CIMP
COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE

NEWSLETTER 90
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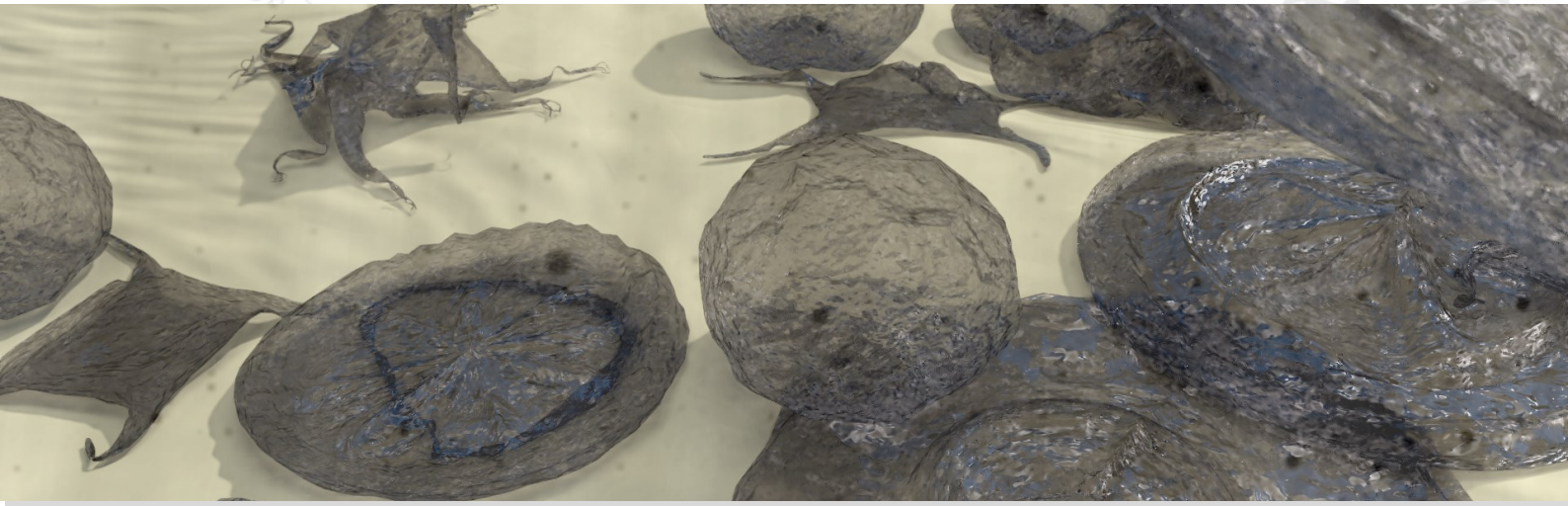

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COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOÏQUE

Thanks to all members who contributed to this newsletter!

Cover photo: 3D model of palynomorph deposition.

CIMP

CIMP is an international federation of palynologists focused in Palaeozoic palynology, and membership is open to all individuals involved in this field of expertise. The commission aims to advance knowledge in Paleozoic palynology and related subjects by the promotion of international co-operation and meetings between scientists of all regions and countries.

To this end the CIMP arranges symposia and working groups which deal with various stratigraphical and taxonomic problems in Palaeozoic palynology. For more information on membership and activities, please see:

https://cimp.weebly.com/

PRESIDENT'S LETTER

Dear CIMP fellows,

a new year has started and I hope you all had a really good start into it. Today, when this newsletter enters your desk, the world has changed due to the COVID-19 pandemic. All sorts of regulations and restrictions determine our lives and most of you are not able to follow your normal life. Quite a number of you are not allowed to be in office and work as usual, but have to stay at home. No one knows how long this will go on, but we will get over these times and will come back to our business - sooner or later. I hope, you all will overcome this time in good health and without major economic problems and come back with fresh and new research ideas and applications of Palaezoic palynology. Not only a new year, also a new decade has just started and it will be interesting and exciting, how palynology and particularly Palaeozoic

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palynology will develop through this decade. Beside academic research Palaeozoic palynology has been strongly linked to fossil energy exploration over the last decades. Particularly the exploration of unconventional shale resources, often Palaeozoic shales, had a very positive impact on Palaeozoic palynological research during the last decade. This will still continue in the coming decade, but as we all know, the world-wide energy market is changing towards sustainable, non-fossil energy and fossil energy exploration will be reduced. Although we will still depend on fossil energy for quite a while, you can feel this wind of change in the industry already and it will effect the support for palynological research in coming years. For the long-term Palaeozoic palynology has to find new fields of applications beside academic research and develop new research topics to keep it a vital and relevant part of the scientific community. This is the great chance and challenge particularly for our young fellows, developing new lines of research for the future of our discipline.

Last year we could welcome 6 new members to CIMP and all of them are student members. It is good to see the next generation of Palaeozoic palynologists coming to take on the future challenges. I cordially welcome our new members and want to encourage you to get actively involved in CIMP. It offers a wide range of knowledge and experience on all aspects of Palaeozoic palynology. Don't hesitate to make this valuable resource available for you and get in contact with the senior members of your specific field of research to get support and advice for your studies.

On the other side we heard with great sadness, that highly merited, long-time members of CIMP passed away last year. Marco Tongiorgi, who made great contributions to the palynology of the Early Palaeozoic over several decades, passed away last summer. Just a few days before Bernard Owen passed away, who was an outstanding supporter of CIMP, serving the society for many years in different positions. Also in times, when he was not in office in CIMP, he was very active to promote Palaeozoic palynology and collaborations with CIMP. In memory of Bernard Owens CIMP will organise a session at the International Palynological Congress in Prague this September. Hopefully this conference can run as planned. More sad news arrived from Belgium this summer, letting us know, that Philippe Gerrienne passed away. Already in 2018 Keith Allen, another long-time Palaeozoic palynologist passed away. Please find more about the life and work of these great colleagues below in the orbituaries.

During the last year CIMP fellows have participated in several national and international conferences (not only palynological ones) to promote their own research and keep Paleozoic palynology in the focus of the scientific community. Also several papers and conference abstracts on Paleozoic spores and pollen studies have been published, in national and international peer-reviewed journals and conference volumes. Take some time to check the reference list in this newsletter and see what has been done in your particular field of research. Also take the opportunity to see what other colleagues are working on and to develop new ideas for collaboration to enhance the power and impact of our discipline by new collaborative research projects.

One way to improve our community and networking is the CIMP group on Facebook - ''CIMP - The Power of Palaeozoic Palynology''. It is a brillant tool to exchange ideas, to develop new collaborations, to get support from the experinced fellows of your specific field of interest, to discuss all questions and

exchange pictures and all sorts of materials including papers. For all of you being already on facebook, why not joining this group, to have the chance of actual and all-time communication about the wonderful world of Palaeozoic palynology. Newcomers are highly welcome. And all the ones already in the group, your active participation within the group is highly appreciated. Help us to make this this group to the central bazar of the Palaeozoic palynology community.

Another way to expand our community and network is our homepage. In recent times homepages have become more and more important to promote our society and attract people to what we are doing. The CIMP homepage was done by Philippe Steemans many years ago and he really did a great job. We are very grateful to him for setting it up and maintaining it for many years. But now it is time revise the page and get it up to date. I would like to get all of you involved in this update. Please visit our homepage (https://cimp.weebly.com/) and check out all the menus. Let us know what you think is important or less important, what are you missing or could be missed, what should be improved and what should be stay as it is. Also your ideas about the design and organization of the homepage are appreciated. You all see so many homepages, so let's get the best out of all for our own. Please send your comments and ideas to our general secretary Gilda Lopes (cimp.palynology@gmail.com).

Gilda Lopes
cimp.palynology@gmail.com

Finally a good way to improve the communication and networking in CIMP is to meet face to face. A good chance for this is the *XV International Palynological Congress / XI International Organization of Palaeobotany Conference* in Prague this September. CIMP will organize a session on Palaeozoic palynology and I hope many of us will meet there and support the session, presenting the current status of Palaeozoic palynological research, exchanging ideas and developing new collaborations and of course having some good Czech beers together. Prague brings together east and west and I want to encourage particularly all our friends and fellows from Eastern Europe and further east to join this conference and contribute to the CIMP session. Although the global pandemic of COVID-19 locks down more and more activities, also scientific meetings, I hope, the situation will turn back to normal until fall and the IPC/IOPC can take place as planned. Hopefully we will meet in Prague in September. Stay healthy.

Best wishes

Hartmut Jäger

GENERAL SECRETARY'S LETTER

Dear CIMP Members,

2020 CIMP Newsletter is now out! We are all passing through a rough phase so, I hope this will bring you a little bit of enjoyable reading time at home!

I want to acknowledge all the members that took their time to write a small contribution. In 2021, if you don't have time to write something up, please just send us a list of the papers published throughout the year. This small gesture will help us all!

In the present newsletter you will find important information about the member's activities, as well as several of the most recent palynological references published, among other issues. Read about the new members and students, and future meetings and courses announcements.

I would also like to acknowledge Filipe Barreira (LNEG's designer) for all his support with the newsletter layout.

If you have any comments or suggestions to improve the newsletter or CIMP please send us an email at cimp.palynology@gmail.com.

Stay safe,
Gilda Lopes

CIMP NEWSLETTER GUIDELINES

The CIMP Newsletter is released once a year by the Commission Internationale de Microflore du Paléozoïque, and welcomes contributions from both members and non-members. You are invited to submit items related to CIMP members' fields of study that might include technical notes, meeting reports and reviews, book reviews, and other news related to Paleozoic palynology. Articles are preferred in Microsoft Word or plain text formats, and high resolution photos and other illustrations are welcomed.

All contributions should be sent by email to the Newsletter Editor, Gilda Lopes, at:

cimp.palynology@gmail.com

CIMP SUBSCRIPTION RATES

CIMP has an annual subscription regime. We encourage you to check your annual status and make your payment!

Subscriptions are set at:

Professionals

10€ per year (+ 0.50€ of charge whatever for how many years you pay your fees)

Students and retired members:

FREE

Information on methods of payment can be found at: **http://cimp.weebly.com/membership.html**.

It is easy, but why pay? Simple - you can help CIMP members (mainly students) to participate in meetings and conferences. You also may help in offsetting the costs of organizing social events during meetings, and 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!

IN MEMORIAM...

KEITH ALLEN (1935-2018)

John Marshall, Nick Rowe, Andrew Leitch

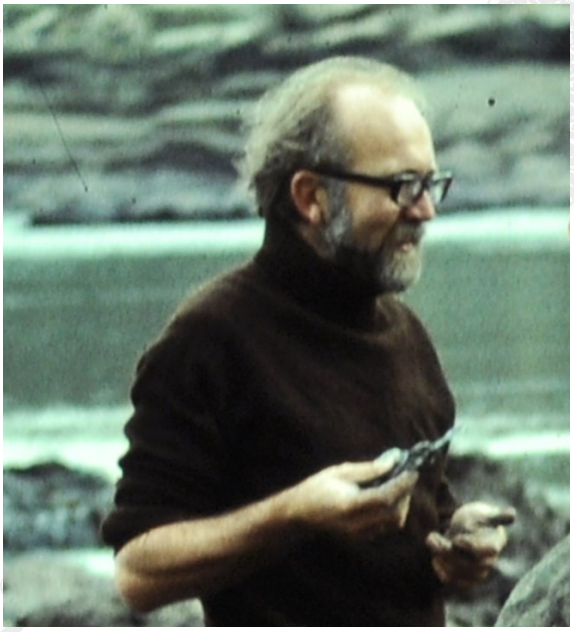

Photo: Keith Allen on the Yorkshire Jurassic Field Trip 1981.

It was in the late 1950's and early 60's that schools in the new discipline of palynology became established in the UK. One of these was started by Norman Hughes at Cambridge University and had a number of early students who went on to become very influential in the subject. These included Mary Dettmann, Geoff Playford and Geoff Norris who had all originated from the Commonwealth and came to do PhD research degrees in the UK. British research students were somewhat rarer as PhD funding was difficult to obtain. However, Keith had been successful in obtaining a Shell scholarship to study Devonian material from Svalbard. Keith had come to Cambridge from the University of Reading where he had taken a dual degree with honours in both Botany and Geology. It was in Reading that he was greatly influenced by the inspirational palaeobotanist Tom Harris who had supervised his project on dispersed lycopod sporophylls from the Drybook Sandstone in the Forest of Dean. An area he returned to later in his career. During the 1950's the UK still had National Service and Keith had opted to undertake this before university rather than deferring it. This entailed 2 years in the Education Corps of the Guards, then and now an elite regiment in the British Army. One of his co-conscriptees was Bamber Gascoigne, later to find fame as a presenter and writer in the arts and TV. This made Keith 2 years older than some of his palynological contemporaries who had opted to defer National Service that had then been abruptly discontinued in 1957.

Keith's PhD entailed investigating many of the samples previously collected by Cambridge Svalbard expeditions led by Brian Harland. As none of these were collected by palynologists they produced rather mediocre assemblages. Keith was then able to go on the 1961 expedition to Svalbard when he mostly worked on the remote north coast. Things were logistically less easy then than now, for example there were no commercial flights to Svalbard. Other aspects were easier or perhaps simpler. For example, most of their work was done in remote temporary field camps after being dropped in a fjord from a converted trawler. They then travelled between localities in a small open boat (dory) with little protection from the elements and indeed no backup or way of communicating with either the wider world or even the main expedition vessel. A degree of risk that would now be seen as completely unacceptable.

At the season's end Keith travelled overland from the head of Wijdefjord to the Russian mining town of Pyramiden together with Mark Moody-Stuart, later to find fame as Managing Director of Shell. The trip was somewhat eventful involving a number of glacier traverses. During one of these traverses Mark Moody-Stuart fell

through the ice into a crevasse and was only rescued as he was attached to Keith by a rope.

It was during his brief stop in Pyramiden that Keith collected from the sections in Mimerdalen that were to provide most of the material for his thesis. This material was Pragian to Frasnian in age and covered most of Devonian time, although not in a continuous sequence. PhD studies in palynology were quite different in those early days, being largely taxonomic in nature. Somethings were easier, for example the published literature would entirely fit in a briefcase! Keith finished his thesis within the three years and it was published in its entirety in the journal Palaeontology. As Norman Hughes was the editor it was somehow possible to publish longer papers than normally accepted. These first publications included a significant number of new species with the microflora regarded as different and now recognised as palaeo-equatorial Devonian. Some of the new genera are still widely used (*Cymbosporites*) together with the first descriptions of key zonal species (*Dictyotriletes emsiensis, Samarisporites triangulatus*). The work made extensive use of microtome cut serial-sections from single spores as pioneered by other members of the Cambridge School. This pre-dated the application of routine TEM sections of spores by some 20 years.

Keith then went for post-doctoral work to Cornell University (USA) with the Devonian palaeobotanist Harlan Banks. This was to study the Devonian succession in New York State. Part way through the study Keith took a job with the Nature Conservancy Council and returned to the UK. Keith's position was taken by John Richardson on temporary leave from Kings College, London together with his car that promptly broke down. Following a brief spell at the NCC Keith was appointed as a lecturer in Botany at the University of Bristol where he established a palynology laboratory.

At Bristol Keith joined a community of Devonian workers that included Brian Williams (sedimentology) and Dave Dineley (fish). He continued his work in the Arctic by joining the 1969 Cambridge expedition to the Devonian of East Greenland. Although this did not produce particularly good spores, a key discovery was the locality on Ella Ø that included the earliest known seed megaspore (now *Spermasporites allenii*) and ultimately the parent plant from which it originated. As Keith was in a Department of Botany he taught plant morphology, palaeobotany and field identification of the modern flora. This teaching pushed him towards more palaeobotanical work, including the systematic study of Devonian megaspores and the first attempts to catalogue Devonian in situ spores. He also edited Palaeontology (1978-82) and textbooks.

