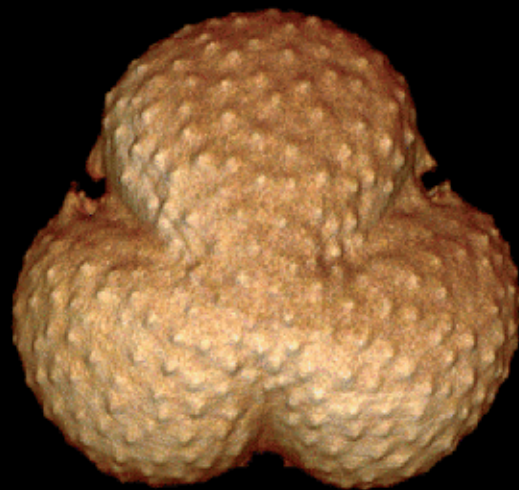


AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS



A. Zwa (The Gannon Technologies Group LLC) and V. Bryant (TAMU)

NEWSLETTER



March 2008
Volume 41, Number 1



A.A.S.P. NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists Inc.

March 2008
Volume 41, Number 1

EGU meeting	-5-
President's Page	-6-
XII Simposio Brasileiro	-8-
CENEX updates	-10-
AASP scholarship	-11-
Jobs	-12-
DINO 8	-15-
Managing editor's note	-16-
Art and Palynology	-16-
Glenn Rouse	-17-
Aquilapollenites	-19-
GSA special session	-21-
Member publications	-22-
NAMS	-25-
ICCP-TSOP	-27-
Early pollinators	-28-
42nd AASP Meeting - an announcement	-30-
Non-pollen workshop	-32-



A.A.S.P.

American Association of Stratigraphic Palynologists Inc.

The American Association of Stratigraphic Palynologists, Inc. - AASP - was established in 1967 by a group of 31 founding members to promote the science of palynology. Today AASP has a world-wide membership of about 800 and is run by an executive comprising an elected Board of Directors and subsidiary boards and committees. AASP welcomes new members. The AASP Foundation publishes the journal *Palynology* (annually), the AASP Newsletter (quarterly), and the AASP Contributions Series (mostly monographs, issued irregularly), as well as several books and miscellaneous items. AASP organises an Annual Meeting which usually includes a field trip, a business luncheon, social events, and technical sessions where research results are presented on all aspects of palynology.

AASP Scientific Medal recipients

Professor William R. Evitt (awarded 1982)
Professor William G. Chaloner (awarded 1984)
Dr. Lewis E. Stover (awarded 1988)
Dr. Graham Lee Williams (awarded 1996)
Dr. Hans Gocht (awarded 1996)
Professor Svein B. Manum (awarded 2002)
Professor Barrie Dale (awarded 2004)
Dr. David Wall (awarded 2004)
Dr. Robin Helby (awarded 2005)
Dr. Satish K. Srivastava (awarded 2006)

AASP Honorary Members

Professor Dr. Alfred Eisenack (elected 1975)
Dr. William S. Hoffmeister (elected 1975)
Professor Leonard R. Wilson (elected 1975)
Professor Knut Faegri (elected 1977)
Professor Charles Downie (elected 1982)
Professor William R. Evitt (elected 1989)
Professor Lucy M. Cranwell (elected 1989)
Dr. Tamara F. Vozzhennikova (elected 1990)
Professor Aural T. Cross (elected 1991)
Dr. Robert T. Clarke (awarded 2002)
Prof. Vaughn Bryant (awarded 2005)
Prof. Alfred Traverse (awarded 2005)

AASP Board of Directors Award recipient

Dr. Robert T. Clarke (awarded 1994)

Teaching medal recipients

Professor Aural T. Cross (awarded 1999)
Professor Alfred Traverse (awarded 2001)
Professor Bill Evitt (awarded 2006)

AASP Distinguished Service Award recipients

Dr. Robert T. Clarke (awarded 1978)
Dr. Norman J. Norton (awarded 1978)
Dr. Jack D. Burgess (awarded 1982)
Dr. Richard W. Hedlund (awarded 1982)
Dr. John A. Clendening (awarded 1987)
Dr. Kenneth M. Piel (awarded 1990)
Dr. Gordon D. Wood (awarded 1993)
Dr. Jan Jansonius (awarded 1995)
Dr. D. Colin McGregor (awarded 1995)
Professor John H. Wrenn (awarded 1998)
Professor Vaughn M. Bryant (awarded 1999)
Dr. Donald W. Engelhardt (awarded 2000)
Dr. David T. Pocknall (awarded 2005)
Dr. David K. Goodman (awarded 2005)
Prof. Owen K. Davis (awarded 2005)



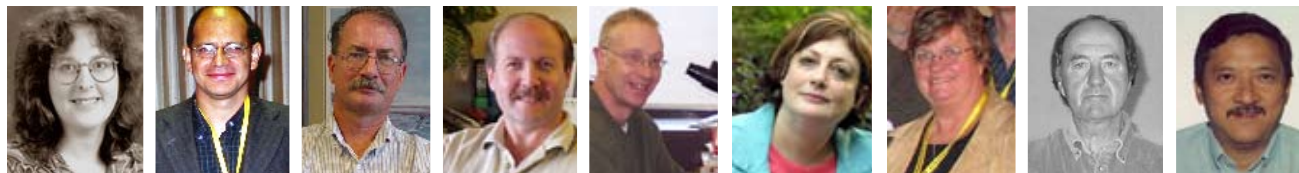
A.A.S.P. NEWSLETTER

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Volume 41, Number 1
Sophie Warny, Editor

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The AASP Newsletter is published four times annually. Members are encouraged to submit articles, "letters to the editor", technical notes, meetings reports, information about "members in the news", new websites and information about job openings in the industry. Every effort will be made to publish all information received from our membership. Contributions which include photographs should be submitted a week before the deadline. Deadline for next issues of the newsletter is **May 1**. All information should be sent by email. If possible, please illustrate your contribution with art, line drawings, eye-catching logos, black & white photos, colour photos, etc. **We DO look forward to contributions from our membership.**

European Geosciences Union General Assembly 2008
Vienna, Austria, April 13 – 18 2008
SSP11 - New applications and challenges in stratigraphic
palynology.



The **EGU** (<http://www.copernicus.org/EGU/>) General Assembly 2008 will be held at the Austria Center Vienna (ACV) in Vienna on April 13-18 2008. The Assembly is the major scientific venue for Earth Science specialists in Europe, covering all aspects of Earth Science. The meeting provides the possibility of Interdisciplinary Interactions among scientists working on distinct fields, yet more closely related than generally considered.

The SSP11 - New applications and challenges in stratigraphic palynology session is intended to present a broad overview of current developments in stratigraphic palynology and their impact in pure and applied research. Submission of papers dealing on all aspects of palynostratigraphy of the entire stratigraphic column is strongly encouraged.

