



IOP NEWSLETTER 61

AUGUST 1997

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PLEASE MAIL NEWS AND CORRESPONDENCE
TO YOUR REGIONAL REPRESENTATIVE OR
TO THE SECRETARY FOR THE NEXT
NEWSLETTER 62.

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

EDITORIAL

This is the first editorial to appear in the IOP Newsletter since that written by Jim Schopf twenty years ago. He was the President then and I took over editing in August 1977 for newsletter 4. The newsletter as well as the Organisation have grown in many ways since then.

It's time for more developments in both parts of the Secretary's remit. So my first editorial is to announce my resignation at the end of this term of office. Another IOP Secretary will be elected at the 2000 Conference in China. It really is time for some new ideas and styles and the forthcoming temporal boundary is a good time for them.

Until then, I hope to help keep the newsletter going and busy with some controversy by this regular editorial column. Like the leader in a daily newspaper it might attract some reactions that can appear in subsequent issues. Several demon-like ideas are lurking at the back of my mind to deliver several parting shots before the year 2000. Today, it's tennis at Wimbledon for the first time after four days of rain, so here goes.

I spend a lot of time on the internet, and I hope that all of you with connections find our site useful. My colleagues here, Helen Fisher, David Gee and Dilshat Hewzulla, are very aware that it's not very friendly yet, and we're working to improve that. It's certainly the first big trial at making palaeobotany accessible to the public as well as the specialists. Our site has more than 200 visitors a day asking more than 400 questions.

This newsletter is included within these same web pages so hard copy is becoming unnecessary for many subscribers: a development to challenge the future administration of IOP.

These same innovations are influencing many aspects of communications in science and other human affairs. As well as informal issues like those in newsletters, the more official business conducted in refereed journals are coming under critical scrutiny. Electronic journals can provide similarly fast distribution and retain high standards of content with fastidious systems of peer refereeing. It is happening already with *Electronica Paleontologica* (<http://www.nhm.ac.uk/paleonet/pe/glines.html>) starting this year and supported by the Pal. Soc., the Pal. Ass. and other organisations.

In the article that follows this one a large group of IOP members make a plea for a new specialist journal in our discipline, to be run by IOP. Surprisingly they do not mention electronic media like this new initiative. Nor do they say anything about the enormous amount of work that would be involved. It would make the voluntary efforts of the

Secretary and newsletter editor pale into insignificance.

I've worried over the years as editor about not getting enough material for the newsletter. It seems to have settled down to about thirty pages a year, through no hard work on my part (or that of the usually passive regional representatives). Certainly a journal is a more attractive source to share a good idea, with brownie points for credibility. Nevertheless it's a pity that the pull of a refereed article for a careerist's c.v. is thought to be more worth while than the pleasure of sharing an early idea through these informal pages. I wonder if the same reluctance will haunt the new electronic medium?

M. BOULTER, London

PROPOSAL FOR AN INTERNATIONAL JOURNAL OF PALEOBOTANY

The health of paleobotany as a discipline is manifested in many ways. Not only are paleobotanists active members in many biological and geological societies, but our own international organization, the IOP, is thriving. The success of recent IOP meetings has been made possible by the international scope of the discipline, and helps contribute to the cohesion that links and has linked paleobotanists for many generations. With this letter, we hope to encourage discussion about an additional way to enhance communication among paleobotanists and raise the international profile and prestige of the IOP - production of an international paleobotanical journal.

We propose production of a core, peer-reviewed scientific journal directly controlled by the Organization. The focus of the journal would be papers in macrofossil paleobotany and paleopalynology, but many of the features of the IOP newsletter could be incorporated into the journal. As with most society journals, we envision an international editorial board whose members would rotate periodically. There are a number of commercial publishers who print and distribute society journals at reasonable costs; we would encourage the Organization to contract with such a publisher to produce the final product.

The overriding justification for such a new journal is affordability. It is imperative that it can reach the desks of individual scientists in all nations, which, at present, no primarily paleobotanical journal can claim to do. As library budgets tighten and as journal costs rise across the board, it is increasingly difficult for many of us and our libraries to afford the journals that currently publish in our field. As a result, the dissemination of scientific information is constricted, which is certainly at odds with the intent

of the research enterprise. The effective dissemination of knowledge should be a principal aim of any professional association of scientists with a common interest. The non-profit nature of the IOP can ensure that costs can be kept as low as possible while, at the same time, quality remains high.

At a time when “geobiology” and “paleobiology” have become watchwords for forward looking, interdisciplinary research, why would a journal devoted solely to fossil plants be desirable? First, excellent society journals are widely read in the broader community, and even welcomed by those with only passing familiarity as ready places to turn to for information. Second, paleobotany is a vast field comprising everything from alpha taxonomy to paleoecology to biostratigraphy and beyond. The considerable dispersal of this literature means that much of it is overlooked, especially as libraries (such as those of some of our home institutions) are forced to make hard choices among journal subscriptions. A central organizing journal, while not containing all the literature, will be sufficiently representative to serve as a starting point for literature searches in particular areas. Finally, many papers fit best into a journal with a strong subject theme where they readily can reach others interested in the same topics.

The undersigned suggest that the creation of an International Journal of Paleobotany be considered seriously by the IOP membership. We urge that a committee be appointed to determine the cost of producing a journal at society rates, and consider a means to finance the journal that will make it accessible to IOP members and libraries. This committee also should consider an editorial structure and policies, and examine the advisability of subsuming the current newsletter into the journal. These data could be put before the IOP membership for a formal vote after a suitable interval for discussion.

Names of signatories follow in alphabetical order.