Keith had a number of research students that included Anne Fletcher and Julie Robson on Devonian megaspores, Richard Thomas on Early Devonian spores from Wales, John Marshall on Middle Devonian spores from the Shetland Islands, Nick Rowe on the Drybrook flora, Ian Perry on Devonian plants from the Shetland Islands and Andrew Leitch on *Chara*. It was during the contraction of UK Botany Departments in the 1990's that Keith took the opportunity to retire early and go in new directions. He was to become a major pillar of his local community and he took the opportunity to lead botanical and natural history holidays to the Mediterranean and Arctic regions. All those who had the pleasure to hear him teach, know that these holidays must have been wonderful events. For his final years Keith was stricken by vascular dementia latterly spending time in residential care.

Keith was always an entertaining lecturer with a somewhat booming delivery. He never seemed to own a watch so lectures could also overrun. As a supervisor he was always entertainingly mischievous, sometimes announcing things at quite inopportune moments. In many ways he seemed to have research students as much for the vicarious entertainment as the research they delivered.

Selected Publications:

ALLEN, K.C., 1961. *Lepidostrobophyllum fimbriatum* (Kidston 1883) from the Drybrook Sandstone (Lower Carboniferous). Geological Magazine, 98, 225-229.

ALLEN, K.C., 1965. Lower and Middle Devonian spores of North and Central Vestspitsbergen: Palaeontology, 8, 687-748.

ALLEN, K.C., 1967. Spore assemblages and their stratigraphical application in the Lower and Middle Devonian of North and Central Vestspitsbergen. Palaeontology, 10, 280-297.

ALLEN, K.C., 1972. Devonian megaspores from East Greenland: their bearing on the development of certain trends. Review of Palaeobotany and Palynology, 14, 7-17.

ALLEN, K.C., 1981. A review of *in situ* Late Silurian and Devonian spores. Review of Palaeobotany and Palynology, 29, 253-270.

ALLEN, K.C. & BRIGGS, D.E.G., 1989. Evolution and the Fossil Record. Bellhaven Press.

Philippe Gerrienne

Philippe Steemans

Photo: Philippe Gerrienne

Philippe was not a member of the CIMP, he was a palaeobotanist. But he has participated in numerous articles and abstracts in which palynology was approached. Besides, many of you knew him. Much more important than being a talented colleague, he was also my friend. Philippe has made a remarkable contribution to a better understanding of the flora of Siluro-Devonian. His numerous papers, including several in Sciences, attest to this. For several years, Philippe has not been doing well morally: health problems, family problems, difficulties at the lab where the ambiance was bad. He therefore decided during the month of June to put an end to his days leaving us orphan of a person appreciated for his kindness, his honesty, his intelligence, his frank and clear laughter. Personally, there is a huge void in me. My life at university will never be the same again.

To have an access to his work, follow this link: https://orbi.uliege.be/

BERNARD OWENS 1938–2019

Duncan McLean, James B. Riding, Charles H. Wellman

Photo: Bernard Owens

Career Overview

Bernard Owens was born in Darlington, County Durham, northeast England in 1938. He won a scholarship to Darlington Grammar School where, influenced by his geography teachers, Jack Waltham and George Chapman, he decided to follow a career in geology[1]. He read for a bachelor's degree in Geology at the University of Sheffield, graduating in 1960, and stayed on to become the first PhD student of Roger Neves. His research involved fieldwork in the remote Pennine fells on the borders of Cumbria, County Durham and North Yorkshire, where he collected material to study the Namurian stratigraphical palynology of the Stainmore outlier. His thesis was completed in 1963 and the results published in Owens & Burgess (1965). These data contributed substantially to the subsequent miospore biozonation for the Namurian of northern England (Owens et al., 1977), and the zonation for the Carboniferous of Western Europe (Clayton et al., 1977). In 1963, upon receipt of a National Research Council of Canada Fellowship he moved to Ottawa to work with Colin McGregor of the Geological Survey of Canada on Middle to Late Devonian spores (McGregor & Owens, 1966), later producing a significant monograph (Owens, 1971). He returned to the UK in 1965 to join the Institute of Geological Sciences (IGS) in Leeds as their first ever palynologist. When the IGS became the British Geological Survey (BGS), and moved its head office to Keyworth near Nottingham in 1984, Bernard became Manager of the Biostratigraphy and Sedimentology Group. He held this post (under several different titles) until his official retirement in 1998. Immediately prior to retiring from the BGS Bernard was awarded a DSc by the University of Sheffield in 1998 and became Director of the Centre for Palynology (later the Palynology Research Facility) there in 2001. The University awarded him an emeritus chair and he remained active in research and publication. His final paper published during his lifetime was in 2019 (Owens et al. 2019), but just before his death he completed his contribution to an as-yet unpublished new miospore biostratigraphy for the entire Carboniferous of the UK and Ireland.

[1]Other students who attended Darlington Grammar School and were similarly encouraged into careers in the Earth Sciences and became eminent palynologists include Rex Harland, George Hart and John Richardson.

Subcommission on Carboniferous Stratigraphy (SCCS)

Bernard attended the Fifth Carboniferous Congress in Paris in 1963 and began a

lifelong association with the International Union of Geological Sciences Subcommission on Carboniferous Stratigraphy (SCCS). He was a corresponding member from 1984 until his death. He attended every Carboniferous Congress (subsequently the International Congress on Carboniferous and Permian, ICCP) up until the 15th in Utrecht in 2003. In the 1960s and 1970s the Commission Internationale de Microflore du Paléozoïque (CIMP) was an integral part of the SCCS and much of its research related to miospores from the Carboniferous (and Devonian-Carboniferous boundary) with alternate CIMP reunions coinciding with each Carboniferous Congress. This was thus a natural place for Bernard to develop his research activities and collaborations, and he contributed many papers at Congresses over the years. Much of Bernard's involvement with the SCCS was in describing boundary stratotypes. Not without some justification, Bill Ramsbottom asserted that the UK and Ireland could be taken as representing a stratotype section for all but the youngest Carboniferous and Bernard provided the palynostratigraphical component to the arguments for establishing stratotypes in Britain (Owens in Ramsbottom, 1981; Owens 1982; Owens et al., 1982; 1985; 1990; Riley et al., 1985; 1993). He helped organise a symposium entitled 'Biostratigraphic Data for a Mid-Carboniferous Boundary' in Leeds in 1982 (Ramsbottom et al., 1982) which directly resulted in the formation of the Mid Carboniferous Boundary Working Group of the SCCS at the tenth Carboniferous Congress in Madrid. Bernard became heavily involved in the (eventually unsuccessful) proposal to place the Mid-Carboniferous boundary in Stonehead Beck, Cowling, in the North of England (Lane et al., 1985; Riley et al., 1987; 1993; Varker et al., 1990). He voted against locating the Mid-Carboniferous Boundary in the shallow water carbonates of Arrow Canyon, Nevada (subsequently shown to include at least one major hiatus) preferring instead the deep water mudstones of the bleak Yorkshire Pennines near Leeds.

The Micropalaeontological Society

Bernard was a founder member of the British Micropalaeontological Group (subsequently the British Micropalaeontological Society and then The Micropalaeontological Society) and was its treasurer from its inception in 1970 until 1972 and secretary from 1970 until 1975. He was president from 1980 until 1982 and edited a special volume of the society's journal in 1985 (Thusu & Owens, 1985).

Commission Internationale de Microflore du Paléozoïque (CIMP)

CIMP routinely held symposia at every Carboniferous Congress. Bernard presented or co-authored at least one paper at each. He also attended the intervening CIMP meetings (such as those at Liège, Belgium in 1969 and León, Spain in 1977 and helped arrange many (such as the North Sea '90 conference in Keyworth in 1990). Bernard was involved in the CIMP Working Group on Devonian palynology at an early stage (Owens & Streel, 1970; Owens & Richardson, 1972). CIMP underwent a major reorganisation at its ninth meeting during the Carboniferous Congress in Krefeld, Germany in 1971 and Bernard was elected as Co-ordinating Secretary of the various stratigraphical and fossil-group Subcommissions. Bernard became a mainstay of CIMP. He was already active in several CIMP Working Groups including the Working Group on *Dictyotriletes* (which reported to the CIMP

reunion during the Carboniferous Congress in Moscow, 1975) and the Working Group on *Vallatisporites*. During the SCCS meeting in Kraków, Poland in 1995, Bernard proposed the establishment of a multidisciplinary working group on the definition of the Viséan-Namurian boundary and its global equivalents. This fitted with the then objectives of the SCCS in establishing a stage boundary close to the Viséan-Namurian boundary. The Working Group reported to the CIMP Meeting in Lille, France in 2002. He was elected as General Secretary of CIMP in 1978, holding this post until 1983. When Maurice Streel retired as President in 1985, Bernard was elected in his place. He stayed as President until 1991 and was re-elected for the period 1998 to 2002.

International CIMP collaborations

Several CIMP sessions formed part of the Fifth International Palynological Conference held at the University of Cambridge in 1980. The resultant publication was edited by Bernard in a special volume of *Review of Palaeobotany and Palynology* (Owens & Visscher, 1981). Through the early 1980s Bernard was instrumental in setting up and running a collaborative research project between the palynologists of CIMP, the University of Garyounis in Benghazi, Libya and the Arabian Gulf Oil Company (AGOCO) to study the Cambrian to Cretaceous subsurface biostratigraphy of the Cyrenaica region of northeast Libya. The inclusion of AGOCO was fundamental, not only because they provided funds, but also because they allowed access to excellently preserved fossil material. Preliminary results were presented in a special part of the *Journal of Micropalaeontology* edited by Bernard (Thusu & Owens, 1985) with more detail published later in a special volume by Garyounis University (El-Arnauti et al., 1988). Again, Bernard acted as editor. In these volumes he is credited as a scientific advisor to the project, but his role was actually much more fundamental and wide-ranging.

Much of the biostratigraphical dating in Libya was achieved by long-distance correlation with northwest Europe. This highlighted a scarcity in palynological data in the intervening areas. The CIMP International Symposium on Circum-Mediterranean Palynology held in Zeist in 1988 was an attempt to start to fill this gap. Again, Bernard edited the symposium volume published in a special volume of *Review of Palaeobotany and Palynology* (Owens & Visscher, 1990).

Having proved the model, Bernard then moved on to establish a similar collaboration between Saudi Aramco and CIMP to study the Palaeozoic palynostratigraphy of the Arabian Plate. This was begun in 1990 and proved to be much longer running, continuing to this day. First results of the project were presented at a CIMP symposium at the Eighth International Palynological Congress (IPC) in Aix-en-Provence, France in 1992, with papers published in a special issue of *Review of Palaeobotany and Palynology* co-edited by Bernard (Owens et al., 1995). Subsequently the Saudi Aramco session became a regular part of all CIMP meetings. Later results were presented at the CIMP General Meetings in Pisa, Italy in 1988, Lille in 2002, Prague, Czech Republic in 2006 and Warsaw, Poland in 2010 and at CIMP symposia during the 10th International Palynological Congress in Nanjing, China in 2000, the 11th in Granada, Spain in 2004, and the 12th in Bonn, Germany in 2008. Again, Bernard pushed to get results published and he was involved in editing each of the three resultant special volumes (Al Hajri & Owens, 2001; Paris et al., 2007; Wellman

et al., 2015). The CIMP industrial co operations stand out as highly significant contributions to the science of Palaeozoic palynology. As well as serving the operational needs of the funding companies, they also produced a coherent research group who continue to be able to access some superbly preserved material and who have so far published six special volumes of papers, many dealing with alpha-taxonomy.

Research

As an overview of Bernard's papers reveal, he had an ambition to establish Carboniferous miospore biozonations across the northern hemisphere, and to provide long-distance correlation between these. To this end his connections in SCCS and CIMP proved invaluable. Originally he worked with colleagues in Belgium and France, eventually extending to become involved in work in eastern Europe and the USSR (Byvsheva et al., 1975; Owens et al., 1978; Coquel et al., 1981; Teteryuk et al., 1979 Podgainaya et al., 1996), the U.S.A. (Owens et al, 1981; Loboziak et al., 1985; Clayton et al., 1998) and China. (Owens et al., 2002). Most of these productive collaborations derived directly from meetings at various Carboniferous Congresses and CIMP. As well as his extensive work on the palynology and stratigraphy of the Devonian and Carboniferous, amounting to more than ninety formal publications, Bernard published on the Ordovician (Wadge et al., 1967), and on palynological techniques (Owens, 1970; 1980; Riding et al., 2007). He contributed palynostratigraphical data to at least ten of the Geological Sheet Memoirs published by the BGS and wrote numerous internal IGS and BGS biostratigraphical reports. Most of the latter are unpublished and are largely concerned with biostratigraphical analysis of onshore Geological Survey boreholes. Others are concerned with economic geology and show that Bernard was involved with biostratigraphical analysis in coal exploration, for example the Oxfordshire Coalfield, and in the early days of hydrocarbon exploration of offshore UK. As well as formal publications, as part of his role in BGS Bernard provided industry with major projects on the palynology of the Jurassic and Carboniferous of the onshore and offshore UK. The significance of palynostratigraphy to UK North Sea hydrocarbon exploration was recognised by the North Sea '90 conference arranged by Bernard and his colleagues at the BGS in Nottingham in 1990.

Honours

Several colleagues honoured Bernard by naming palynomorphs after him with the microspore *Spelaeotriletes owensii* named by Stanislas Loboziak and Boris Alpern in 1978 and the megaspore *Velumousspora owensii* named by Edwin 'Ted' Spinner in 1983. Bernard had been a member of the Yorkshire Geological Society since 1963. He sat on the Society's council, acted as honorary auditor and published many papers in the Society's proceedings. In 1998 he was awarded the Society's John Phillips Medal in acknowledgement of his distinguished contributions to the stratigraphy and palaeontology of the north of England. His contributions to palynology were recognised by AASP-The Palynological Society by the award of honorary membership at their fourty-fourth Annual Meeting in Southampton in 2011. A special CIMP symposium on Palaeozoic palynology dedicated to Bernard was organised at that meeting,

with a Saudi Aramco sponsored reception held in his honour.

Other activities

Bernard collaborated with research students throughout his career. This ranged from providing materials for MSc and PhD study to supervision and examination of theses. While at BGS he co-supervised the PhD of the University of Southampton's John Marshall at the University of Bristol. While Director of the Centre for Palynology he taught on the MSc course in Palynology and supervised MSc and PhD students from Sheffield and other universities. As a PhD student himself, Bernard had learned the technique of producing single-grain slide mounts. He continued to pick and mount individual miospore specimens during the evenings throughout his life and produced thousands of high-quality reference slides. Many of these were distributed to research colleagues around the world, but the bulk of them reside at the BGS in the 'Bernard Owens Collection' which forms the basis of the Carboniferous miospores in the BGS Taxonomy Online web resource (Stephenson & Owens, 2006).

Away from palynology, Bernard was a very keen gardener and grew exquisite dahlias and chrysanthemums. He played lawn bowls and annually provided floral displays for his bowling club in central Nottingham. He met his wife Pat while an undergraduate at Sheffield and they were married in 1963. Pat accompanied him to many a Carboniferous Congress and other meetings and is a familiar face to palynologists and geologists working on the Carboniferous around the world. Bernard and Pat have two children, Graham and Kathryn, and two grandsons upon whom he doted.

In later years Bernard suffered from Parkinson's Disease which affected him physically but not mentally. This did not dint his spirit. With determination he continued to publish papers and was active in research on Carboniferous miospores from the north of England until just weeks before his death. Although the bulk of his published work concerns Carboniferous miospores, it is obvious that he was a major force in the world of palynology more widely, and a great driver of international collaboration.

