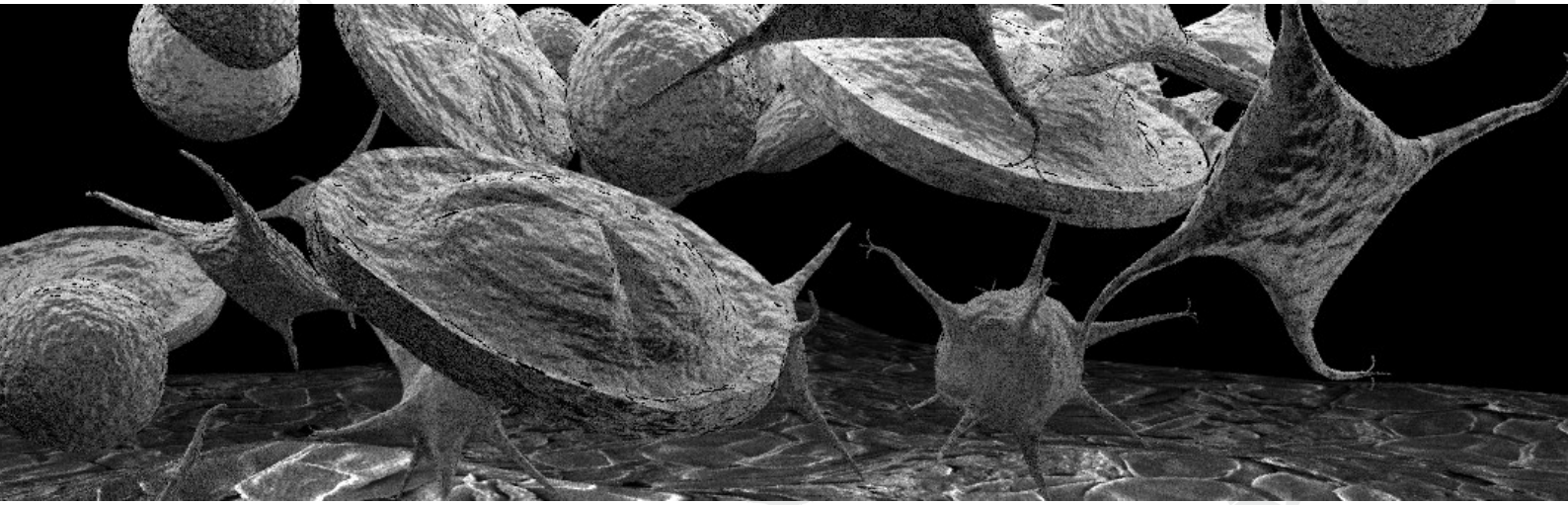
CIMP
COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE

NEWSLETTER 83
MARCH 2015



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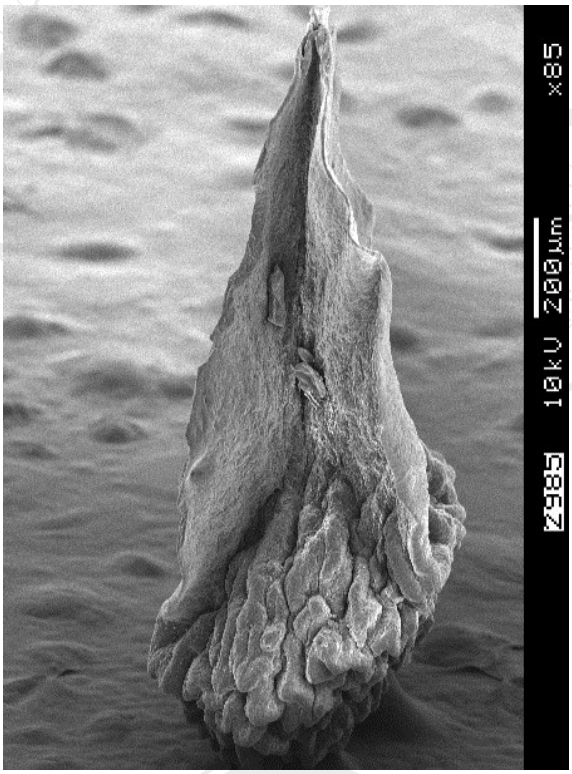
Filipe Barreira (LNEG)

COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOÏQUE

Thanks to all members who contributed to this newsletter!

Cover photo: 3D model of palynomorph deposition.
Credit: Filipe Barreira (LNEG)



Sailing along with CIMP

Illustration credits P. Stemans and Frédéric de Ville de Goyet. The illustration shows a picture of a large megaspore *Lagenicula milleri* (Steemans et al., 2011). The picture presents an unusual view of a specimen. It has been flattened by compression and the specimen is photographed along its edge. It looks like a sailing boat.

PRESIDENT'S LETTER

Greetings CIMP Members:

I hope you like the format of the new CIMP Newsletter. You can thank our General Secretary and Newsletter Editor, Zélia Pereira, for the new look. We plan to have a large Spring Newsletter, and then a short Fall Newsletter. The rationale for this change is that people are very busy and don't always have time to send in an update on their activities twice a year. Anyone involved in putting out a newsletter knows how time-consuming it is to constantly send out reminders to the membership to send something in. Thanks to everyone who responded to our requests for information on your research activities, or the research and activities in your organization or university group.

Those of us on the Board hope this new policy will result in greater participation by the membership. If you have any suggestions for improvement or comments about the new CIMP Newsletter, please let me or our General Secretary, Zélia Pereira, know your thoughts. Our newsletter is only as good as the material we receive.

As your new President I want to thank everyone for your confidence in electing me. I consider it an honor and privilege to serve CIMP during the next four years. I would be remiss if I didn't thank the outgoing Board of Marco Vecoli (President), Gary Mullins (General Secretary & Newsletter Editor), Philippe Steemans (Treasurer), Philippe Steemans (Webmaster), and Zélia Pereira (I.F.P.S.) for all

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their hard work during the past four years. In addition, I know you join with me in thanking them for the excellent job they did in promoting and increasing the visibility of CIMP at the international level and maintaining communication with the membership through the Newsletter.

My goals for the upcoming four-year term of this Board are to continue and further increase the presence of CIMP at the international level through not only our own meetings, such as the one scheduled this fall in Bergen, Norway, but also by CIMP-sponsored symposia, scientific sessions, workshops, and individual talks at various conferences. In fact, I expect we will have a presence at next year's 14th International Palynological Congress in Salvador de Bahia, Brazil, and the European Paleobotany and Palynology Conference in Dublin, Ireland, in 2018.

Other goals include increasing student membership in CIMP, which is really the future and lifeblood of our organization. We also need to make sure our membership list is current and stays up to date. You'll notice in your email all of the names and email addresses of our members. If there are people involved in Paleozoic palynology, or people you think would be interested in what we do as an organization, and they are not on the email list, please let our General Secretary, Zélia Pereira know who they are and their email address so we can at least send them our current Newsletter. I'd also be happy to send them an email encouraging them to join our organization. We are considering posting our membership with email addresses on our website to further facilitate communication with those who might have an interest in what we do.

We are also reaching out to other palynologic/paleontologic organizations such as AASP – The Palynological Society in terms of advertising our meetings in their newsletters and websites. I hope we can expand on this effort in the next four years.

I also want to build on the leadership and strong foundation laid by our past Webmaster Philippe Steemans, by moving ahead with new initiatives regarding our web site. As we all know, we are in the digital age and need to stay current in the ways people communicate and how we present ourselves to the world at large. I am confident our new Webmaster, Christian Cesari, will be leading us forward in this area.

Lastly, I hope to see many of you at the CIMP meeting in Bergen, Norway, September 16-19, 2015. The co-organizers, Gunn Mangerud and Gilda Lopes, have worked very hard in putting together an interesting and wide-ranging scientific program as well as what promises to be informative and scenic pre- and post-conference field trips. For more details on the meeting, see page 4 of the Newsletter.

As I stated in my opening sentence, I hope you like the new format of the CIMP Newsletter and that you find the articles and news informative. If you have any comments or suggestions, please email either me or Zélia Pereira.

Reed Wicander

GENERAL SECRETARY'S LETTER

Dear Colleagues,

It is with enthusiasm that I present to you the new CIMP Newsletter!

As you all know, we have recently been elected to the CIMP main board so we would like to take this opportunity to extend our appreciations to the outgoing board, Marco Vecoli (past-president) and Gary Mullins (General Secretary and Newsletter editor). Philippe Steemans is here acknowledged for all the hard work he has done as CIMP webmaster and treasurer, positions that he filled for a long period of time. Thank you all for your work serving CIMP!

Regarding the present team, first of all I would like to thank Reed Wicander for having invited me to apply for the present position. Another note of appreciation is dedicated to all the members that have voted in these elections. Thank you for believing in the future of CIMP!

I would also like to congratulate all the new elected colleagues, Reed Wicander our new president, Paulo Fernandes our new treasurer and Christian Cesari our new webmaster. Congratulations also to the newly elected presidents and secretaries of the subcommissions. The next four years will be a challenge but I'm really looking forward to working with all of you. I hope that together we may bring new strength and energy to CIMP.

This newsletter represents the beginning of a new phase for our news dissemination, stimulated, in part, by the evolution of new media technology. You will see a different layout and a new organization which we hope will be more efficient and practical to write to and to read. Our main goal is that this new change will motivate the CIMP membership to be more active and more participatory. At this point I need to express my gratitude to Filipe Barreira, the LNEG's designer for his support and hard work on the presented layout.

You will find in the following sections, CIMP news and information, meet the new members and the new students, read about the members, research, labs and university activities, see the photographs and the reports on last year's meetings (14th IPC,

Mendoza, Argentina, and 9th EPPC Padua, Italy). I'm very grateful to Claudia Rubinstein for the great report and photographs on the 14th IPC, as well as Gilda Lopes regarding the Padua Meeting. You will also find the announcements of the future meetings, the next CIMP meeting in Bergen, Norway, in September, 2015 and the AASP meeting in Baltimore, USA. Hope to see many of you at these meetings!

Finally, I would like to show my gratitude to all of you who have contributed to the present newsletter. Please keep sending us the information! Submissions for the next short fall newsletter are already very welcome.

If you have any comments or suggestions to improve the newsletter please email us.

Zélia Pereira

TREASURER NOTE

Paulo Fernandes
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Paulo Fernandes is an Assistant Professor in the Department of Earth and Marine Sciences at the University of the Algarve in Portugal. His research is multidisciplinary and encompasses field geology, sedimentary geology, stratigraphy, organic petrology and palynology. He received his first degree in Geology from the University of Porto. After graduation he worked for the Portuguese Geological Survey as a field geologist in the Iberian Pyrite Belt, and in 1995 he started to work for his Ph.D. under the supervision of Prof. Geoff Clayton, Trinity College, Dublin, where he was introduced to Carboniferous palynology. However, his research is more focused on the applied aspects of palynology and dispersed organic matter in sediments, related to the thermal evolution of sedimentary basins and hydrocarbons. Since joining the University of the Algarve he has been supervising several Ph.D. theses on Palaeozoic and Mesozoic palynology of Portugal. Recently, he started a project on the geology of the Karoo in Mozambique, where palynology is an important part of it.

WEBMASTER NOTE

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Christian Cesari is a Palynologist - Biostratigrapher currently working in the Geological Technical Services Division of Saudi Aramco in Dhahran (Saudi Arabia). He obtained his MSc in Paleontology from the University of Lille (France) in 2008, then he worked as a junior consultant in palynology with applications to biostratigraphy for several oil and gas and geological companies. At the same time he was involved in some research studies dealing with the terrestrialization process, the Paleozoic palynology of the north Gondwana domain, the chemical composition of some Paleozoic palynomorphs, and Neoproterozoic acritarchs. His main academic and professional interests focus on the chitinozoan group but he also has an extensive knowledge of Paleozoic acrtitarchs and spores.

As new Webmaster of the Commission Internationale de Microflore du Paléozoique, Christian would be very glad to receive any ideas or suggestions regarding the website. He also seizes this opportunity to ask CIMP members who are willing to have some pictures of their palynomorphs featured on the

Carte Bonne Année 2015
Credit: Alain Le Hérissé

UPCOMING MEETINGS

CIMP Meeting 2015

The next CIMP meeting will be held in **Bergen, Norway** in **September, 2015.**

This meeting is intended to bring together specialists in Palaeozoic palynology in order to present their work and to discuss various topics that are relevant to a wide range of scientific disciplines, but that cannot always be accommodated in larger, non-specialized, general conferences.