-Henk van Amerom, Krefeld, Germany
 -Sergio Archangelsky, Buenos Aires, Argentina
 -Sidney Ash, Ogdon, USA
 -James F. Basinger, Saskatoon, Canada
 -Mitchel Blake, Morgantown, USA
 -Jean Broutin, Paris, France
 -Robyn Burnham, Ann Arbor, USA
 -Shya Chitaley, Cleveland, USA
 -Christopher J. Cleal, Cardiff, UK
 -Peter R. Crane, Chicago, USA
 -Ruben Cuneo, Trelew, Argentina
 -Carmen Diéguez, Madrid, Spain
 -Jose Bienvenido Diez Ferrer, Zaragoza, Spain
 -David Dilcher, Gainesville, USA
 -William A. DiMichele, Washington, USA
 -Diane Erwin, Berkeley, USA
 -Javier Ferrer, Zaragoza, Spain
 -William Gillespie, Charleston, USA

-David Greenwood, Melbourne, Australia
 -C. Hartkopf-Fröder, Krefeld, Germany
 -Patrick Herendeen, Chicago, USA
 -Francis M. Hueber, Washington, USA
 -Carol Hotton, Washington, USA
 -Kirk Johnson, Denver, USA
 -Jean-Pierre Laveine, Lille, France
 -Richard Leary, Springfield, USA
 -Ben LePage, Philadelphia, USA
 -Alicia Lesnikowska, Americus, USA
 -Li Xingxue, Nanjing, China
 -Richard Leary, Springfield, USA
 -Paul Lyons, Reston, USA
 -James Mahaffy, Sioux Center, USA
 -Sergius Mamay, Washington, USA
 -Steven Manchester, Gainesville, USA
 -Gene Mapes, Athens, USA
 -Lawrence Matten, Carbondale, USA
 -Herbert Meyer, Florissant, USA
 -Brigitte Meyer-Berthaud, Montpellier, France
 -Volker Mosbrugger, Tübingen, Germany
 -Hermann Pfefferkorn, Philadelphia, USA
 -Tom L. Phillips, Urbana, USA
 -Denise Pons, Paris, France
 -Anne Raymond, College Station, USA
 -Gregory Retallack, Eugene, USA
 -Gar W. Rothwell, Athens, USA
 -Steven E. Scheckler, Blacksburg, USA
 -Judith Skog, Fairfax, USA
 -Una Smith, New Haven, USA
 -Thomas Speck, Freiburg, Germany
 -William D. Tidwell, Provo, USA
 -Bruce Tiffney, Santa Barbara, USA
 -Alfred Traverse, University Park, USA
 -Robert Wagner, Cordoba, Spain
 -Debra Willard, Reston, USA
 -Scott Wing, Washington, DC, USA

AN INVITATION TO THE SIXTH QUADRENNIAL CONFERENCE OF IOP IN QINHUANGDAO, P.R. CHINA

The IOPC-2000 is a grand Olympic gathering in the world of paleobotanical research and a great occasion in the scientific and technological domain occurred in the transfer to the next century. We feel greatly honored to have the chance on behalf of all the people of Qinhuangdao city and in the names of ourselves to submit the proposal to the IOP for hosting the 6th quadrennial conference in Qinhuangdao, Hebei Province of the People's Republic of China.

China is one of the largest civilized ancient countries with rich natural resources and well preserved fossil plants. She has fostered many famous

paleobotanists who have reached a new level in the paleobotanical study.

Geographical Location

Qinhuangdao city is located in the northeast of Hebei Province and is 280 km from Beijing. To its north is Yanshan Mountain and to the south is the Bohai Sea.

Natural Environment

Lying at the middle latitudes, Qinhuangdao enjoys a semi-humid continental monsoon climate being warm in winter and cool in summer. The average annual temperature is 10.1°C and the average annual rainfall is about 735mm. The complicated crustal movement has gradually made the land resemble stairs - with mountains, hills, plains, coastline and continental shelf.

Transportation and Telecommunication

The port of Qinhuangdao is the largest energy exporting port in the world. It has established trade relations with 109 countries and regions of the world. The civil aviation airport has opened the air lines to more than ten cities, such as Beijing, Shanghai, Guangzhou, Xian, Dalian and Shijiazhuang. The work of opening international air lines is also under planning.

Tourist Conditions

Qinhuangdao is a grade A tourist city in China. With beautiful scenery and a pleasant climate which is known as a summer tourist resort both nationally and internationally.

Beidaihe beach is a famous scenic tourist area in China with a wonderful landscape of green pines and cypresses, a lush growth of trees and grasses, soft beach and flat tide, the sea dotted with sailing boats and lots of historical sites. In the green trees, there are various buildings of different style and beautiful gardens of varied colours, which tourists enjoy so much they forget to go home.

The ancient city of Shanhaiguan was a defense fortress in ancient China. One of the greatest architected structures on the earth - the Great Wall begins here. The Great Wall goes up and down mountains with magnificent guarding towers, just like a coiling dragon and crouching tiger guarding the pass.

Facilities and Arrangement

Meeting Site and Accommodation: There are 5 hotels in Qinhuangdao which have more than a 3 Star rating and other 3 Starred hotels under construction. Among them the Jinshan Hotel will serve as the main meeting site. It is 200m from the sea and has a fine scenery with a strong sea atmosphere.

The said hotel has comfortable villas and gorgeous luxury suite rooms as well as single or double-bed rooms with air conditioning and bathrooms. Some ideal places have been provided for the conference, a grand meeting hall which can

contain 600 people, medium and small meeting rooms for negotiation. Furthermore, the recreation centre, gymnasium, bar, commercial centre, beauty parlour and clinic can meet the needs of all the participants.

Time: The IOPC-2000 is estimated to convene in July, however the temperature here is cool and comfortable, with a normal temperature of 25-28° C. At night the vast sea presents you an atmosphere of calm and happiness.

Transportation and Telecommunications: Special vehicles will be provided for the conference, collecting participants from Beijing Airport and Beidaihe Railway Station of Qinhuangdao.

During the conference, all the hotels will provide 24 hour access to local and international telephone calls, fax and other services. By the year 2000 computerized networks will be available.

