INTERNATIONAL UNION OF BIOLOGICAL SCIENCES SECTION FOR PALAEOBOTANY



International Organisation of Palaeobotany

IOP NEWSLETTER 106

May 2015

CONTENTS

FROM THE SECRETARY/TREASURER IPC XIV/IOPC X 2016 NEWS FROM INDIA BRIEF REPORTS UPCOMING MEETINGS CALL FOR NEWS and NOTES

The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of IOP. Please send us your contributions for the next edition of our newsletter (July 2015) by June 30th, 2015.

President: Johanna Eder-Kovar (Germany) Vice Presidents: Bob Spicer (Great Britain), Harufumi Nishida (Japan), Mihai Popa (Romania) Members at Large: Jun Wang (China), Hans Kerp (Germany), Alexej Herman (Russia) Secretary/Treasurer/Newsletter editor: Mike Dunn (USA) Conference/Congress Chair: Francisco de Assis Ribeiro dos Santos

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

FROM THE SECRETARY/TREASURER

Dear International Organisation of Palaeobotany Members,

Please accept this March-ish newsletter.

I believe the website issues I talked about in November have been fixed, (thanks Alan) but if some of you still have issues, please let me know.

PayPal renewals are trickling in so please keep up the good work of supporting IOP by your membership

Thanks to everyone who submitted items for the Newsletter. This issue is late in part at least because I had nothing to report, so I really appreciate the input of those who did send items in.

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:

Mike Dunn Department of Biological Sciences Cameron University Lawton, Oklahoma 73505 Ph.: 580-581-2287 email: <u>michaeld@cameron.edu</u>

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 making preparations.

The Organizing Committee is doing the best that they can, but some things just take longer than we would like. But remember that when things do get finalized, the deadlines will come quickly with relatively short notice. So please be ready for the following:

1. Please be ready with symposium proposals. To the best of my knowledge, only one proposal has been discussed, so I hope you will be ready with others when the call dates and format is announced.

2. Please begin thinking about venues for IOPC 2020. All proposals for hosting IOPC 2020 are welcome. I will be happy to share past proposals as templates for submission.

3. Funding for student travel will be available thanks to the generous donation of our Tokyo IOPC 2012 hosts. Details will be included in the July 2015 Newsletter. **NEWS FROM INDIA**

On November 28, 2014, The Eminent teacher award was conferred upon Prof Manju Banerjee by the honourable Chancellor, University of Calcutta, Governor of West Bengal as part of the Annual Convocation Ceremony of University of Calcutta (the oldest University of India) for her outstanding contribution to teaching and research for over the past two decades and for encouraging and nurturing students who have distinguished themselves by their scholastic achievements. The function was graced by presence of the honourable President of India, Shri Pranab Mukherjee.



Professor Manju Banerjee receives the Eminent Teacher Award from Keshari Nath Tripath Chancellor, University of Calcutta, Governor of West Bengal while The President of India, Shri Pranab Mukherjee looks on.

A Distinguished Lecture was delivered by renowned Evolutionary Biologist, Prof. Sankar Chatterjee, Paul Whitfield Horn Professor of Geosciences and Museum Science; Curator of Paleontology and Director, Antarctic Research Center, Museum of Texas Tech University, USA on "Origin of Life" at University of Kalyani, West Bengal, India on April 13, 2015 On December 5, 2014, The Professor A. K. Ghosh Memorial Lecture Lecture was delivered by Prof. D. K. Chauhan, Professor of Botany, Allahabad University, India on "Fossil history of Ginkgo L." at Department of Botany, University of Calcutta



Professor D.K. Chauhan presents The Professor A.K. Ghosh Memorial Lecture.

On February 25, 2015, the 14th Dr. J. Sen Memorial Endowment Lecture was delivered by Prof. David Dilcher, NAS, Emeritus Professor of Geology and Biology, Indiana University on "The Symbiotic Evolution of Flowering Plants" at Department of Botany, University of Calcutta



Professor David Dilcher presents the Dr. J. Sen Memorial Endowment Lecture

BRIEF REPORTS

The Publishing Department of the Institute of Botany of Polish Academy of Sciences announces their newest palaeobotanical publications:

Atlas of pollen and spores of the Polish Neogene – vol. 4 – Angiosperms (2)

Edited by L. Stuchlik

W. Szafer Institute of Botany, Polish Academy of Sciences, Krakow (2014); ISBN: 978-83-62975-23-5

Format A4: (20,50 x 29,50); 147 fig. black and white; 4 fig. color, 466 pp, text in English

Price: EUR 59,00 (postage included).