Placing precise chronostratigraphic constraints on biotic or physical events is fundamental for any geological and palaeobiological model, and palynostratigraphy is certainly one of the most suitable and powerful tools for high-resolution biostratigraphy and correlation.

Visit the **SSP11** website
(http://www.cosis.net/members/meetings/programme/view.php?m_id=498&p_id=315&day=1&view=schedule) to find more information on this session and instructions on how to submit an abstract or write to **Marco Vecoli** (marco.vecoli@univ-lille1.fr) .
Deadline for abstract submission is **January 14th 2008**

PRESIDENT'S PAGE

By Francine McCarthy (fmccarthy@brocku.ca)

All members in good standing should have already received a referendum ballot on the proposed name change. If you haven't yet returned your ballot, there are still a few weeks left to express your opinion on this important question. The decision of the membership will be communicated via email and on the website shortly after the March 31 deadline. I won't reiterate the rationale for changing the name while retaining the acronym, as that was outlined in the last newsletter (Vol. 40, No. 4, p. 5). My reflections as I contemplate my President's Message highlight the international demographic and breadth of palynological interest represented by our membership, however.

This is especially evident as Martin Head and I, at Brock University in Canada's Niagara Region, put the finishing touches on the special volume of *Palynology* devoted to the memory of the late John H. Wrenn. John, originally from Illinois, had in recent years been working primarily on modern and sub-modern sediments, a focus evident in the two papers that he coauthored that form part of the memorial volume. As Associate Professor at Louisiana State University, following a career as a biostratigrapher in the petroleum industry, he remained active in Neogene dinocyst biostratigraphy, and he also became involved in Antarctic studies. The "Wrenn volume" will contain 10 scientific papers as well as a short paper reviewing John's scholarly life and contribution to palynology (see the Table of Contents below). The papers range widely in scope - from modern dinoflagellates to Silurian acritarchs, from Gulf Coast archeology to Late Miocene Mediterranean paleoceanography- a fitting tribute to a man with broad interests in palynology. Contributing authors were based in the U.S.A., Canada, the UK, France, Belgium, Germany, Austria, Romania, Hungary, Croatia, Egypt, and Japan. Most of the authors are university researchers, while a few are employed in the private sector or are affiliated with museums or government agencies.

The very broad nature of palynology is one of the aspects that attracted me (and presumably other people with similarly short attention spans and insatiable curiosity). Our microfossils come from every kingdom of life and since they are by definition acid-resistant, and they are not subject to mechanical breakage, it is very rare to find a fine-grained clastic sedimentary entirely lacking in palynomorphs. Despite these terrific attributes, however, palynomorphs continue to be undervalued by the rest of the micropaleontological community and by scientists in general. This is the main thing I'd like to tackle during my presidency- trying to make sure that palynology gets better PR by exposing other scientists, especially other micropaleontologists, to palynology's potential. Thomas Demchuk and I have organized a Topical Session at the 2008 Joint Meeting in Houston "Celebrating the International Year of Planet Earth"- clearly a meeting not to be missed! We've obtained the co-sponsorship of several other societies for our session on "The Sedimentation of Organic Particles: Practical Applications", and we hope that this will serve as a venue to forge stronger linkages with scientists in related fields. Similarly, I hope that AASP will have a strong presence at other interdisciplinary meetings, such as next year's NAMS Microfossils II conference to be held at Rice University.

Addressing palynology's image is one of the items I've put on the agenda for the Midyear Board Meeting next month in Niagara, and that I hope we can revisit when we meet as part of the International Palynological Congress in Bonn this summer. Please feel free to contact me if you have any input to this important issue, and I will convey the membership's suggestion to the Board of Directors.



Palynology

Special Issue honoring the memory of Prof. John H. Wrenn
Editors: Martin J. Head & Francine M.G. McCarthy

*Dr. Wrenn, at UCL,
Belgium, between
Dr. Maurice Streef and
Dr. Martine Hardy.*

Head, M.J., and McCarthy, F.M.G. Introduction.

Hart, G. F., and Webb, P. The life of Professor John H. Wrenn.

Kawami, H. and Matsuoka, K., The cyst-theca relationship of *Protoperidinium parthenopes* Zingone and Montresor (Peridinales, Dinophyceae).

Hardy, M.J., and Wrenn, J.H. Palynomorph distribution in modern tropical deltaic and shelf sediments (Mahakam delta, Borneo, Indonesia).

Warny, S. *Palaeostomocystis* spp.: A potential indicator of neritic subpolar environments in Antarctica

Bryant, V.M., Jr., and Holloway, R.G. Reducing charcoal in archaeological pollen samples.

Pocknall, D.T. and Jarzen, D.M. Pollen with viscin threads from the Late Cretaceous and Paleocene, Mérida Andes, western Venezuela.

Popescu, S.-M., Dalesme, F., Jouannic, G., Escarguel, G., Head, M.J., Melinte-Dobrinescu, M.C., Sütő-Szentai, M., Bakrac, K., Clauzon, G., Suc, J.-P. *Galeacysta etrusca* complex, dinoflagellate cyst marker of Paratethyan influxes into the Mediterranean Sea before and after the peak of the Messinian Salinity Crisis

Soliman, A., Head, M.J. and Louwye, S. Morphology and distribution of the Neogene dinoflagellate cyst *Operculodinium borgerholtense* Louwye, 2001, emend.

Saunders, R., Wrenn, J.H., Krebs, W., and Bryant, V.M., Jr. Coastal dynamics and cultural occupations on Choctawhatchee Bay, Florida.

Wood, G.D. The biological implications of uniquely preserved *Hoegklintia* (Acritarcha) from the Lower Silurian, mid-continent, United States.

Elsik, W.C., and Jarzen, D.M. New species of the Neogene fungal form-genus *Mediaverrunites* Jarzen & Elsik 1986 ex Nandi & Sinha 2007.

XII Simpósio Brasileiro de Paleobotânica e Palinologia

02 a 05 de novembro de 2008 | Florianópolis - SC

1ª Circular



“Revisitando a Coluna White. Ampliando fronteiras”

Anunciamos a realização do **XII Simpósio Brasileiro de Paleobotânica e Palinologia**, encontro dos paleobotânicos e palinólogos do Brasil, e que reúne pesquisadores da América Latina e de outras partes do mundo, em continuidade às tradicionais RPP's (Reuniões de Paleobotânicos e Palinólogos), sob os auspícios da ALPP, Asociación Latinoamericana de Paleobotánica y Palinología.

