Ghadamis Basin, North Africa. Palaeogeography, Palaeoclimatology, Palaeoecology, 282 (1-4), 1-18.

Wellman, C., Arioli, C., Spinner, E.G. and Vecoli, M., 2009. Morphology and wall ultrastructure of the megaspore *Lagenicula* (Triletes) *mixta* (Winslow, 1962) comb. nov. from the Carboniferous (Early Mississippian: mid Tournaisian) of Ohio, USA. Review of Palaeobotany and Palynology, 156: 51-61.

Romero-Sarmiento, M.-F., Riboulleau, A., Vecoli, M. and Versteegh, G. J. M., 2010. Occurrence of retene in upper Silurian - Lower Devonian sediments from North Africa: Origin and implications. Organic Geochemistry, 41, 302-306.

Dhamelincourt, M.-C., Vecoli, M., Mezzetti, A., Cesari, C., Versteegh, G. and Riboulleau, A., 2010. Laser Raman micro-spectroscopy of Proterozoic and Palaeozoic organic-walled microfossils (acritarchs and prasinophytes) from the Ghadamis Basin, Libya and Volta Basin, Ghana. Spectroscopy, 24 207-212.

Romero-Sarmiento, M.-F., Riboulleau, A., Vecoli, M. and Versteegh, G. J. M., (in press). Aliphatic and aromatic biomarkers from Gondwanan sediments of Late Ordovician to Early Devonian age: an early terrestrialization approach. Organic geochemistry.

Abstracts of conference presentations:

Vecoli, M., Delabroye, A., Spina, A. and Hints, O., 2010. Cryptospores assemblages from the Hirnantian of Anticosti Island, Québec, Canada, and from Valga-10 Borehole, Estonia: palaeophytogeographic and palaeoclimatic implications. 3rd International Palaeontological Congress, London, 28 June – 3 July 2010, Programme and Abstracts, p. 395.

Vecoli, M., Strother, P., 2010. Changing atmospheric CO<sub>2</sub> and the evolution of Palaeozoic phytoplankton: causes and consequences. 3rd International Palaeontological Congress, London, 28 June–3 July 2010, Programme and Abstracts, p. 394.

Spina, A. and Vecoli, M. 2010. Palaeovegetational and Palaeoclimatic trends across the Silurian-Devonian transition by palynological data from southern Tunisia. 3rd International Palaeontological Congress, London, 28 June – 3 July 2010, Programme and Abstracts, p. 361.

Romero-Sarmiento, M.-F., Riboulleau, A., Vecoli, M. and Versteegh, G. J. M., 2010. Aliphatic and aromatic biomarkers from Carboniferous coal deposits at Dunbar (East Lothian, Scotland): palaeobotanical and palaeoenvironmental significance. 3rd International Palaeontological Congress, London, 28 June – 3 July 2010, Programme and Abstracts, p. 332.

Vecoli, M., Dhamelincourt, M.-C., Mezzetti, A., Cesari, C. and Versteegh, G., 2010. Laser Raman micro-spectroscopy of Neoproterozoic - Early Palaeozoic organic-

walled palynomorphs: palaeobiological interpretation. *Geophysical Research Abstracts*, Vol. 12, EGU General Assembly 2010, N° 15373.

Strother, P. K., Taylor, W. A. Vecoli, M., Beck and John H., 2010. Cryptospores from Fossil Mountain and Bower's antithetic origin of plants. Geological Society of America Joint Meeting, northeastern and southeastern sections, Baltimore, Maryland, USA, 14-16 March 2010, *Geological Society of America Abstracts with Program* 42 (1), p. 124.

Vecoli, M. 2009. Palaeophytogeographical patterns during Ordovician – Silurian times: a review of data and interpretations. In: Harper, D. A. T., McCorry, M. (Eds), *Abstracts, Absolutely final meeting of IGCP 503 Early Palaeozoic biogeography and palaeogeography*, Copenhagen September 1-4, 2009, p. 35

Vecoli, M. and Spina, A., 2009. Siluro-Devonian biodiversification of trilete spores and cryptospores from Tunisia: palaeophytogeographic and palaeoclimatic implications. In: *Abstracts, Time and Life in the Silurian: a multidisciplinary approach*, Subcommission on Silurian Stratigraphy Field Meeting 2009, *Rendiconti della Società Paleontologica Italiana* Vol. 48, no. 1, pp. 351-352.

Vecoli, M., Strother, P. K., Servais, T., 2009a. Changing CO<sub>2</sub> and the evolution of terrestrial and marine photosynthetic organisms during the terrestrialization process in the Palaeozoic. *Geophysical Research Abstracts*, Vol. 11, EGU2009-13795, EGU General Assembly 2009, Vienna, Austria 19-24 April, 2009.