Meals: Chinese cuisine has along historical reputation meals such as Qinhuangdao Seafood and Beijing Roast Duck will be served. Also vegetarian and Western-style food can be provided on request.

Official Language: English. The Translators' Association of the city, consisting of more than 200 people, is capable of translating and interpreting 8 foreign languages.

Electricity: 220v is available in the city. 110 v is fitted in the hotels.

Water: Tap water is non-drinkable

Medical Care: Health centres are provided in each hotel.

Travel

During the IOPC-2000, two half days will be arranged to see some scenic spots:-

- Hotel of Old Dragon's Head (Shanhaiguan)- the First Pass of the Great Wall Hotel
- Hotel of Longevity Hill (Shanhaiguan)- the Temple of Lad Mengjiang Hotel
- Hotel of National Beach Forest Park

Qinhuangdao is reforming and opening to the outside world, an ideal city for IOPC-2000 with its flourishing municipal construction and its warm and hospitable people. We sincerely welcome specialists and scholars of paleobotany from home and abroad as well as delegates to have a nice and happy get-together at Qinhuangdao in the year of 2000.

Z. TIELIAN, Mayor of Qinhuangdao

Z. CHONGGUANG, Director of the Qinhuangdao Municipal Science and Technology Commission.

NEWS FROM OTHER SOCIETIES

PALEOBOTANY & PALYNOLOGY ASSOCIATION OF LATIN AMERICA

The new Directive Commission is:

President: Dra. Vera Alleman (Universidad Ricardo Palma, email: valleman@urp2.edu.pe)

Vice-President: Lic. Luis Huaman (Universidad Peruana Cayetano Heredia, email: polen@upch.edu.pe)

Secretary: Dr. Enzo Nully (Universidad Ricardo Palma)

Treasurer: Ing. Barthelemy D4Ans (Instituto peruano de Astronomia y Ciencias para la Conservacion de la Tierra.)

Editor: Lic. Andres Chavieri (Policia Nacional del Peru, Criminalistica)

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PERU

Phone and Fax: 51-1-4418220

Email: polen@upch.edu.pe

L. HUAMAN MESIA, Peru

NEWS OF FORTHCOMING MEETINGS

8th PLANT TAPHONOMY MEETING, November 15 - 16th, 1997, Cardiff, Wales.

The 1997 International Workshop on Plant Taphonomy will be held in the Department of Earth Sciences, University of Wales Cardiff. It will be an open meeting with no formal theme, and covering all aspects of research on plant taphonomy. The meeting will be structured once we know more details of presentations to be offered and will be including keynote lectures and special research topics.

Cardiff is the capital city of Wales and has good train and bus links with other major British cities. It is situated 120 miles from London by motorway and has a small international airport with scheduled flights from European locations including Paris, Amsterdam and Brussels. Accommodation will be arranged in moderately priced hotels (cost c. £30.00 pre night) in easy reach of the University and city centre.

All queries regarding the meeting should be directed to either Dianne Edwards or Tim Jones at the following address:

Department of Earth Sciences, University of Wales Cardiff, PO Box 914, Wales CF1 3YE, UK.

Tel: (01222) 874830

Fax: (01222) 874326

E-mail: jonestp@cardiff.ac.uk

6th INTERNATIONAL CONFERENCE ON MODERN AND FOSSIL DINOFLAGELLATES, June 7 - 12th, 1998, Trondheim, Norway.

This international meeting is aimed at integrating biological, biochemical and geological research on dinoflagellates. The main goal is to bring together specialists with various backgrounds, but related research interests in studies of modern and fossil dinoflagellates. The conference will focus on all aspects of dinoflagellate research, including life-cycles, morphology/taxonomy, biochemistry, growth and productivity, ecology, biostratigraphy and dinoflagellate distribution in recent and ancient environments. Themes of direct interest to both biologists and geologists are emphasised. These include:

- Dinoflagellate evolution (taxonomy, molecular phylogenetics, life-cycles)
- Productivity of recent and ancient seas
- Biogeography and ocean circulation (present and past)
- Dinoflagellates and the climate record
- Dinoflagellate habitats
- Calcareous dinoflagellates
- Biochemistry and fossil biomarkers
- Harmful dinoflagellates

A workshop on Neogene and Quaternary dinoflagellates and a two day workshop on Calcareous dinoflagellates will be held in connection with the meeting.

Please contact the DINO 6 Secretariat for more information:

NTNU Museum of Natural History and Archaeology,
Attn. Morten Smelror,
N-7004 Trondheim,
Norway.

Tel: +47 73-59-21-47

Fax: +47 73-59-22-23

E-mail: morten.smelror@vm.ntnu.no

Latest details of the Conference can be found at:

<http://www.ntnu.no/vmuseet/dino6>

THE NINTH BRAZILIAN MEETING OF PALEOBOTANISTS AND PALY- NOLOGISTS, December 9 - 12th, 1997, Guarulhos, SP, Brazil

In memoriam: Prof. Dr. Murilo Rodolfo de Lima

The Ninth Brazilian Meeting of Paleobotanists and Palynologists (IX Reunião de Paleobotânicos e Palinólogos - IX RPP) will be held on December 9-12, 1997, at the Universidade Guarulhos in the Greater São Paulo metropolitan area. After nearly 20 years at the Universidade of São Paulo (I-VIII RPPs), this meeting will mark the beginning of what we

hope will be a scientifically stimulating rotativity of this traditional scientific meeting among the major Brazilian centers of research in Paleobotany and Palynology.

As in all previous meetings in this series, this year's program offers a broad spectrum of activities, divided approximately equally between technical sessions (oral and poster presentations), on the one hand, and special events, on the other, which will include lectures on "Biochemistry in the Classification of Plants" and "Statistical Methods Applicable to Palynology and Paleobotany"; keynote speeches followed by round-table discussions on Carboniferous Basins of South America, the Origin and Evolution of Angiosperms, and Late Quaternary Climatic Changes in Brazilian Vegetation; and a 4-hour short course on the computer program "Tilia", popular among palynologists.

