



International Organisation of Palaeobotany
(Homepage: www.palaeobotany.org)

IOP NEWSLETTER 88

February 2009

CONTENTS

A NOTE FROM THE SECRETARY/TREASURER.....	2
IOP HOMEPAGE NEWS.....	2
MEMBERSHIP RENEWAL	
IMAGE ARCHIVE	
UPCOMING MEETINGS	3
REPORTS FROM PAST MEETINGS.....	12
OTHER ITEMS OF INTEREST.....	13
AWARDS.....	15
SCHOLARSHIP AND POSITIONS.....	16
BOOKS AND JOURNALS.....	17
CHANGES OF ADDRESS.....	20

The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of IOP.
Please send us your contributions for the next edition of our newsletter (June 2009) the latest by June 15th, 2009.

President: Gar Rothwell (USA)

Vice Presidents: Ruben Cuneo (Argentina), Carole Gee (Germany), Edith Taylor (USA)

Members at Large: David Ferguson (Austria), Lena Golovneva (Russia), Sun Ge (China)

Secretary/Treasurer: Johanna Eder-Kovar (Germany)

Conference/Congress Member: Harufumi Nishida (Japan)

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

A NOTE FROM THE SECRETARY/TREASURER

The vivid response to the call for contributions to the newsletter is wonderful! Thanks to all the contributors!

As approved in Bonn during the 8th IOPC the honorary membership is now included in the IOP Statutes & Bylaws, see

http://www.palaeobotany.org/downloads/statutes/IOP_Statutes_&_By-Laws-Ratified_September_2008.pdf

The new paragraph reads as follows: *6.8 Honorary Membership in IOP may be extended to individuals who have made exceptional contributions to palaeobotany (especially through a career long effort) and are now retired, or have given exceptional service to the IOP, or to regional palaeobotanical organisations but are now retired from that role. Honorary members will have free membership of IOP for life and enjoy all the benefits of a fully paid member. The process of establishing honorary members shall include nominations, to be accompanied by the names of two proposers, a brief statement of justification, and an active e-mail address for the nominee or the name of a Regional Representative willing to forward hard copy information. Nominations shall be approved by the Executive and/or by the membership.*

The minutes of the General Assembly held in Bonn are also included on the IOP web page, see http://www.palaeobotany.org/downloads/statutes/2008_IOP_General_Assembly_Minutes.pdf

Based on the president's and secretary's proposal the Executive voted recently to award IOP honorary membership to Bill Chaloner. The laudation is included here on page 16. Together with Mike Boulter and Edie Taylor who have been awarded in Bonn, Bill Chaloner is among the first honorary members of IOP.

Newsletter and IOP web page are efficient and strong information and communication tools. Thanks to Jason Hilton and Mihai Popa the homepage is developing well, see item IMAGE ARCHIVE that gives us the chance to offer

palaeobotanical images of broad interest to the members.

The web page also offers easy and quick access to see the state of your membership. Have a look there and if required, please renew it. For instructions see item MEMBERSHIP renewal.

It took a strong effort to bring all newsletters on the web, see www.palaeobotany.org/iop/newsletter/. In this context, we thank all who supported this effort, particularly Rudy Serbet, Jason Hilton, Chris Cleal, Jean Galtier, Barry Thomas, Paul Kenrick, and Edie Taylor.

A fairly broad range of conferences and workshops are announced here offering decision support to decide where to participate. In this context, please consider the earlier information on meetings is available the easier it is for potential participants to plan.

Johanna Eder-Kovar

IOP HOMEPAGE NEWS

It has been a busy time for the IOP website associated with the development of additional resources as agreed in Bonn. Much of the work that has been done is behind the scenes such that changes will be hard to spot, other than the banner at the top that informs visitors of temporary disruption. While programming was ongoing it has been necessary to turn off some of the websites modules but these are now running as before. The most important changes have been the development of two file exchange systems, one for images and the second for articles. Both will be accessed through the Members Area of the website so that only members of the IOP can use these resources. Of the two systems, the Image Archive is now accessible and is elaborated below; the articles section will be completed in the near future.

Membership renewals. In late December the IOP experienced difficulties with our online payments centre (PayPal) who required evidence of our tax exemption status, suspending new transactions until

this was produced. We have now done this and the account is back as it was previously and is working fine. However, this led to the account being suspended at the time when automatic reminders were sent out to members from the server. To renew your membership, log into the Members Area of www.palaeobotany.org. In the 'Members Area – Home' page you will see a summary of your membership status under the box 'My Membership'. This will show you the time to renewal or, if your membership has expired, will have a 'Renew Membership' link that takes you through the process of renewing your membership. If you are unable to use the online renewal, please contact your regional representative.

Image archive. To access this, click on the 'File Exchange' box at the top of the Members Area, and this will give you the option to view images (currently online) or articles (currently offline). The default setting is to list the 30 most recently added files to the list. To see older files either scroll through the listings or, use the search option to narrow your field into a manageable number of images.

We are now asking members to upload files onto the system, and to try the system for themselves. To upload an image, click on the 'Upload Image' Tab and fill in the necessary fields. Images should be in JPG format, less than 1mb in size, and preferably include a scale in the image or size of the specimen being elaborated in the description. The file name should be short and informative, as should the caption that should be a stand alone account of what is shown in the image. The description should provide a full account of what is seen in the image so that others can fully understand the image. In a separate field references to the image can be added, such as papers documenting the species of feature, allowing others to find additional information. Keywords can also be added to allow quicker searching. At the end of the upload stage, you will be asked to agree to the terms and conditions of the system; if you do not agree with these, your image will not be uploaded. Once an image is uploaded to the server, it is not immediately visible to other members; it is going into a holding area for IOP

website administrators. You do not need to contact the administrators; they get sent automatic messages from the server for each uploaded image. Administrators can then look at the image to check if it is relevant to palaeobotany and has suitable accompanying information, and will either approve its inclusion into the Image Archive or return it to the sender for emendation. Each image links to the image provider so that you know whose image it is, and in case you want to contact the provider about the image in any way.

As this system is new, a few additional points need to be made at this time. Firstly, there are more detailed instructions on the website for contents and formats, and rather than repeating those here it is more appropriate for users to go to the text on the website. Secondly, we have little idea about how the server will function with multiple users simultaneously uploading or downloading files, so please bear with the website team while these systems bed in. The administrators do this voluntarily and may not be able to respond to problems or queries immediately. And finally, for this system to be a resource for palaeobotany it needs the involvement of the palaeobotanical community, so please see this as an open invitation to use the system and to add images to span the diversity of our subject. Enjoy!

Jason Hilton

UPCOMING MEETINGS

2009 Midcontinent Paleobotanical Colloquium (East Tennessee State University, Johnson City, Tennessee, USA; March 13-15, 2009).

2nd Conference announcement

The Midcontinent Paleobotanical Colloquium (MPC) is held on a different campus each year, providing an informal forum for paleobotany students and professors to meet with others interested in fossil plants for social interaction and exchange of information and ideas. For background and historical overview of the MPC, including its occasional drift to the extreme margins of the North American "midcontinent", see

<http://oak.cats.ohiou.edu/~rothwell/MPC/index.htm>.

The 26th Midcontinent Paleobotanical Colloquium will be held on March 13-15, 2009 at East Tennessee State University (ETSU) in Johnson City, northeast Tennessee. This year's organizer is Yusheng (Chris) Liu.