Some of the questions that will be addressed are: What is the current taxonomic status of Paleozoic organic-walled microfossils (acritarchs, chitinozoans, spores, scolecodonts and others)? What are the recent advances in our understanding of the biological affinities of acritarchs and chitinozoans? What are the best approaches to understanding global changes of palynological assemblages? How can we raise awareness of the societal impact of our science? What are the recent advances in industrial applications of Palaeozoic palynology? We think that this is an opportune time for the Paleozoic palynology community to reaffirm its role in the many and varied fields of modern Earth Science.

A pre-conference excursion to the Oslo region will be offered on September 16th, to the Lower Paleozoic sedimentary rocks of the Oslo area, followed by an ice-break cocktail at the University of Bergen. In order for people to take part in this excursion, we recommend flying into Oslo Tuesday night. The excursion will end at the Gardermoen/Oslo airport in time to catch a flight to Bergen and enabling us to take part in the ice-breaker, in Bergen, on that same evening.

The next two days are devoted to talks, posters and the gala dinner on Friday, September 18th. Next day, September 19th, an optional, full day excursion to Finse will take us to glacier landscapes to look at glacially derived deposits, glacial processes, and the glacier itself. We will thus be able to see the effects of recent glaciation and use that to compare to the many Paleozoic periods in the geological record when ice-sheets covered parts of the globe.

All information regarding costs and logistics will be available by March 20th, 2015 and payment will be online. We will do our best to keep registration fees as low as possible, especially for students and researchers who are in need of financial support to participate. Registration date and abstract deadline will be May 10th, 2015.

We hope to see all of you in Bergen next September!

The Organizing Committee: Gunn Mangerud, Gilda Lopes (co-organizers), Marco Vecoli (former CIMP president), Reed Wicander (CIMP president).

XVI Simposio Argentino de Paleobotánica y Palinología

This event will be held at **La Plata** (Buenos Aires Province, Argentina), in **May, 26- 29, 2015**.

Deadline for abstract submission: March 15th.
More information at
www.xvisapp.fcnym.unlp.edu.ar/index.html.

We hope to see you there!

14th International Palynological Congress, Salvador de Bahia, Brazil, 2016

(Date To Be Confirmed)

During the 13th International Palynological Congress in Tokyo in late August the IFPS councillors voted to hold the 14th IPC in Brazil. This will be the first time that the IPC will be held in South America. The conference will take place as a joint meeting with the 10th Congress of the International Organisation of Palaeobotany.

European Paleobotany and Palynology Conference in Dublin, Ireland, in 2018

(Details at a later time)

2015 AASP Annual Meeting Update

Sunday November 1 to Wednesday November 4, 2015

AASP – The Palynological Society will hold its 2015 meeting as part of the 2015 Annual Meeting of the Geological Society of America (GSA) in Baltimore, Maryland, USA. The meeting is scheduled for Sunday, November 1 through Wednesday, November 4, with pre-conference events on Saturday, October 31. The conference will be hosted at the Baltimore Convention Center, which is located adjacent to Baltimore's renowned Inner Harbor. Because we will be meeting as part of the larger GSA conference, arrangements for registration, housing and abstracts will be handled by GSA through their website, www.geosociety.org. The GSA has a firm abstract deadline, which is normally in July.

One goal of the conference committee is to propose at least four AASP sponsored or co-sponsored topical or theme sessions and to also solicit talks for general palynology session(s). At present, we are pursuing several possible theme session topics, all of these potentially co-sponsored with other societies: Integration of Sedimentology and Microfossils; Rot in the Fossil Record; The Role of Paleontology in Geologic Mapping; and Quaternary palynology.

We enthusiastically encourage AASP members to suggest sessions or, even better, to offer to chair and organize a session. Sessions co-sponsored with other organizations are welcome. Please contact Pete McLaughlin (ppmclau@udel.edu) if you are interested in proposing or co-chairing a session. Sooner rather than later would be appreciated -- avoid the holiday rush! The GSA deadline for submission of a final list of AASP-proposed sessions is February 1, 2015. Planning is underway for two field trips, which will emphasize AASP interests but will be offered through GSA to attract other interested participants. One field trip being investigated will examine the Cretaceous of Maryland, emphasizing the Potomac Group, an interesting interval that records angiosperm evolution in pollen and has yielded important finds of charcoalified flowers. Another trip is being planned to examine application of palynology to climate, sea-level rise, and land use issues in modern environments near the Chesapeake Bay and Potomac River. We hope to have feedback on our proposals and finalize trip offerings early in the New Year.

We are planning at least one social event in the Little Italy/Inner Harbor-area along with the AASP business luncheon. Incoming and outgoing board meetings will be held immediately before and after the technical sessions, respectively. Dates will be announced once finalized with venues and/or GSA.

Pete McLaughlin, Lucy Edwards, and Debra Willard are serving as the planning committee for the 2015 meeting. More information on AASP activities and schedules will be included in forthcoming AASP newsletters.

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Above: *Baltimore Inner Harbor (photo credit: Visit Baltimore at baltimore.org)*

REPORT ON THE MEETING 9TH EPPC 2014, PADOVA, ITALY, 26-31 AUGUST 2014

By Gilda Lopes

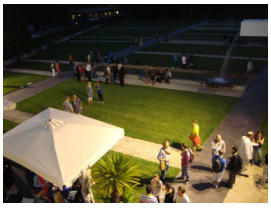


Photo credits: Gilda Lopes

Held in the beautiful and historical city of Padova, in Italy, the 9th European Palaeobotany and Palynology Conference took place last year from the 26th to the 31st of August, congregating researchers from all over the world including more than twenty CIMP members. It was a major conference that took place at the University of Padova, where many interesting research and studies on vegetation throughout the entire geological record were presented (more than 530 abstracts were submitted).

The event started on the 26th with a welcome cocktail at the wonderful Old Botanical Garden of the University of Padova, a protected World Heritage site that is the world's oldest academic garden. In the next day the opening ceremony took place at Palazzo Bo, the main building of the university. It is an historical place where, among other famous scientists, Galileu Galilei gave his lectures. In the afternoon, the scientific sessions started and lasted for more than three days, with an extra day dedicated to two mid-conference fieldtrips to Monte Bolca fossil outcrops or to the Quaternary of the Italian Alps. One of the most interesting aspects to be noted is that several scientific sessions where dedicated to the Palaeozoic time and to several aspects of Palaeozoic vegetation and palynomorphs. Two of those sessions were sponsored by the CIMP: "Palaeozoic of the Arabian Plate" and "What's trendy in pre-Cambrian and Palaeozoic?". The CIMP sessions started with a great keynote given by Sa'id Al-Hajri entitled: "On the mutual benefits of collaboration between industry and academia: the palynology of the Paleozoic of Saudi Arabia as a case study", followed by thirteen other very interesting talks that embraced several thematics on Palaeozoic palynology as, for example, spore and cryptospore evolution, structure and ultra-structure; palynology and palaeogeography and climatic implications, or palynostratigraphic applied studies. In this conference, the CIMP participation also included 6 posters, revealing some of the interesting projects that the younger students and researchers are developing.

After these sessions, the CIMP General Assembly was held. With all the CIMP members present at the event (more than 20), the assembly was conducted by our former President, Marco Vecoli, and the financial report was presented by Philippe Steemans. This was a very important assembly where the newly elected members of the General Commission and several Subcommissions were officially presented and several other important subjects were also discussed, including the new newsletter format, the CIMP meetings interval occurrence and, the future of CIMP, especially regarding the seemingly lack of interest shown by many of the members.

In the last evening the conference social dinner took place at the historical Caffé Pedrocchi and the closing ceremony was at the Geoscience Department of the University of Padova. For those that stayed behind, several post-conference fieldtrips where held to the Dolomites, Sardinia, Emilia-Romagna, Latium, and Tuscany.

Amazing weather, city, people, landscapes, including interesting science and research discussions, in the company of colleagues and friends, it was the recipe to another great conference!

REPORT ON THE 4TH IPC MEETING, ARGENTINA

By Claudia Rubinstein

We cordially invite you to download the Abstract volume at www.ipc4mendoza2014.org.ar/wp-content/uploads/2014/10/Abstract-Volume-IPC4.pdf

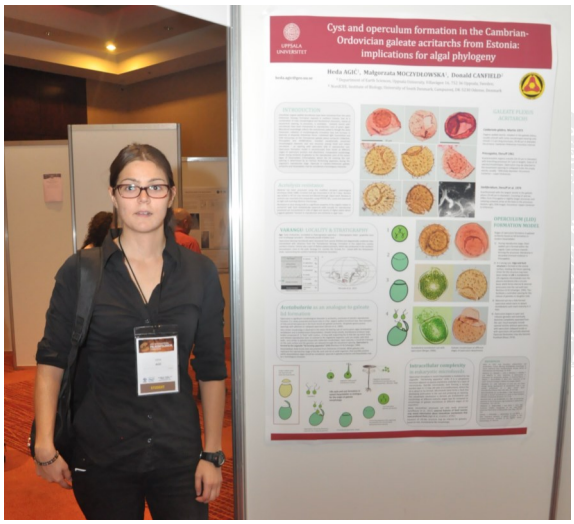
CIMP members involved in the organization: Claudia V. Rubinstein: General Chair; G. Susana de la Puente: Communication & Publicity Victoria; J. García Muro: Collaborator

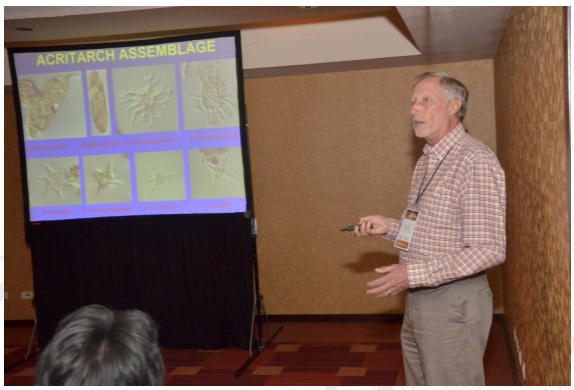
The 4th International Palaeontological Congress was held in the city of Mendoza, Argentina, from September 28 to October 3, 2014. A global meeting devoted to Palaeontology throughout the world by convening every four years under the aegis of the International Palaeontological Association, this edition of the 4IPC, at the foothills of the Andes and in the midst of an entirely novel context, constituted the first time this important event took place in America. Having been hosted by the Centro Científico Tecnológico CONICET Mendoza and organized by top specialists, both local and international, in leading fields of paleontological research, its venue drew in almost a thousand scientific participants of whom a staggering amount were students. The fact that attendees had the opportunity to interact with colleagues coming from 50 different countries rendered the conference truly international.

During the congress, contributions, both oral and poster, were orchestrated in a varied array of meeting styles including plenary lectures (5), symposia on leading issues (22), interactive workshops (4) and technical sessions (24), thus enriching the meeting in nearly every aspect. Beside the academic facet of the gathering, the meeting also provided participants with the unique opportunity to discuss experiences, explore new research directions and debate topics with specialists from across the globe while embarking on several field trips, pre-, post- and intra-congress, covering not only some of the most relevant palaeontological settings in the country but also including visits to the main tourist attractions all over Argentina. Furthermore, social events framing the lectures were as important. With an enjoyable welcome party held at the local Sheraton lobby, the laidback and chattering warm tone of the event was easily embraced by attendees wooed by local delicatessen and live music. To ensure the social tone of the atmosphere endured, every poster session served different local premium wines with cheese and bread for tasting. The cherry to such a cake came with the great success of a breathtaking gala dinner at Septima Winery in which gourmet food was served to attendees while premium wine never stopped oozing from every corner of the tables surrounding a very special tango show followed by some late night dancing.

On a more community-invested note, the congress also encompassed outreach activities such as public lectures on different subjects of general interest and a palaeoart exhibition for promoting and propelling the work of linking art and palaeontology to produce images representative of life in the geological past. Most remarkably, the meeting also served as frame to import a short version of the Indian based Children's Education Programme on Petroleum Geology, Energy Efficiency Campaign and Climate Change.

