



IOP NEWSLETTER 67

NOVEMBER 1999

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PLEASE MAIL NEWS AND CORRESPONDENCE
TO YOUR REGIONAL REPRESENTATIVE OR
TO THE SECRETARY FOR THE NEXT
NEWSLETTER 68.

The views expressed in the newsletter are those of its
correspondents and do not necessarily reflect the
policy of IOP.

President: J. Galtier (*France*)

Vice Presidents: J. Anderson (*S. Africa*) - A. Herman (*Russia*) - K. Uemura (*Japan*)

Secretary: Prof. M. C. Bouvier

University of East London - Romford Road - London E15 4LZ - England

Earlier this month I went to a privately organised "day of conversation" with two palaeontologists and two philosophers. It was about art and science in the next century, wanting to know if science can better help the planet survive the environmental trauma we are giving it, especially in the Third World. The philosophers were concerned about two main things: how and why we scientists create hypotheses, and why we don't take responsibility to follow the results through to the world outside.

Creating an hypothesis can be as original as any work of art, any painting, novel or whatever. To see our world subjectively rather than objectively is just as much for us as the artists, though many scientists find it a hard stream to jump. I think that some of the topical problems in our discipline, how the major clades originated, what a species is (let alone a fossil one), and so on, would benefit from more subjective approaches. To save our world there is little time and less money: we can't afford to split into more precision and nit-picking.

The strength of our social responsibility is connected to a different sense of purpose. Palaeobotany has intimate relevance to many of these problems, climate change and GM foods to name but two, and we have a lot to say about both. Not only do we have a responsibility, from unique positions, to speak out, but we also have the means to follow our ideas through. Increasingly I hear an arrogant, possibly narcissistic, attitude among some of us at times, about the spread of palaeobotany's value. At so many meetings, there are people who declare their own hand without listening to their partner's bidding, let alone to the score in the rubber or the match.

Locally, regionally, internationally, there are environmental and other problems that our expertise can help resolve. If we rid our approach of some of that arrogant objectivity, perhaps we can connect quickly to unexpected places of interest: rising flood plains, for instance. We need to cast our lines into well baited waters. There are plenty of them and time is getting on.

M.C. BOULTER, London

ELECTION OF OFFICERS

This is to announce formally, according to our 1995 Constitution, the need for an election of a President, a Secretary, three Vice Presidents and three Members-at-large. **Nominations must be received at the IOP office, from any member of IOP, by the end of January 2000.**

The resigning officers are J. Galtier (President), M. Boulter (Secretary), J. Anderson A. Herman K. Uemura (Vice Presidents), M. Bande J. Eder-Kovar and E. Truswell (Members-at-large).

E-mail your nominations to fisher2@uel.ac.uk or post them to the IOP office.

GENERAL ASSEMBLY

This is to announce formally, according to our 1995 Constitution, that the next IOP General Assembly will take place in Qinhuangdao, Hebei, P. R. China, in August, 2000. All members are welcome to submit items for the agenda and to attend.

E-MAIL AND IOP WEB SITE

Please check that your e-mail address is on the IOP website at <http://ibs.uel.ac.uk/ibs> or at <http://www.biodiversity.org.uk> Let us know if you have a new address so it can be added. Equally, please tell us to take your address off the list if you want to hide. E-mail fisher2@uel.ac.uk or boulter@uel.ac.uk

NEW IUBS WEB SITE

This is now available at www.iubs.org, and gives details of members, and the progress of IUBS projects. There are facilities to enter discussions and obtain the newsletter *Biology International*.

COMMENTS ON THE ELECTRONIC NEWSLETTER

The last newsletter was sent electronically to those of you with e-mail addresses. We asked you to send your reactions. After all, there must be a strong argument for the next IOP Secretary to distribute the newsletter in this way. Here are some of the comments we received.

Thank you for the attached RTF version of the IOP 66 newsletter. It works well, no problem and I think the IOP will soon spare a lot of money on postage costs. I 100% support this way of mailing the newsletter! **M. Fairon-Demaret**

I am afraid the brave new world of internet-based IOP Newsletters will have to pass me by. It came out as gobbledy-gook. Your system uses some sort of encoding which my server cannot handle. It looks like this:

M>UQR=&8Q7&%N<VD@7&1E9F8T7&1E9
FQA:F<Q,#,S>UQF;VYT=&)L>U QF-%QF M< F]
M86Y<9FH87)S970P7 &9P<G\$R(%1I ;65S(\$YE
=R!2;VU A;CMJ> UQF-5 QFM<W =I< 9FH87)S9
70 P7&9 P<G\$R(\$%R:6% L.WUJ>U QC;VQO<G1
B;# M <<F 5D M,%QG<F5E; C!<8FQU93 `[7])E9#
!<9W)E96X P7&)L=64R -34[7])E9 #!<9W)EM96
XR-35<8F QU93(U3M<< F5D, %QG<F5 E;C(U-
5Q B;'5 E,#L-"EQR960R-35<

All very pretty, but rather difficult to understand.

Chris Cleal

I was really excited on finding the Newsletter 66 on screen, and after dire warnings of what might ensue I took it on board. However, I have only been able to print out the title page and contents. Must wait for snail to arrive. Perhaps guidance could be given for the electronically disadvantaged in a supplement of the next issue. **Bill Chaloner**

I got this message, but no attachment. **Edie Taylor**

Congratulations on getting out the IOP News Letter electronically. It is a real treat to have it so soon, and this undoubtedly will dramatically cut mailing costs in the future. If I may make a suggestion - The original format could be maintained and the whole news letter would be readily accessible to all without having the correct extraction program, etc. If you were to print it to Adobe Acrobat Reader and post it on the WEB. The reader is available to all at no cost. It gives clean, formatted copy, and prints out on a minimum of pages. You can even put up the web site for the free download of Acrobat reader for those who may not already have it. Here's an example: <http://www.plantbio.ohiou.edu/epb/instruct/courses.htm>. **Gar Rothwell**

Good idea to send as *.rtf attachment. Unfortunately, it came through as "garbage" in my system (i.e., bunch of unreadable characters). I think that it may be an encoding problem. Some (?many) of us use the cheap free version of Eudora, which does not have the "uuencoded" option for file attachments.