The meeting agenda is briefly followed. The detailed information on registration, transportation, accommodation, etc. can be found at the meeting website recently built. The website is: <http://faculty.etsu.edu/liuc/mpc26.htm>

Friday, March 13th:

- Open house (at ETSU Paleobotany Lab) and visit ETSU Arboretum
- Welcome and registration
- Evening reception

Saturday, March 14th:

- Scientific session
- Banquet
- Dinner speaker (ETSU ornithologist Dr. Fred J. Alsop III - Birds in Appalachian)

Sunday, March 15th: Two field trips to be planned

- Field Trip 1: Gray Fossil Site and the on-site natural history museum (www.grayfossilmuseum.com)
- Field Trip 2: Roan Mt. State Park

Early arrivals on the Friday are welcome to visit the Liu & Zavada Paleobotanical lab to see the collections of the late Neogene fruits/seeds and

leaves from a newly-found fossil site, known as the Gray Fossil Site, about 7 miles north of the ETSU campus. The ETSU on-campus arboretum, featuring East Asian-North American disjunct plant pairs, is also a nice place for botanists.

To encourage more students to attend this meeting, we have tried to keep the registration fees as low as possible. Registration fee is \$85.00 for professional, \$55.00 for both students and companions. This includes all meals and transportation to planned activities.

Registration for the 26th MPC is now open till February 16th. Abstracts and payments are due on Feb 16th.

A conference website is now being built and will be announced soon. Stay tuned.

For more information, please contact Chris Liu at liuc@etsu.edu;

Tel. (423) 439-6920;

Fax (423) 439-5958.

(Please also note the contribution in Newsletter 87)

19th Plant Taphonomy Workshop (Botanical Gardens (Wachendorfzaal), Utrecht University, The Netherlands, March 27, 2009)

Contributions (talks and poster presentations) to all aspects (structural and geochemical) of the study of plant taphonomy including living and fossil plants (their macro - and microscopic remains) of all geological periods are welcome. We plan to organize a general discussion during the afternoon.

Deadline for abstracts: Feb 28

Registration fee for the workshop: 30 Euro.

A website with further information is available at http://www.bio.uu.nl/~palaeo/Congressen/Taphonomy2009/intro_Taph2009.htm

or via a link from the main institute's webpage at <http://www.bio.uu.nl/~palaeo/index.html>

You will find there an online registration form and further info about the available hotels/youth-hostel in Utrecht as well as about the program.

http://www.bio.uu.nl/~palaeo/Congressen/Taphonomy2009/registrationform_Taph2009.htm

Please fill in the registration form as soon as possible in order to estimate the number of participants and to establish the scientific program.

I look forward to receiving offers of presentations and I hope to see as many of you there as possible,

with best wishes
Wolfram

Dr. Wolfram M. Kuerschner
Institute of Environmental Biology – Palaeoecology
Laboratory of Palaeobotany and Palynology
Budapestlaan 4
3584 CD Utrecht, The Netherlands
ph: +31 30 2532630 Fax.: +31 30 2535096
mail: w.m.kuerschner@uu.nl

Darwin and the Evolution of Flowers – Scientific discussion meeting

**The Royal Society, 6-9 Carlton House, London
SW1Y 5AG; May 11-12, 2009)**

The Royal Society is celebrating 350 years of excellence in science. This meeting will highlight the influence of Darwin on our understanding of the evolution of flowers, presenting new and emerging evidence from seed plant phylogenetics, palaeobotany and morphology. It will review how recent research in these and related fields has brought us closer to resolving the origin of flowers and flowering plants (Darwin's so-called "abominable mystery").

The recent clarification of angiosperm phylogeny at many taxonomic levels, coupled with evidence from the fossil record has given new opportunities for understanding patterns in the evolution of floral structure and biology.

This meeting will also explore how the vast range of floral form seen in the angiosperms has been generated by developmental genetics, and the impacts of contemporary environmental change on the pollination of flowers.

Speakers

Spencer C. H. Barrett, Sarah Mathews, Charlie P. Scutt, Paul Rudall, Peter K. Endress, Susanne Renner, Juerg Schoenenberger, Elena Kramer, Scott Hodges, Sandra Knapp, Cris Kuhlemeier, Raymond

L. Tremblay, Steven D. Johnson, Kingsley Dixon, Lawrence Harder.

Registration

This meeting is free to attend, but pre-registration (online) is essential. The online registration form and programme information can be found at royalsociety.org/events.

Organised by:

Sir Peter Crane FRS,
Professor Else Marie Friis,
Professor William Chaloner FRS
The Royal Society
6-9 Carlton House Terrace
London SW1Y 5AG
e: discussion.meetings@royalsociety.org
w: royalsociety.org

9th North American Paleontological Convention (NAPC 2009, University of Cincinnati, Ohio, USA; June 21-26, 2009)

Please see for details the contribution in Newsletter 87, Oct 2008.

<http://www.napc2009.org/>

11th Joint Meeting of the Regional Committees of Northern Paleogene (RCNPS) and Neogene (RCNNS) Stratigraphy (Geosciences Department of the University Fribourg, Switzerland, August 26-29, 2009)

The meeting will take place at the Geological Institute building, chemin du Musée 6, Fribourg. Communications on all aspects of Northern Neogene and Paleogene Stratigraphy are welcome.

Preliminary program

Wednesday 26: Arrival.

Thursday 27: Lectures and business session

Friday 28: Lectures

Saturday 29: Field trip in the Swiss Molasse basin (back to Fribourg in the late afternoon).

Registration: For further planning, we request all interested colleagues to send back this registration form to jean-pierre.berger@unifr.ch before the **2nd of March 2009:**

Name, address, phone, email

I intend to participate in the RCNNS/RCNPS meeting

I intend to participate to the field trip

I intend to present a lecture

I intend to present a poster

The registration fee will be as low as possible, but probably about 30 Euros for the meeting, (including coffee break and abstract volume) and 40 Euros for the excursion on 29, including a field-trip guide and lunch. Depending on the number of participants and on the interest, we could organize a dinner on Thursday evening in the old town of Fribourg.

You can reach Fribourg by train with all the Intercity trains coming from Basel, Zurich or Geneva. By plane, there is a direct connection from the airports of Zurich or Geneva to the Intercity trains (about 1h30 from Zurich or from Geneva). Fribourg has a wide choice of hotels and we will propose in the next circular a list of hotels. Participants are requested to pay cash (in Euro) at the registration desk upon arrival. A receipt will be handed out.

Present and future of palaeobotany in Southwest Europe in honour of Robert H. Wagner

Annual Meeting of the OFP (Organization of French-speaking Palaeobotanists)

(Aguilar de Campóo, Province Palencia, NW Spain, September 9-11, 2009)

The organizing committee is pleased to invite you to participate in this International Congress, with collaboration and support of the OFP (Organization of French-speaking Palaeobotanists).

Venue

The symposium is taking place in the historical town of Aguilar de Campóo, enjoyable for its rich 12th to 15th century architecture, and in proximity of planned fieldtrips.

The historical town of Aguilar de Campóo is believed to coincide with the Roman settlement of Vellica. It flourished particularly between the 13th and 15th centuries, when the town and surrounding

area formed a marquisate. It is a typical small town of Castile with a colonnaded market place and 14th century church. It is magnifically situated on the Pisuerga river, a tributary of the Duero (Douro).

Aguilar de Campóo has good rail connections with Madrid, Valladolid and Santander, and is well connected by road.

<http://www.aguilardeCampóo.com/>

<http://www.palenciaporsupuesto.com/>

Congress language is English.

