INTERNATIONAL UNION OF BIOLOGICAL SCIENCES SECTION FOR PALAEOBOTANY

International Organisation of Palaeobotany

IOP NEWSLETTER 105

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Please send us your contributions for the next edition of our newsletter (March 2015) by February 28th, 2015.

IOP Logo: The evolution of plant architecture (© by A. R. Hemsley)

FROM THE SECRETARY/TREASURER

Dear International Organisation of Palaeobotany Members,

Please accept this abbreviated newsletter.

We are having technical issues with the IOP Website, but hope to be up and running again soon.

It is time to renew your membership in IOP and PayPal seems to be working fine. Many of us just can't access the Member Page on the Website to see what our membership status is.

As soon as we get the problem fixed, I will send out a separate call for membership renewal.

I did however, want to get all of the submissions that were sent to me out on a timely manner, so they are below.

Thanks to everyone who submitted items for the Newsletter. Remember this is your organisation, and we are only as strong and relevant as we make it.

Please feel free to contact me with questions, comments, or any information you would like passed on to the Membership. I can be reached at:

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IPC XIV/IOPC X 2016

The 2016 joint meeting of the International Palynological Congress and the International Organization of Palaeobotanists will be held in Salvador, Brazil.

At this time we can only say that the meeting will be during the fall, hopefully early in October, or November.

I will send additional details as they are worked out, but please do keep this date in mind. 2016 will be here before we know it, and it is never too early to start thinking about symposia etc.

The Organizing Committee has been formed and I will send details as I get them. Do however, remember to start thinking about symposia topics.

OBITUARIES

Dr. Marina Viktorovna Durante
26 January 1934- 29 October 2014

On 29 October 2014, well-known Russian palaeobotanist Dr. Marina Viktorovna Durante died after a prolonged illness.
She was born 26 January 1934 in Dmitrov (Moscow region). In 1957 she graduated from the Geological Department of Moscow State University as a geologist and stratigrapher.

In 1957–1965 M.V. Durante worked on several expeditions of "Aerogeology" Trust under extremely difficult conditions in the regions of Altay-Sayana mountains and Verkhoyanie, studying the geology and

stratigraphy of the Middle and Upper Palaeozoic deposits. In 1967 she took part in the geological survey of the territory of Mongolian Peoples Republic and at that time began to study fossil plants under the guidance of S.V. Meyen (1935–1987). In 1968 M.V. Durante became a post-graduate student in the Geological institute of USSR (= Russian) Academy of Sciences. Her PhD thesis (1971) was untitled "Palaeobotanical basing of the stratigraphy of the Upper Palaeozoic of Mongolian Peoples Republic". In the following years M.V. Durante conducted fruitful investigations of the Upper Palaeozoic floras and stratigraphy of Siberia, Mongolia and North China.

M.V. Durante was a member of Interdepartamental stratigraphical committee of the USSR, as well as of the corresponding international commissions, subcomissions and working groups in the field of Carboniferous and Permian stratigraphy. She took part in several international research programs and projects, and was a co-author of fundamental monograph "The Carboniferous of the World". After S.V. Meyen's death, she was the go-to expert on the palaeobotany and phytostratigraphy of the Upper Palaeozoic Russian.

Her last years were burdened by serious trials: she became blind and lost much physical strength, but did not lose hope. Her spirit and optimism, modesty and kindness remains in the memory of her disciples and colleagues.

Respectfully submitted by: I.A. Ignatiev and Yu.V. Mosseichik. Any and all transliteration errors are attributable to M. T. Dunn.

Dr. Hans Gocht

Dr. Hans Gocht passed away on 24.7.2014. The funeral took place Friday, 1 August in Tübingen. He was 83 years old. He leaves his wife Erika and two daughters.

For letters of sympathy please write to his wife:

Mrs Erika Gocht,
Christiane-von-Koelle Stift,
Aischbachstrasse 25, D-72070 Tuebingen,
Germany.

MEETING REPORTS

9th EUROPEAN PALAEOBOTANICAL AND PALYNOLOGICAL CONFERENCE 2014

On August, 26-31, 2014 the 9th EPPC took place at Padova. More than 500 scientists from 44 countries, not only from Europe but also from Asia, Australia, Africa and North and South America, were registered at the conference.