The pollen and spores atlas of the Polish Neogene volume 4 – Angiosperms (2) contains description and photographic documentation of the sulcate and colporate groups of pollen grains. Altogether 212 species belonging to 75 fossil genera, 57 of which have botanical affinity indicated in the name, are described.

All described fossil-taxa are included within 55 extant families and 27 orders. In total 5 new genera and 44 new species were described and 26 taxa have their diagnoses complemented, 26 new combinations were described, and new status is proposed for two taxa.

All described pollen species have been documented on 134 photographic plates.

Microphotographs were taken under Light Microscope (LM) and several more important details were documented using Scanning Electron Microscope (SEM). The lay-out of this volume, morphological descriptions and illustrations of pollen were in general made as in the preceding volumes (Stuchlik ed.) 2001, vol. 1 – Spores; 2002, vol. 2 – Gymnosperms and 2009, vol. 3 – Angiosperms (1).

The descriptions are supplemented by introducing the Erdtman's shape classes (Erdtman 1952). For sculpture description of pollen microphotographs surface, apart from the hitherto used method, the terminology of Punt et al. (2007) and Hesse et al. (2009) was used.

This elaboration comprises palynofloras from 88 profiles of the Polish Neogene. Stratigraphical position of the profiles are presented including chronostratigraphic and lithostratigraphic schemes of the Paratethys area (Oszczypko 1999) and Polish Lowland (Piwocki 1998). In the present study published materials, as well as those, remaining in the archives of the W. Szafer Institute of Botany, Polish Academy of Sciences in Kraków, Polish Geological Institute and Museum of the Earth in Warszawa, and the Warszawa and Wroclaw Universities have been taken into consideration.

Verification of fossil genera has been made according to the Genera File of Fossil Spores (Jansonius and Hills 1976–1992, and Jansonius et al. 1998, 2002). All the previously described taxa have been revised according to the International Code of Nomenclature for algae, fungi and plants (ICN, McNeill et al. ed., 2012). A

comprehensive synonym list is included alongside the description of every taxon. Where it was possible new taxa were named indicating the botanical affinity selected in the first module of the name.

The species concept of fossil pollen grains is exclusively morphological. The description of species is based on shape of the pollen grain (P/E), number and character of the aperture, structure and sculpture of the exine. In our morphological determination we have neglected the subspecies concepts of other authors.

When we recognize that subspecies previously determined by other authors (Potonié, Thomson & Pflug, Krutzsch etc.) differs distinctly we have raised them to species rank. However, if the differences were in our opinion small we have necglected the subdivision.

On the base of morphological comparison of fossil pollen with extant plants the botanical affinity on various taxonomical levels was determined and the nearest living relatives indicated.

All taxa are ordered after botanical affinity and morphology by means two morphological groups (sulcate, and colporate) and the described genera are included to extant orders (Stevens et al. 2012). In the orders families are ordered alphabetically, and within families, genera and species are also ordered alphabetically, with the exception of the type species, that is placed directly after the description of the genus.

Volumes I-III are also still available:

May 2015

I. Atlas of pollen and spores of the Polish Neogene - Vol. 3 - Angiosperms (1) (2009)

Edited by Leon Stuchlik.

W. Szafer Institute of Botany, Polish Academy of Sciences; Kraków 2009; ISBN: 978-83-89648-74-7

Format: A4; plates 67; pp. 225

Price: EUR 55,00 per copy (postage included).

II. Atlas of pollen and spores of the Polish Neogene - Vol. 2 – Gymnosperms (2002)

Edited by Leon Stuchlik.

W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków 2002; ISBN: 83-85444-92-0

Format: A4; (238 p., 82 plates)

Price: EUR 48,00 per copy (postage included).

III. Atlas of pollen and spores of the Polish Neogene - Vol. 1 – Spores (2001)

Edited by Leon Stuchlik.

SZAFER INSTITUTE OF BOTANY, POLISH ACADEMY OF SCIENCES, Kraków 2001; ISBN: 83-85444-79-3

Format: A4; (158 p., 41 plates)

Price: EUR 45,00 per copy (postage included).