Scientific programme

Contributions are invited on a wide spectrum of palaeobotanical and palynological topics related to the Southwest European region. Both oral presentations and posters are welcome. Instructions for the preparation and submission of abstracts will be included in the Second Circular. Three keynote addresses are planned.

The symposium will run for a period of three days, two for oral presentations and posters, and one day for the fieldtrip to Carboniferous fossil sites are planned (including the Palaeoforest at Verdeña and the Barruelian stratotype).

Additionally, a pre-congress field trip to an Upper Stephanian opencast site in León and a post-congress visit to the fossil plant collection at Zaragoza University Museum of Palaeontology are available for a limited number of participants. This post-congress visit is of particular interest for colleagues wanting to participate to the 10th Mesozoic Terrestrial Ecosystems congress (Teruel, Spain; September 14-21, 2009).

It is intended to publish a congress proceeding in a special issue of an international journal.

Detailed programme

Wednesday 9 – Lectures and poster presentations

Thursday 10 – Field trip to “Fossil Forest of Verdeña” and Stratotype of Barruelian Substage

Friday 11 – Lectures and poster presentations; official dinner in the evening

Saturday 12 – Optional social programme. Visit to 12th and 13th century Romanesque churches.

Registration fee

200 Euros, including the official dinner, printed abstract volume, field guide, and transport for the field trip.

Accommodation

Various kinds of accommodation can be arranged in Aguilar de Campóo. Details will be given in the second circular (February).

Important deadlines

May, 2009 – Deadline for registration and for abstract submission

June, 2009 – Third Circular with Final Programme and acknowledgement of acceptance of abstracts

Further information on submission, including the first circular for the meeting, is available at the following address: <http://www.paleoserver.com/ofp/>

Secretariat and correspondence:

- José Bienvenido Diez Ferrer (“Bienve”).

jbdiez@uvigo.es

Departamento Geociencias Marinas y Ordenación del Territorio. Universidad de Vigo

Campus Lagoas-Marcosende, S/N. 36200 Vigo

10th Mesozoic Terrestrial Ecosystems Symposium (Teruel, Spain; September 14-21, 2009)

We are pleased to invite you to participate in the next Mesozoic Terrestrial Ecosystems Symposium. The whole symposium (including fieldtrips) has been scheduled from the 14-21 September 2009.

Three Spanish Universities (Universidad Autónoma de Madrid, Universidad Complutense de Madrid and Universitat de Barcelona) and the Fundación Conjunto Paleontológico de Teruel (Dinópolis) will be involved in the organisation of the meeting.

Sessions will be dedicated to palaeobiotic and/or palaeoclimatic reconstructions, palaeoecology of terrestrial fossil assemblages and taphonomy, also considering the influence of microbial mats in preservation, and Mesozoic amber deposits. We would also like to encourage all specialists on microbial, algae, plant, molluscs, arthropods or vertebrate assemblages in order to achieve the broadest framework possible on continental Mesozoic environments.

For more information see the website, <http://www.meetandforum.net/MTE2009> (Note also the contribution in Newsletter 87)

Edith L. Taylor, Professor and Curator
Dept. of Ecology and Evolutionary Biology
Coeditor, *PALAIOS* (<http://paleo.ku.edu/palaios/>)
University of Kansas

1200 Sunnyside Ave.-Haworth Hall
Lawrence, KS 66045-7534 U.S.A.

etaylor@ku.edu

Division of Paleobotany, databases:

<http://paleobotany.bio.ku.edu/>

16th meeting of the Group of European Charophyte Specialists (GEC) (Ohrid, Macedonia, Sept 12-16, 2009)

The meeting dates include excursion to/on Lake Ohrid, considered the oldest lake in Europe.

The meeting is open to all aspects dealing with living and fossil Charophytes (*sensu* Charales)

Contact:

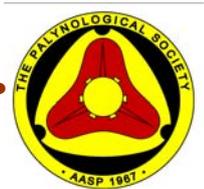
Prof. Sasho Trajanovski
Hydrobiological Institute Ohrid
Naum Ohridski

506000 OHRID

R. of Macedonia

e-mail: trajsa@hio.edu.mk

42nd Annual Meeting of the AASP (Meadowview Convention Center, Kingsport TN; Sept 27-30, 2009)



The 42nd Annual Meeting of the AASP-The Palynological Society is being held in the Appalachian Mountains of east Tennessee, bordering Virginia, and North Carolina. Plans for a pre-conference workshop and post conference field trips are being made. In addition, thematic sessions on forensic palynology, and in honor of R. Kapp are also being planned. Three general lectures featuring, David Pocknall: *Palynology and Petroleum: Supplying Americas Energy Needs*, Vaughn Bryant: *Pollen, Much More than a Sneeze*, and Owen Davis:

Climate Change in Arid Regions will be open to the public.

I also want to remind every member and non member whether attending the meeting or not you are welcome to submit your best artistic photographs that depict any aspect of palynology (including industry, organic petrology, ultra-structure, etc.) for a display that will be presented at the Natural History Museum and Gray Fossil Site.

The exhibit opens on the night of the ice breaker September 27, 2009 and will run about 2 months. We will also take suggestions for the name of the exhibit. Send an electronic version of the photograph(s) or a high quality photograph on paper to: Michael S. Zavada

Department of Biological Sciences, Box 70703, Johnson City, TN 37614 or electronically to zavadam@etsu.edu.

The museum will mount and label the photographs, and will be returned at the end of the public display.

Immediately following the meeting is the International Storytelling Festival in nearby Jonesborough, TN. This festival annually attracts tens of thousands of people for down home fun, and includes crafts, music, and showcases the rich folklore and oral traditions of international and the Appalachian people.

The 42nd Annual Meeting will be held at Meadowview Resort at the foot of Bay's Mountain, in the Tri Cities (Bristol-Kingsport-Johnson City) (<http://www.bookmarriott.com/329/index.html>).

Meeting Schedule

Fri, September 25: Check in if attending workshop

Sat, September 26: Workshop Understanding Pollen and its Application to Forensic Palynology

Sun, September 27: Check-in & Meeting Registration, Icebreaker at Museum of Natural History and Gray Fossil Site

Mon, September 28: Sessions, Public Lecture

Tue, September 29: Sessions, Public Lecture, Evening Banquet

Wed, September 30: Sessions, Business Luncheon, Public Lecture

Thu, October 1: Field trip

Fri, October 2: Field trip, Storytelling Festival

Sat, October 3: Field trips return to Meadowview, International Storytelling Festival

Sun, October 4: Checkout, Last day of Festival

Registration

In January a website will go active for registration and submission of your abstract. A non-refundable deposit of \$250 is required at registration although you can submit the entire amount at the time of registration. Abstracts are due by August 10, 2009. The registration web site will be in operation and linked to the AASP web site in the first week of February.

Mike Zavada

Zavadam@mail.etsu.edu

<http://www.palynology.org/meetings.html>

How to Know Pollen and Spores A Symposium Honoring Dr. Ronald O. Kapp, PhD



Call for papers

At the 42nd annual meeting of the AASP – The Palynological Society (note: new name) we are planning a symposium to honor the late Dr. Ronald O. Kapp, PhD, the author of that old standby reference work *How to Know Pollen and Spores*, now updated as *Ronald O. Kapp's Pollen and Spores*, 2nd edition. In line with Dr. Kapp's professional interests, the emphasis of this symposium will be Quaternary palynology, but talks could also include topics other than Quaternary. If you knew Dr. Kapp, co-authored a paper with him, were inspired by him to become a palynologist, or ever used his books to identify palynomorphs, please plan to attend the symposium and make a presentation of your research.