A se realizar em Florianópolis, Santa Catarina, região sul do Brasil, o XII SBPP busca, entre outros, atingir dois focos principais. O primeiro deles, e uma das razões para a escolha do local do encontro, é o de se integrar às festividades comemorativas aos 100 anos da publicação da Coluna White, uma exposição ao ar livre das sucessões que compõem o Permiano na Bacia do Paraná, em trabalho pioneiro apenso à exploração dos carvões da região. O outro foco consiste em explorar novas fronteiras do conhecimento da Paleobotânica e Palinologia abrangendo perspectivas inovadoras de estudo, integração de diferentes ferramentas e a sua aplicação nas diferentes áreas, na busca da solução de distintos problemas da sociedade moderna e das próximas gerações.

São por isto, bem vindas, contribuições de caráter aplicado em Palinologia, como as realizadas em Arqueologia, Palinotaxonomia, Melissopalynologia e Palinologia Forense, e as em Paleobotânica em geral voltadas para as reconstituições paleoambientais, paleogeográficas e paleoclimáticas e de caráter bioestratigráfico. Além disso, trabalhos multidisciplinares ou que aliem a paleobotânica e a palinologia a outros tipos de organismos fósseis, na avaliação dos depósitos sedimentares e no acompanhamento das alterações globais do clima e do nível do mar no passado são bem vindos.

Esperamos que estes objetivos venham ao encontro dos interesses da comunidade e incentivem sua participação. Saudamos a todos neste início de preparativos da organização do XII SBPP, colocando-nos à disposição para novas sugestões temáticas.

Nessa edição, a Comissão Organizadora é composta por representantes de instituições irmãs do Estado de Santa Catarina (UFSC) e do Rio Grande do Sul (UFRGS, UNISINOS e ULBRA), com apoio de agências de fomento nacionais e instituições afins, tais como PETROBRAS, CPRM e DNPM.

A Comissão Organizadora

XII Simpósio Brasileiro de Paleobotânica e Palinologia

02 a 05 de novembro de 2008 | Florianópolis - SC



Inscrição e Resumos

Comunicações em formas de resumos serão publicadas no Boletim de Resumos do XII SBPP, a serem apresentadas na forma oral ou em painel. O conteúdo deve abranger temas originais em paleobotânica e palinologia, ser redigido de forma clara, informativa e concisa, não sendo voltado a novidades de caráter taxonômico.

O prazo de submissão dos resumos é **31 de julho de 2008**. Maiores informações sobre as normas de confecção das contribuições orais e em pôster serão divulgadas na página do evento, disponível a partir de 05 de março: www.ufrgs.br/xiisbpp. Os valores de inscrições para profissionais e estudantes são assim especificados:

Data Limite	Profissionais	Estudantes de pós-graduação*	Estudantes de graduação*
Até 31/07/08	R\$ 180,00	R\$ 110,00	R\$ 70,00
Até 10/10/08	R\$ 220,00	R\$ 140,00	R\$ 90,00
Após 10/10/08	R\$ 260,00	R\$ 170,00	R\$ 100,00

* Obrigatório o envio de comprovante de matrícula junto com a inscrição.

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xiisbpp@ufrgs.br

www.ufrgs.br/xiisbpp

Promoção:



Asociación
Latinoamericana
de Paleobotánica
y Palinología



Patrocínio:



Apoio:



CENEX UPDATES



AASP Chair Goal Reached!

LSU and AASP are pleased to announce that the AASP Chair in Paleopalynology in the Department of Geology & Geophysics has reached the \$600,000 goal in private funding. By achieving this goal, the chair is now eligible to receive an additional \$400,000 in matching funds from the Louisiana Board of Regents. LSU is currently in the process of applying. The matching of endowed chairs is a state-wide competitive process, and announcements are usually made during the summer.

In 1990, the Center for Excellence in Palynology (CENEX) was awarded to LSU. The primary objectives of the Chair and of CENEX are:

- (1) To promote excellence in the teaching of applications-oriented stratigraphic paleopalynology, with particular reference to the contributions paleopalynology can make toward chronostratigraphy and paleoecology, and toward resolving geological problems in the collateral disciplines of stratigraphy, sedimentology, sequence stratigraphy, geochemistry, paleoecology and kerogen studies; and to train, advise, and direct graduate students to graduate degrees so that those individuals become broadly capable geologists with special expertise in biostratigraphy and paleoecology.
- (2) To promote scholarly research and publication in paleopalynology.

AASP initiated this collaborative effort as a result of their concern for the availability of trained palynologists in the United States. To support these efforts, AASP members and other industry leaders have been raising funds to establish the AASP Endowed Chair in Paleopalynology. Once a Board of Regents match is received, the LSU Department of Geology & Geophysics will be able to conduct an international search for an eminent scholar to fill the chair position.

This important milestone for CENEX was achieved because of the generosity of donors and corporate partners who contributed to the chair. LSU and AASP sincerely appreciate the efforts of everyone involved.

Supporting CENEX

There are several funds held in the LSU Foundation for the purpose of supporting CENEX. In addition to the endowed chair and professorship, these accounts provide important resources for students and research. Private funding for CENEX can help attract and retain top faculty and scholars from around the country, thus advancing the goals of the Center and LSU's National Flagship Agenda.

Gifts in support of CENEX can be made in a variety of ways including check, credit card, stocks, and through estate planning. If you are interested in supporting CENEX through private, tax deductible donations and would like more information, please contact:

Ann Marie Marmande
Senior Director of Development
LSU College of Basic Sciences
225-578-4906
annmarie@lsu.edu

Emilia Gilbert
Associate Director of Development
LSU College of Basic Sciences
225-578-2321
egilbe2@lsu.edu

CENEX Update

Dr. Sophie Warny, palynologist, has recently been appointed as an assistant professor in the Department of Geology & Geophysics with a joint appointment as curator in the Museum of Natural Science. She received a Ph.D. in Sciences from the Catholic University of Louvain (UCL), in Louvain-la-Neuve, Belgium in 1999, under the direction of Dr. Jean-Pierre Suc, from the University of Lyon, France. She has been working in the US since 1999, and at LSU since 2000. She has been an active member of AASP for over 15 years, and served on the AASP Board of Directors from 2006 to 2007. She will use the CENEX facilities for her research program and is looking forward to welcoming the first CENEX chair at LSU once the match is received and a search is conducted. In the meantime, earnings from the AASP Professorship will be used to support the CENEX lab.

AASP Student Scholarships

AASP Student Scholarships are awarded annually to support studies in palynology. These comprise two scholarships of US\$1500 each. Ordinarily, the scholarships will be offered to beginning graduate students, but advanced undergraduates may also apply. The qualification of the student, the originality and imagination evident in the proposed project, and the likelihood of significant contribution to the science of palynology are factors that will be weighed in the selection of award winners. Previous winners of this award are eligible only if they are pursuing a different degree than the one they were pursuing when they received the previous award.

AASP Scholarships are available to all students of palynology in all countries and these students need not be members of AASP.

Application forms can be downloaded from our website at <http://www.palynology.org/content/scholar.html>

Scholarship applications must be postmarked or arrive by email no later than March 31.