Padova is one of the oldest universities of Padova and several of its historical buildings and locations were used during the

conference. The welcome reception took place at the Old Botanical Garden of the Padova University (UNESCO world heritage). The opening ceremony was at the Aula Magna of Palazzo Bo (historical main building of Padova University), where Galileo Galilei gave his lectures. The scientific sessions took place at the building of the Department of Geosciences of the University of Padova.

More than 530 abstracts were submitted for the 39 symposia ranging from general topics to the Palaeozoic, Mesozoic and Cenozoic palaeobotany and palynology, Archaeobotany and actual botany. Due to the high number of oral presentations and posters the program was split into 4 parallel oral sessions and three Poster rooms. The building of the former Department of Geosciences, now Museum of Geology and Palaeontology of the Padova University, was open during the conference giving access to the beauty of the historical Palm room of Monte Bolca fossils. Moreover, a photo contest exhibition on “The Beauty of plant fossils” was open at the Palazzo Cavalli. Thanks to the financial support of the IFPS, the Palaeontological Association and our main sponsor Tassoni 27 students, PhD students and young researchers could get a financial help to join the conference.

The two mid-conference field trips went to the Eocene Fossillagerstätte Bolca and to Quarternary outcrops. The four post-conference field trips took the participants to the late Cenozoic of Cetral Italy, the Permo-Triassic of the Dolomites, the Palaeozoic to Cenozoic of Sardinia and the fossil and extant plants in the volcanic environments of Campania.

EPPC 2014 Group photo

The present volume is edited by the organizers of the 9th European Palaeobotany and Palynology Congress in Padova, Italy (EPPC2014). Italy's palaeobotanical record is extensive. However, this heritage has

largely been forgotten. More than 300 million years lie between the oldest plant fossils discovered in Italy and Quaternary plant remains found in archaeological excavations. Fossil floras throughout Italy are remarkable in that they show a surprising abundance and diversity over the millions of years. The Italian palaeobotanical heritage represents an important source of new information on the evolution of plants and the ecosystems in which they lived, but can also help in predicting future environmental scenarios.

Kustatscher, E., Roghi, G., Bertini, A., Miola, A. (ed.), 2014. La storia delle piante fossili in Italia/ Palaeobotany of Italy. Pubblicazione del Museo di Scienze Naturali dell'Alto Adige 9, 395 pp., Bolzano/Bozen, e-mail. info@naturmuseum.it
Price: 25,00 Euro

Best regards,
The EPPC organizing team

BRIEF REPORTS

The National Cleared Leaf Collection-Hickey Published Electronically

Shusheng Hu

Division of Paleobotany, Peabody Museum of Natural History, Yale University, New Haven, CT 06511

The Division of Paleobotany at the Peabody Museum of Natural History is delighted to announce the electronic publication of the National Cleared Leaf Collection-Hickey (NCLC-H). The NCLC-H consists of over 7,000 cleared, stained and mounted extant leaves. It stands as the major community resource in the area of foliar morphology for plant systematists and paleobotanists around the world. While at the Smithsonian Institution Leo J. Hickey began NCLC-H in 1969 as part of his research on the systematic distribution of the leaf characters of the flowering plants in relation to the evolution of a group. The NCLC-H was moved to Yale Peabody Museum on a long-term loan agreement when Leo Hickey came to the Peabody Museum of Natural History as Director in 1982. Sadly, Dr. Leo Hickey passed away in February 2013. The NCLC-H was returned to Smithsonian National Museum of Natural History in May, 2014.

The NCLC-H is currently arranged alphabetically by family, then by genus and species. There are approximately 321 families and 1,300 genera, including herbaceous, parasitic, Arctic, alpine and derived groups such as the Asteridae, in an effort to elucidate the full range of dicotyledonous leaf morphological patterns.

Also, there are a significant number of extinct and endangered species, such as Canacomyrica monticola from New Caledonia. The collection presently covers floras from South America, North Central America, Oceania and Asia. Most of the leaves have been taken from herbarium collections, with some prepared using fresh or fluid-preserved specimens. Each specimen is vouchered to an authoritatively identified herbarium sheet. The size, scope, documentation, and the quality of the mounts make the NCLC-H the most important database of leaf architecture in the world. At the present time, the NCLC-H provides the main source of documentation for the systematic description of leaf architectural variation among the dicotyledons and has been the basis for the current system of leaf architectural classification, fossil and modern plant identifications, ecological and paleoecological studies, as well as ongoing studies into the ontogeny of leaf venation.