Nestled in the rolling foothills of the Blue Ridge Mountains, the Meadowview Resort offers an excellent venue for both discussing Dr. Kapp's contributions to Quaternary palynology and getting an update on the latest interpretations of Quaternary vegetation changes. Effective immediately, the Society is accepting titles for talks to be presented in the "**Kapp Symposium**". We are seeking high-quality oral and poster presentations on any topics in which Dr. Kapp himself may have been interested. Please encourage potential participants to submit a title and abstract.

Individuals wishing to present a paper in the "Kapp Symposium" should submit their title as an e-mail no later than **01 June 2009** to Lanny Fisk (Lanny@PaleoResource.com) and submit a full abstract online to the AASP website (www.palynology.org) by 10 August 2009. Information on registration fees and hotel accommodations for the conference can be found in the December 2008 AASP Newsletter (vol. 41, no. 4) and will be available soon on the AASP web site at: <http://www.palynology.org/>.

Lanny H. Fisk
Lanny@PaleoResource.com

Paleontological Association – annual meeting (Bonn, Germany, October 4-9, 2009)

Following the success of the IOPC-VIII/IPC-XII, several other conference series have decided to hold their meetings in Bonn, too. This includes the Paleontological Association in Germany (*Paläontologische Gesellschaft*), which will hold its annual meeting in Bonn from October 4 to 9, 2009. Since the *Pal. Ges.* embraces a number of specialist groups, such as the *Arbeitskreis für Paläobotanik und Palynologie* (known to insiders as the *APP*), Bonn is delighted to be able to serve again as a gathering place and forum for palaeobotanists and palynologists in the German-speaking realm. However, the mastery of the German language is not a prerequisite, and all plant palaeontologists are welcome to attend.

More information is available at <http://www.palges2009.uni-bonn.de/>, or contact directly:

Georg Heumann (g.heumann@uni-bonn.de) or
Lutz Kunzmann
(lutz.kunzmann@snsd.smwk.sachsen.de)

Paleobotany of the John Day fossil beds, central Oregon (Portland, USA, October 22-24, 2009)

Richard Dillhoff*, Jeff Myers, Caroline Strömberg, Regan Dunn, Thomas Dillhoff

The Geological Society of America has approved the John Day field trip for October 2009, so we present a trip description:

The John Day Fossil Beds document almost 40 million years of Oregon prehistory, from the middle Eocene through the late Miocene (44-7 Ma), recording the important environmental and biotic changes that shaped modern ecosystems. This will be a three day trip, surveying fossil plants from the middle Eocene Clarno formation, the late Eocene to early Oligocene John Day formation and middle Miocene Mascall formation. We will leave Portland Thursday October 22nd and return Saturday October 24th.

The John Day fossil beds are well known for spectacular remains of Eocene, Oligocene and Miocene mammals as well as abundant fossil plants that document Cenozoic climate change. The Clarno nut beds record a rich middle Eocene subtropical forest. Higher in the section, these subtropical forests were replaced by cooler, drier temperate forests in the late Eocene/early Oligocene John Day formation and mesic warm temperate forests in the Miocene Mascall formation. The younger floras were similar to the modern mixed mesophytic forests found today in China and eastern North America. Participants will also learn about important biogeographic and evolutionary contributions based on the study of plant fossils from these deposits.

Thursday we will travel to Camp Hancock (between the towns of Antelope and Fossil) where we will

spend the first night. We will hike through the Clarno nut beds, visit the late Eocene White Cap Knoll locality and collect late Eocene/early Oligocene leaves from the "Slanting leaf beds" locality. On our way back to camp we will visit a petrified tree, still in situ after 45 million years. Friday morning we will visit the Thomas Condon Paleontology Center near Dayville, Oregon. Specimen displays and interpretive information at the center will provide an overview of the paleontological work being done at the John Day Beds National Monument. Friday afternoon we will collect Mascall formation leaves at localities east of Dayville. We will stay in the town of John Day Friday night. Saturday morning we will visit the Painted Hills unit of the John Day National Monument including the classic Bridge Creek site first collected in 1865. We will return to Portland by 5:00 PM Saturday.

Participants will need hiking boots and be prepared to walk approximately four miles (round trip) at Camp Hancock on uneven terrain. The registration fee includes a shared cabin at Camp Hancock Thursday night and double occupancy room at a John Day motel Friday night. The Camp Hancock cabins are heated but only provide a bare mattress so you will need to bring a sleeping bag, blankets or rent a bag. With advance notice we can rent sleeping bags from REI (liner provided) for a \$25 fee. Cafeteria style meals will be provided and we will bring loaner tools but participants are encouraged to bring a backpack and their own hammer and chisel. No collecting will be permitted on national park lands, but specimens collected at the other localities may be kept for educational purposes. We will make provisions to have any significant finds deposited at an appropriate public institution.

* rdillhoff@evolvingearth.org

1st Session of the Azerbaijan Paleontological Society – The organic world and geohistory of sedimentary paleobasins

(Geology Institute of ANAS, Baku, Azerbaijan, AZ1143; November 2-3, 2009)

We invite you to participate in the 1st Session of the Azerbaijan Paleontological Society. Information about hotels and cultural program will be included into the second circular.

Official languages: Azeri, Russian, English.

Call for papers

Please contact the executive secretariat and/or the Organizing Committee for the registration form and the formatting details for abstracts.

Domestic presenters are required to submit a hard copy of their paper with illustrations included into the text. International participants may submit their paper electronically in PDF format.

Every participant may be a presenting author and a co-author as well.

Important Deadlines

June 1, 2009 – deadline for registration form

August 1, 2009 – Deadline for abstract submission

September 15, 2009 – Distribution of the second announcement and program in electronic copy

Organizing Committee

Alizadeh Ak.A., academician of ANAS (chairman)

Mamedov A.B. (vice-chairman)

Babayev Sh.A.

Kasumzadeh A.A. (scientific secretary)

Atayeva E.Z.

Efendiyeva M.A.

Email: az_pal_society@yahoo.com

Executive Secretariat and Correspondence

Email: azerkasumzadeh@rambler.ru az_pal_society@yahoo.com

Fax: (99412) 497 52 85

Kasumzadeh Azer Aliaga oglu

Ahmedova Samira Arif gizi

Babazadeh Afshan Nazim gizi

For more details about the session please contact:

www.gia.az

www.azerkasumzadeh.narod.ru

www.paleoazerbaijan.narod.ru

Third International Palaeontological Congress IPC 3 2010
(Imperial College and Natural History Museum, London, UK, June 28 - July 3, 2010)

Many people on this list will have enjoyed attending the highly successful IPCs in Sydney and Beijing. We are pleased to announce that the third International Palaeontological Congress will be held in London in 2010, based in venues in and around Imperial College and the Natural History Museum, in South Kensington.

The meeting will be hosted by The Palaeontological Association and partner organizations.

For further information, details of online abstract submission and registration, and regular updates, please visit the ipc3 website over the coming months: www.ipc3.org

We look forward to seeing you in London in 2010!
On behalf of the organising committee

Mark Purnell

Please also note the IPC announcement on Paleonet:

Paleonet@nhm.ac.uk

<http://mailman.nhm.ac.uk/mailman/listinfo/paleonet>

London is one of the most beautiful cities in the world, with an extraordinarily diverse and thriving culture base. June is the perfect time of the year to visit it. See the circulated details below, and get these dates into your diaries now!