Travel Awards:

AASP periodically awards travel grants to students to enable them to attend the AASP annual meeting, other important meetings, and AASP-sponsored short courses. For meetings, the support is for students making presentations at the meeting.

We are pleased to announce that student travel to Dino8, the IPC in Bonn, and the Geological Society of America in Houston will be supported this year.

For Dino8, 3 awards will be given to cover the cost of registration. Applications are due by March 15, 2008.

For IPC in Bonn, a total of US\$1500 will be awarded and split among the winners based on their applications. Deadline for application will appear in later announcements.

For GSA in Houston, 2 or 3 awards will be given to cover the cost of registration. Deadline for application will appear in later announcements.

Procedures for Travel Grant Application: Amount of travel award is variable based on need. Awards can be up to US\$1000 but we anticipated giving out 2 grants of approximately US\$500 each.

Applicants are required to submit:

- 1) A one paragraph justification for the request plus the abstract submitted for the presentation.**
- 2) A simple budget outlining the requested amount and how the funds would be used. We suggest that the AASP award be used to offset the cost of airfare to the meeting.**

Travel Grant Applications are due [date], about two months before the meeting.

Travel Grant Applications should be submitted to the chair of the awards committee who will make recommendations after consultation with the committee. Submission should be made via email, but hardcopy may be sent if necessary.

All application materials should be sent to the Chair of the AASP Awards Committee:

**Martin Farley
Geology, Old Main 213
University of North Carolina at Pembroke
Pembroke, NC 28372
(910) 521-6478
mbfarley@sigmaxi.net**

BIOSTRATIGRAPHERS

Energy section of the Geological Survey of Denmark and Greenland

The Geological Survey of Denmark and Greenland (GEUS) has two vacant positions within the Energy section, to be filled as soon as possible.

The Energy section consists of three departments, Stratigraphy, Geophysics and Reservoir Geology, which together with the other departments at GEUS undertake a diverse range of research and advisory tasks. Over 80 personnel are employed in the Energy section, primarily with responsibility for activities related to hydrocarbon exploration and production in the North Sea, to utilization of geothermal energy, subsurface CO₂ storage, petroleum exploration in Greenland and territorial claims around Greenland and the Faroe Islands.

Research and advisory activities are typically undertaken in collaboration with other research institutes (particularly within the Geocenter Denmark, but also internationally) with the relevant authorities and, increasingly, in collaboration with industry.

Presently, there is a marked expansion in the project portfolio – particularly with respect to North-East Greenland, subsurface CO₂ storage and new conceptual ventures in the North Sea. GEUS forms part of the new Climate and Energy Ministry and with the renewed focus on climate and energy policies, we anticipate many new challenges in the years ahead.

We offer a lively and informal working environment at GEUS together with competent and committed colleagues. In addition to a wide diversity of potential work areas, GEUS provides the possibility for employees to influence the direction and planning of the professional work and also ensures good career prospects with access to courses and advanced training programmes. GEUS operates a flexible working system, with possibilities for home workplace arrangements, and an active social life including personnel and art societies as well as an on-site motion centre with attendant physiotherapist.

Vacant positions: Scientific disciplines and qualifications

There are vacant positions within the fields of biostratigraphy.

The applicants must have relevant research backgrounds and be able to document a publication record at a high international level. All positions require basic computing skills (familiarity with Word, Excel etc) and experience of working in multidisciplinary teams (and optimally project management) and international collaboration will be a significant advantage. The successful candidates will be expected to be creative, result-oriented and show personal initiative, in addition to contributing constructively to integrated teamwork. Applicants must be fully competent in English, both orally and in written reports and papers.

Biostratigraphers (Research Scientist / Senior Research Scientist)

The Stratigraphy Department is seeking two biostratigraphers with specialisation in micro-palaeontology or palynology.

The job will involve a broad spectrum of project work, spanning various geographical areas and stratigraphic levels. In

particular, the biostratigraphers will be working on projects related to hydrocarbon exploration in the North Sea and around Greenland and the Faroe Islands (largely within Mesozoic and Palaeogene successions), and in the Neogene of Vietnam. In addition, the successful candidates may be involved in projects to document the presence of deep Miocene groundwater reservoirs in Jylland and the characterization of sandstone reservoirs for potential CO₂ storage within the Permo-Triassic and Jurassic successions of Denmark and Germany.

The job will be primarily based in Copenhagen but there will also be potential for participation in fieldwork in Greenland and elsewhere, and on marine cruises. The new employees will form part of a biostratigraphic team, presently comprising three palynologists, one micropalaeontologist and three technicians, that works closely with sedimentologists, geophysicists and geochemists. The Biostratigraphy Laboratory is responsible for preparing palaeontological material (microfossils, palynomorphs, nannofossils and conodonts) both for the in-house GEUS palaeontologists and for external clients.

Both experienced researchers and younger candidates (with a PhD) are encouraged to apply.

Salary and employment conditions

Salary and employment conditions are in accordance with the agreement between the Finance Ministry and the relevant professional organisations (trade union). Recruiting personnel at the level of Researcher / Senior Researcher necessitates evaluation of the candidates' qualifications by a specially convened Evaluation Committee.

GEUS is an equal-opportunities employer and we encourage all qualified candidates to apply, irrespective of sex, age or nationality.

Further information

Additional information concerning these positions can be obtained from the following:

Lars Henrik Nielsen, Acting Head of Stratigraphy Dept; tel: 45 38 142730; email: lhni@geus.dk and on the website www.geus.dk (see "Jobs" and "Geologists, geophysicists and engineers")

Applications

Applications should be accompanied by a curriculum vitae, including documentation of expertise within the relevant professional areas and a publication list; copies of publications that the applicant deems of particular relevance for the position should also be attached. Names and contact details of two professional referees should be included.

The candidate should state clearly for which position he/she is applying.

The application should be sent by e-mail to geus@geus.dk

Or by post to:

GEUS
Geological Survey of Denmark and Greenland
Øster Voldgade 10
DK-1350 Copenhagen K
Denmark

Applications must be marked the position applied for and the GEUS j.no. 031-00921.

Applications must be received at GEUS no later than Wednesday 26 March 2008 at 12:00 a.m.(Danish time).

HOLOCENE PALEOLIMNOLOGY AND PALEOCLIMATOLOGY OF THE CAUCA LAKE

The Universidad EAFIT Paleoclimatology research group, in cooperation with *University College London, University of Tokyo, University of Regina, Universidad Nacional de Colombia, and Escuela de Ingenieria de Antioquia*, is investigating the paleolimnology and paleoclimatology of the Holocene laminated deposits of the Cauca Lake. For a second phase of this study we are searching for the following research participants:

- 1) **A MS.c. student.** Professional profile: Geologist with research experience in stratigraphy, preferably in **ciclostratigraphy** and time series analysis in clastic successions.
- 2) **A MS.c. student.** Professional profile: Geologist with research experience in Micro-paleontology and/or **Palynology** with good statistical background preferably in multivariate analysis.