This means that we can't receive files in this format. Could you please send again using "BinHex" encoding for the file attachment. **Paul Kenrick**

EXCLUSIVE DISCOUNT OFFER FOR IOP MEMBERS

ELSEVIER SCIENCE offers you a **personal subscription** to the **Review of Palaeobotany and Palynology** at the very reduced rate of **US\$ 125.00** for the whole year of 2000. IOP members can thus receive all 5 volumes (20 issues) of the journal at their own desk!

The conditions are that

- your institute/organization already has a regular rate subscription for 2000 to the journal
- the associated personal subscription is exclusively for your personal use
- the associated personal subscription is prepaid (personal cheque, credit card)

This offer is valid during 2000, until further notice.

Are you interested? Just send your name, with full postal and e-mail address, your personal IOP membership number as well as your library's subscription number to: *Drs. F. Wallien, Elsevier Science, P.O. Box 1930, 1000 BX Amsterdam, The Netherlands*, referring to this discount offer. Elsevier will then send you the special application form for your personal subscription.

Would you like to receive further details regarding the journal, just check the journal's home page at <http://www.elsevier.nl/locate/revpalbo>

FORTHCOMING MEETINGS

THE EVOLUTION OF PLANT PHYSIOLOGY, London, 9-11 April 2001

In recent years various initiatives in palaeoclimatology have led to what might be termed speculative palaeophytophysiology. Coupled with biomechanical data, organic geochemistry and cladistic analyses utilising abundant genetic data, these studies are revealing new facets of plant evolution. It is with these thoughts in mind that we offer a symposium with the working title of 'The Evolution of Plant Physiology', for the 2001 meeting of The Linnean Society Specialist Group. This high profile, international meeting will encompass physiology in its broadest sense (i.e. including biochemistry, histology, mechanics, development, growth, reproduction and with an emphasis on the interplay between physiology, development and plant evolution) with contributions from both neo- and palaeobotanists.

The tentative programme of sessions with provisional keynote speakers is:

Origins of Plant Physiology: John Raven FRS, Dundee, UK.

Vegetative Physiology: Professor Bill Stein, Binghamton, USA.

Phytochemistry: Professor Jan de Leeuw/Pim van Bergen, The Netherlands.

Reproductive Physiology, Xylem Physiology
Cladistics, Phylogenetics and Physiology: Dr. Mark Chase, RBG Kew, UK.

Contact HemsleyAR@cardiff.ac.uk or i.poole@earth.leeds.ac.uk

6th INTERNATIONAL ORGANIZATION OF PALAEOBOTANY CONFERENCE, Qinhuangdao, Hebei, P. R. China, July 31 - August 3, 2000

The conference is organized by the Palaeobotanical Society of China and the Palaeobotanical Committee of the Botanical Society of China. The Second Circular is now available at www.nigpas.ac.cn

The Sixth Conference of the International Organization of Palaeobotany (IOPC-VI) will be held in Qinhuangdao City, China from July 31 to August 3, 2000. The conference will convene with an Opening Ceremony. The Scientific Program will be presented in Plenary Lectures, Contributed Paper Sessions (both Oral and Poster sessions) and Symposia. Receptions, sightseeing, and other social events will also be arranged during the conference. Four Field Trips will be organized before and after the conference.

Your response to this Second Circular will greatly aid the Organizing Committee in settling the final program of the conference. Any suggestions regarding the conference will still be warmly welcomed. Please write to the Secretary-general of the Organizing Committee, Prof. Liu Lujun (Postal address: Nanjing Institute of Geology and Palaeontology, the Chinese Academy of Sciences, 39 East Beijing Road, Nanjing 210008, China. Fax: 86-25-3357026; Tel: 86-25-6637208; E-mail: PALEOBOT@PUBLIC1.PTT.JS.CN). The Third Circular will be distributed before the end of March 2000 only to those who respond to the *Reply Form* of the Second Circular.

Please note that the Organizing Committee of the 10th International Palynological Conference (IPC-X) changed its date to June 24 - 30, 2000, nearly one month ahead of the scheduled IOPC-

VI. Please also note that the old email address has been changed to:

PALEOBOT@PUBLIC1.PTT.JS.CN

The scientific program will consist of invited papers for Plenary Lectures and Symposia and volunteered contributed papers for both oral and poster sessions. Although each participant can author more than one paper, but only one oral speech (plenary lectures excepted) will be scheduled for each participant. For every oral speech, a 35mm projector, an overhead projector will be available. Additional computer technology (e.g., a Data Projector instrument connected directly with a computer) or Internet access will be available with extra charges. For those wishing additional technical services, please contact the secretary-general in advance.

Symposia

- (1) Early land plants (Organized by Dianne Edwards: Department of Earth Sciences, University of Wales, Cardiff, P O Box 914, Cardiff, CF1 3YE, UK. Email: earth@cardiff.ac.uk)
- (2) Late Palaeozoic palaeophytogeography (by Robert H. Wagner: Jardin Botánico de Córdoba, Avda Le Linneo S/N, 14004 Córdoba, Apartado 3048, Spain. Email: crlwagro@uco.es & Herman W. Pfefferkorn: Dept of Geology, University of Pennsylvania, 240 South 33rd Street, Philadelphia, PA 19104-6316, USA. Email: hpfeffer@sas.upenn.edu)
- (3) Gymnosperms (by Gar Rothwell: Dept of Environmental and Plant Biology, Ohio University, Athens, Ohio 45701, USA. Email: rothwell@ohio.edu)
- (4) Origin of angiosperms (by David Dilcher: Division of Paleobotany, Florida Museum of Natural History, University of Florida, Gainesville, FL 32611-7800, USA. Email: dilcher@flmnh.ufl.edu & Valentin A. Krassilov: Palaeontological Institute, 123 Profsoyuznaya Street, 117647 Moscow, Russia. Email: vkras@paleo.ru)
- (5) Molecular and chemical methods in palaeobotany (by Hong Yang: Department of Science and Technology, Suite C, Bryant College, 1150 Douglas Pike, Smithfield, Rhode Island 02917, USA. Email: hYang@bryant.edu & Edward M. Golenberg: Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202, USA. Email: egolenb@biology.biosci.wayne.edu)
- (6) Fossil cuticles (by Georges Barale: Palaeobotany Laboratory Claude Bernard University, Bt 401A,