Dr Tim Palmer C.Geol., F.G.S.

Executive Officer,

The Palaeontological Association

I.G.E.S., University of Wales

Aberystwyth SY23 3DB

Wales, U.K.

Phone/Answer phone: +44 (0) 1970 627107

Fax: +44 (0) 1970 622659

E-mail: palass@palass.org

Web: <http://palass.org>

8th European Palaeobotany – Palynology Conference
(Hungarian Natural History Museum, Budapest, Hungary, July 6-10, 2010)

Please see for details the contribution in Newsletter 87, Oct 2008.

www.eppc2010.org

Carpathian Balkan Geological Association (CBGA) XIX International Congress 2010 (HELEXPO “Nikolaos Germanos” International Congress Centre, Thessaloniki, Northern Greece, September 23-26, 2010)

The Organizing Committee of the 19th Congress of the Carpathian – Balkan Geological Association (CBGA 2010) extends a warm welcome to earth and atmospheric scientists from around the globe, working on this exciting area of Europe. The First Circular and the Call for Special Session proposals have now been issued and are available for downloading: www.cbga2010.org/documents.htm

Objectives

Presentation of the most recent advances in Geo- and Environmental Sciences, mainly in the Carpathian-Balkan region and the surroundings, aiming at highlighting their impacts on natural resources, natural hazards, and environmental problems. All subjects of Earth Sciences are welcome and a tentative list of themes can be found in the 1st circular.

Call for Special Session Proposals

CBGA 2010 is seeking original high quality special sessions addressing innovative research and/or specific geographic areas in the broad field of Earth Sciences. We wish to highlight significant and emerging areas of the main research fields, but also focus on specific problem of certain areas. Interdisciplinary session themes will be highly regarded.

Official Language

The official language of the congress is English.

Field trips

Several post-Congress field trips have been planned; their realization will depend on the number

of participants. Details will be given in the 2nd circular of the Congress.

Deadline for special session proposals:

March 31, 2009

Special Session proposal form:

www.cbga2010.org/Documents

Further important dates

Second Circular: Early summer, 2009

Early registration (A): November 30, 2009

Paper/abstract submission: November 30, 09

Paper acceptance: Late February-Early March, 2010

Registration (B): April 30, 2010

Information

For any additional information, please contact the CBGA XIX Congress Organizing Committee.

Website: www.cbga2010.org

E-mail: info@cbga2010.org

Tel.: +30 2310 998541, 998512

Fax: +30 2310 998549, 998512

Invitation to the IPC/IOPC 2012 in Tokyo

Please see for details Harufumi Nishida's contribution in Newsletter 87, Oct 2008.

<http://wwwsoc.nii.ac.jp/psj3/ipc13japan/IPC-IOPC/index.html>

REPORTS FROM PAST MEETINGS

Plant Life through the Ages – A Report (November 16-17, 2008)

The Conference on Plant Life through the Ages was organized by the Birbal Sahni Institute of Palaeobotany and the Palaeobotanical Society at Birbal Sahni Institute of Palaeobotany, Lucknow, India from November 16th–17th 2008.

It was inaugurated by Mr. D.K. Pande, Director Exploration, Oil & Natural Gas Corporation Limited. The Chairman of the Organizing Committee, Dr N.C. Mehrotra welcomed the guests. One of the most senior palaeobotanists of the country, Dr. R.N. Lakhanpal, Foundation Member of the Birbal Sahni Institute of Palaeobotany and the

Palaeobotanical Society blessed the organizers for the success of the conference.

The conference was presided by Prof. Ashok Sahni, INSA Senior Scientist, Geology Department, Panjab University, Chandigarh, and he delivered the presidential address on Indian Raft: On Collision Course.

Prof. De-Yuan Hong, Academician, expressed greetings on behalf of the Chinese delegation. Dr A. K. Srivastava, Organizing Secretary of the Conference, dealt in detail with the significance of palaeobotanical research in modern context and emphasized the inclusion of palaeobotanical courses at university and college level. He presented the role of palaeobotany in understanding the classic aspects of plant morphology, evolution and development of different floristic provinces in relation to climatic and geographical factors. The application of palaeobotanical knowledge in oil and coal exploration was also highlighted.

There was overwhelming response from all over the country and even contributions from abroad were received. The contributions were organized under 15 topics, and there were 8 oral and 2 poster sessions. More than 140 research contributions from different colleges, universities, research institutes, industrial organizations, UNESCO South Asia office, and US-India Educational Foundation, New Delhi were delivered.

Special session on fossil fuel

Regarding the importance of palaeobotanical research in the exploration of coal and oil, a special session on fossil fuel was organized which was presided over by Prof. Robert Spicer, Department of Earth Sciences, Open University, Keynes, U.K.. For the first time in the platform of palaeobotany the representatives of two big industrial organizations, Oil and Natural Gas Corporation Limited and Western Coalfields Limited came together to present their views on the relevance of palaeobotany in fossil fuel exploration.

Mr. D.C. Garg, Chairman-cum Managing Director of Western Coalfields Limited inaugurated the session and Mr. D. K. Bhowmik, Executive Director and Head, Keshav Dev Malaviya Institute of

Petroleum Exploration, ONGC discussed the application of palynology in dating the oil-bearing strata. The key note addresses on the significance of palaeobotany in the exploration of coal bed methane and hydrocarbon potentiality in India illustrated that palaeobotany is in motion to play a dynamic role in fossil fuel industry. Prof. Robert Spicer discussed the significance of plant fossils in climatic interpretation and the need to protect the fossils in natural condition.

Academic session

During two days deliberations the conference proceedings dealt with the classic aspects of palaeobotany i.e. morphology, taxonomy, origin, evolution, survival, extinction, and continuation of plant characteristics through their extinct and extant representatives. As per tradition the conference discussed the antiquity of life, significance of coal forming vegetation, coal characteristics, giant gymnosperms of the Mesozoic, emergence and evolution of angiosperms, Quaternary vegetation and forest history, palynology and palynostratigraphy of different sedimentary basins of India, micropalaeontology and sea level changes, palaeoethnobotany and dendrochronology.

Topics were also aligned to include the modern and relevant topics of the competitive world of science like the biotechnological advancements, insect-plant interactions, microbial associations and factors responsible for the disturbance of present and past ecosystem dynamics.

The impact and significance of the conference can be recognized by the high number of research scholars, students and their senior professors who attended the conference to know the latest trend in palaeobotanical research and to advise the young generation to take part in palaeobotany as a career and to popularizing palaeobotany at university and college levels. Prof Manju Banerjee of the Botany Department, Calcutta University presided the valedictory session and highlighted the immense potentiality of palaeobotany.

During the conference Birbal Sahni Institute of Palaeobotany and the Palaeobotanical Society as responsible custodian of palaeobotanical research in India and abroad decided to get reaction from

palaeobotanists, experts of related disciplines, academicians and research oriented industries about the relevance of palaeobotany in modern context, and encouraging responses were received to make palaeobotany exciting in the modern world of science.

Outcome of the conference

Contributions on different aspects of palaeobotany highlighted the vibrant and dynamic character of palaeobotanical research in tune with modern disciplines of science.

The participation of high officials of ONGC and WCL underlines the role of palaeobotany in exploring coal bed methane in different coalfields and in understanding the hydrocarbon potential in the oil-bearing strata.

The records of well preserved plant fossils with different morphotypes and relationship advocate the need of field work to discover plant fossils from new areas.

The morphotaxonomical study of plant fossils is useful to understand evolution, biostratigraphy and climatic interference of past and present floras.