Requirements for the MS.c. students: CV and professional title. Academic marks. Two academic references. Abstract of the research project and copies of papers (if there are any). Intermediate to high level of English, and a basic to intermediate level of Spanish.

Duration and funding of the project: 2 years fully funded by the *Leverhulme Trust* (UK).

Application deadline: January 18, 2008. Please submit your documentation to:

Professor José Ignacio Martínez
Universidad EAFIT
Departamento de Geología
Crr. 49 # 7 sur 50, Av. Las Vegas
Medellín

For additional information: jimartin@eafit.edu

Upcoming meeting:



DINO8: Eighth International Conference on Modern and Fossil Dinoflagellates

Montréal, Canada

4-10 May 2008

The Eighth International Conference on Modern and Fossil Dinoflagellates (DINO8: <http://www.dino8.uqam.ca>) is being organized by the Geochemistry and Geodynamics Research Centre (GEOTOP; <http://www.geotop.uqam.ca/>) and will be held at UQAM in Montreal from May 4 to 10, 2008. The conference will cover various fields of research relevant to the study of dinoflagellates including molecular biology, ecology, taxonomy, biostratigraphy, limnology, oceanography, paleoclimatology and paleoceanography.

Workshops are planned to provide hands-on knowledge on the taxonomy of Neogene and Quaternary dinoflagellate cysts, *in vitro* culture techniques, techniques of preparation and analyses, and quantitative data treatments for paleoceanographic purposes.

The preliminary program and information concerning registration are available on the internet at: <http://www.dino8.uqam.ca>

The organizing committee warmly welcomes students, researchers and professionals to attend DINO8.

Organizing committee:

Anne de Vernal (GEOTOP-UQAM)
André Rochon (GEOTOP and ISMER)

Contact: Taoufik Radi at: dino8@uqam.ca

MANAGING EDITOR'S NOTE

Volume 31 of our journal *Palynology* was published during December 2007. It comprises thirteen research articles. I would like to record my thanks to Production Editor Bob Clarke for his input to this volume. No numbers of the *Contributions Series* were published during 2007.

I am currently seeking high-quality manuscripts for the 2008 issue of *Palynology* (volume 32); space is potentially available in this volume. Suitable manuscripts could therefore potentially be published this year, in 2008. *Palynology* is a high quality journal, with a reader-friendly, two-column format. Plates and diagrams are reproduced at the highest standard. If you have a suitable manuscript available now, or you are anticipating submitting within the next few months, please contact me soon in order that your paper can be considered for publication in 2008.

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ART AND PALYNOLOGY

NOTE FROM MICHAEL ZAVADA

The ETSU and General Shale Brick Natural History Museum at the Gray Fossil Site (<http://www.grayfossilmuseum.org/>) has agreed to put a display of photographs, photographic art, or art that will be exhibited beginning in September 1 of 2009 to December of 2009 called "Palynology in Pictures". The exhibit will coincide with our 42 annual meeting and be dedicated at the beginning of the mixer, Sunday September 27, 2009 in Tennessee. I am soliciting any photographs (digital or otherwise) or art that can be used in this Museum display. The photos or art are to be from the membership of the AASP and may depict any aspect of Palynology. I am sure that many members have photos that they are particularly proud of and are of excellent quality. Depending on the number of photos received and the available space photographs will be chosen that depict the widest range of our collective activities. The museum will mount all digital or photographic pictures and will be on loan until December 2009. Please contact Mike Zavada at zavadam@etsu.edu for further details or to submit your work.

Please submit as early as possible.

GLENN E. ROUSE (1928-2007)

Memories from two colleagues...



Following a prolonged battle with Parkinson's disease, Glenn passed away at Arbutus Care Centre in Vancouver on December 9, 2007 at the age of 79. He was a pioneering palynologist and paleobotanist in Canada who left a significant imprint as a researcher, teacher, and colleague at the University of British Columbia, where he held a joint appointment in the Departments of Botany and Geology.

Glenn Everett Rouse was born in Hamilton, Ontario in 1928 and ultimately graduated with a PhD from hometown McMaster University under the tutelage of Norman Radforth, following a brief interlude at Ohio State University. I would later hear many stories of his thesis research travels to British Columbia and Alberta, where he sampled Jurassic and Cretaceous rocks after occasionally "riding the rails" in the Rockies with various colourful characters for company. No doubt his weaving of relevant adventure stories into his well-organized lectures played some part in his popularity as an undergraduate instructor.

He and his wife Carol came to Vancouver in 1956, and he took up an assistant professor position at UBC in 1957. He began a variety of innovative research projects in the Vancouver area (stratigraphy and palynology of the Burrard and Kitsilano formations), and also worked on various projects in the Interior of B.C. and in Northern Canada, as well as Alberta. Besides his main

focus on Mesozoic and Cenozoic paleobotany, he also had an early interest in the Devonian, and co-authored a paper in *Science* (1962) on Devonian plants and another on *Perfosporites* from the Late Devonian of Quebec.

I met Dr. Rouse while doing a senior undergraduate project at Simon Fraser University in 1969. He was generous with advice and the loan of hard-to-find publications so I could try to identify plant megafossils I had collected at Quilchena, B.C. that summer. After I wrote my paper, Glenn asked me what I planned to do, and after some discussion, he persuaded me to begin a graduate program with him in Botany at UBC. Although my project was on plant megafossils, I was somewhat surprised when he told me that the future was in pollen analysis, especially for someone with a more biological rather than geological background. I knew his own specialty was in paleopalynology of Mesozoic to Cenozoic strata, so it surprised me when he convinced me to do Quaternary palynology. Like most of his advice to me, it turned out to be well-reasoned and has served me well then, and after.

Another Quaternary palynologist that came later from Glenn's lab is Richard Hebda, who worked on the history of Burns Bog and is now based at the Royal British Columbia Museum in Victoria. Pre-Quaternary research predominated, of course, and names like Steve Hopkins, Ken Piel, Satish Srivastava, Eileen Williams, Helene Martin, Gerhard Bihl, and others were frequently mentioned.

Soon after starting at UBC, I learned that Glenn, his wife, and son Clay were headed to Sasebo Japan, a suburb of Nagasaki, for a sabbatical stint with palynologist M. Takahashi. This interlude had a lasting influence on him, since upon his return, his standard lunch came in a Bento box, and was washed down with Japanese tea (with puffed rice) which I also learned

to enjoy. His international connections were many, and he worked at maintaining a facility with French, German, Russian, Japanese, and probably other languages as well. His bountiful correspondence typically rested in stratigraphic piles on his desk, and as usual, he let me keep stamps and reprint request cards when he had fulfilled the orders. He corresponded with many notable palynologists and paleobotanists – and as I peruse a stack of request and thank you cards (I bemoan their disappearance), names like Harlan Banks, Jim Canright, David Dilcher, (Sir) Harry Godwin, Kirchheimer, Kuprianova, Geoff Playford, Olaf Selling, Toshimasa Tanai, S. Van Zinderen Bakker, and L.R. Wilson, among many others, jump out at me.