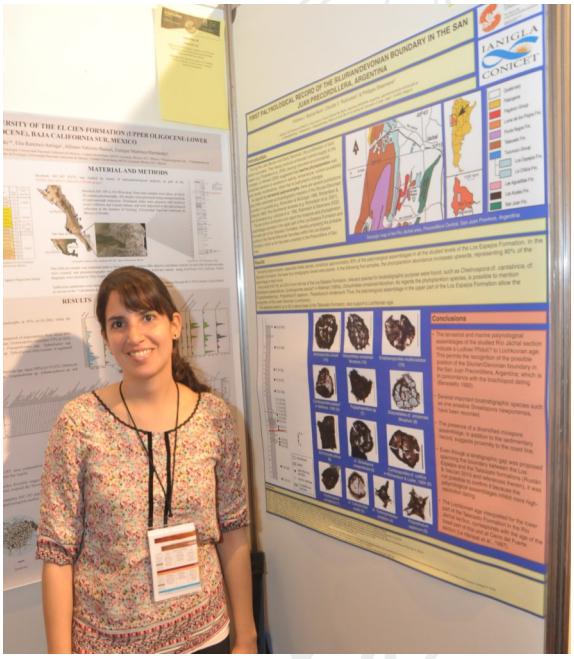
Out of the 896 contributions included in the Abstract Volume for the meeting, around 40 dealt with Palaeozoic palynology, thus potentially appealing to CIMP members in the form of oral and poster presentations within symposia and special sessions such as *The invasion of land: when and where?*; *Evolution of photosynthesizing organisms-from microbiota to plants*; *Ordovician biotas of Gondwana: responses to global climatic and eustatic events, and their biogeographic relationships within the Ordovician world*; *Comparative palaeoecology of Phanerozoic extinction events*; *The 47th AASP-TPS Annual Meeting*; *the IGCP 596/SDS Joint Meeting* and diverse open sessions.


Cyst and operculum formation in the Cambrian-Ordovician galeate acritarchs from Estonia: implications for algal phylogeny


ACRITARCH ASSEMBLAGE

CARBONIFEROUS AND PERMIAN
PALYNOLOGICAL BIOSTRATIGRAPHY
AND LITHOSTRATIGRAPHY: CORE AREA

NEW SPECIES OF THE BIPOLAR ACRITARCH BIMERGA IN THE LOWER DEVONIAN OF URUGUAY: STRATIGRAPHICALLY RESTRICTED AND REGIONALLY CORRELATIVE PALYNOLOGICAL EVENTS IN THE COOL-WATER MOLDAVIDIC AFRIC REALM
Gloria Daners, Alain Le Hérissé and Gerardo Veroslavsky


FIRST PALYNOLOGICAL RECORD OF THE ILLIAN/EVENIAN BOUNDARY IN THE SAN JUAN PRECORDILLERA, ARGENTINA
MATERIAL AND METHODS
RESULTS
Conclusions

Field trip-Darwin and the Highest Andes.

THE SAUDI ARAMCO – CIMP JOINT STUDIES, A LONG-TERM COLLABORATIVE PROJECT UNVEILING THE PALAEOZOIC STRATIGRAPHY OF SAUDI ARABIA

By Marco Vecoli, Pierre Breuer, Christian Cesari – Biostratigraphy Group, Geological Technical Service Department, Saudi Aramco, Dhahran, Saudi Arabia.

The discovery of large hydrocarbon accumulations in Palaeozoic sediments in the subsurface of Saudi Arabia by Saudi Aramco Oil Company in the '80s and early '90s highlighted the need for the establishment of refined biozonations to facilitate the understanding of stratigraphic structures in the subsurface, enhance correlation of sedimentary sequences, and facilitating palaeoenvironmental interpretations. Although pioneer palynological studies of Palaeozoic sequences were developed in-house by Saudi Aramco since the '60s (e.g., Hemer and Nygree, 1967), in general, the pre-Mesozoic rocks had received little attention by exploration palynologists before 1990. Only a few regional studies were available and there was excessive reliance on long range correlation, particularly with the distant Euramerican palaeogeographic domain. To solve this problem and to tackle the monumental task of documenting, in detail, the palynostratigraphy of the Palaeozoic of the Kingdom of Saudi Arabia and building a reliable, high-resolution palynostratigraphic scheme that could be used for oil exploration operations, a collaborative project was established between Saudi Aramco Oil Company and the Commission Internationale de Microflore du Paléozoïque in November 1990. At that time, CIMP already had a long established relationship with industry, which started with the coal industry in the late fifties, then expanding into the oil and gas industry as coal exploration declined.

The Palaeozoic Palynostratigraphy of the Kingdom of Saudi Arabia joint project between Saudi Aramco and CIMP focuses on the accurate description of palynological assemblages (acritarchs, chitinozoans, spores, scolecodonts) from the extensive Palaeozoic successions of Saudi Arabia, both in outcrop and subsurface, and their stratigraphical, palaeoenvironmental, and palaeogeographical application. It is now a well-established, long-term collaboration between the palynologists of the Exploration Technical Services Department and academic palynologists within CIMP, based on mutual benefit. Academic researchers benefit from access to rich and well preserved palynological material from subsurface and outcrop locations that would be otherwise inaccessible, while Saudi Aramco benefits from the highly specialized, enthusiastic international expertise, delivering high-quality data that can be put to immediate use for exploration purposes by staff palynologists.

Results of these 20+ years of continuing collaboration have been impressive: major advances in the understanding of the palaeogeographical and stratigraphical distribution of the main Palaeozoic palynomorphs have been made, which have been regularly presented in international congresses throughout the years. The 8th International Palynological Congress at Aix-En-Provence, France, in 1992 was the first to host a special session on the Palynostratigraphy of the Arabian Plate, where initial results of the Saudi Aramco – CIMP Joint Studies were presented. The papers presented at the 8th IPC were then published in a Special Issue of Review of Palaeobotany and Palynology in 1995 (Owens et al., 1995). This concluded the first phase of the project, demonstrating the potential of palynology as the primary tool in local to regional correlation, but also highlighting the need for further investigations across the entire Kingdom, to achieve a better understanding of the distinctive Palaeozoic palynology of the Arabian Plate. The focus of the second phase of the Project would concentrate on detailed systematic studies of palynological assemblages to describe the many endemic taxa that had been discovered during the initial phase of the research. This highlighted the complex palynostratigraphic relationships and palaeobiogeographic differences between the Euramerican and Gondwanan palynological associations. These results were also presented in various international congresses (e.g., the CIMP General Meeting in Lille, France in 2002, and the 11th International Palynological Congress in Granada, Spain, in 2004) and constituted the subject of a second Special Volume, this time published in GeoArabia (Al-Hajri and Owens, 2000), which remains a key reference for Palaeozoic palynology of Gondwana. A third phase of the Project followed, which focused on specific problems, e.g., the palaeonvironmental interpretation of palynological assemblages in Ordovician successions, including: the glacial-related deposits of latest Ordovician (Hirnantian) times, the taxonomy of Devonian spores, and the comparison with assemblages from North Africa, Turkey, and Iran. These results are illustrated in a Special Issue of Revue de Micropaléontologie (Paris et al., 2007).

The fourth phase of the project is recent history, concentrating on new Ordovician-Silurian material made available by the Qusaiba-1 shallow core

hole, as well as following up on other projects. The end of the Project's fourth phase is marked by the very recent publication of a new Special Issue of Review of Palaeobotany and Palynology (Wellman et al., 2015). The table of contents for that volume is given below.

We are now in the fifth phase of the Project: current investigations focus on a variety of subjects such as detailed analyses of the palynology and palaeoenvironmental interpretation of the transition between the Saq and Qasim formations, taxonomy, palaeobiology and stratigraphic significance of Ordovician-Silurian cryptospore and chitinozoan assemblages, the implementation and testing of a new method for assessing thermal maturity of organic matter in the absence of vitrinite, and the palynostratigraphy of the Permo-Carboniferous of Saudi Arabia. Results from the current phase of the Project were presented at special sessions at the 45th Annual Meeting of the AASP in Lexington, Kentucky, USA (2012), the 46th Annual Meeting of the AASP in San Francisco, California, USA (2013), and at the 9th EPPC Meeting in Padova, Italy, in 2014.

The next Project Progress Report with be held in conjunction with the CIMP Meeting, which is being organized in Bergen, in September 2015. As usual, a special session on the palynology of the Palaeozoic of the Arabian Plate and adjoining regions will take place, where results of our project and other relevant investigations will be presented.

The Saudi Aramco – CIMP Joint Studies Project has been, and continues to be, highly beneficial to both parties; the Company highly values the scientific advice of the academic specialists, which contributes in a cost-effective manner to securing a state-of-the-art in-house database, establishing a resource that will be available to the next generations of staff. The CIMP partners enjoy the access to precious palynological material with the opportunity to publish results of palynological research with high quality geological framework support.

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NEW MEMBERS

CIMP would like to welcome the following new members:

Alexander Askew

ALEXANDER ASKEW

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Position: Student
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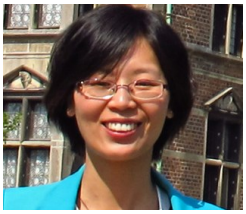
I have just commenced a Ph.D. research project at the University of Sheffield under the supervision of Charles Wellman. My research project entails a palynological investigation of the Middle Devonian Naranco Formation (Asturias) – Huergas Formation (Leon) – Gustalapiedra Formation (Palencia). The aim is to correlate these laterally equivalent formations and document their varied palaeoenvironments (and hopefully identify and analyse the Kačák Event). In January I undertook my first fieldwork in this region.


Yan Liang

Dmitriy Mamontov

DMITRIY MAMONTOV

Leninskie gory, 1, Lomonosow Moscow State University Moscow, Moscow region Russian Federation 119991
Research interests: Paleoecology and palynostratigraphy of the Visean miospores of the Moscow Syneclise;
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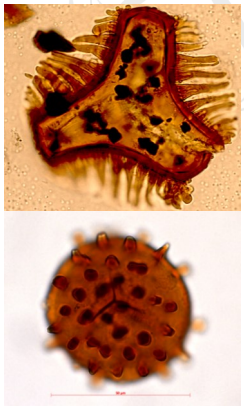
My name is Dmitriy A. Mamontov. I am 26 years old. I graduated as a paleontologist and have a postgraduate diploma from the Department of Paleontology of the Geological faculty of the Lomonosov Moscow State University, Russia. Currently I work as senior teacher at the same University. My PhD research, still in progress, is dedicated to the Visean miospores of the Moscow Syneclise. My research interests focus on the palynostratigraphy of Visean deposits of the region and the paleoecological interpretation of the miospore assemblages. Recently I became interested in fossil spore ultrastructure and palynofacies analysis.

At present, my general attention is focused on two goals: the detail definition of new miospore genera from the Upper Visean of the Kaluga Region and the comparative study of ultrastructure of some dispersal miospores from the same Region.


Diatomozonotriletes jubatus (Staplin) Playford, 1963; *Raistrikia nigra* Love, 1960. Microphotos credit: Mamontov D.A.

Gonzalo Rial

GONZALO RIAL

Universidade de Vigo,
Marine Geosciences and Territorial Planning,
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Position: Student
Research interest: Devonian Miospore caracterization at the Iberian Peninsula (Spain)
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I'm a Mining Engineer from the University of Vigo and am currently conducting my PhD studies in the framework of 'Marine Science, Technology and Management. This PhD study is being performed in the 'Campus do Mar' 'program. My thesis aims to provide "A comprehensive view of the first floras of the Iberian Peninsula through the analysis of micro-fossil record (pollen and spores) in paleomarino-coastal environments."

I am being supervised by (1) the titular professor José Bienvenido Diez Ferrer, as well as by (2) the Marie Curie COFUND postdoctoral researcher Borja Cascales-Miñana.

OLGA ORLOVA

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YAN LIANG

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I am a Ph.D candidate at the Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences. My name is Yan LIANG, and I am working on Ordovician chitinozoans. I am going to finish my doctoral dissertation this coming May, and, in addition, I have already gotten a job of our institute so that I can continue my chitinozoan study in the future.

MEMBER ACTIVITIES

ADNAN M.HASSAN KERMANDJI

University of Constantine 1, Laboratory of Ethnobotany-Palynology and Ethnopharmacology-Toxicology, Faculty of Nature and Life, Department of Biology and Ecology, Constantine, Algeria
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Adnan is struggling on with the teaching that takes up most of his time until the semester break. Though he always spares some part of his time for a number of rigorous research projects. I am continuing my study of a rich assemblage of cryptospores-miospores and in situ spores from the well exposed Silurian and Devonian in several projects concerning taxonomical biozonal issues on palynology and palaeobotany that will allow to improve the comparisons and correlation of mega and microfloras occurring in the Silurian and the Devonian basins such as Oued Soura Depression, Tidikelt Plateau, Illizi and Reggan of south-western and south-eastern Sahara Algeria and can be correlated with well established miospore biostratigraphy of Euro-American, Gondwanan and from other basins of North Africa. The study on Silurian and Lower Devonian sediment of Oued Saoura Depression south-western Sahara Algeria will contribute to the knowledge's on the biostratigraphy, palaeophytogeography and palaeoclimatic events.