43, Bd. du 11 Nov. 1918, F-69622 Villeurbanne Cedex, France. Email: barale@univ-lyon1.fr & Hans Kerp: Abt Palaobotanik, Westfaelische Wilhelms-Universitaet, Hindenburgplatz 57-59, D-48143 Muenster, Germany. Email: kerp@uni-muenster.de

- (7) Palaeoclimate and its interaction with vegetation (by V. Mosbrugger: Inst Und Museum fur Geologie und Palaontologie, Universitat Tubingen, Sigwartstrabe 10 - D7400, Tubigen 1, Germany. & Scott L. Wing: Dept. of Paleobiology, NHB121, Smithsonian Institution, Washington, DC 20560, USA. Email: wings@nmnh.si.edu)
- (8) Intercontinental floristic similarities and differences through the latest Cretaceous and Tertiary (by Steven R. Manchester: Florida Museum of Natural History, Dickinson Hall; Museum Rd. and Newell Dr. PO Box 117800, University of Florida, Gainesville, Florida 32611-7800, USA. Email: steven@flmnh.ufl.edu & Zlatko Kvacek: Dept of Paleontology, Charles University, Albertov 6, 123 43 Praha 2, CZECH REPUBLIC.)
- (9) The ecology of ferns through time (by Johanna H.A. van Konijnenburg-van Cittert: Laboratory of Palaeobotany and Palynology, Budapestlaan 4, 3584 CD Utrecht, the Netherlands. Email: jtvk@kgk.nl & Margaret E. Collinson: Geology Department, Royal Holloway University of London, Egham, Surrey, TW 20 0EX England. Email: m.collinson@gl.rhbc.ac.uk)
- (10) The Aquatic vascular plants in the fossil record (by Ruth A. Stockey: Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada, T6G 2E9. Email: ruth.stockey@ualberta.ca)
- (11) Prospects for palaeobotany and its education in 21st century (by M. Banerjee: Department of Botany, Palaeobotany Palynology Section, 35, Ballygunge Circular Road, Calcutta-700 019, India. Email: manjubanerjee@hotmail.com & Jiarong Mi: Department of Geography, Tianjin Normal University, Tianjin 300074, China)

Satellite workshop:

A pre-conference satellite workshop on "Techniques in Molecular Paleobiology" will be convened by Prof. Hong Yang (hyang@bryant.edu) and Prof. Edward Golenberg (egolenb@biology.biosci.wayne.edu) at the China University of Geosciences (Wuhan) during July 22-24, 2000. The workshop is aimed to promote a synthesis between paleontology and molecular

genetics and to exchange research ideas between paleontologists and molecular biologists. Scheduled activities include: talks by leading scientists of both fields, current reports on recovery of ancient biomolecules and their applications, demonstration of molecular paleobiology techniques, and dialogues between molecular biologists and paleontologists.

Convenors of each symposium and the workshop are fully in charge of organizing the event. Those who are interested in any symposium or the workshop please contact the convenor(s) directly.

Contributed Paper Sessions

Contributed papers may be presented in the form of a 15-minute oral presentation followed by a 5-minute discussion, or as a poster. For poster sessions, approximately 1.25 x 0.9 square meters poster boards will be provided.

Abstract

Participants are requested to prepare abstracts of either contributed or invited papers. Abstracts will be reproduced in the abstract volume as they appear in the submitted form. Please read the following instructions carefully:

1. The abstract should fit within a 17cm wide space, created with word processor and typed by a laser printer on clean white paper. Please use 10-point type.
2. One line-drawn diagram or figure suitable for photocopy reproduction may be included. Photographic pictures are not acceptable.
3. The abstract should be started with a TITLE in CAPITAL LETTERS followed by names of authors (with initials) and institute affiliations.
4. Text should be started with 5-space indentation.
5. No more than two A4 pages (including diagram or figure) is requested.
6. Abstract deadline: Please send your abstract to the secretariat before April 1st, 2000. Sending by email is encouraged.

Arrival and Departure

The secretariat ensures to arrange a convenient arrival route for all overseas participants from the ports of entry to Qinhuaungdao City. What a participant needs to do is to indicate clearly the port and time of entry on the *Registration Form* attached to the Third Circular. For participants entering China through Beijing, Shanghai, and Nanjing, special reception personnel will be at these international airports to meet them.

Please note that the pre-conference field trip (the Yunnan trip for early terrestrial plants) will be started from Nanjing. Participants who joint this trip are advised to contact the secretary-general in advance,

informing him the port and time of entry on *Registration Form*.

The arrival of participants attending the 3-day **Beijing Suburbs Tour** will be arranged by the vice secretary-general, Prof. Xu Zhaoliang (Postal address: Institute of botany, the Chinese Academy of Sciences, Beijing 100093, China; Fax: 86-1-62593385; Tel: 86-1-62591731). Please contact him directly before April 1st, 2000.

The departure of any participant (including those who are interested in travelling in China after the conference) will be arranged by the secretariat. For participants of the post-conference field trips the leader of each trip will be responsible for their departure.

Accommodation and Meals

Accommodation will be in a comfortable hotel in Qinhuangdao City. Transportation will be provided between the hotel and downtown. Modern communication (e.g., fax, e-mail, international long distance call, etc.) will be available in the hotel.

The accommodation rates cover all housing and meals during the conference period but excluding international telecommunication, personal entertainment and laundry. Generally, standard rooms with two beds are available. Rate for a room occupied by a single person is US\$100/day/person. Rate for a room shared by two persons is US\$60/day/person. The single occupancy rate will be reserve only for participants without companion who have clearly indicated on their *Reply Forms* of the Second Circular that they are not willing to share a room with others.