We would like to invite all interested persons to attend. The Registration Fee is US\$80, payable by check to Antônio Roberto Saad.

Abstracts for oral presentations (15 minutes plus 5 minutes for discussion) and posters should be mailed by 30 May 1997 in hard form and 3 ½ diskette (WORD 5.0 OR 6.0 format; Times New Roman 12 font). All text, title, author's names and affiliations, etc. Should fit within a single page of A4 paper (210 x 297mm) with 3.5 cm upper margin, 2.0 cm right margin, 3.0 cm left margin, and 2.5 cm lower margin.

Full papers of up to 20 pages (including all text, figures, and references) may also be submitted for publication in the Universidade Guarulhos Publications in Geosciences. Their deadline is also 30 May 1997.

Information on accommodation and how to get to the meeting site will be published in a second Circular to be sent out in July but will also be available after mid-May by e-mail.

For further information, contact:

Prof. Dra. Maria Judite Garcia (President,
Organizing Committee)
Universidade de Guarulhos,
Departamento de Geociências
Praça Tereza Cristina,
01 Guarulhos,
SP, Brazil - 07023-070

Telephone: 55 (11) 6464-1708

Fax: 55 (11) 6464-1702, 6464-1708 or 6440-2030

E-mail: geo@server.ung.br

URL: <http://www.ung.br>

POLLEN AND SPORES: MORPHOLOGY AND BIOLOGY, July 6 -9th, 1998, London, UK.

An international conference of the Linnean Society Palynology Specialist Group in collaboration

with the Royal Botanic Gardens, Kew and the Natural History Museum, London.

This is the fourth in an occasional series of palynological conferences organised by the Linnean Society Palynology Specialist Group (LSPSG). The previous conferences were: *The Evolutionary Significance of the Exine* (1974); *Pollen and Spores: Form and Function* (1985) and *Pollen and Spores: Patterns of Diversification* (1990).

The conference is timed to coincide with the retirement from Kew of Keith Ferguson, founder and first Secretary of the LSPSG (1974-1987), and founder and head of the Palynology Unit of the Royal Botanic Gardens, Kew (1972-1998).

ORGANISING COMMITTEE

Scientific Programme

- Madeline Harley (Royal Botanic Gardens, Kew)
- Cynthia Morton (Reading University)
- Stephen Blackmore (Natural History Museum, London)
- Paula Rudall (Royal Botanic Gardens, Kew)

Administration

- Lisa von Schlippe (Royal Botanic Gardens, Kew)
- Hannah Banks (Royal Botanic Gardens, Kew)

SCIENTIFIC PROGRAMME

The programme will be a selection of both invited and contributed papers and posters on the following topics:

- Pollen development
- Anther and tapetum
- Pollen - pollinator interactions
- Pollen - stigma interactions
- Pollen morphology in systematics & evolution
- Ultrastructure (fossil & living groups)
- Pre-Cretaceous palynology
- Cretaceous palynology
- Tertiary palynology
- Quaternary palynology
- Pollen and archaeology
- Preparation and techniques

Posters or papers on any of the above topics are encouraged from students. Proposals for special interest workshop sessions are also invited.

The official language will be English.

The proposed registration fee will be around £130; with reduced rates for students. Registration forms will be included with the second circular.

Please contact the Conference Administrator for more information:

Lisa von Schlippe,
Conference Administrator,
Royal Botanic Gardens,
Kew, Richmond,
Surrey TW9 3AB, UK.

Tel: +44 (0)181 332 5198

Fax: +44 (0)181 332 5176/332 5278

E-mail: l.von.schlippe@rbgkew.org.uk

XVI INTERNATIONAL BOTANICAL CONGRESS August 1 - 7th, 1999, Saint Louis, Missouri, USA.

The Scientific Program:

In the tradition of previous IBC's, the Scientific Program of the XVI IBC will consist of invited oral presentations (in Plenary Lectures, Keynote Symposia, and General Symposia) and contributed Poster Sessions. All participants at the Congress (plenary speakers excepted) will be limited to one oral presentation and the convening of one symposium. Abstracts for all presentations will be solicited and made available on the XVI IBC website prior to the Congress. The Scientific Program will be subdivided into the following disciplinary areas:

- I. Botanical Diversity: Systematics and Evolution
- II. Ecology, Environment, and Conservation
- III. Structure, Development, and Cellular Biology
- IV. Genetics and Genomics
- V. Physiology and Biochemistry
- VI. Human Uses of Plants: Economic Botany and Biotechnology

The Nomenclature Section will be held the week prior to the XVI IBC (July 26 - 30) at the Missouri Botanical Garden in St. Louis.

Call for Symposia (deadline: 15th Sept. 1997)

All prospective participants in the XVI IBC are invited to submit a proposal for a General Symposium on any topic in the plant sciences, construed broadly to include botany, mycology, plant ecology, horticulture, agricultures, and related fields. Most of the scientific program of the Congress will be devoted to these Symposia, which will be presented in numerous concurrent sessions.

Each symposium will consist of seven 20-minute presentation and a concluding 10-minute discussion period. In view of the broad representation of disciplines at the Botanical Congress, symposia should emphasize interdisciplinary and integrative approaches, as well as limits to current knowledge and prospects and opportunities for future developments.

Each symposium should have two (or more) conveners, no more than one of whom should be North American. Prior to submitting proposals, organisers should contact prospective speakers to obtain their conditional agreement to speak. In proposing a roster of speakers, organisers should emphasize broad international participation and appropriate gender balance. In considering symposium proposals, the Scientific Program Committee reserves the right to decline any proposal.

Use the Symposium form available on the XVI IBC Web site:

<http://www.ibc99.org/> or contact the Secretary General for a hard copy of the Proposal Form.