The project considers the creation of human resources through scientific work of students. An important achievement of the working group on the Upper Silurian and the Lower Lochkovian to early Lower Eifelian chronostratigraphy and palaeoenvironment will be published shortly. The study unit make up the initiation to discuss and create a regional biostratigraphic system on miospore contain of the Uppermost Silurian-Lower Devonian of Algeria. This is because that the well established miospore biozone in the Western Europe and North America for Přídolían–Lower Devonian not common to the Algerian deposits of the same period. All members of the unit agreed that the best way is to create miospore biozones that can be valid regionally and probably on a Gondwanan scale.

I also continue research on palynostratigraphic studies of the marine Silurian and Devonian sediments from Kef Toumiate Mountains, north east Constantine, Sillon Atlasique Basin (highly complicated structural region). I am working this project with Bernard Owens, Khelifi Touhami, Berarhe Elhasan and Khelid Boulifa. The study results will be published soon.

The other miospore related project a is a comprehensive palynological analysis on a Přídolían and Lower Devonian sequence from a subsurface section of the Stah in the Illizi Basin. It is in progress. The sequence is essentially marine and thus also contains rich acritarchs and chitinozoan assemblages. Definitely we will integrate palynological zonation and module for early land plant evolution based on occurred palynomorphs.

ALAIN LE HÉRISSÉ
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Continues working on organic-walled microfossils (acritarchs and associated microalgae) from the Paleozoic, with emphasis on biostratigrapy and evolution of biodiversity in response to climatic and oceanographic changes.

Current activities at that time include: 1. Study of acritarchs and other microalgae in the Middle Ordovician of Saudi Arabia, in collaboration with Marco Vecoli, Aramco, and Philippe Steemans and Charly Wellman for the miospores and other elements of primitive vegetation; 2. A distinctive marginal marine palynological assemblage from the Pridoli of Saudi Arabia, with Said Al Hajri, Pierre Breuer, Florentin Paris, Jacques Verniers, Philippe Steemans and Charly Wellman; 3. Ordovician to upper Devonian microphytoplanctonic associations from northern Brazilian Basins, in collaboration with José Henrique Melo and Marcia Longhim from Petrobras: a synthesis is in preparation after three years analyzing the material; 4. Microfossil associations from the early Devonian of Uruguay, in collaboration with Gloria Daners, University of Montevideo, and Pierre Breuer; 5. Early Devonian microfossils from the Rhynie and Windyfield cherts, Scotland, in collaboration with Christine Strullu and Paul Kenrick, Natural History Museum, London; 6. Phytoplanctonic associations from Paleozoic of North Africa (Morroco, Algeria, Libya, Tunisia), mainly on subsurface material in different basins.

I am supervising one PHD Student, Tristan Hatin, on late Quaternary diatoms over the last 500 Ky, in the Congo deep sea fan.

AMALIA SPINA
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From 2012 I'm involved in the bilateral project: “Paleontology and Biozonation of Paleozoic Sediments of Central Iran and Zagros Basins”. Resp. Prof. Roberto Rettori (Physics and Geology Department, University of Perugia) and Prof. Mansour Ghorbani (PARS GEOLOGICAL RESERCH CENTER, Teheran, Iran). Moreover, as a member of the organizing committee, I would like to invite you to the International Congress on “Palaeozoic stratigraphy of Gondwana” to be held in Perugia (Italy) on April 14-16, 2016.

The Congress will be organized and conducted by the Department of Physics and Geology (University of Perugia, Italy) and Arianzamin, Pars Geological Research Center of Tehran, Iran (APGC).

The Congress will cover a wide range of topics including paleontology, stratigraphy, organic geochemistry, paleogeography, geodynamic and petroleum exploration. The programs will focus on addressing interdisciplinary approaches to make the state-of-the-art technology to expand on the knowledge about on the Paleozoic Gondwana realm. This will provide an opportunity for constructive interactions between academia and industry in exchanging ideas, perspectives and challenges.

The conference will comprise of 3 days of talks, poster sessions and the invited plenary will talk on the relevant topics of particular interests. Abstract and discourse submissions for presentation shall be reviewed by the Scientific Committee and the conveners. The proceedings shall be published in a volume dedicated to the Congress contribution of the international journal “Rivista Italiana di Paleontologia e Stratigrafia”.

BERNARD OWENS
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Collaboration with Geoff Clayton, Duncan McLean, Ken Higgs and Janine Pendleton to complete comprehensive revision of the Clayton et al. (1977) palynozonation of the Carboniferous of the British Isles. Taxonomy of new early Pennsylvanian miospore species from northern England. Morphology of Carboniferous cinguli-zonate miospores with particular reference to the genus *Vallatisporites* Carboniferous palynostratigraphy of the Arabian Plate.

CHARLES WELLMAN
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I continue to work on long term projects on: (i) early terrestrial ecosystems from the Palaeoproterozoic ca. 1 Ga deposits of the Torridonian (Scotland) and Nonesuch Formation (Michigan, USA); (ii) early land plant spore assemblages from the Ordovician-Silurian of Oman and Saudi Arabia, Late Silurian-Lower Devonian of Scotland, and Lower Devonian of eastern Canada and Spitsbergen. 2015 saw the publication of the fourth volume emanating from the CIMP/Saudi Aramco joint project: *Review of Palaeobotany and Palynology* Special Issue v. 212 'Palaeozoic palynostratigraphy of the Arabian Plate [a joint project between Saudi Aramco and the Commission Internationale de Microflore du Paleozoique (CIMP)]'.

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We are currently working on marine phytoplankton and miospores from Ordovician, Silurian and Devonian strata of western Argentina. Our projects and recent contributions mainly deal with diversity of palynomorph assemblages, biostratigraphy, palaeogeography, palaeoenvironments and palaeoclimates of the Precordillera Basin, in the central-west of Argentina, and the Central Andean Basin, in the north-west of Argentina.

In April, a new student will begin working on his PhD project on Ordovician-Silurian acritarchs and miospores of the Central Andean Basin in the Palynology Group of Mendoza (Argentina), under the supervision of Claudia Rubinstein and the co-supervision of G. Susana de la Puente.

HARTMUT JÄGER
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My main focus in palynological research in the Palaeozoic still is on a kind of palynofacies analysis applied to hydrocarbon exploration, including palaeoenvironmental and basin analysis just as hydrocarbon prospectivity. Main interests are in the upper Ordovician to lower Silurian of Poland, Russia and Arabia and in the uppermost Devonian to Lower Carboniferous / Namurian in Germany, Poland and a bit of northern Africa and the USA. Palynostratigraphical studies are less common, but I'm looking forward to a new study on the Lower Carboniferous in eastern Europe, which is actually negotiated. Beside the commercial studies I'm still working on the palynostratigraphy and palynofacies in short wells from the northern Rhenish Massif as much as possible, focused on the Devonian-Carboniferous boundary and the upper Visean to lower Namurian. Additional to the palynology in the Palaeozoic I'm still interested in the palynology of mostly exotic carbonate environments, ranging from the Neoproterozoic in southern Africa to the Jurassic to Cretaceous in southern Germany, Chile and Mexico.

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This academic year is the last year where my major occupation is in education and department administration as mentioned last year. After retiring in October 2015 I have the opportunity to keep part time an office at the Ghent University and continue mainly chitinozoan research of the ongoing projects. This summer in Padova I presented some new Telychian and Sheinwoodian chitinozoans from Kentucky and Ohio, USA samples in 2011, with Brad Cramer, Carl Brett and Mark Kleffner.

In 2014 together with Thijs Vandenbroucke I supervised the Master thesis of Thomas Steeman, on the on the chitinozoan and δ13Ccarb biochemostratigraphy of the Homerian and Gorstian in Wales (one publication published, one submitted and another in preparation). At the Master students day of Geologica Belgica theses of the passed academic year in Belgium are presented in October 2014 and Thomas was awarded the price for the best presentation of his research.

This year Thijs Vandenbroucke and I supervised the Master thesis of Lander Soens on chitinozoans and carbon isotopes of Homerian strata in a borehole from Poland.

We were very happy to see the successful defense in September 2014 of the PhD thesis of Jan Mortier with the title "The evolution of the Upper Ordovician to Silurian basin in the Condroz Inlier and the Brabant Massif from a litho- and biostratigraphical point of view". It contains more than 26 plates with chitinozoans, and many detailed descriptions of the outcrops.

JOHN MARSHALL AND THE SOUTHAMPTON GROUP

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Another busy year in Devonian spore world. I managed to get a semester of study leave in 2014. Part of this I spent at NIGPAS in Nanjing, China. I worked with Zhu Huaicheng, and Wang Yi on spores from Yunnan. I was very pleased to be able to revisit and resample in detail the Maoshangxiang locality where we had discovered an interesting endemic microflora in 2006. This included spores otherwise only known from either Australia or Saudi Arabia.

In June I went to New York State with Jenny Morris (Sheffield) and Dave Carpenter (Southampton) to work with colleagues from the New York State Museum. We collected charcoal through the Devonian sequence and studied the Mid Devonian forest localities where Jenny and colleagues had previously drilled a series of cores through the underlying palaeosols.

Conference attendance was busy with presentations at AASP in San Francisco, CIMP at the EPPC in Padua, IPC4 in Argentina and PalAss in Leeds, UK.

Continuing PhD students working on the Palaeozoic are Jon Lakin who is just completing his thesis on the D-C boundary glacigenic sequence in Bolivia, Dave Carpenter who is acquiring a mid Silurian to Carboniferous time series on micro-charcoal as an atmospheric oxygen palaeoproxy and Emma Reeves who is working on the palynology of the TW:eed project borehole through the earliest Carboniferous in the Scottish Borders. This is to tie, with palynology, the new discoveries of early tetrapods in Scotland.

This year's new start is Charlotte Aldred who is looking at metals, organic matter and pyrite from the Bowland Shale in northern Britain. There is a strong focus on this unit as an exploration target with gas to be produced by fracking. Charlotte is investigating where metals are hosted within the rock and how they might be mobilised into flowback waters following fracking.

MARCO VECOLI

Biostratigrapher (palynologist) at Saudi Aramco Oil Company, Dhahran, Saudi Arabia.

My activity focuses mostly on Cambrian to Permian palynomorphs (acritarchs, chitinozoans, miospores, pollen) in application to high resolution biostratigraphy, and palaeoenvironmental-sequence stratigraphic reconstructions for hydrocarbon exploration. I am working on several regional projects in the Ordovician and Silurian in the NW of Saudi Arabia, as well as on providing real time, on-site and remote assistance to exploration drilling operations (identification of drilled formation, determination of coring point, formation at TD, etc).

To be confronted to the palynological analysis of many new stratigraphic sections on a daily basis, is a challenging task and a great chance to continue to expand my knowledge and competences, especially by discussions and exchange with the highly skilled palynologists in our group as well as the sedimentologists and regional geologists of the exploration department. I am also involved in the mentoring and training of young professionals in building their career as biostratigraphers, and in coordinating the activities of the Saudi Aramco – CIMP joint project, which through the collaboration of different academic institutions, gives me the opportunity to cultivate my palynological research into the origin and early evolution of land plants ("terrestrialization"), evolution of oceanic microphytoplankton during the Palaeozoic, and the effects of these evolutionary events of the Earth System.

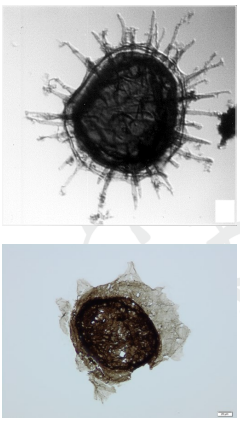
During the last year, some publications went to press which related to my previous research at the University of Lille, as I start to get to pace in presenting and writing papers related to my current activity in Saudi Arabia.

MAŁGORZATA MOCZYDŁOWSKA -VIDAL

Micropalaeontological studies at Uppsala University, Department of Earth Sciences, are carried out by Małgorzata Moczydłowska-Vidal and Sebastian Willman, and our Ph.D. students Heda Agić and Emma Arvestal.

The major theme of our research is the evolutionary history of unicellular, prokaryotic and eukaryotic microorganisms that are interpreted to be of cyanobacterial and algal origins and some of yet unresolved affinities, appearing in the fossil record throughout the Proterozoic and early Palaeozoic times. The currently studied microfossil assemblages are from the Mesoproterozoic, Cryogenian, Ediacaran, Cambrian and the earliest Ordovician successions from various regions in Australia, China, Siberia, and the East European Platform. We are using various microscopic and spectroscopic techniques to reveal phenotypic features and cell wall ultrastructure and biochemistry of microfossils that are extracted from the sediment by palynological methods.