Selected publications:

AL- HAJRI, S. & OWENS, B (editors), 2001. Subsurface palynostratigraphy of the Palaeozoic of Saudi Arabia. GeoArabia Special Publication, 1.

BYVSHEVA, T.V., OWENS, B. & TETERIUK, V.K., 1975. Stratigraphical palynology of the Tournaisian to Stephanian deposits of the USSR and western Europe. Compte rendu 8ème Congrès Internationale de Stratigraphie et de Géologie Carbonifère, Moscow, 1975, 3, 209-215.

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Marco Tongiorgi 1934–2019

Marco Vecoli

Photo: Marco Tongiorgi.

Professor Marco Tongiorgi died last August in Pisa. The news of his passing, initially circulated unofficially on numerous social media before the official confirmation was met with great sadness in the entire town of Pisa, and in the local and international academic world. Marco Tongiorgi was first of all a prominent figure in the Department of Earth Sciences of Pisa, Italy, where he graduated in Geology in 1956 at the age 22 and where he spent his entire academic career, after being appointed as Assistant Professor in 1957 and finally Full Professor in 1973. Marco Tongiorgi scientific interest and activity concentrated on the reconstruction of the Palaeozoic stratigraphic succession of the Tuscan basement through the integration of structural and palaeontological data. Subsequently, he extended his study to the stratigraphy of the Palaeozoic succession of Sardinia. As an important consequence of this research, Professor Tongiorgi recognized the considerable biostratigraphic potential of acritarch assemblages, particularly in the Lower

Palaeozoic rocks. This formed the basis for his motivation, in 1981, to establish the Palynology Laboratory within Pisa University's Earth Science Department and to direct his research towards Lower Palaeozoic micropalaeontology, more particularly palynology. Marco Tongiorgi focused his activity principally into the stratigraphic and paleogeographic application of Early Palaeozoic acritarchs, with notable contributions on the taxonomy, biostratigraphy and paleoecology of Middle Ordovician assemblages from Baltic, Chinese and North African localities. The analysis of many different regions of the world also enabled him and his collaborators to identify global eustatic events in the stratigraphic record, to better define the paleobiogeographical distribution of phytoplankton flora, and to apply this knowledge to reconstruction of oceanic currents in the Middle Ordovician oceans.

Marco Tongiorgi's publications, with shared co-authorship with many authoritative personalities in the field of Palaeozoic Palynology such as Francine Martin, Geoffrey Playford, Yin Leiming, among others, stands out for the scientific rigor, in-depth taxonomic analyses, and the impeccable quality of the photographic reproduction of the palynological assemblages.

Many colleague and friends will remember him also for his conviviality and his indissoluble and lifelong bond with Anna Di Milia as well as for his engagement in social and humanitarian services to which he dedicated after his retirement from the academic activity in 2003.

In 2008, Geoffrey Playford and I wrote a homage to Prof. Tongiorgi in *Revue de Micropaleontologie*, 51, 3-8.

NEW MEMBERS

Several new members have registered in the past year. On behalf of CIMP, I would like to welcome all of you!

Ahmed Maher

Al-Azhar University

Egypt

Position: Student
Location: Assiut

Interests: Carboniferous and Permian acritarchs, miospores, chitinozoan, and other.

David Kroeck

Evo-Eco-Paléo, UFR des Sciences de la Terre

France

Position: Student
Location: Villeneuve-d'Ascq,Lille

Interests: Palaeozoic acritarchs and phytoplankton.

Erica Mariani

University of Exeter

United Kingdom

Position: Student
Location: Cornwall

Houcine Boumediene Benachoiur

Evo-Eco-Paléo, UFR des Sciences de la Terre

France

Position: Student
Location: Villeneuve-d'Ascq, Lille

Interests: Cambrian and Ordovician acritarchs.

Navid Navidi-Izad

Kharazmi University

Iran

Position: Student
Location: Tehran
Interests: Cambrian and Ordovician acritarchs, miospores, and chitinozoans.

Tuba Aydin Özbek
TPAO Research&Development Center
Turkey

Position: Student
Location: Ankara
Interests: Miospores and other.

NEWS FROM THE MEMBERSHIP

Alexander C. Ball°*, Charles H. Wellman†, John B. Richardson*, Stephen Stukins* & Paul Kenrick*
°University of Sheffield; *Natural History Museum London, UK

The Late Silurian – Early Devonian adaptive radiation of vascular plants: evidence from the Anglo-Welsh Basin

NERC funded ACCE (Adapting to Challenges of a Changing Environment) Doctoral Training Partnership Ph.D. studentship and CASE partnership with the Natural History Museum, London.

This project has just entered its second year, and focuses on (i) the quantitative analysis of diversity, disparity and turnover rates amongst sporomorphs through the Pridoli – Lochkovian, (ii) building on previous work by JBR in order to clarify the biostratigraphy of the basin, particularly in the Pridoli, and (iii) in situ spores and what these can reveal about evolutionary patterns and relationships amongst early embryophytes, in addition to providing further context to the dispersed spore record.

Samples on loan from the Micropalaeontology dept. of the NHM have yielded abundant, beautifully preserved cryptospores and trilete spores alongside diverse tubes and cuticles. Whilst understanding the extensive taxonomy has been a principal aim for the first year, simply qualitatively logging the slides has given some indication into the apparently high-tempo turnover from stem-embryophytes to tracheophytes (represented by cryptospores and trilete spores, respectively) and the intense changes in diversity amongst the latter across the Siluro-Devonian boundary – giving a tantalising glimpse of the (no doubt wiggly) road ahead. In terms of biostratigraphy, of particular interest are the earliest Pridoli *tripapillatus-spicula* zone through to the latest Pridoli *Apiculiretusispora* sp. E zone, both of which require clarification, and between and perhaps within these there is expected to be further biozones useful for regional correlation. Fieldwork to the Welsh Borderlands has explored some classic localities for Siluro-Devonian palynology and has added to the existing data base. In addition to dispersed spore assemblages, material on loan from Cardiff University has yielded several charcoal field sporangia containing a variety of in situ cryptospores and trilete spores such as *Hispanaediscus* and *Emphanisporites* from the early Lochkovian of the M50 motorway. These exciting finds reveal further diversity amongst early land plants and with further analysis using techniques such as SEM, TEM and Confocal microscopy, it is hoped they will further elucidate evolutionary patterns and relationships amongst dispersed spores and their parent plants.

The following year will see further logging

and counting of the current material, and through fieldwork the stratigraphic range of the sample set will hopefully be expanded. Proposed methods of quantitative analysis (such as turnover rate and disparity changes) for spore assemblages will be piloted, alongside further investigation into the biostratigraphy and in situ spores.

Charlie Wellman
University of Sheffield
Sheffield, UK

In 2019 I undertook fieldwork in the Scottish Torridonian, Ordovician of South Africa and Silurian-Devonian of Northern Spain and Scotland.

Some recent Palaeozoic palynology publications:

ASKEW, A. J. & WELLMAN, C. H. 2019. An endemic flora of dispersed spores from the Middle Devonian of Iberia. Papers in Palaeontology 5, 425-459.

OKTAY, B. & WELLMAN, C. H. 2019. Palynological analysis of Upper Ordovician to Lower Silurian sediments from the Diyarbakir Basin, southeastern Turkey. Review of Palaeobotany and Palynology 263, 28-46.

OWENS, B., ROMANO, M., WELLMAN, C. H. & RIDING, J. B. 2019. Edwin George ('Ted') Spinner (1938-2018). Palynology 42, 184-188.

WELLMAN, C. H. 2019. Palaeontology: The Rhynie chert is the gift that keeps on giving. Current Biology 29, R93.

WELLMAN, C. H., GRAHAM, L. E. & LEWIS, L. A. 2019. Filamentous green algae from the Early Devonian Rhynie chert. PalZ 93, 387-393.

Claudia Rubinstein
IANIGLA-CCT-CONICET
Mendoza, Argentina
crubinstein@mendoza-conicet.gov.ar

I continue to work in Palaeozoic palynology (acritarchs, miospores and chitinozoans), mainly from Argentina and South America.

I currently lead a research project on the origin and radiation of land plants from the Ordovician to Devonian and their impact on the evolution of marine phytoplankton based on the palynological record. This project is funded by the Scientific and Technological Research Fund (FONCYT) of Argentina.

Together with Victoria García Muro and Sonia Camina (PhD student), we are finishing the writing of an article on Devonian acritarchs and miospores of the sub-Andean basin of Bolivia while preparing another one about chitinozoans in the framework of the study of the Siluro -Devonian basins of Bolivia and northwestern Argentina, with samples provided by Pluspetrol SA. We are also carrying out palynological studies in the Lower-Middle Palaeozoic of the Chacoparaná basin, in northwestern Argentina, with samples provided by the oil company YPF SA and in the Lower-Middle Paleozoic of the Precordillera and the Central Andean Basin.

Current research includes studies on acritarch and spore assemblages from the Devonian of Brazil, in collaboration with Philippe Steemans (Université de Liège); from the Ordovician to Devonian of Colombia, in collaboration with María Vargas and Felipe de la Parra (Ecopetrol, Colombia); and from the Ordovician to the Devonian of Sweden, in collaboration with Vivi Vajda (Swedish Museum of Natural History).

Publications:

RUBINSTEIN, C.V., VARGAS, M.C., DE LA PARRA, F., HUGHES, G.M.G. & SOLANO, C.C., 2019. Lower Ordovician (late Tremadocian?- Floian) palynomorphs from the Llanos Basin, Colombia: Biostratigraphic and paleogeographic significance. Review of Palaeobotany and Palynology, 268: 43-54.

RUBINSTEIN, C.V. & VAJDA, V., 2019. Baltica cradle of early land plants? Oldest record of trilete spores and diverse cryptospore assemblages; evidence from Ordovician successions of Sweden. GFF, 141: 181-190 (https://doi.org/10.1080/11035897.2019.1636860)

GARCÍA MURO, V. J., RUBINSTEIN, C. V., PEREIRA, E., BERGAMASCHI, S., MENDLOWICZ MAULLER, P. & STEEMANS, P., 2019. Early Devonian miospores and organic geochemistry from the Alto Garças Sub-Basin (Paraná Basin), Brazil: biostratigraphic, palaeogeographic and palaeoenvironmental implications. Review of Palaeobotany and Palynology, 274 (2020). (https://doi.org/10.1016/j.revpalbo.2019.104150)

Duncan McLean & David Bodman
MB Stratigraphy Limited
UK

2019 proved to be a very good year for research activities at MB Stratigraphy Limited with plenty of good-quality fieldwork, always in good weather! Several repeat visits to the Northumberland coasts were made, some in connection with the TNO/BGS Palaeo5 project, others independently. This really is a fantastic area for fieldwork. A paper by Matthew Booth (Herriott Watt University, now at Robertson CGG) describing the sedimentology of the sections, with some palynological correlations, has been accepted for publication in 2020. Stephen Ingrams (now studying for a PhD at the University of Aberdeen) has submitted his paper on the preliminary miospore results from the Asbian-Brigantian section at Spittal. This revealed the presence of some important sampling gaps in unpromising lithologies, which have now largely been in -filled. Nick Riley presented a gift of a suite of samples from Lindisfarne in a late Brigantian sequence that uniquely for the Tweed Basin contains ammonoids. These should provide some much-needed independent palaeontological control on the Northumberland assemblages.

Peter del Strother (PhD, University of Manchester) provided sample material from his research site at the Asbian-Brigantian boundary of Cefn Mawr, North Wales. The miospores are well preserved and very diverse.

Burntshaw Quarry in the Pennine hills to the northwest of Sheffield currently exposes a superb section of early Westphalian strata between the Listeri Marine Band and the Thirty Yard Coal. The quarry is due to be in-filled, so Sheffield Area Geology Trust (SAGT) made a ‘rescue’ recording of the section and collected a fairly high density suite of samples, for palynological (and any other) analysis. In 2019 SAGT also visited Cadeby Quarry Site of Special Scientific Interest near Doncaster where Zechstein dolomites of the Cadeby Formation are worked. An unusual section of clays apparently lying between two reef mounds was found by Rick Ramsdale of SAGT. The clays are largely unlithified and were sampled by cutting out cubes of clay with a sharp knife – hardly what is normally expected of the British Permian! The material provided beautiful Permian spores and pollen. It has been handed over to Martha Gibson at the

University of Sheffield for detailed inspection.

Work on the biozonation of the Carboniferous of the British Isles continues despite the very sad loss of our co-author Bernard Owens. Bernard managed to complete his contribution to this work, as well as sending extensive edits of everyone else's contributions just weeks before his death. There is material from the Stephanian miospore-bearing levels in the Oxfordshire Coalfield to consider, and then this work should be largely complete.

Finally, the research collaboration with Dmitriy Mamontov (Lomonosov Moscow State University) came to fruition with publication of Mamontov et al. (2019).

Publications:

BOOTH, M.G., UNDERHILL, J.R., GARDINER, A. & McLEAN, D., in press. Sedimentary and tectonic controls on Lower Carboniferous (Visean) mixed carbonate-siliciclastic deposition in NE England and the Southern North Sea: implications for reservoir architecture. Petroleum Geoscience.

MAMONTOV, D.A., McLEAN, D., ORLOVA, O.A. & GAVRILOV, O.A. 2019. Maiaspora gen. et sp. nov. – a miospore genus with enigmatic sculpture from the late Visean of european Russia. Papers in Palaeontology, 1-44.

FLORENTIN PARIS
France
florentin.paris@orange.fr

Chitinozoan workers who are interested by my old publication " Paris, F. 1981. Les chitinozoaires dans le Paléozoïque du Sud-Ouest de l'Europe. Cadre géologique-étude systématique-biostratigraphie. Mémoire de la Société géologique et minéralogique de Bretagne, n° 24, 42 plates, 496 p." can have a full free access to the whole content through the web site of the French National Library (BNF): https://gallica.bnf.fr/ark:/12148/bpt6k96881788

Most of my other old publications are available in PDF format (scanned reprints) upon request through my e-mail (florentin.paris@orange.fr).

Because I am retired, I have no longer access to the recent literature. Thus, last year I asked information (photo and main data) on newly described chitinozoans species in order to include them in my CHITINOVOSP database. I got no answer but I doubt that no new chitinozoan species have been described since 2015! So, if you have erected new species, please, let me know.

Publications:

SALAMON, M. A., GERRIENNE, P., STEEMANS, P., GORZELAK, P., FILIPIAK, P., LE HÉRISSÉ, A., PARIS, F., BRACHANIE, T. & MISZ-KENAN, M., 2018. Putative Late Ordovician land plants. New Phytologist, 1-5

PARIS, F. 2018. Deux milliards d'années d'histoire géologique bretonne. Dossier thématique http://bcd.bzh/becedia/fr/deux-milliards-d-annees-d-histoire-geologique-bretonne.

PARIS, F. 2018. La mer des faluns: des rivages tropicaux en Bretagne il y a quinze millions d'années. Dossier thématique http://bcd.bzh/becedia/fr/la-mer-des-faluns-des-rivages-tropicaux-en-Bretagne-il-y-a-quinze-millions-d-années.

PARIS, F. 2018. Une montagne en Bretagne il y a 300 millions d'années. Dossier thématique http://bcd.bzh/becedia/fr/une-montagne-en-Bretagne-il-y-a-300-millions-d-années.

NERAUDEAU, D., PARIS, F. & SENAN, D., 2018. Les faluns Miocène de Bretagne dans l'histoire des sciences. Fossiles,

PARIS, F., 2019. Les grottes marines de la baie de Morgat. Origine, diversité, évolution. Editions du Centre de la Terre, 118p.