Not surprisingly, Glenn also collaborated closely with colleagues in Botany and Geology at UBC, notably geologist W.H. Mathews who provided stratigraphy and geochronology to supplement Glenn's palynological analyses of many Interior B.C. localities. He is also well-known as a co-author of the well-reviewed textbook "An Evolutionary Survey of the Plant Kingdom" (Scagel, Bandoni, Rouse, Schofield, Stein, and Taylor, 1969), which was translated into several languages and went through several revisions and editions at Wadsworth.

Among palynologists, I would venture that Glenn Rouse's best known claim to fame is his naming of the important and now extinct angiosperm taxon *Aquilapollenites*. This distinctive pollen type was discovered in the Upper Cretaceous Brazeau Formation of Alberta and formally described in 1957. The "*Aquilapollenites* province" is a widely recognized biogeographic region of occurrence in western North America and adjacent Asia, but it is less well known that this pollen type is immortalized in stone in the spandrels of the House of Commons Chamber in Ottawa. David Jarzen arranged to have "Eagle-pollen" and other pollen types included in the limestone sculptural elements of the capital along with representations of trilobites, a Devonian fish and other vertebrates (see "*Aquilapollenites*: Carved in Stone!" on the Canadian Association of Palynologists web site). A fitting tribute to Glenn's memory.


Besides strictly academic pursuits of teaching and publishing, Glenn always had strong

inclinations to use his palynological skills to solve practical problems of coal and oil exploration, geological correlation, and even dating of placer gold deposits. I enjoyed trying to interpret palynological range charts and stratigraphic sections that were often tacked up on the walls of his laboratory in Hut 02. While Killam fellow Satish Srivastava worked in the lab with me, I was often tempted to venture into pre-Quaternary palynology, based on beautiful images of Maastrichtian palynomorphs that were always on display around me. Satish and Glenn published 3 papers that were among the first to combine SEM and light images of fossil pollen. Satish also created the genus *Rousea* in Glenn's honour in 1969, following on the 1962 creation of *Rouseisporites* by Stanley Pocock.

Also in evidence on the lab wall during my years was a poster that summarized Glenn's philosophy, which was "Lead, follow, or get out of the way". I learned recently from Glenn's son Clay that I was the source of some frustration at times. My excuse is that I was dating my wife-to-be Donna during my 3rd PhD year, playing soccer, and fishing on occasion. I got the message and finished up quickly (3 years total), and Glenn was happy. We both liked fly-fishing before it became a national craze, and we had some fun outings on the Vedder and Squamish rivers, where I caught my first steelhead on a fly I tied myself. Glenn was impressed, and understood why I was not always in the lab!

Glenn Rouse was a dedicated palynologist who contributed much to our discipline, and a generous colleague and friend. I miss his humour, his stories, and his advice, and I am sure that others who knew him well will feel the same way.

Rolf W. Mathewes (PhD, UBC Botany, 1973)
Department of Biological Sciences
and Associate Dean of Science, Simon Fraser
University, B.C.



Aquilapollenites: Carved In Stone!

by

David M. Jarzen

Reproduced with permission from the Canadian Museum of Nature, Ottawa

In 1986 Public Works Canada embarked on a programme to produce a series of stone carvings to adorn the walls of the House of Commons Chamber, along the shoulders of archways (spandrels) enclosing the public galleries. Parliament later approved a series of fourteen carvings to represent the "Origin of Life in Canada." It was proposed that these carvings would acknowledge the internationally recognized work of Canada's paleontologists and provide the public with a view into Canada's prehistory. The beautifully detailed carvings are the creations of Eleanor Milne and Maurice Joanisse, the

Government of Canada's only professional stone sculptors. Maurice, a student of Milne's since 1971, carved the entire prehistory life series from Milne's meticulously detailed designs. Working patiently and researching each detail of the fossil organism that he created in stone, Maurice spent about four months on each sculpture. Sculptures already completed include dramatic and detailed representations of Smilodon, Triceratops, trilobites, dragon-flies and Eusthenopteron, a primitive Devonian fish. Of interest to CAP readers is the choice of *Aquilapollenites* as a candidate for one of the sculptures. Early in 1986 Dr Dale Russell and

I were approached by Eleanor Milne to provide subject material which she could incorporate into the Cretaceous-age carvings. Excited at the prospect of having palynology forever preserved in the Parliament buildings, I selected *Aquilapollenites* Rouse (sensu lato) as appropriate to represent a part of Canada's plant history. Eleanor Milne was delighted with the "bizarre" yet intriguing morphology of these "tiny architectural wonders."

A well-written and beautifully illustrated account of the work of Eleanor Milne and Maurice Joanisse is that of Dugas (1992) in which one of the color photographs (p. 79) shows Maurice and Eleanor discussing the early stages of the *Aquilapollenites* sculpture. One of the archway carvings to be installed during the summer of 1993 on the House of Commons walls is a representation of an ostrich dinosaur flanked above by leaves of *Gunnera* and below by a stylized rosette of four specimens of *Aquilapollenites*. The sculptures are carved in the fine-grained, nearly white, Indiana Limestone (Mississippian) since this rock material is easily carved and usually free of inclusions (including fossils) which may mar the appearance of the final work. The specimens chosen for Maurice to carve were styled from SEM and LM photomicrographs

of *Aquilapollenites* (*Integricorpus*) *clarireticulatus* recovered from the Lea Park and Foremost Formations (Campanian), Youngstown borehole, south-eastern Alberta. Radforth and Rouse (1954) were the first Canadian palynologists to illustrate and describe specimens of *Aquilapollenites* (as N1, N2 "Not previously described") and later Rouse (1957, p. 371) provided the first validly published diagnosis of the new genus. In doing so Rouse noted that "The form genus *Aquilapollenites* has been formulated to incorporate two pollen forms of unknown botanical affiliation which occur in the Brazeau and Oldman formations and appear to be characteristic microfossils of these Upper Cretaceous formations." The carvings of the four grains of *Aquilapollenites* are arranged



in a cruciform pattern with the long axis (polar axis) aligned radially. Overall the four-specimen circle (rosette - see photograph on page 19) measures about 30 cm in diameter. Even at this size, detail of

the reticulate surface could not be carved onto the sculpture as the soft limestone tends to crumble when closely spaced, fine lines are required. Once in place, however, high above the floor of the House of Commons Chamber, the grains are, indeed, recognizable as *Aquilapollenites*.

Certainly the importance of *Aquilapollenites* in Canadian Late Cretaceous biostratigraphy need not be stressed here; however, its inclusion in the Parliament buildings

will assure its permanence as the only fossil pollen grain so honoured.