Field Trips

The field trip II, III, IV, and VIII listed in the First Circular have been cancelled due to insufficient numbers of participants responded in the *Reply Forms* of the First Circular. The other four field trips as well as the Beijing Suburbs Tour remain unchanged, and will be rearranged as follows:

(Please note that the travelling fare of each trip covers the route for each trip respectively. It is provisional and subject to change according to the real cost at that time. The organizing fee includes costs of preparation, guidebook, and guide fee. The field cost covers all expenses during the field trip, including accommodations, meals, and local transportation.)

Pre-Conference Field Trip

FIELD TRIP I July 25 - 30

- ◆ Yunnan (Early terrestrial plants plus the world famous Chengjiang Biota and the China '99 Kunming International Horticultural Exposition)

- ◆ Travelling fare: US\$450.00 (Nanjing - Kunming - Beijing - Qinhuangdao)
- ◆ Organising fee: US\$100.00
- ◆ Field cost: US\$70.00 / day / person

Post-Conference Field Trips

FIELD TRIP II August 4 - 9

- ◆ Xinjiang (Permian - Jurassic plants)
- ◆ Travelling fare: US\$550.00 (Qinhuangdao - Tianjin - Urumqi - Beijing)
- ◆ Organising fee: US\$100.00
- ◆ Field cost: US\$100.00 / day / person

FIELD TRIP III August 4 - 13

- ◆ Heilongjiang - Jilin - Liaoning (Early angiosperms, Cenozoic plants, and Jehol Biota)
- ◆ Travelling fare: US\$400.00 (Qinhuangdao - Harbin - Jixi - Fuxin - Yixian - Fushun - Shenyang)
- ◆ Organising fee: US\$100.00
- ◆ Field cost: US\$80.00 / day / person

FIELD TRIP IV August 4 - 8

- ◆ Shanxi - Henan (Cathaysian flora, Early Triassic and Jurassic floras)
- ◆ Travelling fare: US\$350.00 (Qinhuangdao - Beijing Taiyuan - Zhengzhou - Beijing)
- ◆ Organising fee: US\$80.00
- ◆ Field cost: US\$60.00 / day / person

Registration Fees

Registration fees for the conference cover the cost for facilities, equipment, paper materials (including abstract volume) distributed to all participants, and the opening and closing ceremonies. Fees are as follows:

Professional Participant:	US\$200 (Before 1/4/00)
	US\$300 (After 1/4/00)
Student Participant:	US\$100 (Before 1/4/00)
	US\$150 (After 1/4/00)
Accompanying Participant:	US\$80 (Before 1/4/00)
	US\$100 (After 1/4/00)

Payment must be in U. S. dollars. Personal Check, Money Order, or cash are acceptable. Please send your registration fee directly to the **secretariat** (Liu Lujun). Postal address:

Nanjing Institute of Geology and Palaeontology,
Chinese Academy of Sciences,
Nanjing 210008, China
E-mail: paleobot@public1.ptt.js.cn
Fax: 86-25-3357026

IOP 2000 STUDENT TRAVEL AWARDS

The Paleobotany Section of the Botanical Society of America will make UP TO TEN AWARDS of \$1000 each for STUDENT TRAVEL AWARDS for travel to and participation in the Sixth International Organization of Palaeobotany Conference to be held at Qinhuangdao, China next July 31-August 3, 2000.

Awards are restricted to current student members of the BSA Paleobotany Section.

Please send one copy of your application by February 20, 2000 to each of the following Student Travel Award Committee members:

Dr. Kathleen Pigg

Department of Plant Biology, P.O. Box 871601
Arizona State University
Tempe, AZ 85287-1601, USA
kpigg@asu.edu FAX: 480 965 6899

Dr. William A. DiMichele

Department of Paleobiology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20560-0001, USA
dimichele.bill@nmnh.si.edu
FAX: 202 786 2832

Dr. Stephen E. Scheckler

Department of Biology 0406
Virginia Tech
Blacksburg, VA 24061-0406, USA
stephen@vt.edu FAX: 540 231 9307

The application letter should state:

1. Your full name, email address, and institutional address.
2. Your academic level (BS/BA, MS program, have MS and now in PhD program).
3. A list of your publications (in any field) for the past five years.
4. State whether you have applied for financial aid from IOP (we encourage this).
5. And include a copy of the abstract and title that you plan to submit to IOP-VI (identify whether for a contributed paper or poster).
6. Your application must be accompanied by a letter of support from your advisor or committee chair (sent separately or included in a sealed and signed envelope).

Applications and supporting letters should preferably be sent by email, but may also be sent by postal mail or FAX so long as they arrive to all three committee members by February 20. Notification of

awards will be made by March 5, 2000 by email, followed by hard copy.

Further information about the IOP-VI meeting can be found by links from the home pages of IOP <<http://ibs.uel.ac.uk/palaeo/default.htm>> and the Nanjing Institute of Geology and Paleontology <<http://www.nigpas.ac.cn>>, the latter of which also includes a link to the text of the Second Circular for IOP-VI <<http://www.nigpas.ac.cn/iopc2nd.htm>>.

Please note that the Second Circular does not yet include on-line registration for receipt of the Third Circular and must be replied to by postal mail. The deadline for application for financial aid from IOP is January 1, 2000. No applications will be accepted by IOP afterwards. See the Second Circular for further details of their application process and mailing address.

TERTIARY PALAEOBOTANY IN MELBOURNE

The research group led by David Greenwood has been active at Victoria University of Technology. Papers on Paleocene-Eocene vegetation and climates were presented at conferences in Sweden and the US by Greenwood and Vadala and students. In June, the 'Early Paleogene warm climates and biosphere dynamics' meeting was held at the University of Göteborg in Sweden, where Greenwood presented an analysis of the Cambalong Creek Late Paleocene macroflora and the Early Eocene floras of the Mount Hotham area based on work by group members. These floras contain abundant organically preserved leaves and shoots, and document species rich mesothermal forests containing conifers (*Agathis*, *Dacrycarpus*, & *Libocedrus*) and many dicots (e.g. *Nothofagus*, Elaeocarpaceae, Lauraceae, & Proteaceae). Palaeoclimates in south-eastern Australia appear to have changed little over the interval, with substantive floristic change only occurring at the Early-Middle Eocene, rather than the P-E boundary. A poster presented by Vadala at the International Botanical Congress in St Louis in August provided systematic detail on these floras. Research continues on Miocene floras from Central Australia (M.Sc. student).