Postglacial history of vegetation in the Polish part of Western Carpathians based on isopollen maps

Edited by: Andrzej Obidowicz, Ewa Madeyska and Charles Turner

W. Szafer Institute of Botany, Polish Academy of Sciences, Krakow (2013); ISBN: 978-83-62975-20-4

Format A4: (20,50 x 29,50); 24 fig., 175 pp, text in English

Price: EUR 38,00 (postage included).

OVERVIEW

Presentation of the postglacial history of the Western Carpathian flora on isopollen maps continues the idea of Professor Wladyslaw Szafer (1935), who introduced this method into reconstructions of palaeoenvironmental changes. When in 2004 Ralska-Jasiewiczowa used this method to present the Late Glacial and Holocene history of vegetation in Poland, the number of palynological sites in this part of the Carpathians was still small (Ralska-Jasiewiczowa et al., eds 2004). For this reason, conclusions on the formation and shifts in altitudinal climatic-vegetation belts could not be fully justified and the direction of migration of particular taxa could not be identified with any great precision.

The number of profiles presently available already exceeds 70. They include sites investigated in the interwar period of the last century. However, such pollen diagrams, may be characterized by only a short list of taxa that were then recognized, overlook particular tree species and completely miss out herbaceous plants. For obvious reasons such diagrams were not dated using absolute methods and, therefore, have not been considered in the present synthesis. Furthermore, several new sites were also not considered, as they have only been subjected to superficial analysis, and their stratigraphic position is uncertain. In total, 46 profiles (two from the Bieszczady Mountains), including nine formerly unpublished studies, were used in the construction of the maps (Fig. 25, Tab. 4, Appendix, this volume). The Bieszczady Mountains, a fragment of the Eastern Carpathians lying within borders of Poland, have been mentioned in interpretations mainly for taxa that migrated to the Western Carpathians from that specific direction.

Maps, prepared by D. Nalepka and A. Walanus with the use of POLPAL software (Walanus & Nalepka 1999, Nalepka & Walanus 2003a), present the history of the last 10 000 years for the most important tree species growing in the Western Carpathians. The maps show time-slots at 500-year intervals and are of a dot type indicating the time of local appearance of a given taxon. Dot maps were also used for time-slot "0", as several sites were studied 50 years ago. Moreover, particular authors collected the top samples from different depths (usually between 0 and 10 cm), therefore such data do not always correspond to the present-day range of occurrence of the taxa under discussion.

CONTENTS

Introduction

Geological and geomorphological setting by: Wlodzimierz Margielewski

Altitudinal vegetation belts of the Western Carpathians by: Zbigniew Mirek

History of palynological studies in the Polish part of the Western Carpathians . Remar ks on pollen analysis at montane sites and the importance of research on the modern pollen rain

by: Andrzej Obidowicz

Western Carpathian isopollen map construction method by: Dorota Nalepka & Adam Walanus

Calibration of the time horizons stated in radiocarbon age for the West Carpathias isopollen maps by: Adam Walanus & Dorota Nalepka

Isopollen history of trees and Shrubs

Abies alba Mill. – Fir by: Andrzej Obidowicz & Dorota Nalepka

Alnus Mill. – Alder by: Kazimierz Szczepanek, Andrzej Obidowicz & Dorota Nalepka

Betula L. – Birch by: Wojciech Granoszewski & Dorota Nalepka

Carpinus betulus L. – Hornbeam by: Wojciech Granoszewski & Dorota Nalepka

Corylus avellana L. – Hazel by: Andrzej Obidowicz & Dorota Nalepka Fagus sylvatica L. – Beech by: Jacek Madeja, Andrzej Obidowicz & Dorota Nalepka

Fraxinus excelsior L. – Ash by: Piotr Kolaczek & Dorota Nalepka

Larix decidua Mill. – European larch by: Kazimierz Szczepanek, Wojciech Granoszewski & Dorota Nalepka

Picea abies (L.) H. Karst. – Spruce by: Andrzej Obidowicz, Kazimierz Szczepanek & Dorota Nalepka

Pinus cembra L. – European stone pine by: Wojciech Granoszewski, Kazimierz Szczepanek & Dorota Nalepka

Pinus L. subgenus Pinus (subgen. Diploxylon (Koehne) Pilger) – Pine by: Jacek Madeja, Agnieszka Wacnik & Dorota Nalepka