Proposals for symposia should be developed in as much detail as possible, including the following:

1. Title of symposium.
2. Brief description of symposium topic, scope, and relevance.
3. Name, address, and contact numbers (telephone, fax, and e-mail) of convener(s).
4. List of prospective speakers, with institutional affiliations.

Proposals or questions regarding the Congress should be submitted to:

Secretary General, XVI IBC
c/o Missouri Botanical Garden
P.O. Box 299
St. Louis, MO 63166-0299 USA
Telephone: +314-577-5175
Fax: +314-577-9589
E-mail: ibc16@mobot.org

CATALOGUE OF PALAEONTOLOGICAL TYPES IN AUSTRIAN COLLECTIONS

This database project (financed by the Austrian Academy of Science, the Austrian National Bank and the Natural History Museum Vienna) has been an ongoing endeavor for several years. Currently more than 26000 palaeontological types (plants and animals, figured and unfigured specimens) from 10 Austrian institutions have already been included.

The information for every specimen includes the

1. generic (sub-) name
2. species (sub-) name
3. author(s) of the species (sub-)
4. information on the geographic and stratigraphic position
5. reference and illustration
6. status of the type
7. collection file no.
8. institute (where the material is kept)

A restricted version of this database is now accessible in the world wide web via the address:
<http://www.ocaw.ac.at/~oetyp/palint.htm>

It contains the data on items 1 to 3 and 6 to 8 above and provides the opportunity to combine up to four criteria in one search run. Four different sorting possibilities are available for the output of the results. More detailed information on the objects is available from the collection curators at the respective institutes. An address list enables the user to contact the responsible persons there.

All the references for which types have already been included in the database are listed alphabetically (now more than 800).

As the data input is an ongoing process, regular updates will be provided.

Contributing Institutions:

- Geologische Bundesanstalt Wien
- Karl-Franzens Universität Graz:
 - Institut für Botanik
 - Institut für Geologie und Paläontologie
- Krahuletzmuseum Eggenburg
- Landesmuseum Joanneum Graz
- Naturhistorisches Museum Wien
- Universität Innsbruck:
 - Institut für Geologie und Paläontologie
- Universität Wien:
 - Institut für Geologie
 - Institut für Paläontologie
- Vorarlberger Naturschau Dornbirn

J. KOVAR-EDER, Natural History Museum Vienna, Geological-Palaeontological Department, Burgring 7, A-1014 Vienna, Austria.

FOSSIL PLANTS AT LIVERPOOL MUSEUM

Liverpool Museum has recently acquired an interesting collection of Cretaceous fossil specimens from the St. Helens Museum, who are deaccessioning their natural history collections and have allocated their geology collections to the museum. It includes a nice set of Wealden plants from the Hastings Beds, in Fairlight Clays.

The specimens were collected by Arthur E. West and presented to the museum by his mother, but have been 'out of sight' since then until our assistant curator of paleontology, Wendy Simkiss, got hold of them.

J. EDMONDSON, Curator of Botany.

NEWS FROM THE PALEOBOTANY COLLECTIONS OF THE FLORIDA MUSEUM OF NATURAL HISTORY

We have just added to the staff in Paleobotany, Dr. David M. Jarzen as Collection Manager of Paleobotany with the help of a grant from NSF. He joined the Florida Museum in late January 1997, coming south to warm, sunny and friendly Florida from the Canadian Museum of Nature in Ottawa, Ontario, Canada where he worked for over 20 years and developed a vigorous program in Palynology. His wife Susan Jarzen is with him and both have been active in going through and beginning to organize over 35 years of collections. There were a lot of dusty old boxes of fossil plant material and miscellaneous material that is being sorted through and the

collection is taking on a different appearance as work progresses. David Jarzen's organizational skills are an important new addition to make the Paleobotany Collection useful for scholars around the world.

The Paleobotanical Collection at the Florida Museum of Natural History consists mainly of the nearly 100,000 specimens that were moved there from Indiana University in 1990 when Professors David Dilcher and Steven Manchester accepted positions there. The Museum is in the center of the University of Florida campus and is a part of the University. The particular strengths in the collection are in Cretaceous and early Tertiary age material with quite a bit of Carboniferous fossils from the Indiana coal mines as well. Also the collection has worldwide representation and a broad stratigraphic range of plant fossils. With the curation help of David Jarzen this collection will be much more accessible to the international community of paleobotanists. We have an internet page at:

<http://www.flmnh.ufl.edu/natsci/paleobotany/paleobotany.htm> which describes the collection, gives all the references of the material in the type and figured collection and home pages for Steven Manchester and David Dilcher. We expect to continue sharing more data about the collection with the world community through the Internet as we continue to organize the collection.

We are extremely happy that David Jarzen has joined Paleobotany at the Florida Museum of Natural History. Visit us on the Internet.

D. DILCHER, Gainesville, Florida.

THE YOUNG SCIENTISTS' LABORATORY OF PLANT ORIGIN, EVOLUTION AND ENVIRONMENTAL CHANGES

Institute of Botany, Chinese Academy of Sciences

The Young Scientists' Laboratory of Plant Origin, Evolution and Environmental Changes at the Institute of Botany, Chinese Academy of Sciences was founded in 1993. The laboratory was assessed by the Chinese Academy of Sciences in 1994 which considered it to be of suitable academic quality and excellence to be considered at academy level.

The laboratory director is Professor Li Cheng-Sen and Professor Wang Yu-Fei is the vice director. The honorable director is Professor D. Edwards who is a distinguished research Professor at the University of Wales in Cardiff, a Fellow of the Royal Society and the editor of the Linnean Society's Botanical Journal. Consultants in the Institute include three academics; Liu Dong-Shen, Zhang Xin-Shi and Wang Fu-Xiong (deceased) and three Professors; Li Zheng-Li, Lu An-

Min and Sun Xiang-Jun. At present there are 8 young scientists at Professor and Vice Professor level, 2 post-doctoral researchers, 6 postgraduates studying at Ph.D. level and 2 studying at M Sc. level.