Details of research activity, including publications by group members can be found at our website: www.vu.edu.au/foes/sols/prg/

D.R. GREENWOOD, Melbourne, Australia
David.Greenwood@VU.edu.au

REPORTS OF RECENT MEETINGS

A DISCUSSION ON PALAEOCARPOLOGY

During the 5th European Palaeobotanical and Palynological Conference, held in Cracow from June 26th to 30th 1998, a group of about ten persons sat together to discuss the best way to improve the exchange of information in the field of palaeocarpology. The meeting started with the presentation of the first, preliminary, annual report on the subject ("Directory of European Palaeocarpology for 1996-97" = DEP), which has been printed on *Documenta naturae* special issue N° 10 (Munich). Afterwards, several proposals made by the DEP contributors have been discussed and voted.

There was a wide agreement on the point that information about palaeocarpology ought to be gathered also in the future years, but several modifications to the structure of the annual report had to be introduced. So in the report for 1998 we tried to collect information concerning studies on the fossil record of female reproductive structures of Spermatophytes throughout the whole Northern Hemisphere. The resulting work (issued in 1999) is in press on "*Documenta naturae*", under the title: "Palaeocarpology of the Northern Hemisphere, an annual report for 1998"... The paper contains bibliographies, personal news, standing interests and addresses of contributors, but also general news. An important section is the one reporting the list of new names and the diagnosis of the new species described in 1998 (and also 1997, 1999).

In order to reach a wider array of persons, the work has also been located in the internet site: <http://www.dst.unito.it/paleocarp/paleoframe.htm>. Hopefully, this may be a first step towards a more complete synthesis on the progress of palaeocarpology.

E. MARTINETTO, Torino, Italy

10ème COLLOQUE DE L'ORGANISATION FRANÇAISE DE PALEOBOTANIQUE, Zaragoza, Spain, 11-12 November, 1999

For the first time, a meeting of the *Organisation Française de Paléobotanique* was held in Spain, in the splendid city of Zaragoza. The meeting was attended by 20 palaeobotanists and palynologists from Belgium, France, Portugal and Spain. Because of the distant southern location, the attendance was not as large as usual, but the enthusiasm was in inverse proportion!

Most of the Thursday field trip was dedicated to the detailed visit of the Permian-Triassic sequence of Tabuena-Rodanas about 60 km south-west of Zaragoza. Under the expert and enthusiastic guidance of José Bienvenido Diez, we have been introduced to the geology, sedimentology and palaeobotany (Voltzia-type flora) of this nearly deserts but fascinating area. At the end of the afternoon we visited, under the direction of Maria-Eugenia Dies Alvarez, the protected Cambrian paleontological site of Murero near Daroca, where algae filaments are quite common associated with sponges and trilobites. Despite the glacial wind everybody much enjoyed the day, including the superb lunch-paella in the Rodanas Inn and, on the way back, the? visit to the small paleontological museum in Ricla which ended with a special bodega vino tinto degustation.

Before the beginning of the Friday meeting, Jean Broutin paid an emotional homage to Prof. Edouard Boureau, who passed away on October 2, 1999. During the meeting itself, 9 papers were presented, ranging from an overview of the taphonomy and palaeoecology of Late Carboniferous plants from Graissessac (France), through a fascinating illustration of the ultrastructure of Lower Cretaceous cuticles from Rubielos de Mora (Spain), to new data on the Miocene floras from the same area. As a result of the small number of presentations, we had the time for really constructive discussions between each talk. Thanks to our Spanish guests, everybody had the opportunity to taste delicious tapas for the midday meal (in fact, according to the Spanish way of life, we had the lunch at 2 pm!).

On the Saturday, some of us attended the VI Jornadas Aragonesas de Paleontologia, at Ricla. In a friendly atmosphere, more than 200 people participated to these 6th Palaeontological Days, which included field trips, conferences, exhibitions, ...and an excellent gastronomic meal!!!

We just would like to emphasize the wonderful hospitality of Javier Ferrer Plou, José Bienvenido Diez Ferrer (the loquacious "Bienve"), Cristóbal Rubio Millán, and Maria-Eugenia Dies Alvarez. The organization was without failure, and everybody agreed on the perfect Spanish hospitality.

After Liège (1998) and Zaragoza (1999), the association will come back to its home country, as the 2000 meeting will be held in Lyon.

J. GALTIER, Montpellier, **P. GERRIENNE**, Liège

GEOLOGICAL AND BIOLOGICAL EVIDENCE FOR GLOBAL

CATASTROPHES Esperaza/Quillan, Aude, France, 26th- 30th September 1999 (Dinosauria Impact ESF) ed. by E. Buffetaut and J. Le Loeuff.

The programme concerned the extinction of organisms after an impact, especially at the K/T boundary, but also the Ries impact. Around 40 lectures gave an overview on geochemistry, sedimentology, mass extinctions and other topics (very few palaeontological ones) of this interesting field of science.

About 50 participants discussed not only in the conference rooms, but also in the field, where one terrestrial and one marine profile could be studied, concerning the K/T boundary. Sometimes the ideas were very controversial, but this is common in scientific discussions.

2) An announcement for an interesting conference in Libya: Sedimentary Basins of Libya - second symposium, Geology of Northwest Libya: Tripoli 6-8 Nov. 2000

Please contact: Secretary General Geology of Northwest Libya Symposium, National Oil Corporation (NOC), P.O.Box 2655, Tripoli, Libya, G.S.P.L.A.J., e-mail: noc_clib@hotmail.com

A GERMAN WORKGROUP IN PALAEOBOTANICAL BIOSTRATIGRAPHY is active in the following fields:

- a) open pit Hambach, Rhenish Browncoal, Miocene to Pliocene, especially the Plio/Pleistocene boundary. We work especially with fruits, seeds, but also with leaves and palynology. Some items are published and available in Documenta naturae (contact the author).
- b) molasse floras, together with Erwin Knobloch (Praha); especially leaf floras, stratigraphy, paleocology, palaeoclimate.
- c) Cretaceous woods and fruits and seeds from the Aachen sands - just in preparation.
- d) fossil floras from Guatemala (leaves, fruits, woods)
- e) fossil woods from India
- f) fossil forest from Sardegna - Miocene or Oligocene stems and algal reefs around such stems.
- g) Neogene floras from the Mediterranean, a reconstruction of vegetation, ecological conditions and especially of the climatic conditions (see Flora Tertiaria Mediterranea (in the documenta naturae list).