GIL MACHADO
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Since the beginning of 2019 I've been 100% dedicated to Chronosurveys, a consulting company providing services on Biostratigraphy, Petroleum Geology and training. Among our research projects I've been testing the recovery of palynomorphs from evaporites and associated sediments. The technique is now streamlined and publication of results from the several case studies is in prep. I've also been involved with small research projects at the University of Lisbon, supervising undergraduate students on Carboniferous turbidites and other sediments from southern Portugal, the results of which have been presented in the Annual Portuguese Geology students meeting in Estremoz and further publications are in prep. A modest contribution to project IGCP 652 Reading Geologic Time in Palaeozoic sedimentary rocks is in press at the time of writing.

Publications:

MACHADO, G., SLAVIK, L., MOREIRA, N., FONSECA, P.E. 2020. Prasinophyte bloom and putative fungi abundance near the Kačák event (Middle Devonian) from the Odivelas Limestone, Southwest Iberia. Palaeobiodiversity and Palaeoenvironments
DOI: 10.1007/s12549-019-00415-1

GILDA LOPES
CIMA, University of Algarve
Faro, Portugal
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Since March 2019, I have been working on a new project back in Portugal, at CIMA, University of the Algarve, with Paulo Fernandes, Zélia Pereira, Márcia Mendes, and other colleagues. We finally got the Mozambique project funded and lots of work have been done in the past year, including two publications and a field campaign in Tete, Mozambique. I am also working with very interesting material from Angola and Brazil (Quaternary and Cretaceous) in collaboration with Zélia Pereira and other colleagues. As a first author, I published a paper on the Carboniferous of Portugal, as well as two conference abstracts. One other paper and a book chapter in co-authorship are also listed below.

Publications:

LOPES, G., PEREIRA, Z., FERNANDES, P. & PIÇARRA, J.M., 2018. Estudo bioestratigráfico do núcleo do sinclinal de Portalegre – investigação das sucessões do Carbónico inferior da Zona Centro Ibérica, Portugal. Comunicações geológicas, 105, 79-89.

LOPES, G., FERNANDES, P., PEREIRA, Z., MENDES, M., MARQUES, J. & GALASSO, F., 2019. Estado da Arte da Palinologia do Pérmico de Moçambique, Supergrupo Karoo. Paleo Fall Meeting, Évora, Portugal, September 26-28, 2019.

LOPES, G., FERNANDES, P., PEREIRA, Z., MENDES, M. & MARQUES, J., 2019. Permian palynology of the Moatize – Minjova Coal Basin, Karoo Supergroup, Mozambique: present knowledge, challenges and future paths. In: S. Hartenfels, H.G. Herbig, M.R.W. Amler, M. Aretz (Eds.), Abstracts, 19th International

Congress on the Carboniferous and Permian, Cologne, July 29–August 2, 2019. Kölner Forum Für Geologie Und Paläontologie 23, 214-215.

GUTIÉRREZ-MARCO, J.C., PIÇARRA, J.M., MEIRELES, C.A., CÓZAR, P., GARCÍA-BELLIDO, D.C., PEREIRA, Z., VAZ, N., PEREIRA, S., LOPES, G., OLIVEIRA, J.T., QUESADA, C., ZAMORA, S., ESTEVE, J., COLMENAR, J., BERNÁRDEZ, E., CORONADO, I., LORENZO, S. & SÁ, A.A., 2019. Early Ordovician–Devonian passive margin stage in the Gondwanan units of the Iberian Massif – Capítulo 3. In: Quesada, C., Oliveira, J.T. (eds.), The Geology of Iberia: a geodynamic approach. Vol. 2, The Variscan Cycle. Regional Geology Review series, Springer Verlag, Berlin, 75-98. ISBN 978-3-030-10398-9

PEREIRA, Z., FERNANDES, P., LOPES, G., MARQUES, J., VAZ, M., COSTA, M., CORREIA, J., CASTRO, L. & GALASSO, F., 2019. Palynology of the Muarádzi sub-basin, Moatize-Minjova Coal Basin, Karoo Supergroup, Mozambique. Review of Palaeobotany and Palynology 269, 78-93.

HARESHWAR N SINHA
Department of Geology
Vinoba Bhave University
India

This year I extensively worked on the Lower Paleozoic of the Tethys Himalaya of Spiti section and got encouraging results on organic-walled microfossils. Currently the work is under progress and I hope i will submit the outcome of findings next year. This year I published one paper on the spore/pollen from the Lower Gondwana of peninsular India. The title is: *Characteristics of the Palynomorphs and Hydrocarbon Potential in the Continental Permian Raniganj Formation, Banespetali Nala, West Bengal.* I have attached the pdf of the paper. If you want a copy you can contact CIMP secretary at cimp.palynology@gmail.com.

India is hosting 36th IGC this year. The conference will be held in New Delhi and due to the Corona virus dramatic situation it was rescheduled to November 9-14, 2020.

Publications:

SINHA, H. N., PATEL, R. C. & KUMAR, B.A., 2019. Characteristics of the Palynomorphs and Hydrocarbon Potential in the Continental Permian Raniganj Formation, Banespetali Nala, West Bengal. Journal Geological Society of India, 93, 431-436.

HARTMUT JÄGER
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After taking over GeoResources and separating it from Heidelberg University end of 2017, I moved again with my company last summer, this time to my hometown. I'm still working with industry, focused on palynology applied in hydrocarbon exploration. Studies are mainly focused on optical kerogen analysis and maturation analysis both applied for the analysis of hydrocarbon systems. Sometimes also palynostratigraphy is included. In the Palaeozoic the major focus is still on the Early Silurian and the Carboniferous/Devonian. Due to the confidentiality of the studies the publication of results is very limited.

Publications:

JÄGER, H., REUTNER T. & WIESMAYR, G., 2019. Organic maturation and thermal history of the Eastern Molasse Basin, Austria with special focus on the Permo-Carboniferous. - Abstracts, AAPG European Regional Conference, Vienna, Austria.

JÄGER, H., REUTNER T. & WIESMAYR, G., 2019. Palaeoenvironmental analysis and hydrocarbon source rock potential of Permo-Carboniferous shales below the Eastern Molasse Basin, Austria. - Abstracts, AAPG European Regional Conference, Vienna, Austria.

HERBIG, H.-G., KORN, D., AMLER, M. R. W., HARTENFELS, S. & JÄGER, H., 2019: The Mississippian Kulm Basin of the Rhenish Mountains, western Germany – fauna, facies, and stratigraphy of a mixed carbonate- siliciclastic foreland basin. Field trip C1, 19th International Congress on the Carboniferous and Permian Cologne 2019. - Kölner Forum Geol. Paläont., 24: 143–217.

Helga Priewalder
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I retired from my work at the Geological Survey of Austria (GBA) by the end of 2013, but during the subsequent years I continued - although at a reduced level - my studies on the chitinozoans from the Cellon section (Carnic Alps, Austria). The results will be published this year in the "Jahrbuch der Geologischen Bundesanstalt" entitled *Chitinozoans of the Ploecken Formation (Hirnantian) and Kok Formation (upper Llandovery-lower Ludlow) in the Cellon section (Carnic Alps, Austria)*.

As I have to leave my workplace at the GBA definitely by the end of June 2020, I want to announce once more (as I did already several years ago) that the collection of Fritz CRAMER (a lot of rock samples and thousands of permanent slides) is now housed in the collections of the Geological Survey of Austria, A-1030 Vienna, Neulinggasse 38 (the responsible person for our collections is Dr. Irene ZORN).

Husain Shabbar
MOMA-Researcher,
Gondwana Palaeobiology Division
Birbal Sahni Institute of Palaeosciences
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I am working in Gondwana Palaeobiology Lab with Dr Anju Saxena and it's my third year of PhD at the Sambalpur University studying the biodiversity, with emphasis on palynomorphs, of Ordovician-Silurian periods of Spiti, Tethyan Himalaya, India. I have found excellently preserved assemblage and with which, I am investigating palaeoecology, palaeoenvironment and biostratigraphy. Latest results indicate somewhat older age of the formation than assigned previously by workers. Research articles about these findings will be published soon in reputed journals. These works are presented in national and international conferences.

Publications:

SHABBAR, H., SAXENA, A., SINGH, K.J. & GOSWAMI, S., 2019. Cyclocrinitids from the Lower Palaeozoic Tethyan sequence of India. Palaeoworld (doi.org/10.1016/j.palwor.2019.07.007).

SHABBAR, H., SAXENA, A., GUPTA, S. & SINGH, K.J., 2020. ?Late Ordovician Calcareous green algae (Cyclocrinitids) and Chitinozoa from the Tethyan sequence of Spiti, India and their implications. 4th International Congress on Geosciences of Myanmar and surrounding regions plus IGCP 668 & IGCP 679, Myanmar, January 2020.

SHABBAR, H., GUPTA, S., SAXENA, A. & SINGH, K.J., 2019. First Report of calcareous green algae – Cyclocrinites welleri and Cyclocrinites globosus from the

Lower Palaeozoic sequence of Spiti, Tethyan Himalaya, India and its implications. 12th International Symposium on Fossil Algae - Birbal Sahni Institute of Palaeosciences, India, September 2019.

SHABBAR, H., SAXENA, A., GUPTA, S., SINGH, K.J. & GOSWAMI, S., 2019. First Report of Chitinozoa – Belonechitina capitata from lower Palaeozoic sediment of Spiti, Tethyan Himalaya, India. 27th Indian Colloquium on Micropaleontology and Stratigraphy, India, November 2019.

GUPTA, S., SAXENA, A., SINGH, K.J., SHABBAR, H. & BALI, R., 2019b. Palynological Study of Tethyan Sequence of Gechang Formation (Early Permian), Spiti Valley, Himachal Pradesh. 27th Indian Colloquium on Micropaleontology and Stratigraphy, India, November 2019.

JACQUES VERNIERS
Ghent, Belgium

Not a lot of Silurian News from me and no new publications. I continue this year the stratigraphical paper on the Belgian Silurian, with the unpublished parts of previous PhD studies from Jan Vanmeirhaeghe, Jan Mortier, and some Masters theses. There will be some chitinozoans in it.

The research unit Palaeontology in the Department of Geology, in Ghent, is again very active with chitinozoans this year, with Thijs Vandenbroucke, PhD students Julie De Weirdt and Tim De Backer and a new starting PhD student: Cristiana Esteves.

All the best,

Jacques

JOHN MARSHALL
Southampton, UK

Still 2018-19 has been a less eventful year for fieldwork with no longer trips to the Arctic. The time has been usefully spent catching up with existing projects, particularly on the Devonian-Carboniferous boundary. More publications are coming out and much of this comes from the TW:eed Project where we investigated the vertebrates, environments and age of Romer's Gap from sections in the Scottish Borders. The important paper from us this year (and any year) is the one that reinterprets the age of the Upper Old Red Sandstone in Scotland. This proves (with palynology, what else) that the Upper ORS in Scotland is firmly Devonian in age with the D-C boundary approximating the ORS-Ballagan Formation Boundary contact. This changes the view (accepted since the 1930's) that the Upper ORS was Early Carboniferous in age. In October we made a brief foray to the TW:eed sections in Scotland and were successful in finding a new plant bed including seeds.

We managed to complete some long unpublished work on the Rotliegend-Old Red Sandstone unconformity from the North Sea. This resulted from some of the stratigraphic revisions we did for the *Millennium Atlas of the North Sea*. Interestingly it's the first Geological Society of London publication that has the international spelling of *Paleozoic* in the title. The world has not stopped revolving.

In May, I went with Chris Berry (Cardiff) to Russia on a Science Café sponsored by the British Consul General in Ekaterinburg. We visited Syktyvkar in the Komi Republic where Olga Tel'nova had organised 2 days of presentations by UK and Russian colleagues on the Devonian and particularly the terrestrial environment.

On the return journey we stopped in St Petersburg hosted by Sergei Snivrevsky and studied excellent collections in VSEGEI, the University and Botanic Garden. This included some magnificently large *Callixylon* trunks.

The summer was all about conferences and I attended the overlapping AASP (palynology) meetings in Ghent (talk on malformed spores at the F/F mass extinction) and STRATI-19 in Milan (talk on Devonian-Carboniferous boundary again) where we had a useful and well attended Devonian session followed by the Subcommission on Devonian Stratigraphy Business Meeting. In August I went to the Carboniferous Congress in Köln for a day for the special session on the D-C boundary redefinition (talk on using palynology to define the terrestrial D-C boundary).

At the end of August I attended the EGU Extinctions Meeting in Utrecht (talk on both the FF and D-C boundary mass extinctions in 15 minutes). This was an interesting meeting not for its Palaeozoic content but for learning about the very detailed studies on the T/J and other mass extinctions.

Publications:

TEL'NOVA, O.P. & MARSHALL, J.E.A., 2018. Devonian spores of *Kryshtofovichia africani* Nikitin (Tracheophyta): morphology and ultrastructure. Palaeontological Journal, 52, 342-349.

Тельнова О. П. & Маршалл Дж. Е. А., 2018. Девонские споры Kryshtofovichia africani Nikitin (Tracheophyta): морфология, ультраструктура Палеонтологический журнал, 52, 119-124.

RICHARDS, K., SHERWIN, J., SMITHSON, T., BENNION, R., DAVIES, S., MARSHALL, J., & CLACK, J., 2018. Diverse and durophagous: Early Carboniferous chondrichthyans from the Scottish Borders. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 108(1), 67-87. doi:10.1017/S1755691018000166

MARSHALL, J.E.A. & SIVETER, D.J., 2018. The Lake Il'men Clint, Russia: a Potential Devonian Geopark. Journal of Mining Institute, 234, 581-590. DOI: 10.31897/PMI.2018.6.581

Дж.Е.А.Маршалл, Д.Дж.Сиветер 2018. Ильменский глинт: потенциальный геопарк девонского периода. Записки Горного института. Т. 234. С. 581-590 DOI:10.31897/PMI.2018.6.581

MONAGHAN, A.A., UNDERHILL, J.R., HEWETT, A.J. & MARSHALL, J.E.A. (eds), 2019. Paleozoic Plays of NW Europe. Geological Society, London, Special Publications, 471, 395pp.

MONAGHAN, A.A., UNDERHILL, J.R., MARSHALL, J.E.A. & HEWETT, A.J., 2019. Paleozoic Plays of NW Europe: an introduction. The Old Red Group (Devonian) – Rotliegend (Permian) Unconformity in the Inner Moray Firth. In: Monaghan, A.A., Underhill, J.R., Hewett, A.J. & Marshall, J.E.A. (eds) Paleozoic Plays of NW Europe. Geological Society, London, Special Publications, 471, 1-15.

MARSHALL, J.E.A., GLENNIE, K.W., ASTIN, T.R. & HEWETT, A.J., 2019. The Old Red Group (Devonian) – Rotliegend (Permian) Unconformity in the Inner Moray Firth. In: Monaghan, A.A., Underhill, J.R., Hewett, A.J. & Marshall, J.E.A. (eds) Paleozoic Plays of NW Europe. Geological Society, London, Special Publications, 471, 237-252.

BROWN, J.F., ASTIN, T.R. & MARSHALL, J.E.A., 2019. The Old Red Group (Devonian) – Rotliegend (Permian) Unconformity in the Inner Moray Firth. In: Monaghan, A.A., Underhill, J.R., Hewett, A.J. & Marshall, J.E.A. (eds) Paleozoic Plays of NW Europe. Geological Society, London,

Special Publications, 471, 253-280.