The plant kingdom which connects with human's existence and development has undergone evolutionary processes for more than 3.5 billion years. Plants have had more than 400 million years of development since they first colonized the land. Although the emergence of humans occurred only several million years ago, their actions have broken the natural balance in many environments and these processes still continue. The aims of the Young Scientists' Laboratory are in recognizing the processes of evolution, finding the regulation mechanisms of plant evolution, establishing the relationships of plant evolution and environment changes, keeping the coordinated development between humans and nature, protecting biological diversity and providing theoretical basis for rational and sustainable utilization of biology resources.

Fossil plants collected through geological history are the focus of the research. The most precious fossils are those which have plant organs, tissues and cell structure, even possibly ancient DNA. Collecting these specimens depends on geological knowledge and techniques while research relies on biological thought and methodology. At the same time, comparative research is carried out on modern plants which have a close relationship with the fossil plants. In our work, fossil plants are a key link in determining plant evolution with details of morphology, anatomy, reproductive biology and physiology helping to reconstruct the whole plant. With this accumulated knowledge on extinct plants we can recover the original evolutionary series of plant development, step by step. From this, our research goals realizing the essence of plant origin and evolution, establishing the natural systematic relationships within the plant kingdom can then be reached.

The occurrence and development of the plant kingdom has a close relationship with global environmental conditions. In geological history, global environmental changes, regardless of speed, strongly affect plant evolution. Changes in plant structure and geographical distribution are some of the plants responses to environmental change. Recognizing the relationships of plant evolution, environmental change and the regulation of this change is of considerable significance for humans to predict and direct the co-evolution of humans and nature. This will come through comprehensive study of Palaeobotany, Palaeogeography, Palaeoclimate and Palaeoenvironment.

In this field there is plenty of scope for young scientists to show their excellence. This is because study involves extensive research knowledge in both

geological and biological sciences over long geological time spans. It also includes examples of many extremes; from ancient to present, from stasis to development, from micro to macro.

At present there are many facets of research including the origin of plants, the origin and early evolution of land plants, the origin and evolution of the Gymnosperms, the origin and evolution of the Angiosperms, the relationship between diversity of plant development and environmental changes.

Projects of international co-operation include schemes with America, Britain, Germany, Belgium, and Switzerland.

The Young Scientists Laboratory has good facilities for fossil analysis including sample preparation, spore and pollen analysis laboratories and a dedicated microscope room with many high quality microscopes, a photography room and a newly constructed National Museum of Plant History of China (including visitors facilities). In addition to these there are various modern facilities in the Academy which are open to us including electron microscopy, specimen preparation labs, plant herbarium, communication and computer facilities.

For further information, you feel free to contact:

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SCIENTIFIC LIBRARY FOR SALE

I wish to announce that after 50 years of teaching and research, I am disposing of my personal scientific library. It would take up too much printed space to list my paleopalynological and paleobotanical titles, but if someone is interested in a particular specialty or age, they can contact me and I will list available items and prices.

I have a complete run of the journal "Palynology" plus the 7 volumes of "Geoscience & Man" that preceded this journal. I also have a run of "Review of Palaeobotany & Palynology" vol. 1(1967) through vol. 14(1972). "Acta Palaeobotanica" is available from vol. 4(1963) through 13(1972).

A complete run of the "IOP Newsletter" (1, 1976 to 59, 1996) will be donated to the first person requesting it.

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NEWS OF AN INDIVIDUAL

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FLORISSANT MONOGRAPH REPRINTED

The classic monograph by H.D. MacGinitie, "Fossil Plants of the Florissant Beds, Colorado", has been reprinted and is available as a spiral-bound volume. Copies may be obtained by sending payment (in U.S. currency) of \$24.95 plus \$3.50 for USA shipping or \$4.50 for international shipping to: Colorado Outdoor Education Center, Box 167, Florissant, CO 80816 USA.

H.W. MEYER, National Park Service, Colorado, USA.

NATHORST'S UNPUBLISHED PLATES

Nathorst's unpublished plates are now published in what I find is a very beautiful volume: Z. Kvacek and S.B. Manum 1997: A.G. Nathorst's (1850-1921) unpublished plates of Tertiary plants from Spitsbergen. Swedish Museum of Natural History, Department of Paleobotany, Stockholm, Sweden. 8 pp., 36 plates. I am very pleased to see the plates published and I am very grateful to all who has been involved in the process - including yourself that has encouraged the publication (and of course were involved in the first publication before we found the original prints). I hope that an announcement of the publication and the history of the plates can be published in the IOP Newsletter. I could make a such a note but it may look better if you did it - What do you think? You probably have been informed about the work from Svein Manum and knows quite a lot about the material.

The Spitsbergen material in our collections has attracted quite a lot of interest and several visitors have studied the unpublished specimens.

Budantsev and Golonova have compared the material to their own collections and during one of their visit to Stockholm they help curating the material - it is now all numbered and sorted out due to their hard work in our collections - and is now being entered in our database. It will hopefully soon be available on the net.

I am staying in Stockholm most of the summer and hope to have done a lot of work - but it is not as easy as I thought - since a lot of people is out of town I get all the inquiries.

E. M. FRIIS, Sweden

BOOK REVIEW

Palynology: principles and applications. 1996. Jan Jansonius & D. Colin McGregor. (eds.). 3 volume set. American Association of Stratigraphic Palynologists Foundation, Salt Lake City. 1330 pages. ISBN 9-931871-03-4. Price \$100.

It has become customary for major textbooks on palynological subjects to begin with an historical review providing a précis of the major players, research landmarks and publications in the development of palynology beginning with Wodehouse (1935) and more recently being exemplified by the works of Evitt (1985), Traverse (1988) and Tyson (1995).