The electronic publishing of NCLC-H makes researchers and the public easy access to the database. The NCLC-H is available free at http://peabody.research.yale.edu/nclc/

STOMATIFEROUS PROXIMAL CUTICLE: MEDULLOSALEAN MICROSPORANGIATE ORGAN (BASAL CANTABRIAN, SYDNEY COALFIELD, CANADA)

Erwin L. Zodrow, Curator Emeritus
Cape Breton University, Sydney, Nova Scotia, Canada.
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Unlike in other Carboniferous coal basins, where medullosalean microsporangiate organs are common, e.g. western Europe and the U.S., Sydney Coalfield in Nova Scotia hardly has any record of them. The reported discovery of several compressed specimens of one species of this organ from this coalfield is therefore significant (Zodrow, 2014). The specimens are interpreted as campanulate structures, 3.5 cm in diameter, and have a margin formed by four lobes. Careful maceration (Schulze's chemical process) revealed a minimum of three layers of synangia/sporangia, at least 8 mm in length, where each may contain a minimum of 103 monolete pollen. These are variable in length from 833 microns to 330 microns, which is probably the largest medullosalean-pollen range on record. Proximal pollen surfaces show a deflected monolete slit, and the distal surfaces two crescent-shaped grooves symmetrically placed about a central ridge, fitting the generic Schopfipollenites concept.
Each of the many maceration experiments performed yielded at least two types of cutinized tissues. One probably represents parenchyma (isodiametric cells 60 microns to 66 microns in size). Most importantly the other is a first-time report of stomatiferous cuticle with small-round cells 10-26 microns in size. Stomata are unequivocally recognized by their cyclocytic structure of 6-8 rectangular cells (33-40 microns by 30-33 microns) about bean-shaped guard cells (40-45 microns long), Fig. 1. Stomatal distribution appears uniform at approximately 30/mm2. The polar axes are unoriented.

The stomatal apparatus is similar, for example, to Alethopteris pseudograndinioides, Pecopteris polypodioides, certain living marattialean

ferns, or to certain living cycads (Zodrow, 2014a), i.e. it is regarded as a conservative structure.

Zodrow, E.L. 2014. Significance of compressed campanulate organ with monolete pollen: physical and functional-group distributions under increasing maceration (Pennsylvanian, Medullosales, Canada). MS

Zodrow, E.L., D'Angelo, J.A., Werner-Zwanzinger, U., Al-Shraa'h, A. 2014a. Cycas rumphii seed: Model for the larger Carboniferous medullosalean ovules: Implications for cycadalean evolution and phylogeny. MS.

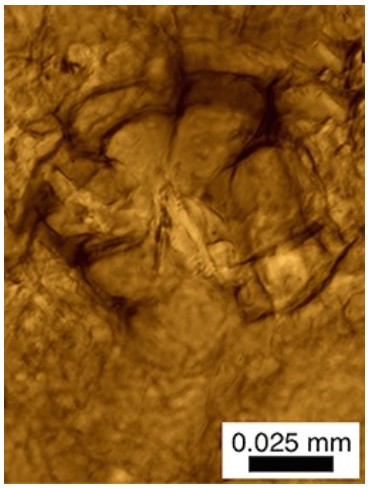

Figure 1. Sketch of a typical cyclocytic stoma. Slide 4-Z39/15 in the Palaeobotanical Collection, Cape Breton University.

IOP MEMBER OPINION PAGE

Opinion: Cite the Tertiary Period without apology.

There is a term for the interval of Cenozoic that precedes the Quaternary and it is "Tertiary." Using the cumbersome phrase "Paleogene and Neogene" when one simply means Tertiary, is a waste of key strokes, ink, electrons, not to mention brain cells. The stratigraphic and chronologic definitions of this period are well established in popular as well as geological dictionaries and literature. The break between Paleogene and Neogene is unnatural, falling at the end of the Oligocene, whereas a more natural division is with the climatic cooling at the end of the Eocene. Why should I publish in journals that prohibit use of standard language, including the well established, well understood, term Tertiary? What scientific purpose is advanced by my saying "K-Pg" in reference to what has long been known as the "K-T" boundary? Certainly there are instances when the terms Paleogene and Neogene are useful in their own right, but that does not negate the precedence and utility of Tertiary.

Steve Manchester, Tertiary (third rate) Paleobotanist
Gainesville, Florida, USA

UPCOMING MEETINGS

International Conference on "Current perspectives and emerging issues in Gondwana evolution" February 19-20, 2015, Lucknow, India

We are pleased to announce that an international conference on Current perspectives and emerging issues in Gondwana evolution" will be organized during 19-20 February, 2015 by Birbal Sahni Institute of Palaeobotany (BSIP), Lucknow, India. The oral and poster sessions during February 19-20 will be followed by a post conference field trip during February 21-26, 2015 to visit the classical Gondwana sections in central India.