The major project, which is granted to Małgorzata by the Swedish Research Council, is concerned with the studies of biological affinities of marine phytoplankton and their phylogenetic relationships. As a result, timing of the diversification of photosynthesising eukaryotes and the origin of sexual reproduction is estimated. These events are among the most significant in the evolution of biosphere that had a profound influence on the oxygenation of hydro- and atmosphere. The research is a part of two doctoral projects.



Photomicrographs: Microfossils representing microalgal zygotic cysts and preserved with the internal bodies, which are endocysts containing offspring cells or gamets. *Skiagia ornata* is from the lower Cambrian of the Arrowie Basin, South Australia. *Tanarium tuberosum* is from the Ediacaran Ura Formation, Patom Uplift, East Siberia. (Moczydłowska, 2015, *Palynology*, in press).

Heda's doctoral project is entitled "Origins of Proterozoic-Cambrian photosynthetic microbiota" and the plans are that she will defend her thesis at the end of 2015. The objective of the project is to determine the sequential emergence of photosynthetic microorganisms and their phylogenetic affiliations in the Proterozoic and Cambrian times by phenotypic studies and cell wall biochemistry and ultrastructure. Establishing the affinities and timing of the origins of discrete phyla/classes by fossil record would reconcile with phylogenetic relationships among early lineages of the Chlorophytes and the tree of life of the Chloroplastida based on molecular biology and genomics of modern biota. This will elucidate the time of the origin of photosynthesis in algae and endosymbiosis of plastids, and further evolution of autotrophic eukaryotes.

Emma began her Ph.D.work last year and her project is on "Microorganisms from the late Neoproterozoic-early Phanerozoic". The methods include morphologic and ultrastructural/geochemical studies of organic-walled specimens and their cell

wall at micro- and nanoscale by various microscopic techniques (LM, SEM, TEM, confocal laser Raman microscopy/spectroscopy). Multidisciplinary approach and advanced methods in studying microfossils and particulate organic matter will provide reliable data for further interpretations. Set in geological time frame, we may recognize the major divergence events of photosynthesising microbiota, their adaptation and survival of environmental stress, and their impact on global environmental change.

Małgorzata Moczydłowska is also the investigator in the multidisciplinary project supported by The Research Council in Norway, entitled "The Digermul Peninsula – a window into the early diversification of animal life" and led by Dr. Anette Högström at Tromsø University Museum. Her contribution, involving Heda Agic studies, deals with the primary producers at the base of evolving trophic web at the Proterozoic-Cambrian transition that pawed the way for the development of animals.

Geochemical and ultrastructural studies of organic matter comprised in body walls of the early, organically preserved metazoans are methodologically similar to those used in studies of resistant biopolymers in unicellular microorganisms. The search of biochemical composition of organic materials synthesized by microbes and metazoans provide the insights into the biochemical evolution through time. It unravels the major changes in synthesis of resistant macromolecules that allowed evolution of multicellularity and biomineralization. This was a part of the evolutionary success of metazoans and later on the terrestrial plants.

Scientific activity

Małgorzata was the member of the Scientific Advisory Board at the 4th International Palaeontological Congress, September 28–October 3, 2014, Mendoza, Argentina, and the organizer and convenor Session 14. Evolution of photosynthesizing organisms – from microbiota to plants. The session was sponsored and kindly supported by The Palaeontological Association. Three of us, Małgorzata, Heda and Emma, participated in the congress and the field excursion to the Andes in the footsteps of Darwin. The field excursion "Darwin and the highest Andes" provided the opportunity to examine the geologic successions of the Central Andes, and one of the classic sections visited and described by Darwin in 1835. Darwin, in his pioneering trip across the Andes along the mule trail, not only observed the living biota and collected palaeontological specimens, but was the first to describe the geology of the High Andes. Well before the plate tectonic theory was formulated, Darwin understood the dynamic mechanisms in mountain ranges building, such as earthquakes, volcanism and

Field excursion to the High Andes at the 4th International Palaeontological Congress 2014, Mendoza, Argentina. From left to right, Małgorzata, Emma and Heda at the Puente del Inca locality, described for the first time by Darwin in 1835.

uplift. One of the successions visited by Darwin was our own inspiration and a great memory documented by photograph showing, from left to right, Małgorzata, Emma and Heda at the Puente del Inca locality.

Małgorzata attended the 9th European Palaeobotany Palynology Conference at Padova, Italy, 29-31 August 2014, and presented talk in the session S38.

Sebastian continues his research on the Ediacaran microbiota and biochronology with the purpose of

establishing the potential Global Stratotype Section and Point of the Ediacaran System, which is the aim of the IUGS, ICS, Working Group on the Ediacaran Subdivision.

At our Department, Sebastian is responsible for scientific outreach and education in Earth Sciences, including geoturism in the Baltic countries and educational activity in schools and society.

Heda presented in March, 2014, her thesis for the degree of Filosofie Licentiat entitled "Microfossils of eukaryotic cysts through time – a study of Precambrian-Ordovician organic-walled microbiota". During the summer, she participated in the International Geobiology Course 2014, USC Dornsife, and fieldwork in the area of the Walker Lake, Nevada. The project work and studies on stromatolites and global climate change during the Pleistocene resulted in the poster presentation at the 2014 GSA Annual Meeting in Vancouver, British Columbia, 19-22nd October, 2014.

Emma took part in the expedition to a newly discovered locality in the Marvel Canyon in the Rocky Mountains (Alberta, Canada) with the research team led by Prof. Jean-Bernard Caron (Royal Ontario Museum, Toronto). The succession contains Middle Cambrian, exceptionally preserved fossils like those from the Burgess Shale type locality, and both assemblages are dominated by arthropods. However, the fossils from the new site are better preserved and it may appear that the Marvel Canyon sediment contains also organic-walled microfossils. Emma collected samples for her studies, and if successful in recovering microfossils, the material would be unique for biostratigraphic correlation of metazoan- and microbial-based zones.

MAURICE STREEL
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I'm more involved in Holocene research for the time being (See cimp.weebly.com. : Miscellanea : members libraries). I hope also to contribute with a poster on the Famennian in Eastern Belgium at the next meeting of the Subcommission on Devonian Stratigraphy (SDS) in Brussels next September. As I have written to Gilda I very much regret the clash of the Brussels and Bergen meetings (The same days!) but I doubt anyway to have been able to go to Norway (too much tiring for me now then I reach the 80th this year!).

I also accepted a suggestion of Hartmut to "write up a short history about CIMP: the people that started it, the people that served at the board of CIMP during the years, the places where CIMP met and so on". But unfortunately this will not be ready for the next newsletter.

MERCEDES DI PASQUO
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Mercedes di Pasquo is working mainly on the Silurian–Permian palynofloras (and megafloras) of South America in collaboration with several colleagues from Argentina (Sol Noetinger, María Vergel, Daniel Starck, Juan Pablo Milana, Victoria Valdéz), and elsewhere (e.g., Paulo A. Souza, Roberto Iannuzzi, Gordon Wood, Peter Isaacson, George Grader, James Martin, Heidi Anderson, Enrique Díaz Martínez, Delfino Hernández, Benjamin Kneller, Paulo Paim, William Matsumura). Actually, last contributions deal with palynofloras from the Mississippian Poti Formation of northeastern Brazil, in collaboration with Roberto Iannuzzi, and another is related to the "Global biostratigraphic comparison and correlation of an early Cisuralian palynoflora from Bolivia".

During 2013 she was working on the Carboniferous and Permian palynofloras of the Paraná Basin and its comparison to South American basins at the UFRGS (Porto Alegre, Brazil), thanks to the Brazilian Program "Science without borders" CNPq (2013 -2014), as a Special Foreign Researcher (di Pasquo and Souza, 2014). Since 2014 she is also participating as Victoria Valdez´s co-supervisor, together with Paulo Paim (UNISINOS, Sao Leopoldo, Brazil), and contributing with Carboniferous palynostratigraphic data to her geological study of the Precordillera Argentina. Mercedes is also working with William Matsumura, who is finishing his PhD at UFRGS with his supervisor R. Iannuzzi, on the Mid-late Devonian floras (especially the genus *Haplostigma*) from the Paraná Basin (Brazil). She is carrying on the analysis of the palynoassemblages associated to the plant deposits that are correlatable to the Bolivia and northern Argentina ones (di Pasquo et al., 2013).

As Affiliate Associate Professor at the Department of Geological Sciences, University of Idaho (Moscow, Idaho, USA, since 2010, not tenure-track position), she was working with Dr. Peter Isaacson. He stayed three months at the CICYTTP during his sabbatical time in 2011, and Audrey Warren (Dr. Peter Isaacson´s mater student) spend 2014 july to work on Late Devonian and Lower Carboniferous palynofloras from Montana (U.S.A.). A complete manuscript is currently in progress (di Pasquo et al. 2012; Isaacson et al., 2013, 2014; Warren et al., 2014). Further contributions deal with Upper Palaeozoic palynofloral changes in Bolivia and Argentina during the Gondwanaland glaciation, also in collaboration with Heidi Anderson, who defended her PhD in 2010. Some results were presented by di Pasquo and Anderson 2012.

She is still President of the ALPP (*Asociación Latinoamericana de Paleobotánica y Palinología*) for a second period 2013-2016 (www.ufrgs.br/alpp, alpaleobotanicapalinologia.blogspot.com).

More information at websites:
http://www.cicyttp.org.ar/mdipasquo.htm
http://palino.com.ar (username/password can be requested to medipa@cicyttp.org.ar
http://independent.academia.edu/MercedesDiPasquo
https://www.researchgate.net/profile/Mercedes_Di_Pasquo/

MIKE STEPHENSON
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In the last few years I've been working on the Permo-Carboniferous of Pakistan and Yemen, including some wonderful fieldwork in the Salt Range of Pakistan. This resulted in a paper in Gondwana Research (*see list of Members publications*).

I also continue to work in the Arabian Peninsula developing and refining stratigraphy in the Khuff Formation through palynology and Sr isotopes in brachiopods, working with colleagues in Italy and France.

I've branched out into shale gas working with colleagues at Leicester University and PhD students. Palynology has a vital role in understanding the primary prospectivity of shale.

I'm also about to have a book published on shale gas (March 2015). The book is called: 'Shale Gas and Fracking: the Science behind the Controversy' and it's published by Elsevier (http://www.amazon.co.uk/Shale-Gas-Fracking-Science-Controversy-ebook/dp/B00TH0LWK6). The books looks at primary prospectivity of shale in relation to palynology, along with other topics.

I'm continuing to work on carbon capture and storage and recently published (Aug 2013) another book on CCS (which contains a little bit of palynology!). The book is published by Elsevier also. It's called 'Returning Carbon to Nature' (http://www.amazon. co.uk/Returning-Carbon-Nature-Capture-Storage/dp/0124076718). A few papers on CCS were published between 2012 and 2014 (see publication list).

My most active area of research at the moment is the Middle Permian of Jordan. The fascinating sequences along the eastern edge of the Dead Sea reveal superbly fossiliferous Permian rocks including famous plant fossil localities, but also high-yielding palynological rocks. These sequences may be important for understanding Middle Permian and Permian-Triassic boundary sequences in the Tethys. I will be going into the field again in April 2015. A few papers have been published, and a few more are on the way (see publications list).

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I am working with Charles Wellman and Wilson Taylor on Precambrian palynology of the Nonesuch Shale (Michigan, USA) and the Torridonian (Scotland), both of which consist of lacustrine deposits (1Ga). We have a couple of papers somewhere between rejected and in revision, so no recent publications in that regard, but we expect to see some initial publications in later in 2015.

We are concerned primarily with trying to establish the systematic affinities of unicellular protists and this is proving to be not easy. I also continue to work on early and middle Cambrian cryptospores from Laurentia and associated palynodebris which may or may not have some relevance to the algal-embryophyte transition. I hope to have the first systematic work, including probably 3 new genera, published before the end of 2015.

With Marco Vecoli and John Beck, we have a paper on the palynology of the (Dapingian-Darriwilian) Kanosh Shale at Fossil Mountain (Utah, US) that should be out soon in the Journal of Paleontology. We are proposing some modifications to the old suprageneric classification of the acritarchs, which the editors allowed us to publish in spite of reviewer negativity. We are trying to address some basic morphological issues within the sphaeromorphs by making a distinction between wall structure, which includes the internal features of the wall that are still expressed in transmitted light, as opposed to wall sculpture which is applied to the outer surface of the wall. Also with Marco Vecoli and Al Traverse, I have published some systematic micropaleontology of

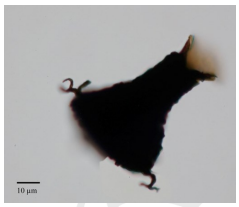

Photo credit: Paul Strother

the cryptospores from the (Darriwilian) Hanadir Shale in Saudi Arabia which represent the perhaps the oldest cryptospores that have clear relations with younger material.