Tilia L. – Lime by: Agnieszka Wacnik, Jacek Madeja & Dorota Nalepka

Ulmus L. – Elm by: Piotr Kolaczek & Dorota Nalepka

Holocene history of development of zonal forest communities in the Western Carpathians by: Andrzej Obidowicz

APPENDIX Sites included in plotting isopollen maps of the Western Carpathians

References

Late Glacial and Holocene history of vegetation in Poland based on isopollen maps (2004)

Edited by: Magdalena Ralska-Jasiewiczowa; Cracow 2004;

W. Szafer Institute of Botany, Polish Academy of Sciences; ISBN: 83-89648-23-7

Format: A4 (20,5 × 29,5 cm); 444 pages;

Price: EUR 98,00 per copy (postage included).

Please be informed that the orders will be shipped after receipt of payment.

Payment can be done either by bank transfer to our bank account or by credit card payments. We can not accept bank cheques.

As of May 1, 2011 customers from countries of the European Union as well as from other countries in the world must add 5% VAT to listed prices.

This does not apply to customers having a European VAT Identification Number, which must be quoted when ordering.

In case of bank transfer, the money should be transferred to our bank account number: PL 11 1240 1431 1978 0000 1047 5443

IBAN number PL 11 1240 1431 1978 0000 1047 5443

Please find below the full data of our bank:

Bank Polska Kasa Opieki S.A. I Oddzial Krakow; ul. Rynek Glowny 31, Krakow, Poland; SWIFT code: PKOPPLPW, We also accept payments by Visa and Eurocard/Mastercard credit cards. If you would like to pay by credit card, please be so kind as to send us the following information by fax or by mail:

1. your credit card name and number

2. expiration date of your card

3. name and surname of the owner of the card

4. your address (as given to your Bank)

5. total sum of payment

6. title of the book and quantity of copies

7. the card owner's signature

Please note that we are required by our bank to deliver the full number of the credit card, including your CVC 3 digit number. This number is placed on the reverse side of the card next to your signature and it is necessary in order to process your transaction.

Yours faithfuly,

Danuta Janik

IB PUBLISHER POLISH ACADEMY OF SCIENCES W. SZAFER, INSTITUTE OF BOTANY ul. LUBICZ 46, 31-512 KRAKÓW, POLAND e-mail: wydawnictwa@botany.pl fax: + 48 12 42 41 731

UPCOMING MEETINGS

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 Institute of Geology of the Ufimian Scientific Centre,

Russian Academy of Sciences, Ufa North-East Interdisciplinary science research institute, Russian Academy of Sciences, Far East Branch,

Magadan Scientific Committee

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.

Reprinted from: Permophiles Issue #59 June 2014

24th International Workshop on Plant Taphonomy 2015, November 26 - 27, 2015, Stuttgart, Germany

The International Workshop on Plant Taphonomy 2015 will be held at the State Museum of Natural History in Stuttgart, ermany, from November 26th to 27th. In line with the traditionally open character of the International Plant Taphonomy meetings, we cordially welcome contributions (oral, poster and/or workshops) dealing with various palaeobotanical topics and we invite contributions dealing with a broad range of issues. One highlighted topic, for example, will concentrate on fossil leaf traits and their significance in palaeoclimatology, palaeoceophysiology and taxonomy.

More information can be found on http://www.plant-taphonomy-2015.naturkundemuseum-bw.de/.

Please note that the deadline for registration and abstract submission is September 1st, 2015.

Contact Anita Roth-Nebelsick anita.rothnebelsick@smns-bw.de

Organizers:

Anita Roth-Nebelsick (anita.rothnebelsick@smns-bw.de) Michaela Grein (michaela.grein@smnsbw.de) Johanna Eder (johanna.eder@smns-bw.de)

The 10th European Palaeobotany and Palynology Conference

First Announcement: The 10th European Palaeobotany and Palynology Conferencewill be held in Dublin on the 12th to 19th of August 2018 at University College Dublin. Partner organizations include Trinity College Dublin and the National Museum of Ireland. We look forward to welcoming you in 2018!



& PALYNOLOGY CONFERENCE

Jennifer McElwain, Earth Institute, University College Dublin Chair of EPPC organizational committee

May 2015

CALL FOR NEWS AND NOTES

Please send submissions for the next news letter by 30 June 2015 to:

Mike Dunn Department of Biological Sciences Cameron University Lawton, Oklahoma 73505 Ph.: 580-581-2287 email: michaeld@cameron.edu