VIRGIL DALE WIGGINS

Virgil Dale Wiggins Resident of Walnut Creek Virgil passed away after a long illness on February 15 in Walnut Creek, CA at the age of 76. He resided in Walnut Creek with his wife, Lorna at the same location for 37 years. He was born in Tulsa, Oklahoma to Virgil and Helen Wiggins. He was preceded in death by his parents and a sister Ann Lee Wiggins. Virgil attended Elementary and Secondary Schools in Oklahoma, Colorado, Washington and Missouri. He graduated from Tulsa Central High School in 1949. Attended Oklahoma A.M. in 1949-1950 where he met his wife Lorna. He joined the Air Force during the Korean War and was stationed at Fairchild Air Base in Spokane, Washington. He and Lorna were married in 1952. After his discharge in 1954 they returned to Oklahoma where he attended the U. of Oklahoma receiving a BS degree in geology and an M.S. degree in palynology. In 1959 the family moved to Bakersfield, California to start his career with Standard Oil Co as a palynologist. From 1959 until his retirement in 1990 he was actively doing research for the Exploration Division of Standard Oil/Chevron U.S.A. Most of his research concerned the Company's effort to



discover oil in different locations in Alaska. In 1989 the Company awarded him for the palynology work he had done in the Cook Inlet Basin and the Bering Sea. He retired in 1990 after 31 years with Chevron as a Staff Palynologist. Virgil had many interests and

hobbies which were always changing. He always loved gardening. He volunteered at Heather Farms where he planted a Daylily Garden. He also earned a Master Gardener's Certificate from the U. of California. He is survived by his wife Lorna of 55 years and their three children, Kathleen McCraw, Ft Smith, Arkansas, Michael Dale Wiggins, Edmonds, Washington,

Timothy Wiggins, Oakland, California. There are six grandchildren,

Jeremy McCraw, Columbia, Tennessee, Michael McCraw, Springdale, Arkansas, Christopher McCraw, Ft Smith, Arkansas, Andrew Wiggins, Houston, Texas, Daniel Wiggins, Alexandria, Virginia and Kaitlin Wiggins, Spokane, Washington. He also had three great-grandchildren, Katie, Emma, and Joseph McCraw, Columbia, Tennessee. Services and interment were held on February 22nd at the Ozark Memorial Park Cemetery in Joplin, Missouri.

The Sedimentation of Organic Particles:

Practical Applications

Special session at the

2008 Annual Meeting of the Geological Society of America in Houston

We have often bemoaned the “poor second cousin” status of palynology in the micropaleontological world, which largely ignored palynomorphs until petroleum exploration expanded into coastal/neritic and high latitude paleoenvironments where other calcareous/conventional microfossil groups were rare. Despite palynology’s proven success in these geological settings, our discipline continues to suffer from our late entry into the game and lack of high-resolution biozonations. We need to continue to develop applications that will interest industry. There is increasing realization that there is more valuable information in palynological preparations than previously exploited. Basic research which allows for a thorough and accurate appreciation of palynological data is key to allowing the development of practical applications that will get the attention of industry, with the subsequent hope of increased funding and job opportunities for palynologists.

As a result, we are soliciting submissions to a Topical Session entitled “The Sedimentation of Organic Particles: Practical Applications” that is being organized for the 2008 Annual Meeting of the Geological Society of America in Houston. A full description of “proposed Topical Session #53” is reproduced below, and should soon be posted at <http://www.geosociety.org>.

Organic particles accumulate in varied environments where decay is inhibited by anoxic or acidic conditions, or by rapid burial. Organic particles are the source

of fossil fuels, and the sequestration of carbon in these depositional environments is significant to climatic systems. Acid-resistant organic particles- i.e. palynomorphs- have proven useful in the determination of thermal maturation, and in biostratigraphic correlation. Palynomorphs along with other organic material can also be useful paleoenvironmental proxies, but accurate paleoenvironmental interpretations require an appreciation of the impact of the taphonomic processes affecting these particles- i.e. differential preservation and transport. Papers are solicited on any aspect of the study of organic particles leading to a qualitative or quantitative understanding of the behavior of organic particles in various depositional environments, and their application to geologic studies.

We are also planning a special volume to coincide with this session, which we hope will bring together scientists from diverse fields including sedimentary geology and palynology. We hope to attract submissions from industry as well as academia, and co-sponsorship of this topical session by the Coal Geology Division and the Sedimentary Geology Division of GSA, and SEPM should encourage the cross-fertilization that we feel will help promote our discipline.

Francine McCarthy (fmccarthy@brocku.ca)
and Thomas Demchuk
(Thomas.D.Demchuk@conocophillips.com),
session co-organizers

Recent AASP-Member Publications and other sources of palynological interest

Compiled by Sarah de la Rue (sarah.delarue@vandals.uidaho.edu)

The following are some recent pollen news (contributed by Vaughn Bryant and David Jarzen- Thank you both!):

Battle Against Counterfeit Drugs Has New Weapon: Pollen
<<http://www.nytimes.com/2008/02/12/world/asia/12malaria.html>> - New York Times

Researchers hunt down fake drug
<<http://www.nature.com/news/2008/080211/full/news.2008.568.html>>

Nature Scientists, police lift lid on fake malaria drugs
<<http://www.reuters.com/article/latestCrisis/idUSL11103825>>
<http://www.sciencedaily.com/releases/2008/01/080117181233.htm>
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NAMS

North American Micropaleontology Section, SEPM

ANNOUNCEMENT

GEOLOGIC PROBLEM SOLVING WITH MICROFOSSILS II

MARCH 15-18, 2009

UNIVERSITY OF HOUSTON
HOUSTON, TX USA

PRELIMINARY TITLE DUE APRIL 30, 2008

FINAL ABSTRACTS DUE OCTOBER 1, 2008

The North American Micropaleontology Section (NAMS) of SEPM invites you to attend the 2nd international conference on *Geologic Problem Solving with Microfossils*, “Microfossils II”.

“Microfossils II” is intended to bring together a diverse range of geoscientists to showcase the problem-solving power of microfossils across a broad variety of geologic settings. The planning committee is dedicated to developing a strong program and stimulating the “cross-fertilization” of ideas that result when a diverse group of scientists gather in a common venue.

The first conference on *Geologic Problem Solving with Microfossils*, held at Rice University in March, 2005, was a major success. More than 150 participants from dozens of countries attended, and the high-quality program has resulted in a special publication to be published by the Society for Sedimentary Geology (SEPM) that is currently in final editing stages.