I have attached a photograph which is a montage of two different focal planes of what appears to be a chitinozoan. However, it comes from the Carbon Canyon Member of the Galeros Fm, which is older than 742 Ma. The textured surface is probably taphonomic, the neck region does not look so chitinozoanesque to me, but the spines and overall outline do. The age of this fossil would exclude a metazoan origin. The section this derives from are well known for vase-shaped microfossils (or, VSMs), so it appears possible that this fossil might be related the testate amoebae.

THOMAS SERVAIS

Is a research director of the French CNRS, based at the University of Lille. Specialist of the acritarchs, he uses this fossil group for biostratigraphical, palaeoecological and palaeogeographical purposes. In the last years, he mainly discussed the importance of the group as an essential part of the marine phytoplankton, triggering probably the Cambrian-Ordovician radiation, and in particular the 'Ordovician plankton revolution.' In the two last years, the publication on acritarchs included several papers with the PhD student Yong Lei (Wuhan, China and Lille, France) on Permian phytoplankton, and further work with Wang Wenhui (Nanjing University and Lille, France), Yan Kui and Li Jun (Nanjing Institute of Geology and Palaeontology, China) about the Early-Middle Ordovician, including the revision of the taxa Rhopaliophora and Dactylofusa velifera, and the palaeobiogeography of Veryhachium. Additional work, also with Stewart Molyneux, is in preparation. Hendrik Nowak (PhD student) will finishing his work on the Fezouata Lagerstätte (Lower Ordovician of Morocco) later this year. Thomas is currently a vice-president of the International Paleontological Association (IPA) and past-president of the International Federation of Palynological Societies (IFPS).

THOMAS B. VAN HOOF

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At TNO we currently focus on integrated palaeoecological and stratigraphic studies in the palaeozoic by integrating quantitative palynology with a number of other techniques (e.g. phytoliths, stable isotopes). Current work-areas are the Middle-East (palaeozoic of Kuwait), eastern-Kentucky and of course the Netherlands. We recently finished a project in the Dutch offshore where we used an outcrop study in eastern Kentucky to develop a palaeoecological proxy for predicting the level of stacking of Carboniferous reservoir sands. Furthermore we developed an integrated workflow (incl. high resolution palynology) for source-rock characterization and sweet-spot prediction in unconventional reservoirs.

RAINER BROCKE

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I am currently working on palynomorphs of the Mid-Devonian Chotec Event. In cooperation with Olda Fatka (Charles University, Prague), Eberhard Schindler (Senckenberg, Frankfurt), Richard Lindemann (Skidmore College, Saratoga Springs) and Charles Ver Straeten (New York State Museum, Albany,) we submitted a paper dealing with material from the Chotec type section in the Prague Basin and coeval strata in the Appalachian Basin. Together with Walter Riegel (Göttingen), Volker Wilde (Frankfurt) and Volker Kneidl (Bad Kreuznach) we study palynomorphs from the Lower Devonian Hunsrückschiefer and its facies equivalents in Germany.

REED WICANDER

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My palynology research interests continue to involve mostly Ordovician and Devonian acritarchs. I am finishing a very long overdue paper with Clinton Foster on an Early Ordovician acritarch assemblage from the Nambeet Formation, Canning Basin, Western Australia. In terms Devonian acritarch research, I presented a paper on a Middle Devonian acritarch assemblage from the Arkona, Hungry Hollow, and Widder formations of Ontario, Canada at the 4th International Paleontological Congress last year. I also was the advisor for an undergraduate senior thesis by my student Joe Mohan titled "A new occurrence of scolecodonts (polychaete jaws) in the Middle Devonian Gravel Point Formation of West Michigan." He is currently revising his submitted manuscript to *Contributions from the Museum of Paleontology, University of Michigan*.

I still continue to write geology textbooks with my coauthor, Stew Monroe. The 7th edition of "The Changing Earth: Exploring Geology and Evolution" and the 8th edition of "Historical Geology: Evolution of Earth & Life Through Time" were published in late 2013 and 2014 respectively by Cengage Learning.

Lastly, I was awarded the AASP -The Palynological Society Distinguished Service Award for my many years of service to the society. As I said in my ac-

ceptance of the award, I was speechless, humbled, and truly honoured to receive such recognition. I was also elected President of CIMP this past year and look forward to an active four year term as your President.

WALTER RIEGEL
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Although my main research focus has long shifted from the Devonian to the palynology of Eocene lignites of northern Germany, I still cannot quite keep my hands off Devonian spores and acritarchs. I am currently working with Rainer Brocke and Volker Wilde from the Senckenberg Museum and Research Institute at Frankfurt on spores and phytoplankton from a newly described section of the famous Lower Devonian Hunsrück Shale. Despite the high degree of thermal alteration palynomorphs from this section are sufficiently well preserved to identify, mainly by means of SEM, a fair diversity of spores/cryptospores and, first for the Hunsrück Shale, of phytoplankton as well. However, picking individual specimens for SEM is rather painstaking and requires much time and patience that, perhaps, only retired professors like me may be able to afford. First results have been presented in a poster at the 9th EPPC at Padova and will be published shortly. After that we will continue with more classical sites of the "Hunsrückschiefer Fossillagerstätten". Further work with Rainer Brocke et al. including Middle Devonian palynology of the Eifel region is in preparation.

Since, in my view, the Late Paleozoic Phytoplankton Blackout continues well into the Triassic, I may point out a rare side track of my work together with Volker Wilde concerning phytoplankton from the Mid-Triassic Muschelkalk of the vicinity of Göttingen. Emphasis is placed there on the significance of small acritarchs and the need of SEM in their study. It was intended as a tribute to our department head to remind him that, despite his global network, interesting aspects of marine primary productivity are waiting to be studied in his immediate backyard.

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Wenhui Wang is an assistant researcher at the School of Earth Sciences and Engineering in Nanjing University, China since 2013. She obtained her PhD degree of Paleontology and Stratigraphy in the same year after completing a thesis on the Ordovician fossil groups from graptolitic shales. Wenhui got in touch with palynology (chitinozoans and acritarchs) when she was at the Research Unit of Paleontology during 2010 (Ghent University, Belgium) and Geosystem department (University of Lille 1), where she conducted an integrated study on early Ordovician chitinozoans, acritarchs and graptolites from South China.

At the beginning of 2014, she spent some time on some characteristic early Ordovician acritarchs which are of great biostratigraphical and palaeogeographical potential. Her closest research attention is paid to a research project focusing on the geographic and biostratigraphic distribution of graptolitic shales in South China across the Ordovician-Silurian boundary. Wenhui is in charge of check the chitinozoan and acritarch biostratigraphy from boreholes. Meanwhile, Wenhui is also working on middle Ordovician chitinozoans and graptolites from both Anhui province and Qinghai Province in China, in hope of working out the biogeographic relationship between the two different Terrence during middle Ordovician.

ZÉLIA PEREIRA
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I have been involved with several Devonian and Carboniferous projects in support of the mission programs, mapping and contracts with companies at the LNEG Portuguese Geological Survey. During the upcoming year, I will continue working on the Devonian and Carboniferous palynostratigraphic research and I am developing a recent challenging project with Paulo Fernandes in high resolution palynostratigraphy of the Permian Karoo of Mozambique, Africa (see the microphotos).

Microphotos by Zélia Pereira representing pollen from the Upper Permian Karoo Matinde Formation of Mozambique *(Striatopodocarpites cancellatus* and *Guttulapollenites hannonicus)*

MEMBERS PUBLICATIONS

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

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PHD THESIS OF JAN MORTIER

Abstract:

Twelve years ago Verniers et al. (2002a) summarized what was known at the time about the Cambrian to Middle Devonian basin evolution and deformation history of Belgium, eastern England and surrounding areas east of the Midlands Microcraton.

The combination of the data concerning the basin development, stratigraphy, sedimentology, subsidence history, magmatism, tectonic deformation and metamorphism led the authors to define three megasequences, each megasequence being characterized by a different geodynamic setting. In the present study only the third megasequence, starting in the middle Katian, is considered. This megasequence is heralded by the first signs of the collision, or better docking, of Avalonia and the continent Baltica. During the middle Silurian, these two continents collide with Laurentia. A counterclockwise rotation of the Midlands Microcraton with respect to the Lake District from the Caradoc (Sandbian- middle Katian) to the Emsian led to the convergence of the Midlands Microcraton and the Lüneberg-North Sea Microcraton, resulting in the Brabantian orogeny and the Anglo-Brabant Deformation Belt.

Stratigraphical data of the Condroz Inlier during the third megasequence are restricted, especially those for the Silurian part, this in contrast with our knowledge of the Brabant Massif. The data concerning the Condroz Inlier are mainly based on studies dating from the first half of the previous century. Some years ago, Vanmeirhaeghe (2006b), in his PhD study, revised the lithostratigraphy of the Ordovician and parts of the lower Silurian of the Condroz Inlier in combination with a biostratigraphy using chitinozoans. Detailed field observations of the lithofacies in the Condroz Inlier led to the reconsideration of the lithostratigraphical units present in the inlier. Biostratigraphical analysis mainly with chitinozoans, but also with graptolites and brachiopods, allowed to place the lithostratigraphical units in the chronostratigraphy. Once the stratigraphy of the Condroz Inlier was established, correlation with the Brabant Massif became possible. During megasequence 3 the sediments of the Condroz Inlier were deposited on the shelf, but the location of the sedimentation on the shelf changed through time. During the same megasequence sedimentation of the Brabant Massif starts with shelf deposition, but slope conditions prevail during the Silurian with deposition of turbidites. The thickness of the lithostratigraphical units generally increases through the Llandovery with thick deposits starting from the upper Telychian. The basin of the Brabant Massif begins to deepen already in the upper Katian and

we prefer to place the start of the development of the foreland basin at the onset of the deepening in the upper Katian.

From the lower Telychian on oxic-anoxic changes in the stratigraphical column of the Condroz Inlier are noted. From the upper Telychian on to the end of the Wenlock anoxic sedimentation takes place almost continuously, with deposition of dark grey, finely laminated mudstone; oxic intervals are limited. Such mudstone, known as laminated hemipelagites, have already been recorded from the Brabant Massif and are here described for the first time from the Condroz Inlier.

OBITUARIES

BUREAU OF PALYNOLOGICAL COMMISSION OF RUSSIA REGRETS TO INFORM ABOUT THE DEATH OF VALENTINA MANTSUROVA ON NOVEMBER 12TH, 2014

Valentina Mantsurova (Валентина Николаевна Манцурова) (cand.geol.-min.sci.) was born in Volgograd on July 27th, 1949. She graduated from the Faculty of Geology of the Lomonosov Moscow State University in 1974. In the years 1974-1978 she completed doctoral studies at the Department of Palaeontology at Moscow State University and successfully defended her thesis. All next years of her scientific research were closely related to the work in the Volgograd Oil Institute of Ministry of Oil Industry of the USSR (now Branch "LUKOIL-Engineering" Ltd "VolgogradNIPImorneft"): from 1979 to 1994 as the Senior Researcher and since 1994 as the Leading Researcher.

V. Mantsurova has proved itself as a highly qualified specialist in the stratigraphy of Palaeozoic and Mesozoic deposits of the Lower Volga, Near-Caspian and Caspian Sea regions. The scientific interests of Valentina within the palynology were concentrated on the palynostratigraphy of the Devonian and Lower Carboniferous of south-eastern Russian plate, biostratigraphy of Mesozoic deposits around and in the Caspian Sea. She has made a significant contribution to the development of palynostratigraphic zonation of the Middle and Upper Devonian of Russian Platform and palynological studies of the Frasnian-Famennian boundary deposits. As the result of her studies the position of the Frasnian-Famennian boundary in the Lower Volga was clarified and, based on the palynological data, was moved from the top to the base of the Linevskaya Formation.