It was suggested to provide technical knowledge to protect and preserve the fossils and sites in different parts of the country.

The suggestion to establish a University-Institute Interactive programme for the dissemination of palaeobotanical knowledge at university and college levels was appreciated.

A.K.Srivastava
Organizing Secretary
Conference on Plant Life through the Ages

IOPC-VIII/IPC-XII

Many thanks again to all those who made the trip to Bonn and the IOPC-VIII/IPC-XII last fall such a productive congress. Photos from the congress and field trips, and even a link to a youtube clip can still be viewed at <http://www.paleontology.uni-bonn.de/>.

OTHER ITEMS OF INTEREST

Taxonomic databases and their utility for Paleobotany

When one considers the creation of a new botanical genus or species, it is essential to research the literature to avoid using preoccupied names. Two free web databases are helpful for researching generic names of plants, but they differ in their scope and utility for paleobotanical research.

The **International Plant Names Index** (IPNI) is a database of the names and associated basic bibliographical details of EXTANT seed plants, ferns and fern allies [www.ipni.org/index.html].

IPNI combines information from three main sources: the Index Kewensis, the Gray Card Index and the Australian Plant Names Index. This is an excellent source to the original literature for taxonomic names of different ranks, including families, genera, subgenera, and species. The online search of a generic name in the IPNI database generates a list that includes the genus name followed by the names of its species and varieties. Each name in the list is followed by abbreviations indicating the original author, publication venue and date. Unfortunately, this database specifically excludes names of fossils plants, yet it remains useful in researching extant taxa to which fossils, particularly Cenozoic records, have been attributed. You won't find *Calamites* or *Lepidodendron* in this database, but you will find such favorites as *Ginkgo*, *Metasequoia*, and *Quercus*. It remains useful to paleobotanists naming new Paleozoic and Mesozoic genera, because of the IBCN requirement that a newly erected name should not repeat any previously established botanical name. IPNI is managed by the Plant Names Project, a consortium comprising the Royal Botanic Gardens, Kew, the Harvard University Herbaria and the Australian National Herbarium, Canberra.

The **Index Nominum Genericorum** (ING) is a compilation of generic names published for all organisms covered by the International Code of Botanical Nomenclature. This database, maintained by the International Association for Plant

Taxonomy (IAPT) and the Smithsonian Institution, includes both FOSSIL and EXTANT plants [<http://ravenel.si.edu/botany/ing/ingForm.cfm>].

In contrast to IPNI which attempts to record all described species and subspecies of each genus, ING targets only genera and their type species. Successful search of a generic name yields a record with the original author, publication and date, and (for fossils), the type locality and geologic age (as it was published in the original source), and familial assignment (as indicated in the original publication).

For example:

Callistophyton Delevoryas et Morgan,
Palaeontographica, Abt. B, Palaeophytol. 96B: 17.
1954.

T.: *C. poroxyloides* Delevoryas et Morgan
FOSSIL-GYMNOSPERMAE-
PTERIDOSPERMOPHYTA

Florissantia F. H. Knowlton, Proc. U. S. Natl. Mus.
51: 270. 24 Nov 1916.

T.: *F. physalis* F. H. Knowlton
Flower; Upper Miocene; Florissant, Colorado,
U.S.A.
FOSSIL-MAGNOLIOPHYTA-SOLANACEAE?

The database editors, Ellen Farr and Gea Zijlstra, indicate that ING is "fairly current through 1990. Names in some plant groups are more up to date than others and the editors are making every effort to bring ING's coverage up to date. It is our hope that those needing information about generic names of plants and fungi will use ING and will consider themselves collaborators by letting us know of problems with older names and of recently published names missing from the index." This database, while superior to IPNI by its inclusion of fossil generic names, is not concerned with species other than those designated as generitypes. Although not as comprehensive in its coverage, I recommend that it receive stronger support by the paleobotanical community as an important supplement to the printed reference by Henry Andrews, 1970, Index of generic names of fossil plants, 1820-1965. U.S. Geological Survey Bulletin 1300.

Steven R. Manchester*

*Curator of Paleobotany
Florida Museum of Natural History
Gainesville Florida, USA
steven@flmnh.ufl.edu

Donations of fossil plant specimens

Mihai Tomescu (Humboldt State University, Arcata, California) acknowledges donations of fossil plant specimens by Thomas and Edith Taylor (with help from Rudolph Serbet), Patricia Gensel, Ronny Rössler, Lisa Boucher, and Michael Dunn. The specimens added to the core collection donated previously by Gar Rothwell, contribute substantially toward the taxonomic breadth of the paleobotany teaching collection at Humboldt State University.

Mihai thanks all of these people for their generosity which provided tremendous support to the teaching of paleobotany. He is very happy to report that the paleobotany course is taught again this semester at Humboldt State University, after a two decades (or more) break.

Others interested in donating fossil specimens that they can spare, are encouraged to do so - their contribution will be greatly appreciated.

Mihai's address is:
Alexandru M. F. Tomescu
Department of Biological Sciences
Humboldt State University
1 Harpst Street, Arcata, CA 95521, USA
mihai@humboldt.edu

Darwin Commemorated

The Division of Paleontology at the University of Bonn is celebrating the Charles Darwin Bicentennial with a special exhibition in its Goldfuss Museum on this great scientist and his voyage on the *Beagle*. Although Darwin is best known for his botanical and zoological work, the museum exhibition in Bonn highlights Darwin's contributions to science in the disciplines of geology and palaeontology.

The exhibition, entitled *Charles Darwin, Geologist on A Journey Around The World* (German title:

Charles Darwin, Geologe auf Weltreise), was opened on February 12, 2009 with a birthday bash for Charles and continues on display for the duration of the Darwin Bicentennial, until January 24, 2010.

As always, the Goldfuss Museum is open to the public on weekdays (holidays excepted), from 9 am to 4 pm, and admission is free. For more information, see <http://www.paleontology.uni-bonn.de/>.

Complementing this exhibition at the Goldfuss Museum is another special exhibition on Darwin put together by Museum Koenig, which houses the zoological collections of the University of Bonn. Museum Koenig is showcasing the biological work of Darwin with an exhibition on *Charles Darwin and the Origin of Species* (German title: *Darwin und die Entstehung der Arten*), which will also be open to the public during the entire Darwin Bicentennial.

Carole Gee
Steinmann Institute, Division of Paleontology
University of Bonn, Germany
cgee@uni-bonn.de

AWARDS

Aureal Cross receives 2008 Meritorious Faculty Award



Aureal Cross, geology professor emeritus at Michigan State University, East Lansing, Michigan, USA was awarded the College of Natural Sciences Meritorious Faculty Award for excellence in teaching and research. Cross received a B.A. in Geology from Coe College in 1939, and an M.A.

and Ph.D. from the University of Cincinnati in 1941 and 1943. He joined the MSU faculty in 1961 where he served in geology, botany and plant biology for 25 years. He also served as the curator of the Fossil Plant Herbarium at MSU.

Cross has been honored with numerous awards, including the Paleobotanical Section of the Botanical Society of America's Distinguished Service Award in 1985 and the Coal Geology Division of Geological Society of America's Distinguished Service Award in 1992. In 2005, the American Association of Petroleum Geologists awarded him the Grover E. Murray Distinguished Educator Award. Cross retired in 1986 and remains involved with the department as well as with professional organizations and colleagues.