This handsome and superbly produced 3-volume set edited by Jansonius and McGregor is destined not to be just another one of the texts quoted in future historical reviews, but most probably the most important text yet written on the subject of palynology.

Originally conceived in 1989 as a 'Silver Jubilee Volume' to commemorate the 25th anniversary of the founding of the American Association of Stratigraphic Palynologists, the initial single volume production mushroomed from the intended 24 chapters to 32 chapters (and numerous subchapters) written by over 110 individuals. The two editors (stalwartly assisted by Robert and Carol Clarke) are to be heartily congratulated on accomplishing the daunting undertaking of co-ordinating and compiling such a multi-author collection of manuscripts! The resulting tomes ably demonstrate that everyone's hard work has been fully justified, and the majority of the chapters will undoubtedly stand as 'classic' contributions in their own subdisciplines for many years to come. Almost by virtue of being such a comprehensive work, the AASP Silver Jubilee came and went, and the printed volumes only saw the light of day at last year's 9th IPC in Houston - from which

many delegates could be seen leaving for home with more than their allotted baggage allowance to avoid postage costs for the books!

The first volume of the set, 'Principles', provides an introduction to all of the major and many of the hitherto overlooked more minor groups of palynomorphs. There are differences in style, and in some cases content, within the individual chapters, in certain cases such differences are clearly warranted (such as the small addendum to the chitinozoan chapter on processing methods pertinent to that group), but the ordering of the chapters is somewhat anachronistic in places (why are the chapters on *in situ* spores and pollen and their development not found after those on spore and pollen morphology, but at the end of the volume following the section on minor palynomorph groups?).

Beginning with the historical review of palynology by Jan Jansonius and Colin McGregor (which interestingly includes sections on palynological organisations and publications), we are treated to a lucid review of nomenclature and taxonomy by Al Traverse, which at once manages to inform, clarify and surprise (the comparison of ICBN and ICZN rules is especially meritorious). There then follows a chapter by Gordon Wood and co-authors on the techniques of palynological processing and observation which is commendably complete, although some of the more applied observational methods (such as vitrinite reflectance and automated spore colour recognition) are omitted, but it is difficult to know quite where to set the bounds of 'palynology' these days! Andy Knoll then provides an excellent discussion of 'Archaean and Proterozoic Paleontology', an apt title as, and the author himself acknowledges this point, not all of the bugs and beasties mentioned could strictly speaking be termed 'palynomorphs'. Acritarchs are the subject of the superbly illustrated chapter by Paul Strother, which is followed by the dinoflagellates, dealt with by Rob Fensome, Jim Riding and 'Max' Taylor. This exhaustive section is in part a distillation of the landmark Fensome *et al.* (1993) tome, with additional illustrations of great clarity and good size, a notable feature of the whole set of volumes which should especially be earmarked for praise, given the problems that have been experienced in the past with some illustrative material. There then follow several shorter chapters by a variety of authors, concerned with green and blue-green algae, palynomorph groups too often overlooked in the past. Although brief, these sections provide invaluable reference bases for these environmentally important groups.

The text then moves on to the terrestrially-derived spores and pollen, chapters by Geoff Playford & Mary Dettmann and David Jarzen & Doug Nichols respectively. Again sporting fine diagrams and

photos the authors deal with the biology, morphology, description and classification, and evolution of these palynomorph groups. Bill Elsik, Merrel Miller and Hubert Szaniawski then provide short chapters on fungal palynomorphs, chitinozoa and scolecodonts before various miscellaneous groups are covered (such as melanosclerites, microforaminiferal test-linings and the pseudofossil cenospheres - hopefully inclusion of the latter will finally stop recognition of such combustion products as biological entities in palynological preparations!). Some of these minor groups, such as clitellate cocoons, make their textbook 'début' in this section. The remainder of the volume comprises the oddly displaced section on *in situ* miospores and their importance in plant evolution (Dianne Edwards & John Richardson on early land plants; Else Marie Friis & Raunsgaard Pedersen on Cretaceous angiosperm reproductive organs; Thomas & Edith Taylor & Jeffrey Osborn on the biological and evolutionary importance of *in situ* miospores). The final chapter is by John Rowley, with a fascinating account of exine development and structure, a subject area that has received additional attention recently by such as Collinson *et al.* (1993) and Hemsley *et al.*

The second volume, 'Applications', is largely concerned with biostratigraphy (introduced well by Raymond Christopher and Dave Goodman) and in some smaller measure in some chapters, palaeoecology. The chapters in this instance are organised in a 'pseudo-chronostratigraphic' format, effectively dealing with palynomorph groups sequentially as they appear in the geological record. The majority of these chapters are multi-authored, which has resulted in comprehensive overviews both temporally and geographically, which draw together a wealth of published information concerning zonation schemes throughout the geological column and across the globe (although with a notable North American and European bias for the most part). The first two chapters on 'Paleozoic Phytoplankton' (Stuart Molyneux, Alain Le Hérissé & Reed Wicander) and 'Chitinozoan biostratigraphy and paleoecology' (Florentin Paris) are followed by seven subchapters dealing with various aspects of Palaeozoic spore and pollen evolution. John Richardson's paper on early spore evolution is especially illuminating, but one wonders what the driving force was behind the seemingly unnecessary subdivision of Permian spores and pollen into two separate subchapters, one of text (Geoff Warrington) and one largely of illustrations (John Utting). The largest single chapter in the three volumes (109 pages) is by a 'Who's who' of authors and deals with dinoflagellate, acritarch and prasinophyte biostratigraphy and ecology through the Mesozoic and Tertiary: with such a vast remit it is clear why 11 authors were required! A commendably