V. Mantsurova published more than 120 scientific papers and monographs, gave many conference, meeting and congress presentations not only in Russia, but also abroad (China, 2000, 2006; Greece, 2002; Spain, 2004; Czech Republic, 2006; France, 2007; Germany, 2008; Great Britain, 2010; Latvia, 2011; Japan, 2012; Portugal, 2013).*

Valentina was active member of several scientific societies and commissions: Palynological Commission of Russia (since 1979), Russian Paleontological Society (since 1981), Moscow Society of Naturalists (since 2001), International Commission of the Palaeozoic Microflora, CIMP (since 2008), Russian Interdepartmental Stratigraphic Commission, Section of the Lower Palaeozoic and Devonian of Central and Southern Russia (since 2009); in 2005 she became a member of the Bureau of Palynological Commission of Russia, and in 2009 became the corresponding member of the Subcommission on Devonian Stratigraphy.

With great enthusiasm, as interested and constantly well-wishing person with highly developed sense of responsibility, during the last decade Valentina distributed all current information on the events organised by the Bureau of Palynological Commission of Russia and the International Federation of Palynological Societies (IFPS) among palynologists and other palaeontologists of Russia and neighbouring countries.

Thankful and good memory of Valentina Mantsurova will forever remain in our hearts.

*(*The main publications of VALENTINA MANTSUROVA can be found on the CIMP web site).*

LEONARD E. EAMES

June 17, 1936 - September 28, 2014

Leonard E. Eames (age 78) died on Sunday, September 28, 2014 in Tulsa, Oklahoma surrounded by his children and loving wife, Jean Asbury Eames. Leonard was born on June 17, 1936 in Bedford, Ohio, the only child of Leonard Jackson Eames and Bertha Fair Eames. Living in a rural area, Len was surrounded by the fields and forests of northeast Ohio. Rocks and plants became lifelong interests.

Len loved cars. His first cars included a 1938 Plymouth and a 1950 Chevy. He and his best friend Bill Waller enjoyed customizing their vehicles.

As a young man, he worked as an aircraft mechanic at Horn's Flying School in Russell, Ohio where he learned to fly small planes. However, a career fixing planes outside during the winter was a persuasive argument to go to college. He attended Kent State University where he majored in Biology and met his first wife, Carol Ely. He graduated in June 1961 and married Carol a week later. He was drafted into the Army and served two years as a lab technician at Fort Benning, GA. Three children, a master's degree from Kent State in Botany and a Ph.D from Michigan State in Paleontology/Palynology followed.

Len moved his family to Tulsa in 1971 after accepting a position as a Research Scientist with Amoco Production Company. His career allowed Len to travel, searching for rock samples from Baja California to Egypt to Canada. He retired from Amoco in 1994 and soon became an active volunteer at Oxley Nature Center. He shared his love of nature, botany and butterflies with hundreds of schoolchildren over the next 20 years.

Len's hobbies included metal detecting and enjoyed many roles including president of the Indian Territory Treasure Hunters Club and was an active member of the Tulsey Town Treasure Hunters. He spent many weekends attending treasure hunts throughout the Midwest. One of his proudest discoveries was helping law enforcement search for a knife used in local crime. Len found the knife in tall grass, helping to solve the crime.

Len married Jean Asbury on October 30, 1994. They shared their home with several beloved dogs.

He is survived by his wife, Jean Asbury Eames of Tulsa, OK, daughter Nancy Eames (Suzanne Grime), Bowling Green, OH, and sons David Eames (Kelly), Lee's Summit MO, and Brian "Chip" (Jan) of Tulsa. Grandchildren Sam, Bailey, Jack and Will of Lee's Summit, MO and Tyler and Taryn of Tulsa. He is also survived by brother-in-law Douglas Asbury of Chicago, Ill.

In lieu of flowers, the family suggests contributions

to Oxley Nature Center, Hospice of Green Country or the American Cancer Society.

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INFORMATIONS AND NEWS

Sa'id A. Hajri, (from Saudi Aramco) have been the Middle East President for the American Association of Petroleum Geologists for the past 18 months. He will complete his two years term in July 2015. *See the header of the first page of the AAPG newsletter.*

CIMP FEES

Please don't forget to pay your annual CIMP subscription. Information on methods of payment can be found at **http://cimp.weebly.com/membership.html**.

It is easy, but why pay? Simple - you may help CIMP members (mainly students) to participate in meetings and congresses. You also may help in offsetting the costs of organizing social events during meetings. You may also participate in discussions between CIMP members. Your annual CIMP member dues also provide the fees for the CIMP subscription to IFPS (International Federation of Palynological Societies).

Thank you!

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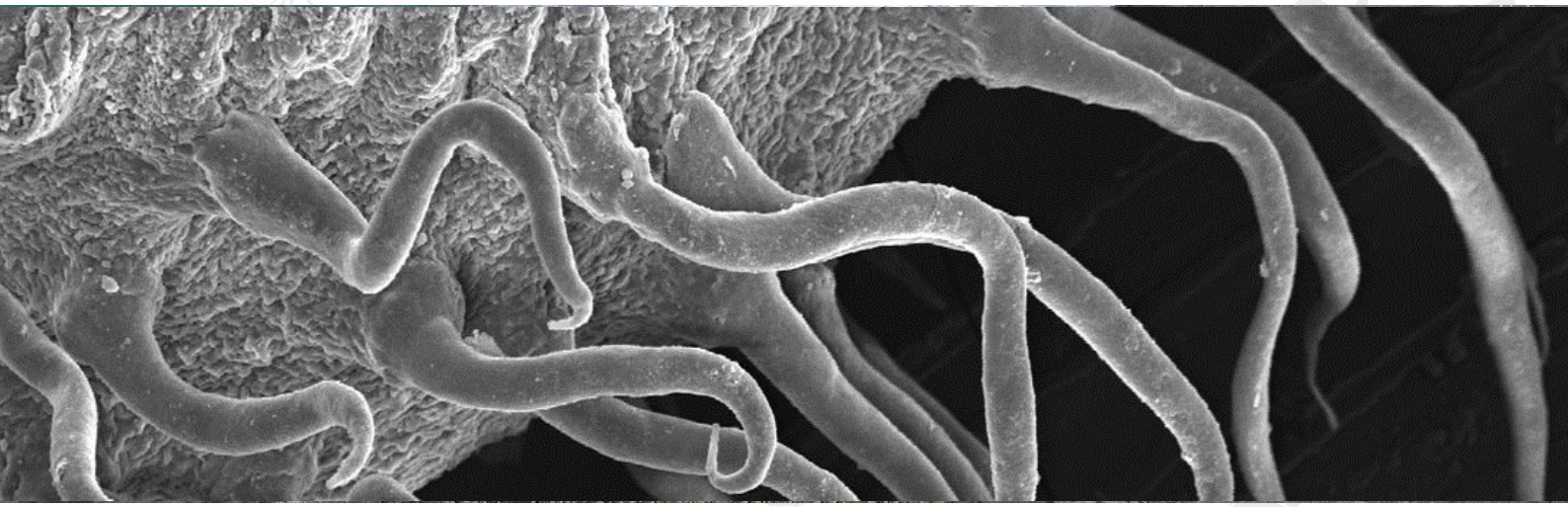
COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE

NEWSLETTER 83
MARCH 2015



COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOÏQUE

SUBCOMMISSION ON SPORES AND POLLEN

Thanks to all members who contributed to this newsletter!

Cover photo: Detailed of a megaspore ornamentation
Credit: F. de Ville de Goyet

President
Hartmut Jager

PRESIDENT'S LETTER

Dear colleagues,

I guess many of you know me already from the last four years serving as secretary of the CIMP spore-pollen subcommission. I still continue to serve this subcommission for (at least) the next four years, only moving from secretary to subcommission president. I'm following Zelia Pereira in this position, serving 8 years as president of this subcomission and I want to greatly acknowledge the great job she did for our subcommission. Thank you Zelia! On the other side I want to welcome Gilda Lopes as new secretary of our subcommission and we both will do our best to keep it running for the next years.

You actually received the first CIMP newsletter in the new format. To make things less complicated and hopefully improve the internal communication in CIMP, it was decided to have one CIMP newsletter including all subcommissions. The additional newsletters of the three subcommissions are canceled, but each subcommission will have its own section within the new CIMP newsletter for specific subcommission related issues. This YOUR place in the newsletter, to bring in and discuss all the spores and pollen related issues, that you come across in your research and always wanted to share with other colleagues. The spore-pollen subcommission section of the newsletter is waiting for YOUR input. Therefore Gilda Lopes sent out an email earlier this year, asking for ideas and contributions to fill in the spore-pollen subcommission section. Unfortunately she didn't received any replies to this. Maybe there are no more open questions and discussions related to Palaeozoic pollen and spores, which I would seriously doubt. Or it was just too much confusion with all the new ideas. So we give it a second try in the spore-pollen section of the next newsletter.

As already done in our email for the section of the spore-pollen subcommission, we ask you to share your ideas, views and concerns regarding Palaeozoic spores and pollen and their terrestrial palaeoenvironments. Typical topics could be: newly described species of pollen and spores and their stratigraphic and regional distribution; open questions and discussions on pollen/spore taxonomy, pollen/spore taphonomy, pollen/spore ecology, po-llen/spore distribution/palaeobiogeography; new topics and research directions regarding paleozoic pollen and spores or terrestrial palynology in the Palaeozoic at all. In my opinion there are many issues, that have to be discussed and worked on in more detail and the spore-pollen subcommission section in the CIMP newsletter could be a perfect place to bring up and discuss such issues.

To start up the spore-pollen subcommission sec-

tion I want to ask all of you, working on pollen and spores, to send me your newly described, modified and emended species of the last three years. Please include the original descriptions and photo(s) of the type specimen and send it back to Gilda (Gilda.Lopes@geo.uib.no) or me (jaeger@georesources.de). Because not all of us have access to all the different journals and might not be aware of all the new species, I would like to send around a compilation of newly described species at least once a year. I'm looking forward for your comprehensive contributions on this topic.

Cheers
Hartmut

Secretary
Gilda Lopes

SECRETARY'S LETTER

Dear colleagues,

It is with immense pleasure that I'm writing to you to introduce myself as the new Spore and Pollen Subcommission Secretary. First of all, I would like to take this opportunity to show my appreciation to Hartmut and Zélia for having invited me to apply for this position, and I also want to thank to everyone that voted for me. To all members, even those that I still haven't got the pleasure to know, I hope to meet your expectations.

I would also like to congratulate all the new elected colleagues, both for the subcommissions as well as the main board. I'm looking forward to working with all of you! For those that still don't know me, I am a Paleozoic palynologist currently working as a post-doctoral fellow at the University of Bergen, Norway. The Carboniferous biostratigraphy of the Barents Sea is now my main theme of work but previously, during my PhD, I was focused on the biostratigraphy of the Portuguese Central-Iberian and Ossa-Morena Zones within a time frame that ranged from the Late Cambrian to the Early Carboniferous.

This year, I am also co-organizing a CIMP Meeting with Gunn Mangerud, Reed Wicander, and Marco Vecoli. I hope to see you all at the next CIMP Meeting at the University of Bergen!

Best Regards,
Gilda Lopes

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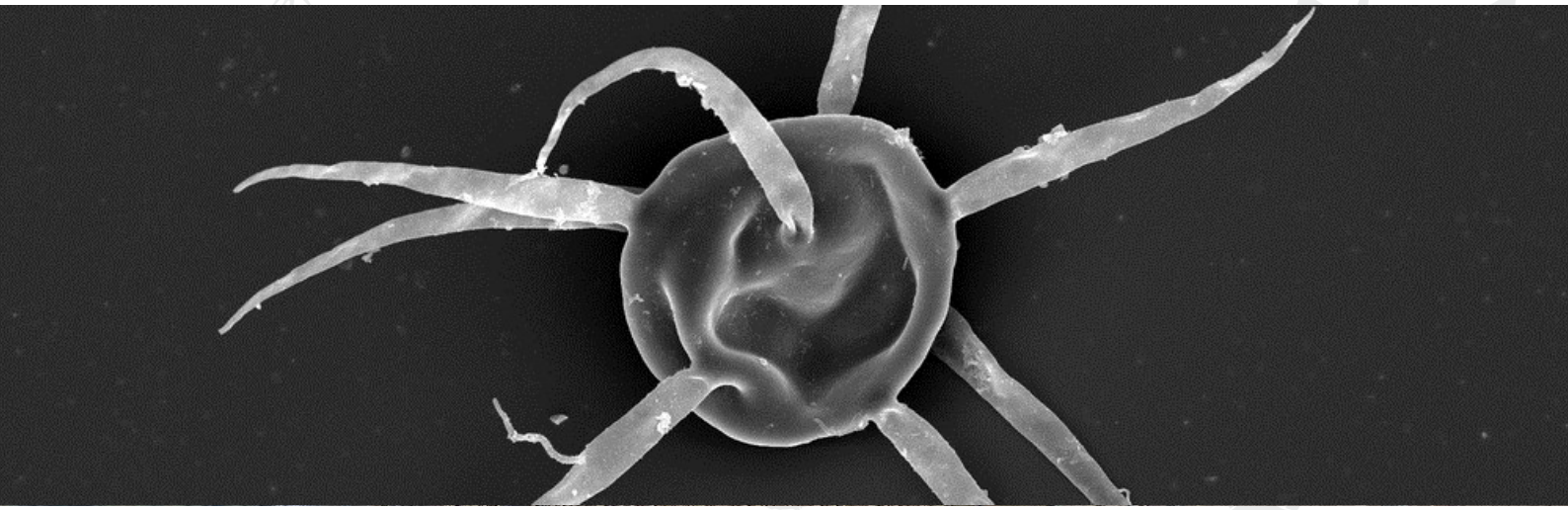
COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE

NEWSLETTER 83
MARCH 2015



COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOÏQUE

SUBCOMMISSION ON ACRITARCHS

Thanks to all members who contributed to this newsletter!