U. GREGOR AND J. GREGOR, Munich

NOMENCLATURE

A DAY OR TWO IN SAINT LOUIS

Another International Botanical Congress has come and gone and with it, as usual, an eventful nomenclatural session. All in all, we feel that paleobotany (including paleopalynology) was served well in St Louis in August, and that the changes to the Code that came to pass will have a stabilizing and clarifying effect on paleobotanical nomenclature, rather than an obfuscating one.

Of the Big Ticket items, the concept of an overriding code ("BioCode") for all organisms was put on hold, although a committee will continue to take note of the ways in which the several existing codes could be harmonized. The dream of a new, universal code for the new millennium was a seductive one. But seduction is commonly on the path to dysfunction, so many of us were greatly relieved to see this project shelved. With regard to other big issues, no aspects of the Names in Current Use proposal passed, though discussions appear to continue. There is no current or planned paleobotanical activity on this front, anyway. Nor was anything passed relating to Registration: all proposals were withdrawn, but the issue will probably reappear in the future. For now, all mention of Registration in the Code will be removed.

On the more specific items, the proposals of Fensome et al. (Taxon, v.47, p.489-490) were passed. These regarded clarification of the designation of types of the names of fossil plants. Thus (pending minor modifications by the Editorial Committee), Article 8.4 will now read:

The type of the name of a taxon of fossil plants of the rank of species or below is the specimen whose figure is, as of 1 January 2001, identified as being of the type and either accompanies or is cited in the valid publication of the name [New changes are underlined.]

After Article 8.4, another article will be added, as follows:

In cases where, prior to 1 January 2001, the type of the name of a taxon of fossil plants of the rank of species or below is designated but not identified among the illustrations, the name is validly published. However, one of the specimens illustrated in the protologue must be chosen as lectotype. This choice will be superseded if it is later demonstrated that the author of the name clearly intended another specimen illustrated in the protologue to be the type.

In summary, if you come across a name for which a type is indicated by, for example, a specimen

number, but no illustration is identified as being of the type, up to the end of 2000, the name is still validly published. After 2000, it is not. Any ambiguity, past, present or future, in this respect is thus removed.

With regard to the status of the "form-genus", two partly overlapping, but partly conflicting proposals had to be dealt with. To ease the potential conflict, a compromise proposal was worked out during the meeting by a consensus of the proponents of the original proposals (Chaloner, Greuter, Traverse and Nicolson; Fensome and Skog) and the members of the fossil plant committee present (Archangelsky, Faegri, Jansonius, Skog and Traverse). One of the main points of contention was what to call the entity that is in effect a combination of the former organ- and form-genus concepts. In the original proposals, Fensome and Skog had preferred to retain the term "form-genus" (or perhaps "form-taxa"), albeit with a modified definition. Chaloner et al. had suggested "parataxa", but this term is already in use for an evolutionary concept. As a compromise, the term "morphotaxa" was accepted as a simple and appropriate alternative by all.

The terminological question thus settled, the main part of the compromise proposal was to add a new paragraph to Article 11 (on priority), with two examples:

Fossil taxa may be treated as morphotaxa which for nomenclatural purposes comprise only those parts, life-history stages or preservational states represented by the corresponding nomenclatural types. Names for morphotaxa, for purposes of priority, compete only with names based on a fossil type representing that same part, life-history stage, or preservation state.

Ex.1. The genus *Sigillaria* Brongn. 1822, established for bark fragments, may in part represent the same biological taxon as the cone-genus *Mazocarpon* M.J. Benson 1918, which represents permineralizations, or *Sigillariostrobus* (Schimp.) Geinitz 1873, which represents compressions. Certain species of the genera (*Sigillaria*, *Mazocarpon*, *Sigillariostrobus*) can all be assigned to the family Sigillariaceae. Some species of these genera may be associated with the "root-genus" *Stigmaria* Brongn. 1822 and the "leaf-genus" *Cyperites* Lindl. & Hutton 1832; other species of *Stigmaria* or *Cyperites* may be assignable to the families Lepidodendraceae and Bothrodendraceae. All these generic names can be considered correct in spite of the fact that they may, at least in part, apply to the same organism.

Ex.2. The fossil cysts known under the generic name *Tuberculodinium* D. Wall 1967 may be retained under this morphogeneric name even though modern cysts of this type are known to be part of the life cycle of the extant genus *Pyrophacus* F. Stein 1883, which is the senior name if the two are considered taxonomically synonymous."

As part of this proposal, Article 3.3 is deleted, so that morphotaxa can be assigned to families, in contrast to the former situation for form-genera (in the legal sense).

Another aspect of Article 11 was modified - Article 11.7 will be modified to read "Names of botanical taxa (Bacillariophyceae excepted) based on a non-fossil type are treated as having priority over names of the same rank based on a fossil (or subfossil) type. (Bacillariophyceae are diatoms.) Thus, older names based on fossils, like *Tasmanites* and *Spiniferites*, can no longer have nomenclatural priority over modern, more recently named, counterparts like *Pachysphaera* and *Gonyaulax*.

The proposals of Traverse concerning illustrations as types of microfossils were withdrawn. However, a problem in this area is still perceived by some taxonomists, and this issue will be addressed within the committee between now and the Vienna IBC (2005). The following names are now conserved:

- 1) *Cyclopteris* Brongniart (fossil plants) against *Cyclopteris* Schrad. ex Gray (non-fossil *Pteridophyta*) (proposed by Cleal & Shute in Taxon 47: 448-450. 1998).
- 2) *Neuropteris* (Brongn.) Sternb. (fossil plants) with a conserved spelling and ultimate type (proposed by Laveine in Taxon 47: 451-452. 1998).
- 3) *Rhaetogonyaulacaceae* G. Norris (fossil *Dinophyceae*) against *Shublikodiniaceae* V. D. Wiggins (proposed by Fensome & al. in Taxon 47: 731-732. 1998).