Prof Chaloner awarded IOP Honorary Membership

As the result of a recent vote of the Executive, Professor William G. Chaloner, University of London has been awarded Honorary IOP Membership. As one of the founders of the International Organisation of Palaeobotany, it is most fitting that "Prof Chaloner" be among the first to receive this award. The Honorary Membership category was established at the General Assembly Meeting held at IOPC-XIII in Bonn Germany in September, 2008. Please see article 6.8 of the IOP Statutes.

According to the nomination proposal, Bill Chaloner is one of the most productive and influential paleobotanists of our time. He has been a prolific contributor to the development of plant paleontology through innovative writing and has an exceptional ability to develop new approaches and avenues of inquiry. He also has served tirelessly as an ambassador of good will, extending knowledge and understanding of the fossil plant record far beyond the discipline. Bill stands out among the "founding fathers" of the International Organisation of Palaeobotany, with more than a half century of dedicated service to the organization. He was among those who labored tirelessly to establish IOP, and has played an active role in nurturing the

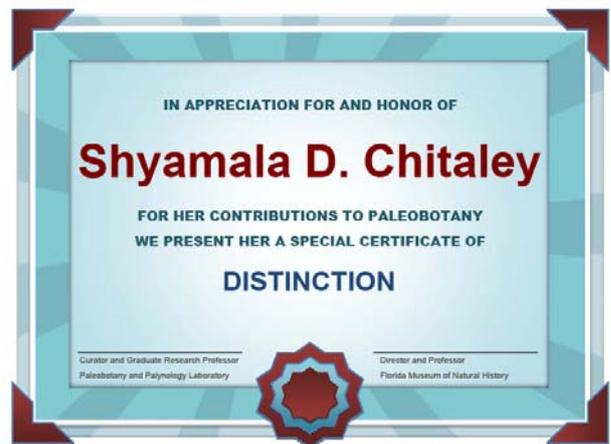
organization up to the present day. A perusal of the archived IOP Newsletters reveals Bill's guiding hand and dedicated service from the very beginning, when he served on the Executive Committee and recorded IOP activities from Newsletter Number 1, onward. Prof. Chaloner served as IOP President in the 1980s. He is among our most eminent and revered colleagues, and is most deserving of the status of Honorary Member of the International Organisation of Palaeobotany.

Congratulations Bill!

Gar Rothwell, Ohio University, USA
Johanna Eder-Kovar, State Museum of Natural History Stuttgart, Germany

Award for Dr. Shymala D. Chitale

The Paleobotany and Palynology Laboratory of the Florida Museum of Natural History has awarded to Dr. Shymala D. Chitale, in appreciation for and honor of her contributions to Paleobotany, a Special Certificate of DISTINCTION. This special certificate was given to her in February 2009.



David Dilcher
11 Drive and Museum Road
University of Florida
Gainesville, FL 32611-7800, U.S.A.
Office phone: 352-273-1944
Office FAX: 352-392-2539

SCHOLARSHIP & POSITIONS

Openings for graduate students

Graduate student positions are available at the University of Illinois Urbana-Champaign with Dr. Surangi Punyasena. Students interested in Neotropical palynology, paleoecology, or biostratigraphy are encouraged to contact Dr. Punyasena for more information.

Applications may be made through the Departments of Plant Biology, Geology, or the Program in Ecology, Evolution, and Conservation Biology.

Dr. Surangi Punyasena
punyasena@life.uiuc.edu

M.Sc. Research Scholarship

Graduate opportunities (M.Sc.) in Paleobotany, Department of Biological Sciences, East Tennessee State University, USA:

The Department of Biological Sciences is inviting applications for three (3) graduate scholarships for its Master's program in Paleobotany/Palynology sponsored by NSF. The students will involve with research on the Neogene plants (fruits/seeds, leaves, or pollen/spore) from the Gray Fossil Site (www.grayfossilmuseum.com). The requirements to get into the graduate school can be found at <http://www.etsu.edu/gradstud/>.

For more information on the research projects, please send your inquiries to Dr. Chris Liu at liuc@etsu.edu for details.

Postdoctoral Research Position in Palaeobotany and Seed Plant Phylogeny

Applications are requested for a one year Post-Doctoral Research Fellow to participate in an NSF funded, Assembling Tree of Life (ATOL, Gymnosperms) program. This position will be heavily focused on the construction and scoring of an approximately 9,000 cell matrix of morphological characters for extinct and living seed plants, and will begin in September, 2009. The project, led by Gar Rothwell, Gene Mapes, and

Ruth Stockey, is part of a collaborative effort to combine gene sequence data, rare genetic markers, and morphological data to resolve the phylogenetic relationships of seed plants. Information about the overall program is posted at

<http://www.huh.harvard.edu/research/mathews-lab/atolHtmlSite/>.

The successful applicant is expected to have a firm understanding and extensive experience in phylogenetic studies using morphological characters, to be proficient in specimen preparation, digital image capture, and development of plant concepts for extinct species using both internal anatomy and morphology. The position will provide an opportunity for some descriptive work with plant fossils, and field work may also be undertaken. Work will be based at Ohio University in Athens, Ohio, USA, with an anticipated salary of \$36,000 plus benefits. Informal Inquiries and letters of application together with a complete curriculum vitae and a statement of career ambitions are to be sent to Gar Rothwell rothwell@ohio.edu. Applications will be accepted until March 31, 2009 or until a suitable applicant has been appointed.

BOOKS AND JOURNALS

Bibliography of European Palaeobotany and Palynology 2006-2007

The latest edition of the European bibliography is now available. Its 169 pages include contributions from over 200 palaeobotanists and palynologists from across Europe. There are full lists of publications produced over the two years, dealing with all aspects of palaeobotany and palynology, from Precambrian to Quaternary floras. There are also lists of names and addresses, areas of interest and research, news of activities, and doctorate and masters theses.

The bibliography can be obtained from us at the National Museum Wales in Cardiff priced £6 from the UK, £8 from continental Europe, and £9 from the rest of the world. Payment has to be in pounds sterling, or via credit card. If you wish to pay by credit card, please contact Helen Fraser at NMW

(email helen.fraser@museumwales.ac.uk) who will send the appropriate forms.

C. J. Cleal

National Museum Wales, Cardiff
(chris.cleal@museumwales.ac.uk)

Book Review

Anderson, J. M., Anderson, H. M. & Cleal, C. J. 2007. Brief history of the gymnosperms: classification, biodiversity, phytogeography and ecology. *Strelitzia* 20. 280 pp.

Although it is not fully apparent from the title, this book is a radical departure from previous volumes that have come out of their laboratory because many other workers have joined with John and Heidi in its preparation. Also, and perhaps more important, the book differs from earlier volumes in that its coverage is worldwide in scope and contains a comprehensive in depth review of fossil gymnosperms since their origin some 375 million years ago in the Devonian. Consequently, it should be of interest to a broad spectrum of palaeobotanists not just those concerned with early Mesozoic fossils. Hopefully evolutionary botanists will find it useful also. This book is printed on coated A4 size paper and is soft bound. Once again, the cover has a montage of colour reconstructions of several of the interesting species discussed and illustrated in the volume. In addition to many pages of text the book contains numerous black and white line drawings of fossil and extant gymnosperms as well as many colour charts and maps.