Cover photo: Baltisphaeridium perclarum Loeblich & Tappan, 1978
Credit: Reed Wicander (CIMP WEB SITE)

President
Thomas Servais

PRESIDENT'S LETTER

Dear colleagues,

I started to work with acritarchs as a master student, and dedicated my PhD to acritarch biostratigraphy of the Ordovician of Belgium and Germany. At about that time, in the early 1990's, I reactivated the acritarch subcommission together with Stewart Molyneux. Stewart was chairman (or president), and I served as secretary. This subcommission organised a congress on acritarchs at Prague in 1996 (with Olda Fatka as chair), and about 60 (sixty !) acritarch workers came together. The conference volume (published in Acta Universitatis Carolinae, section geology, 1997) included a short paper that I wrote about the history of the acritarch subcommission, a group that was initiated in the early 1960's.

The term acritarch is now over 50 years old (as is the subcommission !), and I tried to celebrate the term 'acritarch' with talks at the AASP/dinoflagellate meeting in San Francisco and the PalAss meeting in Zürich in 2013. However, almost nobody was left over to celebrate the 50th anniversary…

Most acritarch workers are now retired, or they are doing other things! We are now a very small community, with only a few handfuls of people. But compared to trilobites or graptolites, investigated since several centuries, acritarch research is still in its pioneering years. Many geographical areas of numerous geological intervals remain totally unknown! The Lower Ordovician of Laurentia, the entire Upper Ordovician of the northern part of Gondwana (Australia, North China, etc.), for example, remain totally unknown.

And it appears almost utopic to ask these days for financial support to sponsor PhD studies to work on biostratigraphy in the Palaeozoic, as all fundamental research must be orientated to answer societal questions: climate change and global warming, just to name a few.

So, is acritarch research dead ?

No, maybe the best years are over, and a quarter of a decade after the end of the glorious period, we have to evolve in another context. Our subcommission produces now a joint newsletter with the other groups of palynologists. We should have meetings with other bodies (it seems impossible to bring 50 acritarch workers these days) and try to find new questions for our old group.

First step: with Gil as acritarch subcommission secretary, we have to track individually all acritarch workers. Our list of members is outdated. Circular e-mail messages sent out get only little answers. So, we will contact you individually very soon!

With best wishes,

Thomas Servais

Secretary
Gil Machado

SECRETARY'S LETTER

It seems like yesterday when I moved to Oman. It was a great opportunity to work as professional Paleozoic - and also Precambrian - Stratigrapher and Palynologist. I returned to Portugal late last year and restarted as a Geoscientist at Galp Energia this January. Although I will be responsible for the biostratigraphy work in the company (no microscope for me, only third party reports), there will be a lot of seismic interpretation, well data to manage and other sorts of exploration work.

Regarding research, I am currently involved with several small projects relating to the Precambrian of Oman, both standard palynology and material from thin sections; Cambrian conodonts from Oman; Devonian conodonts from Portugal and hopefully one day I will publish parts of my thesis about the stratigraphy and palynology of a Pennsylvanian basin in Portugal and also Devonian acritarchs from another basin in Portugal.

Too many things, too little time!

Gil Machado

PALYNOLOGY DATABASES AND RESOURCES ONLINE

There are several taxonomic databases available online. Probably one of the most complete is The Taxonomicon. It includes nearly every fossil group. Although it goes down to species level, for most genera the species are not listed extensively, e.g. *Veryhachium* has 6 species listed, but you do find possible synonyms and the original author

http://taxonomicon.taxonomy.nl/

In terms of nomenclature to use, the most complete is certainly the Glossary of Pollen and Spore Terminology developed at Utrecht University. Although focused on pollen and spores, much of the nomenclature is used in other organic walled microfossils.

Available here:http://www.pollen.mtu.edu/glos-gtx/glos-int.htm

And published here http://www.sciencedirect.com/science/article/pii/S0034666706001291

If you find Fungi under the microscope (or something that resembles Fungi), then this digitised version of the The Kalgutkar and Jansonius Database of Fossil Fungi is the thing for you. Searchable and browsable as a list, it includes description and sketch for many of the entries. Genus and species level.

http://advance.science.sfu.ca/Kalgutkar_and_Jansonius/index.php?-link=Home

Last but certainly not least, *Palyweb* is a database developed by the Liege palynology team which is focused on Paleozoic Palynology. It is wiki based and best of all, you can contribute to it! Most entries include description and images. Ask Philippe Steemans for a login to access it

http://www.palyweb.ulg.ac.be/wiki/index.php?title=Main_Page

Other indexes are not available freely, but quite cheaply accesible such as the Fensome et al., 1990 Acritarchs and fossil prasinophytes: an index to genera, species and infraspecific taxa, from AASP. It is probably the most extensive (and up to date despite its 25 years!) published index for Palynology. It includes all the known species to 1990. For each there is a discussion on the validity and synonymy, although no descriptions or images are provided.

If you know other databases or useful resources online please let the palynological community know. Maybe you developed your own database and feel the urge to share it!

CIMP
COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE

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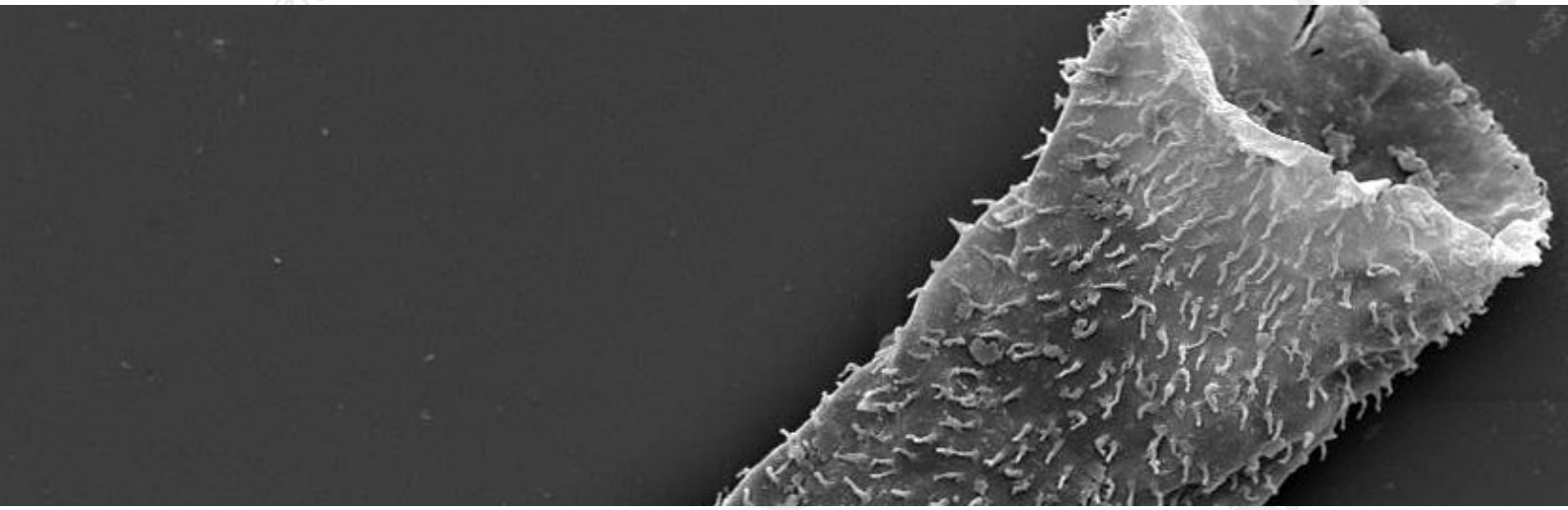

COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOÏQUE
SUBCOMMISSION ON CHITINOZOANS

Thanks to all members who contributed to this newsletter!

Cover photo: Detail of chitinozoan ornamentation
Credit: Wikipedia

President
Jacques Verniers

Secretary
Wenhui Wang

PRESIDENT'S LETTER

At the last CIMP meeting in Padova, I was happy to be able to report the result of the election of our new secretary of the Chitinozoa Subcommission, Wenhui Wang, from the Nanjing University. Our small community has been able to communicate over the last year results involving chitinozoans at conferences as the CIMP session in Padova, the IGCP 591 meetings, the AASP meeting, the GSA meeting and the different symposia of the International Stratigraphic Subcommission on the Silurian and Ordovician as in Kunming (China). As a help to all members of the Subcommission Chitinozoa we can send you any missing pdfs of chitinozoans articles to make your set of publications complete. Below you can find some websites with information on chitinozoans. Some are very good, others less complete. If you know about others please mention them to Wenhui and me. At the coming CIMP meeting next September in Bergen (Norway) we can discuss how we can distribute our knowledge on chitinozoans to the active workers and also to the interested persons. At the coming CIMP meeting I would like to continue the discussion started in Padova on how the Subcommission can help you: a platform for taxonomic discussion, a platform for dissemination of new results. Maybe we can discuss the need for a functional website for chitinozoan workers or a database with all publications in pdf form. I hope that you can make it all to Bergen and I'm eager to meet you there, see your results or hear from you before by email.

Jacques Verniers

SECRETARY'S LETTER

Wenhui Wang is an assistant researcher at the School of Earth Sciences and Engineering in Nanjing University, China since 2013. She obtained her PhD degree of Paleontology and Stratigraphy in the same year after completing a thesis on the Ordovician fossil groups from graptolitic shales. Wenhui got in touch with palynology (chitinozoans and acritarchs) when she was at the Research Unit of Paleontology during 2010 (Ghent University, Belgium) and Geosystem department (University of Lille 1), where she conducted an integrated study on early Ordovician chitinozoans, acritarchs and graptolites from South China. At the beginning of 2014, she spent some time on some characteristic early Ordovician acritarchs which are of great biostratigraphical and palaeogeographical potential. Her closest research attention is paid to a research project focusing on the geographic and biostratigraphic distribution of graptolitic shales in South China across the Ordovician-Silurian boundary. Wenhui is in charge of check the chitinozoan and

acritarch biostratigraphy from boreholes. Meanwhile, Wenhui is also working on middle Ordovician chitinozoans and graptolites from both Anhui province and Qinghai Province in China, in hope of working out the biogeographic relationship between the two different Terrence during middle Ordovician.

WEBSITES WITH CHITINOZOANS

http://fossiilid.info/34 (excellent site in the database Paleobiodiversity in Baltoscandia by the Institute of Geology at Tallinn University of Technology, for chitinozoans in the Baltic area). http://www.ucl.ac.uk/GeolSci/micropal/acritarch.html from the University College London Micropalaeontology Unit.

http://www.geosciences.univ-rennes1.fr/IMG/pdf/Alphabetic_list_of_chitinozoan_species-3.pdf (list of all species described up to 2010)

http://cimp.weebly.com/ (new CIMP website, partly under construction).

http://www.cimp.ulg.ac.be/Chitinozoans.html CIMP website in Liège.

OTHER WEBSITES FOR CHITINOZOANS

http://en.wikipedia.org/wiki/Chitinozoan (also wiki French, Portuguese, Dutch, Catalan, etc)

http://www.encyclo.nl/begrip/chitinozoa (repeats http://nl.wikipedia.org/wiki/Chitinozoa)

http://sn2000.taxonomy.nl/main/classification/94209.htm, with some errors Clavachmna in stead of Clavachitina.

http://www.gbif.org/species/101496159 (with 113 genera mentioned, but validity not discussed).

http://eol.org/pages/2912515/overview (database uncurated yet, linked to **Encyclopedia of Life database)**

http://encyclopedia2.thefreedictionary.com/Chitinozoa

http://www.geo.arizona.edu/palynology/ppchtnz.html (with old links)