CLACK, J.A., RUTA, M., MILNER, A.R., MARSHALL, J.E.A., SMITHSON, T.R. & SMITHSON, K.Z., 2019. *Acherontiscus caledoniae:* the earliest heterodont and durophagous tetrapod. Royal Society Open Science. 6, 5, p. 182087

MILLWARD, D., DAVIES, S. J., BRAND, P. J. BROWNE, M.A. E., BENNETT, C. E., KEARSEY, T. I., SHERWIN, J. E. & MARSHALL, J. E. A., 2019. Palaeogeography of tropical seasonal coastal wetlands in northern Britain during the early Mississippian Romer's Gap. Earth & Environmental Transactions Royal Society Edinburgh. 109, 279-300.

MARSHALL, J., REEVES, E., BENNETT, C., DAVIES, S., KEARSEY, T., MILLWARD, D., BROWNE, M., 2019. Reinterpreting the age of the uppermost 'Old Red Sandstone' and Early Carboniferous in Scotland. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 109, 265-278.

CHALLANDS, T.J., SMITHSON, T.R., CLACK, J.A., BENNETT, C.E., MARSHALL, J.E.A., WALLACE-JOHNSON, S.M. & HILL, H., 2019. A lungfish survivor of the end-Devonian extinction and an Early Carboniferous dipnoan radiation, Journal of Systematic Palaeontology, DOI: 10.1080/ 14772019.2019.1572234

DEAF, A. S., TAHOUN, S. S., GENTZIS, T., CARVAJAL-ORTIZ, H., HARDING, I. C., MARSHALL, J.E.A. & OCUBALIDET, S., 2019. Organic geochemical, palynofacies, and petrographic analyses examining the hydrocarbon potential of the Kharita Formation (Albian) in the Matruh Basin, northwestern Egypt. Marine & Petroleum Geology 112,

MARSHALL, J.E.A., TEL'NOVA, O.P. & BERRY, C.M., 2019 Devonian and Early Carboniferous coals and the evolution of wetlands. Vestnik IG Komi SC UB RAS, 2019, (10): 12-15.

DEAF, A.S., HARDING, I.C. & MARSHALL, J.E.A., 2019. Cretaceous (Hauterivian–Cenomanian) palaeoceanographic conditions in southeastern Tethys (Matruh Basin, Egypt): Implications for the Cretaceous climate of northeastern Gondwana. Cretaceous Research, 106, 104229.

ANDREWS, S.D., DECOU, A., BRAHAM, B., KELLY, S.R.A., ROBINSON, P., MORTON, A., MARSHALL, J.E.A. & HYDEN, F., 2019. Exhumed hydrocarbon traps on the North Atlantic Margin: stratigraphy, palaeontology, provenance and bitumen distribution, an integrated approach. Basin Research. https:// doi.org/10.1111/ bre.12424.

STEIN, W.E., BERRY, C.M., MORRIS, J.L., HERNICK, L.V., MANNOLINI, F., VER STRAETEN, C., LANDING, E., MARSHALL, J.E.A., WELLMAN, C.H., BEERLING, D.J., & LEAKE, J.R., 2019. Mid-Devonian Archaeopteris roots signal revolutionary change in earliest fossil forests. Current Biology 30, 1-11.

MARTHA GIBSON
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I am now in the final year of a 4-year ACCE studentship funded by NERC at the University of Sheffield, supervised by Charles Wellman (University of Sheffield), Geoff Warrington (formerly BGS) and Tristan Pottas/Asher Haynes (Sirius Minerals), studying the palynology of the Upper Permian Zechstein sequence of North Yorkshire, England.

This year I have finished data collection involving (i) logging the palynology of material recovered from various surface

exposures in northeast England, and over 16, 000m of borehole core drilled by Sirius Minerals PLC; (ii) developing novel preparation techniques for extracting palynomorphs from rock salts; (iii) exploring the unusual darkening of palynomorphs and their variable preservation quality, which appears to be a result of their unusual preservation in evaporite deposits rather than thermal alteration; (iv) investigating the presence of dark bodies within the corpus of bisaccate pollen grains, interpreted as peculiar fungal bodies; (v) undertaking Transmission Electron Microscope analysis of the wall ultrastructure of key Lopingian pollen taxa of unknown affinities to address issues of biological affinity and taxonomy.

Publications:

GIBSON, M.E., TAYLOR, W.A. & WELLMAN, C.H. (in press). Wall ultrastructure of the Permian pollen grain Lueckisporites virkkiae Potonié et Klaus 1954 emend. Clarke 1965: Evidence for botanical affinity. https://doi.org/10.1016/j.revpalbo.2020.104169

Mohammad Ghavidel-Syooki
Tehran, Iran

GHAVIDEL-SYOOKI, M. & BORJI, S., 2018. Chronostratigrahy of Acritarchs and Chitinozoans from upper Ordovician Strata from the Robat-e Gharabil Area, NE Alborz Mountains, Northern Khorassan Province: Stratigraphic and Paleogeographic Implications. Journal of Sciences, Islamic Republic of Iran, 29(1), 35 - 51.

GHAVIDEL-SYOOKI, M. , 2019. Middle-Late Cambrian acritarchs from the Zardkuh area in the High Zagros Mountains, southern Iran: Stratigraphic and paleogeographic implications. Journal of Sciences, Islamic Republic of Iran, 30(4), 331 - 353.

Marco Vecoli
Geological Consultant
Geological Operations Department
Saudi Aramco, Dhahran, Saudi Arabia

I am interested in Lower Paleozoic stratigraphy and correlation especially in Gondwana and in particular the Middle East; I have been studying palynomorphs (cryptospores, chitinozoans, acritarchs) not only for dating and correlation but also to interpret sediment provenance, amplitude of stratigraphic hiatuses, palaeogeography and paleoenvironment of Cambrian to Silurian sequences.

Recently, I have focused my interest on the estimation of Thermal Maturity of the organic matter based on the quantitative analysis of color changes in palynomoprhs and correlation to Thermal Maturity (PDI method, in collaboration with Geoff Clayton), as well as on more qualitative analysis of palynofacies (in collaboration with Kaya Ertug).

I have participated to the 52nd AASP meeting in Ghent where I was co-author on a couple of presentations on thermal maturity of early Silurian sediments of the Arabian Plate, and the palaeoecological significance of the fossil euglenid Moyeria from Hirnantian (latest Ordovician) sediments of Saudi Arabia. I also contributed to the “Middle East Oil and Gas Show” (MEOS), presenting a paper on Cambrian-Ordovician palynological-based correlations between Saudi Arabia and Oman.

Papers published in 2019:

VECOLI, M. & CESARI, C., 2019. Palynological Correlation of the Late Cambrian to Middle Ordovician Saq Formation in Saudi Arabia and Equivalent

Strata in Oman. Society of Petroleum Engineers SPE-195108-MS.

ERTUG, K., VECOLI, M. & INAN, S., 2019. Palynofacies, paleoenvironment and thermal maturity of early Silurian shales in Saudi Arabia (Qusaiba Member of Qalibah Formation). Review of Palaeobotany and Palynology 270, 8-18.

Presentations to conferences:

VECOLI, M. & CESARI, C., 2019. Palynological Correlation of the Late Cambrian to Middle Ordovician Saq Formation in Saudi Arabia and Equivalent Strata in Oman. MEOS 2019 21st Middle East Oil & Gas Show and Conference, 18-21 March 2019, Manama, Bahrain. Paper #195108

CLAYTON, G., VECOLI, M., GOODHUE, R. & LUO, P., 2019. Estimation of the thermal maturity of subsurface Silurian sections in Saudi Arabia based on determination of Palynomorph Darkness Index (PDI). AASP-The Palynological Society 52ndh Annual Meeting, Ghent, Belgium, 1-3 July 2019, Program Book, p. 13.

STROTHER, P., TAYLOR, W., CESARI, C., MILLER, M., VECOLI, M. & WELLMAN, C., 2019. Paleoecological significance of the fossil euglenid *Moyeria* from the Hirnantian of Saudi Arabia. AASP-The Palynological Society 52ndh Annual Meeting, Ghent, Belgium, 1-3 July 2019, Program Book, p. 83.

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Although I did not have any papers published in 2019, I am continuing research with my long-time colleague Geoff Playford. This year I will be spending four months (January–May, 2020) with Geoff and we will finish our study of the Lower Devonian Ross Formation, Tennessee, submitting a manuscript to *Boletín Geológico y Minero* mid-year.

I finished another geology textbook (Geology: Earth in Perspective) with my co-author Stew Monroe, which is now available. Stew and I have published a number of physical and historical geology textbooks during our 30-year collaboration. This textbook incorporates many new features such as videos and other interactive exercises.

Lastly, I attended the 52nd Annual AASP-The Palynological Society meeting at Ghent University, Ghent, Belgium where I had the pleasure of delivering the keynote address at the Paleozoic Palynology Session honoring our long-time member Jacques Verniers, whose research, mentoring of numerous students, and contributions to CIMP have had an enormous impact on the science of Paleozoic palynology. In addition to the keynote address, there were 15 papers presented in the CIMP session, seven of which were by students.

Paul Strother
Weston Observatory of Boston College
Weston, MA, USA

I am working on the fossil record of the euglenids, which includes *Moyeria*. An initial paper on this work, clarifying the genus and the type species *Moyeria uticaensis* Thusu, now *M. uticana* Thusu was published this year in *Palynology*. We are now looking further at the pellicle (wall) ultrastructure on isolated specimens (with W. Taylor), with an expected updated on *Moyeria cabottii* and related Palaeozoic species during 2020. This work is part of an ongoing project at Sheffield University headed by Charles Wellman,

which is addressing the overall fossil record of the euglenoids.

The Linnaean Society of London Palæobotany and Palynology Specialist Groups held a meeting in remembrance of Cedric Shute, former curator for Palaeobotany at the British Museum of Natural History in October, 2019. I presented a talk on the use of IR in Paaeozoic palynology which is available for download from my lab website, https://sites.google.com/bc.edu/paulkstrothersbcwebsite/home. (Warning: this presentation may be offensive to chitinozoan workers, as it may contain images revealing interior contents).

Publications:

STROTHER, P. K., TAYLOR, W. A., VAN DE SCHOOTBRUGGE, B., LEANDER, B.S. & WELLMAN, C.H., 2019. Pellicle ultrastructure demonstrates that Moyeria is a fossil euglenid. Palynology; doi: 10.1080/01916122.2019.1625457

WACEY, D., SIRANTOINE, E., SAUNDERS, M. & STROTHER, P., 2019. 1 billion-year-old cell contents preserved in monazite and xenotime. Scientific Reports 9(1), 9068; doi: 10.1038/s41598-019-45575-4.

van Maldegem, L. M., Sansjofre, P., Weijers, J.W.H., Wolkenstein, K., Strother, P.K., Wörmer, L., Hefter, J., Nettersheim, B.J., Hoshino, Y., Schouten, S., Sinninghe, Damsté, J.S., Nath, N., Griesinger, C., Kuznetsov, N.B., Elie, M., Elvert, M., Tegelaar, E., Gleixner, G. & Hallmann, C., 2019. Bisnorgammacerane traces predatory pressure and the persistent rise of algal ecosystems after Snowball Earth. Nature Communications, 10 (1). 476; doi.org/10.1038/s41467-019-08306-x.

WENHUI WANG
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Wenhui Wang is now an associate professor at the School of Earth Sciences and Geo-physics in Central South University, China. Most of her research activities in the past year have been involved in Ordovician-Silurian boundary projects. Ultrastructure of some microfossils (radiolarians, sponge spicules, acritarchs, conodonts, chitinozoans, and scolecodonts) from the late Ordovician - early Silurian black shales in South China are analyzed, in hope of provide new insights for the investigation of pore systems in shale gas reservoirs. A large number of biological autologous micro-nano pores are found in these micro-fossils. Most pores are densely and randomly distributed with honeycomb or irregular shapes. Considering the importance of micro-fossils and their pores in the perspective of hydrocarbon generation, connectivity, accumulation, and production of shale gas, a consideration of including micro-fossil pores in the classification of pore system is suggested in one publication (see in below). Also, she is now continuing her works with experts from Estonia. On the one hand, she is working on the ultrastructures of carinae with Liang Yan (China) and Olle Hints and Jaak Nõlvak from Estonia since the beginning of 2019. One the other hand, another mysterious type of microf-ossil—melanosclerite is also of her interest. A master student is working on the melanosclerite materials from Estonia now.

Wenhui has one paper concerning micro-fossils been published in 2019:

TAN, J., HU, R., WANG, W. & DICK, J., 2019. Palynological analysis of the late Ordovician - early Silurian black shales in

South China provides new insights for the investigation of pore systems in shale gas reservoirs. Marine and Petroleum Geology, doi: https://doi.org/10.1016/j.marpetgeo.2019.104145.

THE COMMISSION INTERNATIONALE DE LA MICROFLORE DU PALÉOZOÏQUE (CIMP) IS SIXTY YEARS OLD

By Phillipe Steemans & Maurice Streel
Geology, University of Liège, Belgium

Born during the 4th Carboniferous Congress at Heerlen (The Netherlands) in September 1958 under the impulse of Boris Alpern (1921-2014), CIMP held a first meeting in Paris in March 1959. This was recorded in the Carboniferous Congress CR in 1960. In a first note (Streel 2017, CIMP Newsletter 85), we tried to emphasize the aims of this commission establishing working groups (17 in 1963) and its relations with other, generally subsequently created, commissions like AASP and ICP. Most of the reports were type-written and send by post to members who became quickly more and more interested (27 in 1959, 72 in 1973). The first four CIMP general meetings reports (1959-1962) were not really published but succeeding meetings were published in the 5th, 6th, and 7th Carboniferous Congresses Comptes Rendus until 1971. The meeting held in Paris in 1967 was the last* related by B. Alpern as General Secretary.

The CIMP Newsletters started in 1972 (**see table 1**). They record meetings all over Europe, including Eastern Europe and European part of USSR (8th Carboniferous Congress). From 1976, CIMP started crossing oceans with the 1st join meeting with AASP and later with the 9th Carboniferous Congress, in North America. Then, occur meetings in China (11th Carboniferous Congress), in Australia (7th International Palynological Congress) and in South America (12th Carboniferous Congress).

Aside giving all necessary information concerning the attendance to those meetings, the names of participants and most often the topic(s) of their contribution, the newsletters reproduced the submitted abstracts. Who were these contributors? Are they still in activity today?

Focusing on newsletters 1 to 19 (i.e. 1972 to 1978,) we have recorded 117 authors with topic(s) concerned by Paleozoïc sensu lato, and indicated the number of the related newsletter(s) (**see table 2**). Most of these abstracts have been published subsequently in more appropriate journals but the interest for CIMP was to speed the contact between researchers. Many more abstracts were reproduced in Newsletters 20 to 57 (during twenty years i.e. from 1979 to 1999).

From 1991 to 1999, secretariat was in hand of Jacques Verniers and later Thomas Servais under presidency of Jeff Clayton and once again Bernard Owens. Newsletter 55 (1998) was the last-one to be distributed as a hard copy to all members.