Although not under the aegis of the Committee for Fossil Plants, many palynologists will be interested to know that the dinoflagellate family name Protoperidiniaceae has been conserved against the names Congruentidiaceae, Diplopsalaceae and Kolkwitzziellaceae.

The list of members on the current Committee for Fossil Plants will appear in a forthcoming issue of this newsletter. The present authors agreed to serve again as Chair and Secretary respectively, and we welcome your comments and questions on nomenclatural matters.

R. FENSOME (fensome@agc.bio.ns.ca), **J. SKOG** (jskog@gmu.edu).

R.FENSOME adds

The write-up above reports on what are important advances in making the International Code of Botanical Nomenclature more responsive to paleobotanical needs. This success results from the work of many people, and in recognition of this I would like to thank the members of the Committee for Fossil Plants who responded promptly and constructively to the ballots leading up to the St. Louis meeting. I'd also like to thank those members of the Committee for Fossil Plants who put in long hours, notably to forge the compromise on the form-genus issue: Sergio Archangelsky, Knut Faegri, Jan Jansonius and Al Traverse. Last, but by no means least, I'd like to thank Judy Skog for her hard work in compiling and reviewing the ballots, her communication skills at presenting the paleobotanical point of view and, generally, her dedication to the cause.

W.G. CHALONER writes:

The long-debated problem of how we handle the names used for fossil plants surfaced again at the Nomenclature Section of the International Botanical Congress, held in St. Louis last summer.

The early post-war versions of the Code of Nomenclature (ICBN), based on the Congresses held in Paris, Montreal, Edinburgh, and Seattle sought to differentiate form genera and organ genera of fossil plants. These concepts were dear to some worthy palaeobotanists of that time (notably James Schopf and Robert Potonie) while others were less enthusiastic. The category of organ genus was formally dropped from the Code some years ago, but we still had form genera; and that concept, as defined in the Code, has given rise to sustained wrangling over recent years. Two proposals came before the Nomenclature Section in St. Louis, both attempting to avoid that now rather battered term, but both aiming at much the same goal. Their objective was to make the Code's treatment of the genera of fossil plants conform more closely to the procedure generally followed by palaeobotanists!

One of these proposals came from Fensome and Skog (Chairman and Secretary respectively of the Special Committee for Fossil Plants) - see *Taxon* 46:557 - which retained the term form genus, but in a much wider sense than previously, in effect combining the terms form- and organ genus of earlier usage. The alternative, proposed by Chaloner, Greuter, Nicolson and Traverse - see *Taxon* 47:909 - introduced the term "parataxa" for fossil taxa at any level where the name was based on only some part of

the plant or its life cycle (meaning, of course, the great majority of fossil plant taxa). This concept, too, included form genera, but was of wider application.

These two packages of proposals had received very diverse levels of approval in the postal ballot (the straw vote on all nomenclature proposals conducted by mail to assess the views of a wide canvas of botanists before the Congress itself). In order to try to arrive at a solution which would be helpful to most palaeobotanists, combine the common ground of these two sets of emendments, and yet gain the approval of the Section, a group of us convened by Judy Skog met in St. Louis in July at the start of the Nomenclature Section meetings. Unfortunately the Chairman of the Fossil Plant Committee, Rob Fensom, had been unable to get to the St. Louis meeting. But five members of that Committee, Sergei Archangelski Knut Faegri, Jan Jansonius, Judy Skog and Al Traverse were all present, and I joined them on the frail pretext of being a past member of that committee. We came up with an alternative, and less emotive, term - "morphotaxa" and offered a series of minor changes to the Code which defined it in a way which we believed would be helpful to palaeobotanists. This new package of proposals was duly adopted by the Nomenclature Section, and will be included in the Code to be published early in the new year. The key elements of the changes are: -

Art. 3.3 is deleted - so getting rid of the contentious phrase relating to form genera not being assignable to a family, which worried a number of palaeobotanists.

In Art 3.4 - a note stating that "For the purpose of this Code, a morphotaxon is defined as a fossil taxon based on its particular form or structure, life history stage or preservational state".

To be added to Art. 11: - "Fossil taxa may be treated as morphotaxa which for nomenclatural purposes comprise only those parts, life history stages or preservational states represented by the corresponding nomenclatural types. Names for morphotaxa, for purposes of priority, compete only with names based on a fossil type representing that same part, life history stage, or preservational state."

The use of morphotaxon acknowledges that this concept can apply not only to genera but to fossil species within non-fossil ("living") genera - of which there are numerous Tertiary examples - as well as to fossil (extinct) genera which might previously have been treated either as organ genera or form genera.

Other action taken by the Nomenclature Section was, to this member at least, less helpful. Proposals that might have led to formal protection of lists of

"Names in Current Use" were rejected, as was the move to make mandatory Registration of new names a prerequisite for validity. Tentative moves towards a single Code of Bionomenclature were also defeated; the Section was not even prepared to entertain the designation of a Committee to explore further the "harmonization" of the several Codes. I came away with the feeling that those botanists whose research is mainly in the area of nomenclature seem generally to be too inward-looking and backward-looking - a sad and destabilising state of affairs !

The next IBC is scheduled for Vienna in 2005 - a worthy centre of European botany, and indeed palaeobotany. It should also see better representation of European palaeobotanists than the rather small number who were able to get to Missouri.

NEWS OF INDIVIDUALS

DIETER HANS MAI celebrated his 65th birthday with more than 70 guests at the Humbolt University in Berlin on December 6th. There were biographical presentations from Z. Kvacek and H. Walther, followed by lectures from B. Tiffney and V. Wilde.