The conference will address varied aspects relating to Gondwana evolution, encompassing palaeontology, geology and geophysics, under the following themes:

Geophysical evidence for Gondwana assembly and fragmentation

Global event markers during Gondwana evolution

Biodiversity during Gondwana period
Mixed floras: Gondwana- Laurasia biotic interchanges

Sedimentary record and sea level changes
Correlation and age constraints

Permian-Triassic boundary events
Palaeoclimatic events: biological, geochemical, sedimentological and isotopic proxies

Palaeofires in Gondwana

Energy resources

XVIII INTERNATIONAL CONGRESS ON THE CARBONIFEROUS AND PERMIAN (ICCP 2015)

The XVIII International Congress on the Carboniferous and Permian, is to be held at the Kazan Federal University, City of Kazan, Russia, August 11 – August 15, 2015.

The Carboniferous and Permian successions of Russia have a long history of study and are renowned for excellent outcrops that occur over a vast territory, a considerable variety of depositional types, and abundant fossils. This makes Russia one of the most famous and popular locations for basinal studies, global and regional tectonic reconstructions, paleogeographical and biostratigraphic research, and upper Paleozoic fossil collecting. Carboniferous and Permian research in Russia has recently seen a marked increase in activity. National and international projects have focused on documentation of candidates for global stratotypes for stage and substage boundaries in historical and newly discovered sections, and paleotectonic reconstructions of the Uralian Ocean, leading to new interpretations of the evolution of the Paleo-Tethys. Considerable progress was made in the study of Carboniferous and Permian successions in Siberia and the Russian Far East. Exciting fossil excavations revealed new faunas in the Cis-Uralian Region, which in combination with modern geochemistry technologies has led to great advances in our understanding of the paleoclimate at the end of the Paleozoic, and new insights into the causes and consequences of Carboniferous-Permian events, especially the P-T extinction. The ICCP-XVIII

Congress in Kazan will provide an important forum for discussion of the most relevant cutting-edge topics of Carboniferous-Permian geology and paleontology, and a unique opportunity to see and collect from exceptional geological localities in the European and Asian regions of Russia.

General sponsors include:
Russian Academy of Sciences
Interdepartmental Stratigraphic Committee of Russia
Carboniferous and Permian Commissions of Russia
The International Subcommission on Carboniferous Stratigraphy
The International Subcommission on Permian Stratigraphy

Congress Organizers:
Kazan (Volga region) Federal University
Lomonosov Moscow State University
A.P. Karpinsky Russian Geological Research Institute (VSEGEI), St. Petersburg
The Paleontological Institute, Russian Academy of Sciences, Moscow
The Geological Institute, Russian Academy of Sciences, Moscow
Perm State National Research University
The Zavaritsky Institute of Geology and Geochemistry, Russian Academy of Sciences, Ural Branch, Ekaterinburg
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Russian Academy of Sciences, Ufa
North-East Interdisciplinary science research institute, Russian Academy of Sciences, Far East Branch,
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Alexander S. Alekseev, Igor V. Budnikov, Alexander S. Biakov, Zhong Q. Chen, Boris I. Chuvashov, Ilshat R. Gafurov, Valeriy K. Golubev, Natalia V. Goreva, Olga L. Kossovaya, Galina V. Kotlyar, Elena I. Kulagina, Danis K. Nourgaliev, Svetlana V. Nikolaeva, Victor V. Ogar, Galina Y. Ponomareva, Barry C. Richards, Shuzhong Shen, Vladimir V. Silantiev

Venue
The City of Kazan is among the most ancient cities in Russia. With a population of 1.2 million people, it is a cultural and industrial center included in the UNESCO World Heritage list, and its mosaic of Muslim and Christian architecture contributes to its unique atmosphere and scenery. Kazan is easily accessible from Europe via Frankfurt, Moscow or St. Petersburg, and its position in the center of European Russia makes it an ideal base from which to explore a wide variety of sections and outcrops located in several adjoining districts of Russia.

Call for Abstracts:
Abstracts for the meeting are due on April 1, 2015.

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CALL FOR NEWS AND NOTES

Please send submissions for the next news letter by 28 February 2015 to:

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