*available on request to Maurice.Streel@uliege.be

TABLE 1

CIMP Comptes rendus (CR) and Newsletters (Newsl.)		**(Ehren-) President**	**Secretary General**	**ACTIVITIES in Europe and overseas**
CRCarb.Congr.4eme (1960)	1958	THIADENS	ALPERN	Heerlen 16, 18 septembre 1958
CR1ere réunion CIMP	1959	POTONIE	ALPERN	Paris 23-26 mars 1959
CR2eme réunion CIMP	1960	POTONIE	ALPERN	Sheffield 5-7 avril 1960
CR3eme réunion CIMP	1961	POTONIE	ALPERN	Krefeld 11-13 mai 1961
CR4eme réunion CIMP	1962	POTONIE	ALPERN	Liège 10-15 septembre 1962
CRCarb.Congr.5eme (1964)	1963	POTONIE	ALPERN	Paris 9-12 septembre 1963
	1965	POTONIE	ALPERN	Sheffield SCCS september 1965 (See also Newsl. 25)
	1967	POTONIE	ALPERN	Paris 6-7 février 1967
	1967	POTONIE	NEVES	Sheffield september 1967
CRCarb.Congr.6eme (1969)	1969 & 19	POTONIE	NEVES	Liège SCCS April 1969
CRCarb.Congr. 7eme (1972)	1971	POTONIE	NEVES	Krefeld 23-28 août 1971
CIMP Newsletters : *1-*	1972	ALPERN	STREEL	Boussens 1973, Sosnowiec 1974, Namur 1974.
2-	1972	ALPERN	STREEL	Boussens , Sosnowiec
3-	1972	ALPERN	STREEL	Boussens (list of members and topics)
4-, 5-	1973	ALPERN	STREEL	Boussens (details)
6-	1973	ALPERN	STREEL	Boussens (abstracts) , Sosnowiec, Visby 1974, Leeds 1974, Liège 1974, Moscow 1975 (**8th Carb. Congr**.)
7-	1974	ALPERN	STREEL	Visby, Moscow
8-	1974	ALPERN	STREEL	Visby, Namur, Kiel (1974) , London CIMP (1975) , Moscow
9-	1974	ALPERN	STREEL	Boussens , London, Moscow
10-	1975	ALPERN	STREEL	London (abstracts), *Halifax* ***1st AASP-CIMP 1976*** **,** Visby, Moscow (Photos!)
11-	1975	ALPERN	STREEL	London (abstracts), Sosnowiec, Halifax, Léon (1977), Moscow: CIMP detailed CR
12-	1976	ALPERN	STREEL	Boussens, Liège SCCS, Namur
13-	1976	JARDINE	STREEL	Halifax, Léon, Bristol (1978)
14-	1976	JARDINE	STREEL	Léon, *Urbana-1979* (**9th Carb. Congr.**),
15-	1977	JARDINE	STREEL	Léon, IUGS Precambrian WG
16-	1977	JARDINE	STREEL	Léon, Liège APLF/KRING (1977), Bristol , Urbana
17-	1978	JARDINE	OWENS	Bristol, Liège APLF/KRING (abstracts), *Tulsa 1977 AASP* (abstracts)
18-	1978	JARDINE	OWENS	Bristol, Urbana, Cambridge 1980 *(5e IPC Congr.)* , IUGS Precambrian WG
19-	1978	JARDINE	OWENS	Bristol (abstracts)
20	1979	JARDINE	OWENS	Bristol, *Phoenix 1978 AASP* (abstracts), Cambridge, *Dublin* ***2nd AASP-CIMP 1982*** **, D/C WG**
21	1979	JARDINE	OWENS	Urbana (abstracts), Cambridge, Dublin, **26e Int. Geological Congress** Paris 1980
22	1979	JARDINE	OWENS	*Dallas AASP 1979* (abstracts),
23	1980	JARDINE	OWENS	Cambridge, Dublin,
24	1980	STREEL	OWENS	Cambridge (abstracts acrit.,chitinoz., scolecod.), Dublin
25	1981	STREEL	OWENS	Sheffield 1965 SCCS, Dublin, Paris (**D/C WG**) , *Keystone 1980 AASP* (abstracts)
26	1981	STREEL	OWENS	Dublin, Leeds 1981 SCCS (+ **D/C WG**), *New Orleans 1981 AASP* , Madrid 1983 **(10th Carb. Congr**.)
27	1981	STREEL	OWENS	Dublin, New Orleans (abstracts)
28	1982	STREEL	OWENS	Dublin, *Calgary (6e IPC Congr.)*
29	1982	STREEL	OWENS	Dublin (abstracts), **27e Int. Geological Congress** Moscow 1984
30	1983	STREEL	OWENS	Madrid (abstracts). First Acritarch subcommission Newsletter!
31	1984	STREEL	CLAYTON	?
32	1985	OWENS	CLAYTON	Sheffield 1986, *New York* - ***3d AASP-CIMP 1986*** , *Beijing 1987* (**11th Carb.Congr**.)
33	1986	OWENS	CLAYTON	Sheffield, New York
34,35	1987	OWENS	CLAYTON	Utrecht/Zeist 1988, *Brisbane 1988 (7th IPC Congr.)*
36	1987	0WENS	BRUGMAN	Zeist, *Halifax AASP 1987 (abstracts)* , Beijing (abstracts)
37	1988	0WENS	BRUGMAN	Zeist (abstracts), *Houston AASP 1988*
38	1989	0WENS	BRUGMAN	*Buenos Aires 1991* **(12th Carb. Congr.), D/C WG),** Houston (abstracts), Brisbane (abstracts)
39	1990	0WENS	BRUGMAN	*Tulsa AASP 1989* (abstracts)

TABLE 2

Abstract authors	Newsl. N°	Abstract authors	Newsl. N°	Abstract authors	Newsl. N°	Abstract authors	Newsl. N°
Allen KC	10/19/	Fletcher A	10	Lister	6	Smith DG	6
Alvarez-Ramis C	19	Garrett M	19	Loboziak S	6/11/19/	Somers Y	17
Banks HP	19	Gensel PG	10	Magloire L	6	Streel M	6/17/19/
Barss MS	17	Gorka H	6	Marshall JEW	11/19/	Strother PK	17
Brooke-Reaugh A	17	Graham JR	19	Martin F	6/11/	Tadeau D	10
Bujak JP	17	Gueinn K	6	MattenLC	19	Taugourdeau-Lantz	6
Burylova	11	Gupta S	6/10/	May BI	19	Thomas RG	19
Butterworth M	11	Henry JL	10	McGregor DC	11/19/	Tims JD	19
Byvsheva	11	Higgs K	19	Miller MA	11/	Traverse A	17
Chaiffetz MS	17	Hill PJ	6	Mishell	10/11/	Tsai C	19
Chaloner WG	10	Holland CH	19	Morbey SJ	6/10/	Vachey G	6
Chlupac I	19	Horne RR	19	Moreau-Benoit A	10	Van Der Zwan CJ	19
Chobanova A	6	Hueber FH	19	Naylor D	19	Van Veen PM	19
Clayton G	19	Hutter TJ	19	Neves R	6	Vanguestaine M	6/19/
Clement-Westerhof JA	6	Inossova KI	11	Otazo Bozo	6/19/	Visscher H	6/19/
Combaz A	6	Iurina	19	Owens B	6/10/11/	Warrington G	6
Cornell W	17	Jardine S	6	Paris F	10/17/19/	Waterlot M	6
Cramer FH	6/10/11/	Kalvacheva R	6	Peniguel G	6	Whiteley MJ	19
Debourle A	6	Kedo GI	11	Petrosyan NM	19	Williams G	17
Del Carmen M	6/10/	Kievits J	17	Pierart P	6/11/	Wittaker	11
Deunff J	10	Kocurek G	17	Potter TL	6/10/	Wong TE	6/11/
Doubinger J	6/11/	Konzalova M	6	Rasul SM	10	Wood G	11
Downie C	6	Krawzunska-Grocholska	11	Rauscher R	6	Zdebska Bs	19
Dunay RE	6	Kremp GOW	6	Reynolds MJ	6		
Dupina	11	Lacey WS	19	Richardson JB	6/10/19/		
Dybova-Jachowicz S	6	Lachkar G	6/11/	Riegel W	6/10/		
Edwards D	19	Laufeld S	11	Sergeev L	19		
Faddeeva	11	Lee H	19	Sheerin A	19		
Fairon-Demaret	19	Lejal-Nicol A	19	Shwatsman	11		
Fischer MJ	6	Lemoigne Y	19	Sivertseva	11		

CONFERENCE/MEETINGS REPORTS

52ND AASP—THE PALYNOLOGICAL SOCIETY ANNUAL MEETING

GHENT UNIVERSITY, GHENT, BELGIUM

JULY 2-4, 2019

by Martha Gibson & Alex Ball
University of Sheffield, UK

The highly successful 2019 meeting of AASP—The Palynological Society, featuring two CIMP sessions, was held on July 2-4, 2019 in 'Het Pand' at Ghent University, Belgium. The purpose of this meeting was to bring together specialists from across palynological disciplines to discuss current research. The organising committee consisted of Steven Louwye and Thijs Vandenbrouke of the Department of Geology of Gent University.

The meeting was preceded by a one-day pre-conference field trip to the Palaeozoic and Mesozoic of southern Belgium. The trip included a visit to the Frasnian type area and an abandoned red marble quarry,

the well-known mud mound Beauchateau. A lunch at Chimay was followed by a visit to the Malogne underground phosphate quarry to see *in situ* hainosaures. The last stop of the excursion was at Bernissart, the world-famous locality where the largest *Iguanadon bernissartensis* was discovered in 1878. The museum at Bernissart exhibits a complete skeleton of *I. bernissartensis* as well as other Mesozoic marine reptiles.

The 2019 AASP—The Palynological Society meeting officially began on Monday July 2 2019 with a welcoming address by Steven Louwye. The attendees, presenters of the 72 scheduled talks and 21 poster presentations were welcomed and a brief history of the Dominican Monastery 'Het Pand' was given for historical context. The meeting was turned over to the first chair Gunn Mangerud for the first session on General Palynology. Talks in this session included talks entitled:

- Phanerozoic phytoplankton and the diversification of the marine biosphere (Thomas Servais)

- End-Permian vegetation collapse marked by 'Dead Zone' in the Sydney Basin, Australia (Vivi Vajda)

- Triassic palynology of NW Bulgaria: towards a refined Tethys-Peri-Tethys correlation (Annette E Götz)

- Palynostratigraphy of the Triassic-Jurassic transition in the Sichuan Basin, southwestern China (Liquin Li)

- Middle Jurassic palaeoenvironmental events in Europe – evidence from palynology and carbon isotopes (Suzanne Pultz)

After the midmorning coffee break, Jim Riding chaired the second General Palynology session, including talks entitled:

Opening of the 52nd AASP—The Palynological Society Annual Meeting at Gent University (Photo credit: Pieter Gurdebeke).

- Palynological aspects of the Upper Jurassic Grès de la Crèche Formation and a comparison with a shoreface complex from the subsurface of the Dutch offshore (Roel M.C.H. Verreussel)

- Dinoflagellate cyst biogeography reveals enhanced Artic-Tethys connectivity ending the Toarcian Oceanic Anoxic Event in NW Europe (Alexander J.P. Houben)

- Palynology, source potential and depositional environments of the Cretaceous succession, northeast Baffin Bay, West Greenland (Henrik Nøhr-Hansen)

- The Early Cretaceous in the Richardson Mountains (Northwest Territories, Canada): palynological insights on the tectono-stratigraphic architecture of the Canadian Arctic mainland (Emily D. Ellefson)

- Palynological insights on the Cretaceous clastic basins of southern Yukon, Canada (Kimberley M. Bell)

- Palynology in deep well surveys for Geothermal Energy – some case studies (Sofie Lindström)

The conference lunch was served in the Kloostergang, a spacious hallway providing the opportunity to mingle and network in a relaxed and comfortable environment. The glorious weather throughout the conference also provided an opportunity to take discussions to the walled garden outside.

The first afternoon session following lunch was chaired by Thijs Vendenbroucke and Sofie Lindström on the current hot topic of teratology, including talks entitled:

- Metal-induced malformations in early Palaeozoic plankton are harbingers of mass extinction (Tim De Backer)

- Teratology in fossil spores and pollen – a result of change, a genetic pattern or a result of ecological upheaval? (Julia Gravendyck)

- Mis-shapes, mistakes, misfits: aberration & mutations in terrestrial palynomorphs (Barry H. Lomax)

- Plant mutations induced by toxic metals during the end-Permian extinction (Nial W. Paterson)

- Malformed spores and the Frasnian-Famennian Mass Extinction (John E.A. Marshall)

- New data on aberrant tetrads; implications for palaeoenvironment and past extinction events (Stephen Stukins)

- Extinction of Resilience? – Fern spore teratology during the end-Triassic mass extinction (Sofie Lindström)

Following the afternoon coffee break, Carlos Jaramillo chaired the final session of the day, and third General Palynology session. This session consisted of talks entitled:

- Where do trabeculae originate and locate: last frontier in studying morphological complexity of skolochlorate dinoflagellate cysts (Chen Yow-yuh)

- A review of areoligeracean dinoflagellate cyst *Cyclonephelium* and morphologically similar genera (Jim B. Riding)

- Fungal distributions in Wilcox Group Sediments: biostratigraphic or palaeoecologic indicators? (Jen O'Keefe)

- Palynofacies and organic geochemical composition of the Paleogene sediments of the Garo Hills, Meghalaya, India (Yenkhom Raghumani Singh)

- Palynology of the Late Miocene 'Pontian' and Pliocene Productive Series from outcrop studies in Azerbaijan, western Caspian Sea (Keith Richards)

- Organic geochemistry and palynomorphs

Opening of the 52nd AASP—The Palynological Society Annual Meeting at Gent University (Photo credit: Pieter Gurdebeke).

from the Surma Group in Indo-Myanmar Range, Manipur region (Yenkhom Raghumani Singh)

This session was closed with an introduction to the 53rd AASP—TPS meeting, given by Sophie Warny, which will be held in Baton Rouge, USA on May 27-29 2020. Details of this meeting will soon be circulated.

Following the final session of the day participants were treated to a welcome reception and ice breaker outside in the courtyard of Het Pand giving the opportunities for old friends and colleagues to catch up and new friendships to be made, while sampling Belgian beers and other refreshments.

Following the Icebreaker, early career researchers were encouraged to socialise at the Early Career Dinner organised by Julia Gravendijk. Participants enjoyed a free dinner and drink at Vooruit Cafe with the support and funding of Imphasys and the Society for Sedimentary Geology.

The second day of the meeting (Tuesday, July 3, 2019) began with a Keynote talk by Kasia Śliwińska where the reliability of dinocycsts as a temperature proxy was discussed with *Svalbardella cooksoniae* as a case study for late Palaeogene palaeoclimatological studies, how using the entire genus of *Svarbardella* as a proxy for sea surface cooling may be misleading considering recent study of organic biomarkers from the Middle Holocene of Denmark, which shows that not all species correspond with cooling. Dirk Munsterman continued to chair the first session on Integrated Palynology. The session consisted of talks entitled:

- Paleocene-Eocene southern high-latitude warm polls: the Australo-Antarctic Gulf (Joost Frieling)

- Oceanographic and vegetation changes across the Palaeocene-Eocene Thermal Maximum in NW Europe and the Artic (Erica Mariani)

- Paleocene-Eocene terrestrial palynology of the Chicxulub impact crater, IODP 364

(Vann Smith)

- Depositional setting for Eocene seat earths and related facies of the Gippsland Basin, Australia (Vera A. Korasidis)

The second morning session after a midmorning coffee break, chaired by (Karen Dybkjaer) on the theme of Integrated Palynology, included talks entitled:

- Late Eocene Southern Ocean cooling and invigoration of circulation preconditioned Antarctica for full-scale glaciation (Alexander J.P. Houben)

- The value of integrative palynology in enhancing insights on stratigraphy and environmental change: examples from the Neogene Southern North Sea Basin (Dirk K. Munsterman)

- Vegetation prior to and during the development of the East Antarctic Ice Sheet: high resolution palynological insights from the Sabrina Coast, East Antarctica (Meghan L. Duffy)

- Marine microfossils in tidal freshwater deposits? Assessing the value of microfossils as palaeoecological proxies in estuarine environments based on a case study of the middle Holocene Scheldt estuary, N-Belgium (Annelies Storme)

After lunch the second Keynote of the meeting was provided by Reid Wicander entitled 'Laudatio Career of Jacques Vernier' including highlights of his career, emphasising and celebrating his passion for teaching and helping students in a hands-on manner. Following the Keynote Paul Strother chaired the first of two CIMP sessions. The first CIMP session included talks on:

- How chitinozoans from the Maquoketa Group (upper Katian, Wisconsin, USA) are being used to make some initial steps in determining the ordering the events of the Late Ordovician Mass Extinction to better understand the relationship between the ocean, atmosphere and biosphere during episodes of perturbation evidenced by a series of carbon isotope excursions indicative of ocean-geochemical disturbances (Charlotte De Boodt),

- How the chitinozoan biostratigraphy of the elusive *Pleurograptus linearis* graptolite Biozone in Girvan, Scotland, may help relieve confusion regarding regional and global correlation the British Ordovician (Cecile-Marie Lissens)

- On Early Silurian acritarchs from the Kallholn Formation in central Sweden and how global fluctuations in sea level influenced the diversity and composition of marine acritarch assemblages, integrated with new organic carbon isotope data and a revised biostratigraphical framework (Natalia Walasek)

- The palynology of Early Devonian sediments from the Bukowa Gora quarry in the Holy Cross Mountains of central Poland which is indicative of the great biodiversity of the Early Devonian marginal marine/alluvial environments (Marcelina Kondas)

- A comparison between Early Devonian spore assemblages from the Armorican Terrane Assemblage in Spain, northern Gondwana, and southeast Laurussia, suggests that Iberia had an impoverished endemic flora and the tract between the Armorican Terrance Assemblage islands and the two supercontinents was larger than current palaeocontinental reconstructions suggest (Charles H. Wellman)

- On studying the diversity of the Palaeozoic phytoplankton which highlights the evolutionary consequences of

diversification and extinction events allowing for an assessment of phytoplankton evolutionary dynamics and its influence on marine ecosystems (David M. Kroeck)

- Devonian diversity dynamics of the terrestrial palynofloras of China to reconcile plant megafossil and palynoflora patterns of China and investigate the global impact of these diversity dynamics (Zhen Shen).