It is difficult to prepare a concise yet comprehensive review of this book because it contains discussions of such a wide range of topics pertinent to the history of the gymnosperms and several that some workers might consider of marginal value. Consequently, I will only touch on some of the material presented and hint at the rest. After the front matter comes the first of the five principal sections that the book is divided into. This section concerns the classification and biodiversity of plants, especially of the gymnosperms. There is much to consider, ponder and perhaps disagree

within this section. Most of this section consists of discussions of previous attempts at classifying both extant and fossil gymnosperms. Concluding that all of these schemes have inconsistencies and problems the authors choose to use Cleal's 1993 scheme with modifications based on more recent palaeobotanical work as well as certain implications of cladistic analyses and molecular biology. In a signed essay in the section Paul Kenrick briefly discusses gymnosperm phylogeny and suggests that more molecular data will lead to more stable ideas of the relationships of living groups and provide a framework within which fossil record can be analyzed more accurately. In the final part of the section the principal authors spend several pages discussing Triassic gymnosperms with an understandable emphasis on those in the Molteno Formation. Also, they discuss in some detail the explosive radiation of gymnosperms in the Triassic that was covered earlier and in more detail in the volume on the Molteno gymnosperms (Anderson & Anderson, 2003) that they now consider a "prequel" to the present volume.

The second section entitled "Holistic Overview: Silurian to the Present" contains 30 full page colour charts covering a variety of topics related to the gymnosperms. The first chart concerns the macroevolutionary life cycle of the gymnosperms and illustrates with histograms the interesting concept that their life cycle has passed through four phases: youth, adolescence, maturity, and old age. Each of these phases was separated from the one that followed by one of the major extinction events generally recognized in the Phanerozoic, i.e., the end Permian, end Triassic, and end Cretaceous events. Several range charts for the gymnosperms, insects, and tetrapods are also included in this section. They are followed by ten correlation charts showing the distribution of plant bearing beds throughout the world which could be useful to workers trying to determine the ages and or the geographic distribution of floras they are not acquainted with. However, such workers need to be careful because I did note that the chart for North America, the region I am somewhat acquainted with, contains a number of notable errors. For example, according to the chart the Cretaceous Glen

Rose flora occurs in Mexico (actually in Texas) and the Jurassic Oaxaca and Vera Cruz floras are in Texas and New Mexico (actually in Mexico). I just hope the citizens of Mexico will not think that this chart is evidence that my country wants to “liberate” more of Mexico, just as we did in 1848! Possibly the other charts contain similar errors so the workers need to be careful when using them. The section concludes with ten nicely illustrated charts concerning the phytohistory of the Araucariaceae (prepared by some of our Brazilian colleagues) and the comparative morphology of extant families of gymnosperms (prepared by some of our German friends). These latter charts could be particularly useful to students who are just starting out in botany/paleobotany.

In the short section entitled “Macroevolutionary Life Cycle of the Gymnosperms” that follows the authors elaborate on the interesting concept mentioned earlier in this book that the gymnosperms have passed through four phases in their life cycle. Topics covered in the summaries of the phases are plate tectonics and global physiology, floral kingdoms, biodiversity, insect associations, and tetrapod co-evolutionary patterns. These concise summaries should be quite useful for workers concerning themselves with the history and development of the gymnosperms. The section concludes with a pessimistic view of the future for life on earth because of the population explosion and the accelerating and uncontrolled destruction of natural habitats on earth by humans.

In the section “Systematics of the Gymnosperms” the principal authors are joined by several of our colleagues (e.g., Zhou Zhiyan, Krasilov, Van-Konijnenburg-Van-Cittert, etc.) to sketch the history of the group by discussing the eight classes, 37 orders and 84 families they assign to the gymnosperms. Some of these divisions are new. The discussions include diagnoses, summaries of the ranges, ecology, systematics, basic references, pictograms illustrating the species that are covered, etc. The classification used is based primarily on the ovules of the species which is difficult to nearly impossible to establish because of the nature of the fossil record of plants. Thus the authors have had to

use the technique of uniting affiliated organs that they developed earlier while working on the Molteno gymnosperms (Anderson & Anderson, 2003). As a result some workers may disagree with certain conclusions in this section. Nevertheless, this chapter does bring together data relating to the history of the gymnosperms in an interesting manner.

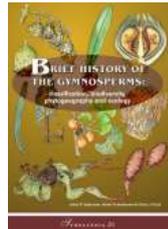
The last section of this book has the thought-provoking title of “Prequel to Sequels: of People & Palaeofloras” and is more historical and personal in nature than the previous sections and most palaeobotanical publications, in fact. The section begins with a rather light-hearted summary of the history and evolution of this book with amusing asides by the principal authors and contributors and contains an explanation of its origin and relationship to the book’s prequel “Heyday of the gymnosperms: classification and diversity of the Molteno fructifications” (Anderson and Anderson, 2003). The section concludes with a one or two page discussion of some 16 localities that have produced plant megafossils which have helped elucidate the history of the gymnosperms. These sites, which occur across the world, range in age from the Early Carboniferous Berwickshire localities of Long in Scotland to the Early Tertiary Bug Creek stratigraphic section that includes the Cretaceous-Tertiary boundary in Montana, USA. Each discussion generally includes remarks about the history of collecting and the study of the fossils at the localities, a summary of the plant and animal fossils found there, and a discussion of their significance. They also contain a spirited sketch of each locality by Heidi Anderson as well as an occasional image of significant plant megafossils that occur at some localities.

This book brings together an enormous amount of data about the gymnosperms which is widely scattered in many publications and provides a comprehensive history of the group which is not available elsewhere. Although some readers may disagree with the classification used here and some of the conclusions presented the book still could be a useful tool for many palaeobotanists and botanists. Also, the book would be a valuable addition to the

libraries of most palaeobotanists and a necessary addition to most college and university libraries.

With a cost of only US\$60 plus postage this is a book that most of us can afford. It is published by the South African National Biodiversity Institute, Pretoria, 0001 South Africa and can be ordered online from their bookshop at <http://www.sanbi.org/index.html>

----- Sidney Ash, PhD
Dept. of Earth and Planetary Science
University of New Mexico
Albuquerque, NM
(505) 856-5852



New journal PALAEODIVERSITY

Please note the new website of the international palaeontological journal PALAEODIVERSITY at <http://www.palaeodiversity.org>, which now features a PDF archive and a sophisticated online submission system for authors and reviewers. Please consider to submit your manuscripts.

PALAEODIVERSITY is a journal open to all authors and addresses an international audience. It publishes high-quality research in all fields of palaeontology. Specimen-based studies which address major question of current scientific issues or deal with problems on a larger scale are given preference. Longer articles and monographs are welcome, and there is no limit in the number of pages or illustrations. Colour illustrations are possible. As an open-access journal all articles are freely available as PDF files on the web. All submitted manuscripts will be strictly peer-reviewed.

Features of PALAEODIVERSITY:

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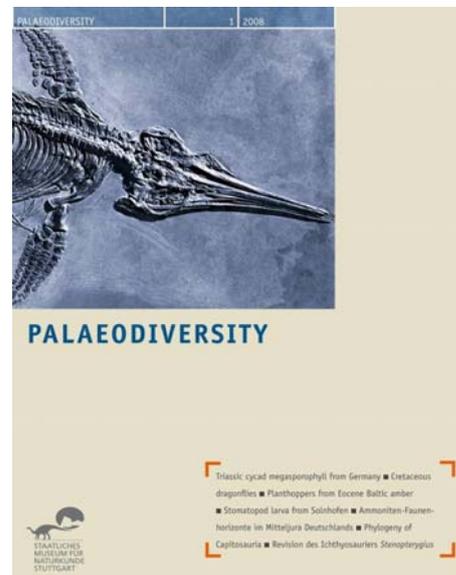
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