Vecoli, M., Strother, P. K. and Servais, T., 2009b. The effects of terrestrialization on marine ecosystems: the fall of CO<sub>2</sub>. *Abstracts, 9th North American Paleontological Convention*, University of Cincinnati, Ohio, USA June 21-26, 2009, *Cincinnati Museum Center Scientific Contributions*, N. 3, p. 50.

Vecoli, M., Dhamelincourt, M.-C., Mezzetti, A., Cesari, C. and Versteegh, G., 2009. New insights into the nature of Neoproterozoic-Early Palaeozoic organic-walled palynomorphs by applications of laser Raman microspectroscopy. 53rd Palaeontological Association Annual Meeting, University of Birmingham, U.K., 13-15 December 2009.

Romero, M.-F., Vecoli, M., Riboulleau, A. and Versteegh, G., 2009. Applications of molecular analysis for the study of early land plant evolution during the upper Silurian – Lower Devonian: borehole MG-1, Ghadamis Basin, southern Tunisia, North Africa. *Geophysical Research Abstracts*, Vol. 11, EGU2009-4998, EGU General Assembly 2009, Vienna, Austria 19-24 April, 2009.

Strother, P. K., Vecoli, M. and Beck, J., 2009. Paleopalynology of the Kanosh Shale at Fossil Mountain, Utah. *Abstracts, 9th North American Paleontological Convention*, University of Cincinnati, Ohio, USA June 21-26, 2009, *Cincinnati Museum Center Scientific Contributions*, N. 3, p. 203.

Romero-Sarmiento, M. F., Riboulleau, A., Vecoli, M., Versteegh, G. J. M., 2009. Identification de rétène dans les sédiments du Silurien supérieur – Dévonien inférieur en Afrique du Nord: origine et implications. In: *Résumés, Prospectives en Paléontologie et Palynologie, 4e congrès APF – 21e réunion APLF 02-05 Juin 2009*, Lille, France, p. 79.

Dhamelincourt, M.-C., Mezzetti, A., Versteegh, G. and Vecoli, M., 2009. Laser Raman micro-spectroscopy of Proterozoic and Palaeozoic organic-walled microfossils. In: *Abstract Book of the XIII European Conference on the spectroscopy of biological molecules*, August 28 – September 2 2009, Palermo, Italy, p. PA43.

Romero-Sarmiento, M.-F., Riboulleau, A., Vecoli, M., Versteegh, G., 2009. Biomarker contributions to the knowledge

of terrestrialization process during the upper Silurian – Lower Devonian: borehole M.G.1, Ghadamis basin, southern Tunisia, North Africa. 24th IMOG:

International Meeting on Organic Geochemistry, September 6-11, 2009, Bremen, Germany.

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THESIS ABSTRACT: MARIA FERNANDA ROMERO-SARMIENTO,  
UNIVERSITÉ LILLE 1

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Maria Fernanda Romero-Sarmiento. Contribution of molecular biomarkers to the knowledge of terrestrial plants development during the Palaeozoic. FRE 3298 Geosystems CNRS, Laboratoire de Paléontologie, Université Lille 1, Unpublished PhD thesis.

Principal supervisor: Marco Vecoli, Associate supervisor: Armelle Riboulleau

Abstract

The aliphatic and aromatic biomarker content from terrestrial and marine sediments of Late Ordovician to Early Carboniferous age have been related to their palynomorph assemblages (e.g. acritarchs, prasinophytes, chitinozoans, cryptospores, trilete spores and megaspores) in order to contribute to the knowledge of land plant evolution during the Palaeozoic. This investigation is therefore focused on the land-derived biomarkers and their attributions to specific kind of plants. The biomarker record of middle Silurian – lower Devonian sediments from southern Tunisia, Ghadamis Basin (Gondwana) reveals the presence of retene, cadalene, kaurane, norabietane, tetrahydroretene, C19 isohexylalkylnaphthalene and simonellite. The early Palaeozoic bryophytes and tracheophytes (e.g. Cooksonia, lycophytes and zosterophylls) may therefore be considered as potential precursors for retene and its related molecular compounds in sediments of Middle Silurian to Early Devonian age. In contrast, the Early Carboniferous flora formed by arborescent lycopods, sphenopsids and pteridosperms have been suggested here as a possible terrestrial source for phyllocladane, abietane, ent-beyerane, bisnorsimonellite, diaromatic totarane, diaromatic sempervirane and 2-methylretene in the Lower Carboniferous (Viséan) coal deposits at Dunbar (East Lothian, Scotland). Among the other biomarkers detected in our samples, ionene, alkyl dibenzofurans, perylene and combustion-derived polycyclic aromatic hydrocarbons (PAHs) indicate pollen, lichens, fungi and vegetation fire contributions, respectively. Most of the biomarkers identified here had been so far generally associated to conifers, though conifers only evolved during Late Carboniferous. These compounds therefore are also characteristic of early land plants.