Following the afternoon coffee break Charles Wellman chaired the second CIMP session where presentations were given on:

- The ongoing investigations of fossil euglinids which shows them to be more diverse and more ancient than previously thought, and the palaeoecological significance of the fossil euglinid *Moyeria* from the Hirnantian of Saudi Arabia (both by Paul Strother)

- How palynology can be used as a tool to assess the potential Carboniferous shale in the UK allowing for more accurate estimations of gas content in the Bowland Shale (Jan A.I. Hennissen)

- On an acritarch assemblage from the Cottonwood Canyon Formation (Early Mississipian), Wyoming, USA, and associated stratigraphic and environmental implications of morphological variation observed within the assemblage (David T. Pocknall)

- On how palynomorphs recovered from fresh borehole material of the British Zechstein suggest a relatively wetter Late Permian environment compared to classic reconstructions and how transmission electron microscopy is being used to assign botanical affinities to dispersed bisaccate pollen grains (Martha Gibson)

- The palynostratigraphy and thermal maturity of Cambrian-Ordovician rocks in the Zagros Basin of southwestern Iran, which confirms that Palynomorph Darkness Index (PDI) is a robust quantitative method for estimating the thermal maturity of sections containing organic matter unsuitable for Rock-Eval pyrolysis or lacking vitrinite (Andrea Sorci)

- How PDI can be used to estimate the thermal maturity of subsurface Silurian sections in Saudi Arabia, instead of Vitrinite Reflectance due to plants preserved in Lower Palaeozoic rocks not producing enough woody tissues which are the precursors of vitrinite (Geoff Clayton).

Following the final session, the conference dinner was held at the Brasserie Pakhuis on the banks of the River Leie. Guests were treated to a three course dinner in the spectacular setting of the former warehouse which was overhauled by the Portuguese architect Pinto. Guests enjoyed their meal in a setting of juxtaposed warmth from excellent company, and the basic industrial elements of the building.

The third and final day of the meeting (Wednesday, July 4, 2019) commenced with a Keynote on dinoflagellate and dinocyst isotope biogeochemistry where Appy Sluijs described a novel tool for reconstructing dinoflagellate palaeoecology and past CO2 concentrations using laser ablation that can measure stable carbon isotope ratios on particulate organic matter. Results so far suggest that fossil dinocysts retain information regarding marine carbon cycling and dinoflagellate physiology and ecology. Future work on this method hopes to produce a fully quantitative proxy to bridge the gap between cells and cysts.

The first session of the day on General Palynology was chaired by Thijs

Delegates at the Conference Dinner held at Brasserie Pakhuis (Photo credit: Pieter Gurdebeke).

Vandenbroucke with talks entitled:

- Testing the toxic effect of redox-sensitive metals on Palaeozoic palynomorphs through synchrotron elemental mapping, electron microprobe and LA-ICP MS measurements (Julie De Weirdt)

- Pyrolysis-GCxGC-TOF MS – a new tool for determining the macromolecular composition of palynomorphs (Suryendu Dutta)

- Core-top calibration and first application of the dinoflagellate cyst based on pCO2 barometer (Joost Frieling)

- Dinoflagellate cyst counts versus DNA metabarcoding: a test case from the Bay of Brest, NW France (Kenneth N. Mertens)

- Sporopollenin (Gerard J.A. Versteegh)

After the morning coffee break another Analytical Palynology session was chaired by Kenneth Mertens with talks entitled:

- Methodological assessment of micto-FTIR as a tool for the characterization of macromolecular dinoflagellate cyst composition and chemotaxonomy (Pjotr Meyvisch)

- Contributions from micro-FTIR analysis to the macromolecular composition of dinoflagellate cysts and acritarchs (Pieter R. Gurdebeke)

- *Impagidinium pallidum* morphology and bimolecular characteristics of Quaternary and Holocene cysts from Labrador Sea and Baffin Bay: taxonomic and palaeogeographical implications (Peta J. Mudie)

- The Peridiniacean lineage and its transition to freshwater environments: the strange case of *Peridinium limbatum* (Francine M.G. McCarthy)

At lunch time on July 3 2019 the Business Luncheon took place in the Restaurant

Pand where members were updated on AASP—The Palynological business and Gunn Mangerud handed over the presidency to Katrin Ruckwied.

The first session after lunch featured more General Palynology talks chaired by Francine McCarthy with talks entitled:

- Later interglacial oceanographic and primary productivity changes in the Santa Barbara Basin, southern California (ODP Hole 893A) (Vera Pospelova)

- Postdepositional aerobic and anaerobic particulate organic matter degradation succession reflected by dinoflagellate cysts: the Madeira Abyssal Plane revisited (Karin A.F. Zonneveld)

- From bi-polar to regional disruptions of modern dinoflagellate cysts, an overview of their biogeography (Fabienne Marret)

- Transport bias by ocean currents in sedimentary microplankton assemblages: implications for palaeoceonographic reconstructions (Peter K. Bijl)

- Assessing the utility of freshwater dinoflagellate cysts in palaeoecological studies – a 33 lake calibration set and down core analysis from NW Ontario, Canada (Donya C. Danesh)

- The hidden potential of Desmidales: assessing the utility and sensitivity of desmids as palaeoenvironmental proxies of change – a 32 lake calibration set and down core analysis from Ontario, Canada (Donya C. Danesh)

- Neotropical Biome Evolution (Carlos Jaramillo)

The final session of the meeting, on General Palynology, was chaired by Fabienne Marret. Talks given were entitled:

- Comparative foraging behaviour among stingless bees from the Pacific and Central regions of Mexico (Elia Ramírez-Arriaga)

- Clitellate annelid cocoons – neglected components of palynoassemblages (Steve McLoughlin)

- A global review of calibrated dinoflagellate cyst events: status check (Peter K. Bijl)

- Online access to over 200,000 high resolution digitized palynological slides from Mesozoic and Cenozoic intervals on the Norwegian Continental Shelf (Robert W. Williams)

- A short story on the life of W.H. Eberhard Schulz (1931-2017) (Julia Gravendijk)

In addition, 21 posters were on display during the three days of the conference and provided an excellent accompaniment to the talks and stimulated vibrant conversation during the breaks.

- Evaluating the Shelf-Margin Eocene Coaledo Formation, Oregon: an Integrated Palynology, Geochemistry and Organofacies Study (Allison Barbato)

- A review of the acritarch genus *Saharidia* Combaz 1967 (Houcine B. Benachour)

- Palynological and calcareous nannofossil record from the Early Cretaceous (late Barremian-early Aptian) sections of the Galve subbasin (Maestrat basin, Spain) (Nicolatte Buratti)

- The *Parvodinium umbonatum* puzzle – is there more than of species identified as cysts of *P. umbonatum* in freshwater lakes? (Donya C. Danesh)

- Aquatic palynomorphs of the Late Permian Galilee Basin (Australia) (Annette E. Götz)

- Early Devonian animal remains of Bukowa Góra in terms of palynology (Holy Cross Mountains, Poland) (Marcelina

Kondas)

- The palynological record of the Late Devonian, global Dasberg Event (Holy Cross Mountains, Poland) (Marcelina Kondas)

- The rise of flowering plants in high southern latitudes (Vera A. Korasidis)

- Morphological variability in acritarch populations from the early Darriwilian (Middle Ordovocian) of Öland, Sweden: indicators of sea-level change (David M. Kroeck)

- Ecology and taphonomy of the recent freshwater dinoflagellate *Peridinium limbatum*: insights from sediment rap and lakebed studies (Francine M.G. McCarthy)

- Geochemical and Palynological Analyses of the Witbank and Highveld Coalfields, Karoo Basin, South Africa (Peter Moutevelis)

- Palynostratigraphy of Upper Cretaceous Sequences of the Yola Sub-basin, Upper Benue Trough, Nigeria (Usman Musa Bappah)

- Cretaceous climatic reconstruction from Argentina based on palynological data (Mercedes B. Pramparo)

- First report of the Miocene palynofloras from Tomellin Formation and Phyllarenite Quitepec, Oaxaca, Mexico (Elia Ramírez-Arriaga)

- Dinoflagellate marker species of the relic Paratethyan seas: Pannonian to Caspian basins (Keith Richards)

- Distribution of characteristic microfossil groups in the deposits of the Jurassic and Cretaceous of Ukraine (Olena Shevchuck)

- Dinoflagellate cyst events across the H1 (ETM-2) and H2 hypothermal events at the southern edge of the North Sea Basin (Thomas Steeman)

- Analytical data on the pine pollen wall – the first reported natural nanofoam structure – and comparisons with other natural and synthetic foams (Stephen Stukins)

- Fungal spores as a palaeovegetation proxy in East Africa (Daan can der Velden)

- The importance of micro-charcoal data from palynological slides: an example of fire intensification linked to aridification on the Tibetan Plateau (Sophie Warny)

The meeting was closed by new AASP—The Palynological Society president Katrin Ruckweid and the presentation and poster awards were presented. Julia de Weirdt (Gent University) won the best Student Talk award with honourable mentions going to Tim De Backer (Gent University) and Martha Gibson (University of Sheffield). Daan ven der Velden (Gent University) won the Student Poster Award.

A two-day post-conference field trip took place on July 4-5 2019 and visited the famous Cretaceous and Jurassic outcrops near Cap Blanc Nex and Cap Griz Nez in northern France. The first day was dedicated to the Cretaceous exposures along the beach between the villages of Wissant and Sangatte, while the Kimmeridgian and Tithonian was visited on the second day, between Bolougne-sur-Mer and Wimereaux.

The meeting was a great success and credit for its success must go to the co-organisers Steven Louwye and Thijs Vandenbroucke, as well as the many number of helpers from Gent University, who ran a fantastic meeting that will be remembered for many years to come for its seamless organisation. Thanks must also go to the speakers and poster participants for their excellent presentations, as well as the audience for provoking stimulating discussion. It should

be noted that Houcine B. Benachoiur, Marcelina Kondas, David Kroeck, Andrea Sorci and Natalia Walasek received travel grants of 300 EUR each from CIMP to facilitate their attendance.

Post-conference excursion (Photo credit: Pieter Gurdebeke).

AASP-TMS Annual Meeting 2019 delegates (Photo credit: Pieter Gurdebeke).

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

By Reed Wicander & Tony Butcher

At the 2019 AASP meeting in Ghent, Belgium, homage was paid to the career, contributions to palynology, and service to CIMP by Jacques Vernier at the dedicated Paleozoic CIMP session. The following is the Powerpoint presentation given by Reed Wicander, based on Jacques's career and the many remembrances, thanks, and wishes for a justly deserved retirement that Reed and Tony Butcher received from students, colleagues, and friends.

Paleozoic Palynology Session Honoring Jacques Verniers

We are officially opening the Paleozoic session of the 52nd annual meeting of AASP – The Palynological Society in Ghent, Belgium in honor of

Dr. Jacques Verniers

During his long and productive career, Jacques has been an indefatigable supporter and advocate of CIMP for many decades, as well as a leader in our understanding of chitinozoans, and professor and mentor to numerous generations of students.

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

Friends, students, and palynologic colleagues

Unlike Mark Anthony in Shakespeare's play *Julius Caesar*, we have come together today, not to bury Jacques Verniers, but to praise him, for all his many contributions to geology, chitinozoan research, CIMP service, and the numerous students he has mentored and trained during his long and distinguished academic career.

And no, it is not any evil that Jacques has done that will live after him, but the good that will serve as his enduring legacy.

IN THE BEGINNING . . .

Then

Brest, France 1985 Photo courtesy of Geert Van Grootel

Now

Some things never change!