LIZ KENNEDY completed her Ph.D. at the Open University in Milton Keynes last year and has taken up a two year post-doc based at the Institute of Geological & Nuclear Sciences in Wellington, New Zealand. She is working on the application of morphological methods of palaeoclimate analysis to Late Cretaceous and Tertiary leaf floras from the South Island of New Zealand.

JOAN WATSON is looking for a Ph.D. student to work at Manchester University on Mesozoic conifers from several countries worldwide; co-supervised by Paul Kenrick and funded by a NERC Studentship. A variety of excellent material is already available in Manchester and there is considerable potential for further collecting and visiting collaborators. The project is flexible and can be wide-ranging or fairly narrow to suit the candidate; either botanist or geologist, with luck both. If you know of anyone who might be interested and would be eligible contact: jwatson@fsl.ge.man.ac.uk

THOMAS SPECK has been appointed Hochschuldozent for Botany, Biophysics and Palaeobotany for the next 6 years at the Botanical

Garden of the University of Freiburg. During the winter term 1999/2000 he works as guest-professor with Dave Ferguson at the Department of Palaeobotany (Institute of Palaeontology, University of Vienna).

Together with Nick Rowe (Université de Montpellier 2) he runs a binational PROCOPE-project "Molecular systematics, biomechanics and functional analysis of stem structures: methods for a better understanding of evolution, ecology and niche formation of plants with different growth habits", supported by the DAAD (Germany) and A.P.A.P.E. (France) for the years 1999 and 2000. In this project studies on fossil plants are also included.

BOB HILL has moved from the University of Tasmania to the University of Adelaide's Department of Environmental Biology early in 1999.

BOB SPICER explains that the book, *Environmental Biology*, so glowingly reviewed in the last newsletter, is available through the Internet from www.amazon.co.uk for £19.50

OBITUARY

DAVENDRA DUTT NAUTIYAL, 1934 - 1999

Professor D. D. Nautiyal, an eminent Palaeobotanist and Morphologist, ex-head of the Department of Botany, expired on Monday, February 1, 1999. He has left behind him his loving wife, Mrs. Chhaya Nautiyal, a daughter Anuradha and a son Deepak. Born on 13th July, 1934, Prof. Nautiyal had his early education in his home town at Garhwal in Uttar Pradesh, graduation from D.A.V. College, Dehra Dun and Post-graduation in 1957 from Allahabad University.

He started research under Professor D. D. Pant and after obtaining a DPhil degree in 1961 he joined the Botany Department at Allahabad University as a Lecturer where he continued as Reader and Professor, to become Head of Department from 1988 to 1994. After retirement, he continued active research works with several projects and was equally active in the University administrative services till the last day of his life.

A dedicated research worker in palaeobotany, palynology and morphology, Professor Nautiyal was the first and most dedicated student of Professor Pant. They developed a school with a well trained

team of palaeobotanists and morphologists. They published a series of excellent papers on fossils and extant cycads, and also contributed papers in developing new concepts, discovering new genera, species and combinations and a new group, the Buriadiales. Their work made them famous and both of them are recognized as authorities on the modern cycads and reproductive organs of *Glossopteris*. Their work on the Lower Gondwana seeds, cuticles, epidermis, *Buriadia heterophylla*, *Ottokaria*, *Raniganjia* and *Diphyllopteris* (possible seedlings of *Glossopteris*) are regarded as their best contributions on the subjects and quoted in research papers and books. In addition to his main contribution in the field of palaeobotany, he has also worked on other subjects viz., pteridology, archaeobotany, pollination biology of angiosperms, tissue culture, aerobiology, morphology and anatomy of diverse vascular plants. Eleven students obtained their D.Phil. degree under his guidance. He has published more than a hundred papers in reputed journals and edited three volumes of proceedings of international symposia.

Professor Nautiyal was a source of inspiration to his younger colleagues and students. Prof. Nautiyal with his loving personality was admired and liked by all in the administrative, Faculty and student circles in his University and other Universities, Institutes of the Country where he had responsible involvement. He participated in a number of National/International Conferences/ Seminars. He participated in the Gondwana Symposium held in the International Botanical Congress at Sydney in 1981 and also worked on Indo-Australian Gondwana fossils. Under Indo-French Exchange Programme for development of Science and Technology, he visited Dr. Jean Galtier's Laboratory in Montpellier.

Professor Nautiyal was the Fellow of Palaeobotanical Society of India, Fellow of Indian Fern Society, Fellow of Indian Botanical Society, Fellow of Cycad Society of U.S.A. He was nominated Indian Member of the National Working Group of International Geological Correlation Programme (IGCP). In his death, we have lost not only a palaeobotanist and morphologist of repute but also a man of great humane qualities.

G.K. SRIVASTAVA, Allahabad, India

A RECENT PUBLICATION

ANN. MISSOURI BOT. GARD. Volume 86. Number 2. 1999. 227-655.

This collection of nine papers comprises the proceedings of the Annual Systematics Symposium of the MBG on "The Origin of Modern Terrestrial Ecosystems: Fossils, Phylogeny and Biogeography" held in October 1997. It attempts to bring together evidence from different disciplines to show how our understanding of modern terrestrial ecosystems has been influenced by angiosperm palaeobotany. The substantial volume is served by a 12 page index.

For subscription information contact Allen Marketing and Management, PO Box 1897, Lawrence, KS 66044-8897, USA. Overseas subscription is \$165 for four issues.

A FORTHCOMING PUBLICATION

CHINESE BULLETIN OF BOTANY for IOPC-VI: a Call for Papers

The Palaeobotanical Association of China is in the process of compiling a special issue of the Chinese Bulletin of Botany for the next IOP conference in Qinhuangdao, China in 2000. The special issue of the journal is expected to appear before the opening of the conference. The issue is bilingual. an English paper with a Chinese abstract or a Chinese paper with an English abstract. The issue covers review papers, original articles and some notes.

The contribution deadline is January 30, 2000 (by postmark). Papers can be posted or e-mailed to the following address: Dr Sun Qigao Institute of Botany, Chinese Academy of Sciences, No. 20 Nanxincun, Xiangshan, Beijing, 100093 China Fax: 86-10-62593385. E-mail: sunqg@ibcas.ac.cn or lics@public2.east.cn.net

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