Keywords: Land plant biomarkers, Ghadamis Basin, The Midland Valley of Scotland, Silurian, Devonian, Early Carboniferous, terpenoids, retene, phyllocladane, kaurane, beyerane, alkyl dibenzofurans, alkylphenanthrenes, cryptospores, trilete spores, megaspores.

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THESIS ABSTRACT: GIL MACHADO

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Machado, G. 2010. Upper Palaeozoic Stratigraphy and Palynology of the Ossa-Morena Zone, NW and SW Portugal. Aveiro University, Unpublished PhD thesis. 365pp.

The Palynology and Stratigraphy of Devonian and Carboniferous sedimentary rocks and metasediments outcropping along the Porto-Tomar shear zone are described and interpreted. The Palynology and Stratigraphy of the Santa Susana Basin and of the Odivelas Limestone are also described and interpreted.

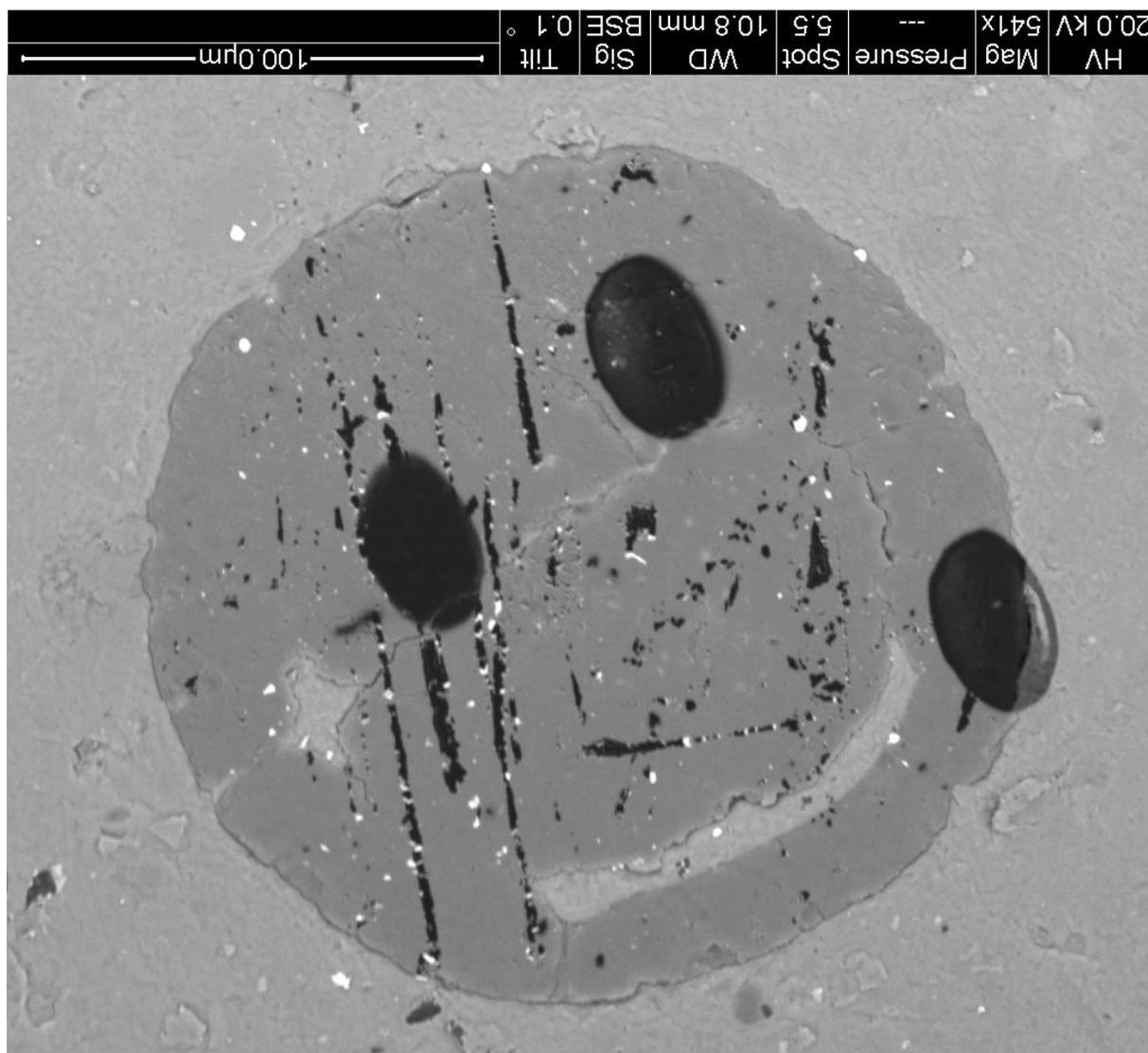
There is a discontinuous sedimentary record possibly associated with the Porto-Tomar shear zone extending from the Late Devonian to the Pennsylvanian. From the Late Devonian to the Mississippian, the sedimentation was marine, essentially turbiditic, with a general shallowing trend. The thermal maturation of these rocks (Albergaria-a-Velha Unit) is high, and the unit is considered to be post-mature in terms of hydrocarbon generation potential. The incipient metamorphism is accompanied by intense deformation.