complete account has been provided, especially good is the provision of brief 'case studies' of palaeoenvironmental investigations. I found some of the image-processed illustrations a little strange at first, but the greater clarity afforded from the deletion of extraneous background material does aid recognition of the taxa concerned. The following section is the work of David Batten and various co-authors, and Geoff Warrington, who have undertaken to address Mesozoic spore and pollen biostratigraphy and have illuminated many of the problems inherent in the use of these groups in biostratigraphy of this part of the column. Although this is not meant as a criticism, several of these contributions are, in terms of content, rather different from the majority of the text, being more of the style of a journal article, and thus they sit rather awkwardly alongside the other chapters in the three tomes. This section is concluded by a brief chapter by Norman Frederiksen on 'Uppermost Cretaceous and Tertiary spore/pollen biostratigraphy'. The final two chapters both deal with Quaternary subject matter. Peta Mudie & Rex Harland cover aquatic palynomorphs, showing how such forms can now be used increasingly for interpretative, palaeoenvironmental reconstruction. Glen MacDonald describes 'Non-aquatic Quaternary' palynomorphs and the numerical techniques used to interpret the data collected. I found this section to be very stimulating, being largely unfamiliar with the field. As many pre-Quaternary palynologists are now starting to employ techniques used by workers on this more recent material for many years, hopefully this chapter will only serve to accelerate the trend of statistical manipulation of pre-Quaternary palynological data.

The third and final volume, 'New directions, other applications and floral history', is as can be guessed from its title, a bit of a mixture! Vaughan Bryant introduces the 7-part 23rd chapter 'New frontiers in palynology' in which a variety of authors present short introductions to 'Archaeological palynology' (Bryant & Richard Holloway), 'Medical palynology' (Mary Kay O'Rourke) and forensic palynology (Bryant, John Jones & Dallas Mildenhall) amongst others, which were appetite-whetting and perhaps just a little too short! The following multi-authored chapter on the use of 'Personal computers in palynology' could have sat happily within 'New frontiers', but placing it in a section of its own recognises the increasing importance of computer-based techniques. One of the joys of being a palynologist during this 'new wave' of research is, that as a group, we above all other palaeontologists appear to be grasping the opportunities offered by rapidly burgeoning technology with both hands. Who knows what a potential 'Golden Jubilee' volume chapter on this subject might contain?! Chapter 25,

by Lucy Edwards and Jean Guex deals in admirable fashion with graphic correlation and the definition of unitary associations using dinocyst-based data sets.

David Batten returns to provide Chapter 26, which covers many aspects of the definition, characterisation and applications of palynofacies information. With the publication of volumes by Traverse (1994), Tyson (1995) and now this extensive section, palynofacies workers have been well served by the literature of late! There is then a small section on faecal pellets, a field impinging on the sedimentation and preservation of biogenic material, which although it has been afforded attention by those such as nannofossil experts, has thus far been afforded little attention by palynologists. Palynomorphs and some of their roles in ore and hydrocarbon prospecting are discussed in Chapter 28, prior to one of the major themes of this volume, vegetational history, co-ordinated by Norman Frederiksen. The four subchapters comprise: a statistical analysis of Devonian spore floras presented by John Marshall; Cortland Eble on the paleoecology of Pennsylvanian coal beds; an absorbing account of Cretaceous floral provinces by Herngreen *et al.* and Doug Nichols who deals briefly with the K/T transition. Two chapters on dinoflagellates follow, including a massive compilation of data concerning the biological affinities of modern dinocysts by Martin Head (did *you* know there were so many modern cysts?), and Barrie Dale's timely account of dinocyst ecology and its application to the geological record is of great importance in drawing together a rapidly growing bulk of literature.

Perhaps fittingly, the final short submission is entitled 'Economic applications of palynology: examples'. Given that the production of this volume was to a certain extent delayed by the exodus of several ear-marked contributors from commercial posts in the early 1990s, subtitles which incorporate palynology in the same sentences as phrases such as 'big dollars saved..' and '...results in substantial savings' should be waved vigorously in front of the noses of company accountants by those palynologists remaining in the industry! Further subjects touched upon in this final farewell demonstrate the continuing relevance of palynology in the real world, in environmental monitoring and global climate change.

So, after such a lengthy review of such a massive set of literature, what can be concluded? Well, without a doubt this compilation, by many of the world's most distinguished palynologists, is to be most strenuously recommended as required reading for all palynologists, presenting as it does the most comprehensive literature source ever assembled on the subject. Surprisingly there are omissions from such an otherwise complete text (post-Palaeozoic

megaspores and even a few pages on graptolite remains for instance), but these are so minor as to be churlish to mention in the context of such a major achievement. Similarly there are some inconsistencies within individual texts, and stylistic differences between authors (although it could be argued that this adds rather than detracts from the finished work). Overall, the 3-volumes present stunning value for money, at only \$100 for the set, some 7.5 cents (or 4.5 pence) per page, which in the UK generally works out as being cheaper than photocopying, not bad for 125 high quality plates (some in colour) thrown in!

As to target audiences, this is more difficult. Clearly the set should be a standard reference work on the shelves of most academic institutions, and also within the walls of consultancies; in addition many individuals working in the field of palynology will feel that they cannot be without a copy readily to hand, given the remarkable value that the work represents. However, the preface (p. i) states that the target audience was 'graduate students, professional practitioners and managers'. Whilst the set will certainly be within the budget of the latter categories, I fear that in these days of financial constraints, most graduate students (let alone undergraduate students who would also benefit greatly from access to the contents of Volume 1) would be unable to afford the purchase. At my own institution we have purchased 2 complete library copies in order that we can include this work as a reference source for our advanced undergraduate courses, but I would like to echo the sentiments of Bill Sarjeant (1997) in his review of this publication, that the AASP be urged to consider publishing the 3 volumes separately, in order to reach a wider potential market and to further stimulate the assimilation of fresh blood into what has, through some 1330 pages, so ably been demonstrated to be a rapidly growing and dynamic field of research so relevant to much of our daily lives.

A final salutation to all those involved with bringing this ambitious and no doubt arduous task to a most excellent conclusion! Who is going to volunteer to edit the 'Golden Jubilee' volume.....?

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