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

SCIENTIFIC CAREER

PhD 1976 Universiteit Ghent
Geologic Survey of Mozambique 1977-1978
Ghent University 1979-1987
Geological Survey of Belgium 1987-1989
Vrije Universiteit Brussel 1989-1992
Universiteit Ghent 1992-Present
  Full Professor 2008-2015
  Professor Emeritus 2015-Present

Photo courtesy of An Van de Wiele

ACADEMIC CAREER

Universiteit Ghent
Courses Taught: Palaeontology, Micropalaeontology & Palaeoenvironmental Reconstruction, Advanced Micropalaeontology, Geological Mapping, Geology of Belgium Structural Geology
Degrees Supervised:
  16 PhD and 103 MSc
  Notables: Thijs Vandenbrouke & Stephen Louwye

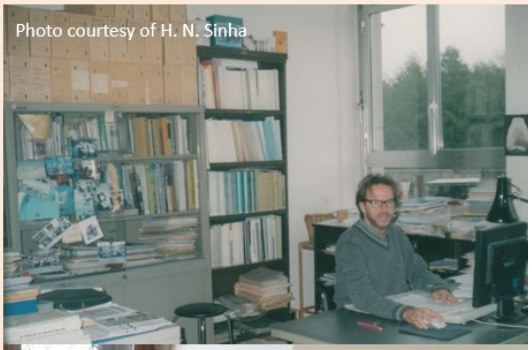


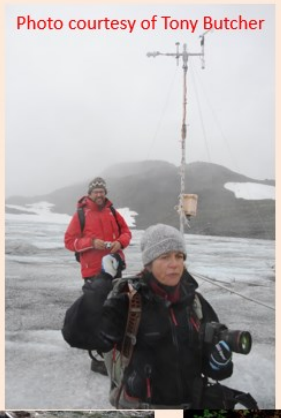
Photo courtesy of H. N. Sinha

Jacques with Pieter Gurdebeke, teaching assistant 2012-2018
Photo courtesy of Julie De Weirdt

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

STUDENT FIELD TRIPS

FIELD WORK



PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

PUBLICATIONS & PRESENTATIONS

169 publications
6 co-editor symposium proceedings
166 abstracts at conferences or symposia
23 field excursion guides

GEOLOGICA BELGICA (2008) 11/3-4: 167-174

RÉVISION STRATIGRAPHIQUE DU SONDAGE DE LESSINES (MASSIF DU BRABANT, BELGIQUE)

Alain HERBOSCH[1], Timothy N. DEBACKER[2] & Jacques VERNIERS[2]

(3 figures)

6 Silurian

JACQUES VERNIERS (co-ordinator), JÖRG MALETZ, JÍŘÍ KŘÍŽ, ŽIVILĖ ŽIGAITĖ, FLORENTIN PARIS, HANS PETER SCHÖNLAUB & RYSZARD WRONA

PROFESSIONAL ORGANIZATIONS

International Stratigraphic Commission on the Silurian
Belgische Vereniging Voor Geologie
Societe Geologique de Belgique
Geolgica Belgica
Geology of the Caledonian Massifs of Belgium and Surrounding Areas
Precambrian to Tertiary Palynology of Belgium
National Stratigraphical Subcommission on the Lower Palaeozoic of Belgium
National Committee for Geological Sciences of Belgium
Royal Belgian Institute of Natural Sciences
Commission Internationale de Microflore du Paléozoïque (CIMP)
- Member 1972-Present
- Treasurer 1990-1998
- Secretary-General 1990-1998
- Subcommission on Chitinozoa Member
- Session Organizer & Field Trip Leader

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

Meetings

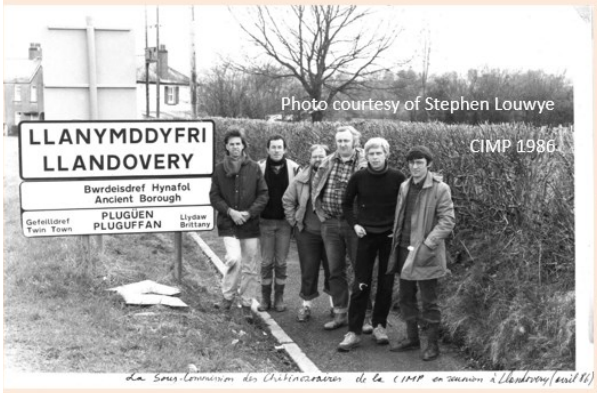
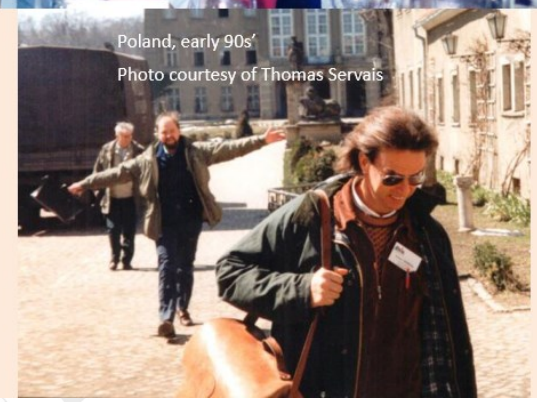


Photo courtesy of Stephen Louwye
CIMP 1986


Photo courtesy of Thomas Servais
Granada, Spain 2004


Photo courtesy of Stephen Louwye


Poland, early 90s'
Photo courtesy of Thomas Servais

HONORS & AWARDS

Prix Agathon De Potter 1985

For his contribution to the geological knowledge of the Caledonian of the Brabant Massif

Prix Adolphe Wetrems 1997

For his recent studies in micropalaeontology

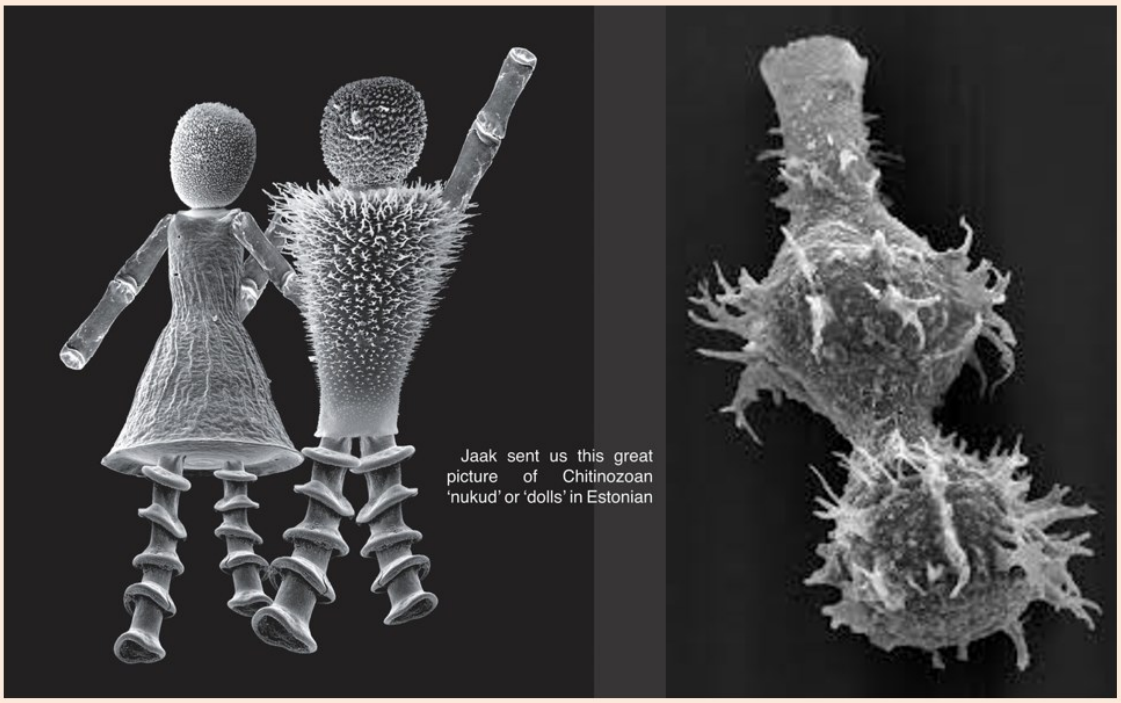
Van den Broeck Medal 2018

Laureate 2018 of Geologica Belgica, awarded to a person with great merits for the advancement of the geosciences in Belgium.

Talk title: The search into the Caledonides: serendipities or waiting for the surf?

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

CHITINOZOAN RESEARCH



Jaak sent us this great picture of Chitinozoan 'nukud' or 'dolls' in Estonian

FLORENTIN PARIS

I met Jacques at the 1st symposium on Chitinozoa in 1974.

We co-authored a first paper in 1992 at 8th Int. Palyn. Congress of Aix en Provence, initiating a sustained and fruitful scientific cooperation over 20 years.

Jacques's field work in Central Africa gave him the title "*the white man who is not afraid of lions*" based on the fact that one day while crossing quietly across a bridge in the jungle Jacques ignored a lion walking behind him!

Jacques is an excellent guitar player, an outstanding singer, and speaks 7 languages!

Photo courtesy of Stephen Louwye

2006/08/04

As a fluent French speaker, I would like to say "*Jacques, un très grand merci pour ton agréable et efficace collaboration, mais aussi pour tous les très bons moments que nous avons passés ensembles. Très bonne retraite, même si je sais pertinemment que tu retourneras encore pendant longtemps au laboratoire de paléontologie de Gent!.*"

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

MAURICE STREEL

I would like to note his altruistic characteristic with two examples.

When trying to organize an MSc in palynology at the University of Liège in the 1980s, the most enthusiastic support came from Jacques Verniers and Jan De Coninck at Ghent University.

Jacques has always promoted large scale collaboration in our many bilingual countries. He initiated in his department the necessity for his students to understand lectures in Dutch, English, and French.

Xth Int. Carboniferous Congress, Madrid 1983
Photo courtesy of Maurice Streel

TONY BUTCHER

When I started my PhD in 1998 (never having heard of a chitinozoan!), Jacques epitomized the friendly, helpful and welcoming nature of the chitinozoan community. He was always ready with advice, willing to discuss and resolve taxonomic issues, and always happy to nurture and support students in their studies.

Jacques was also the external examiner for my first PhD student, during which his helpfulness (and patience!) knew no limits!

Thanks for everything, Jacques!


Jacques checking his photo of 'Echo Base' (Hardangerjøkulen, Norway)
Photo courtesy of Tony Butcher

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

REED WICANDER

I would like to add my appreciation for all you have done for the palynologic community (especially those rascals chitinozoans), geology in general, and as a mentor and role model for students and colleagues alike.

It has always been fun with Jacques around!

A NICE GUY & ALWAYS HELPING OTHERS

Photo courtesy of Tony Butcher

Photo courtesy of H. N. Sinha

Field work in Malawi, 2010
Photo courtesy of Bert Van Bocxlaer

Photo courtesy of Pieter Gurdebeke

PALEOZOIC PALYNOLOGY SESSION HONORING JACQUES VERNIERS

THANKS TO EVERYONE

Thanks to all CIMP colleagues and friends that sent messages, stories, and photos that were presented here in this Introduction.

We have received emails from many colleagues of different generations, students, and professionals from all over the World!

These messages and photos are proof of the high regard and respect that Jacques is held by the palynologic community.

Reed Wicander and Tony Butcher, co-presenters


Photo courtesy of Geert Van Grootel

UPCOMING MEETINGS AND COURSES

XV International Palynological Congress & XI International Organization of Palaeobotany Conference - 200 Years of Palaeobotany

Prague, Czech Republic

September 12-19, 2020

Dear IPC-IOPC 2020 Participants, Dear IPC/IOPC Community,

We are monitoring the situation concerning the Covid-19 pandemic and various severe restrictions in Europe. Due to this issue, the abstract submission deadline is postponed to May 1, 2020. Please, stay in touch and monitor our website and social media.

However, there are still six months until the congress, and we are all confident that "time is on our sides" and all the measures taken now will dramatically decrease the number of infected people so that things will soon return to normal.

One of our Symposiums is dedicated to Palaeozoic palynology (see below).

Best Wishes and Good Luck to all of us!

Organizing Committee

Updated 2nd circular: https://prague2020.cz/2ndCircular_IPC-IOPC.pdf

For more information please go to: www.prague2020.cz

B02 Palaeozoic palynology: a CIMP and Aramco-CIMP Special Project symposium dedicated to the memory of Professor Bernard Owens

Chaired by Marco Vecoli, Hartmut Jäger and Charles Wellman

This symposium will cover all aspects of Palaeozoic palynology. It is dedicated to the memory of Professor Bernard Owens, a stalwart of Palaeozoic palynology, who passed away in 2019. Bernard was an outstanding supporter of the CIMP, one of the main palynological societies dedicated to research on Palaeozoic palynology, and served as Secretary and President. Beside his research in Western Europe Bernard was strongly involved in international collaborations and correlations, particularly with eastern Europe and Russia. He was also instrumental in establishing the Aramco-CIMP Special Project on 'Palaeozoic Palynology of the Arabian Plate' that today celebrates another milestone: the publication of a synopsis volume that pulls together all of the work undertaken during the past 30 years. Contributions to the symposium are invited from all palynologists studying any aspect of Palaeozoic palynology.

53rd AASP-The Palynological Society Annual Meeting
Baton Rouge, USA
May 26-30, 2020

In this conference, a session on Palaeozoic palynology was planned: Paleozoic Palynology in memory of Gordon Wood, organized by Thomas Demchuk. Due to the global pandemic of COVID-19 the conference **was cancelled**.

Applied Biostratigraphy Course
Online Course
May 18 - June 29, 2020

This course will focus on biostratigraphy and its applications in the oil and gas and other industries. The course is composed of lectures, videos and exercises which you can follow at your own pace in the comfort of your home or office. Many examples and real industry data will be used for the lectures and exercises. The main course topics include:

- An introduction to the different microfossil groups
- A discussion on the laws of stratigraphy and how biostratigraphy can be used for chronostratigraphy
- Which microfossil groups to use for each interval and how they are used as palaeoenvironmental indicators
- What pitfalls to look for and how these can lead to a better geological understanding
- How to use biostratigraphy and bio facies to identify key seismic markers
- How to integrate biostratigraphical data with other geological data (sedimentological, petrographical, geochemical) to maximize its use
- How to use integrated biostratigraphical data to build a high-resolution sequence stratigraphy schemes
- How biostratigraphy can be used in play definition and for play-based exploration
- Working examples of applied stratigraphy for exploration and development from West Africa, South America and Middle East.

Further details and registration can be found at
https://ingeoexpert.com/en/courses-online/applied-biostratigraphy-course/

There is also a Portuguese version if you prefer:
https://ingeoexpert.com/pt/cursos/curso-de-biostratigrafia-aplicada/

You can also drop me an email at gil.machado@chronosurveys.com for more information.

Gil Machado

International Course on Organofacies Analysis

Erlangen, Germany

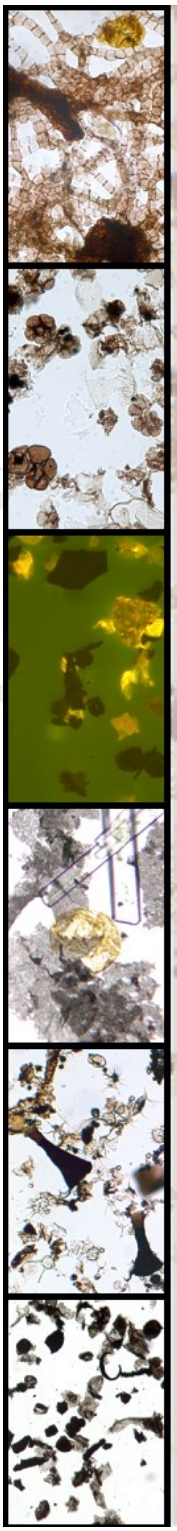
October 5 - October 9, 2020

This course is made for everyone interested in the understanding and interpretation of the whole range of organic matter in sedimentary rocks - from origin to distribution, preservation, maturation and even hydrocarbon generation. It includes all palynology, from Proterozoic to Tertiary, but Palaeozoic palynology is a major part. The course is made of lectures in the morning and microscope exercises in the afternoon. If you have own slides, you can bring them with you. There will be time to work on and discuss own slides.

The program includes on overview of all groups of organic matter (Palynomorphs and more), the production, distribution and preservation of organic matter, the composition

and preservation of organic matter related to palaeoenvironmental / facies settings (Palynofacies analysis) and applied to sequence stratigraphy, the thermal alteration of sedimentary organic matter and the composition and preservation of organic matter related to hydrocarbon generation.

For more information please contact me via email: jaeger@georesources.de
Hartmut Jäger



CIMP sponsored

International Course of Organofacies Analysis

Sedimentary Organic Matter
Principles & Applications

October 05 - 09, 2020
University of Erlangen

5 days of lectures and practical microscope exercises.
Participants can bring own slides to discuss at the last day

General principles of palynology in its widest sense and its applications in facies analysis, sequence stratigraphy and hydrocarbon generation.

Basic knowledge in palaeontology, facies analysis or hydrocarbon systems is useful, but not mandatory.

Course outline

- **Principles of sedimentary organic matter**
  Production, distribution and preservation of sedimentary organic matter
- **Groups of organic matter** (Palynomorphs and more)
  Marine and terrestrial derived sedimentary organic matter
- **Application for facies & sequence stratigraphical analysis**
  General introduction to facies development and sequence stratigraphy
  Composition & preservation of sedimentary organic matter related to palaeo-environmental analysis (Palynofacies analysis)
  Palynofacies analysis applied to sequence stratigraphy
- **Application for basin analysis & hydrocarbon generation**
  Thermal alteration of sedimentary organic matter (maturation)
  Classification of organic matter in Hydrocarbon systems (kerogen types)
  Hydrocarbon potential based on optical kerogen analysis & organic maturation

Course language is English
Seats are limited

For more information contact:
Dr. Hartmut Jäger (jaeger@georesources.de)
GeoResources STC, Bensheim, Germany
www.georesources.de