The Buçaco basin is entirely terrestrial and its age is restricted to the Gzhelian (upper Pennsylvanian). The sedimentation is clearly controlled by the Porto-Tomar shear zone. Its thermal maturity is relatively low (within catagenesis range) and the deformation milder, contrasting with the Albergaria-a-Velha Unit. The contact between the two is tectonic. The field evidences and the thermal maturity data of the basin and surrounding units point to an important regional thermal and deformation event that took place between the Serpukovian and the Gzhelian and another, essentially tectonic, between the Gzhelian and the Carnian (Upper Triassic).

The Santa Susana basin has similarities with the Buçaco basin as it is also within an important shear zone, in this case separating the Ossa-Morena and South Portuguese Zones. Its age is kasimovian, and possibly moscovian (middle Pennsylvanian). The thermal evolution of the basin and the structural relations with the surrounding units point to a regional scale thermal and tectonic event occurring between the Viséan and the (?)Moscovian-Kasimovian.

The detailed study of several occurrences of the Odivelas Limestone allow an insight to the regional palaeogeography of the Western Ossa-Morena Zone during the latest Emsian – Givetian interval (latest lower Devonian – middle Devonian): marine (and possibly sub-aerial) volcanic activity forming volcanic buildings on top of which reef communities developed (and possibly on structural highs). The reef biota persisted, in terms of diversity, during all or most of this time interval. The basal Choteč event is recorded in one of these occurrences.

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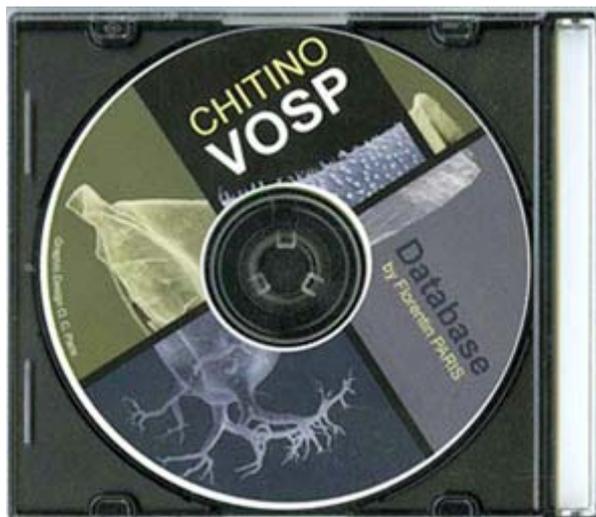
*In situ* miospore in a Devonian sediment from the subsurface of the Illizi Basin (Algeria) showing burned spots corresponding to single- specimen multiple measurements of d13C with ultra-precision SIMS analyser (Photo: Marco Vecoli and collaborators, in progress. See Marco's report above for more details of the research).

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**CHITINOVOSP, A DATABASE RECORDING CHITINOZOAN SPECIES**  
By Florentin Paris

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A new version of CHITINOVOSP database now exists 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.



CHITINOVOSP 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, subspecies, 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](mailto:oliv-chang.paris@orange.fr)

See also the web page: <http://www.geosciences.univ-rennes1.fr/spip.php?article1093>

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## NOMINATIONS FOR CIMP WEBMASTER

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Philippe Steemans has been very ably fulfilling the role of both CIMP Treasurer and Webmaster for a number of years, but wants to stand aside as Webmaster. We are therefore looking for someone to take on the responsibility of managing our very professional looking (many thanks Philippe!) webpages. Please submit your nominations or feel free to volunteer. Contact me, Marco Vecoli or Philippe Steemans.

Thank you.

Gary Mullins

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