For “Microfossils II”, we are seeking high-quality oral and poster presentations in which microfossils are integrated with related geologic data and contribute to solving significant geologic problems. Presentations that demonstrate new techniques or novel applications are encouraged, and studies of all geologic ages and geographic areas will be considered. Tentative session themes for the conference include:

- Microfossils and Problems in Eustasy and Tectonics
- Biostratigraphy and its Role in Sequence Stratigraphy
- Paleooceanography, Paleoecology, and Paleoclimatology
- Biochronologic Correlation
- Micropaleontologic Applications to Reservoirs and Drilling
- Micropaleontology Tools and Techniques
- Ecologic Analogs
- Environmental Analysis
- Roundtable Discussions of one or more topics based on participant interest

We encourage potential participants to solicit abstracts from colleagues to develop theme sessions of interest to you.

TENTATIVE SCHEDULE:

April 30, 2008: Preliminary title due
October 1, 2008: Abstracts due
December 1, 2008: Tentative program announced

FORMAT FOR ABSTRACT SUBMISSIONS:

1) Please submit 250-word abstracts (SEPM format) on above or related themes by October 1, 2008 to SEPM (online submission to become available). **NO ILLUSTRATIONS, PLEASE.**

2) Abstracts should be informative and present the main conclusions of the study. We ask that authors please avoid vague phrases such as “data will be presented”, etc.

3) The official language of the conference is English, but the organizing committee hopes for strong international participation. If you are not a native English speaker, it would be most beneficial to have your abstract proof-read and corrected by someone fluent in English before submission.

4) Presentation Format: Please indicate preference for poster, oral, or both. However, the Technical Program Co-Chairs will make the final decision as to presentation format.

Authors should submit a preliminary presentation title by April 30, 2008 to the Technical Program Chairs at the e-mail addresses below and submit a full abstract online to the SEPM website (www.sepm.org) by October 1, 2008.

Final abstracts are due October 1, 2008.

Information on registration fees and hotel accommodations for the conference will be announced shortly on the NAMS and SEPM websites.

PROGRAM COMMITTEE:

General Chair Don Van Nieuwenhuise
Treasurer, NAMS
Professor of Geosciences, University of Houston, Houston TX

Vice Co-Chair Ron Waszczak
President, NAMS
Principal Biostratigrapher, ConocoPhillips, Houston, TX

Vice Co-Chair Nancy Engelhardt-Moore
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Technical Program Co-Chair
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International Conference On Coal and Organic
Petrology ICCP - TSOP
2008 - Oviedo, SPAIN

International Committee for Coal
and Organic Petrology (ICCP)
The Society for Organic Petrology (TSOP)

**JOINT ANNUAL MEETING ANNOUNCEMENT
AND CALL FOR PAPERS**

Oviedo (Asturias), Spain
September 21-27, 2008

Conference Themes:

Advances in organic petrology and organic geochemistry
Application of organic petrology to coal utilization and coal by-products
Organic petrology in the context of clean coal technologies
Organic petrology and the environment

Field Trip to the Asturian Coast Jurassic section

TECHNICAL PROGRAM AND ABSTRACTS:
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GENERAL INQUIRIES AND REGISTRATION:
Begoña Ruiz Bobes
E-mail: begorb@incar.csic.es

ABSTRACT SUBMISSION DEADLINE: APRIL 15, 2008

Meeting and abstract submission details:

http://www.incar.csic.es/iccp_tsop

ICCP: www.iccop.org
TSOP: www.tsop.org

TSOP student research grant
(deadline May 15, 2008)



96-million-year-old Fossil Pollen Sheds Light On Early Pollinators

A 96 million-year-old angiosperm pollen clump of cf. *Phimopollenites* sp.. The stickiness that forms the pollen clumps indicates an adaptation for zoophilous pollination. Its occurrence is a significant step in early flowering plant and pollinator coevolution. Image courtesy of Shusheng Hu.

The origins of when flowers managed to harness insects' pollinating power as long been murky. But the new study, published online on the Proceedings of the National Academy of Sciences Web site and appearing in its Dec. 24 print edition, is the first to pinpoint a 96-million-year-old timeframe for a turning point in the evolution of basal angiosperm groups, or early flowering plants, by demonstrating they are predominantly insect-pollinated.

"Our study of clumping pollen shows that insect pollinators most likely have always played a large role in the evolution of flowering plants," said David Dilcher, a graduate research professor of paleobotany at the Florida Museum of Natural History. "It was true 96 million years ago and we are seeing it today with the potential threat to our agricultural crops because of the collapse of the honeybee colonies. The insect pollinators provide for more efficient and effective pollination of flowering plants."

The study provides strong evidence for the widely accepted hypothesis that insects drove the massive adaptive radiation of early flowering plants when

they rapidly diversified and expanded to exploit new terrestrial niches. Land plants first appear in the fossil record about 425 million years ago, but flowering plants didn't appear until about 125 million years ago in the Early Cretaceous period.

The study also is the first to describe the biological structure of pollen clumping in the early Late Cretaceous, which holds clues about the types of pollinators with which they were coevolving, said lead author Shusheng Hu, who started the study while at the Florida Museum but is currently at Indiana University Southeast. Hu said previous scientists found examples of early clumped pollen from a slightly earlier time period but these were interpreted as immature parts of anther from a flower, or dismissed as insect packaging activity or fecal pellets.

"We really had to jump out of the box and think in a new way on these widespread pollen clumps," said Hu, who completed the research in 2006 as part of his UF doctoral work. Today, flowers specialized for insect pollination disperse clumps of five to 100 pollen grains. Clumped grains are comparatively

larger and have more surface relief than wind- or water-dispersed pollen, which tend to be single, smaller and smoother.

"These clumps represent an amazing new strategy in the evolution of flowering plants," Dilcher said. "For me, the excitement here lies in the early times of these fossil flowers, when angiosperms were making these huge evolutionary steps. What we found with the fossil pollen clumps folds nicely into what has been suggested by molecular biologists that those plants that are basal in angiosperm evolutionary relationships seem to have been dominated by insect pollination." The nine species of fossil pollen clumps, combined with known structural changes occurring in flowering plants at this time, led the researchers to suggest that insect pollination was well established by the early Late Cretaceous — only a few million years before the explosion in diversity and distribution of flowering plant families. Known structural changes include early prototypes of stamen and anther, plant organs which lift pollen up and away from the plant, positioning the plants' genetic material to be passed off to visiting insects. The researchers

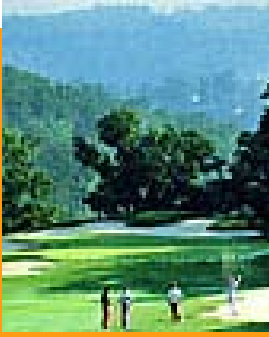
sampled pollen from three sites in Minnesota's Dakota Formation, which represents a time period when a shallow seaway covered North America's interior. Co-author David Jarzen, a Florida Museum pollen scientist, refined existing pollen processing techniques for extracting intact fossil pollen from the calcareous Minnesota limestone and silicate mudstone rock matrix. Co-author David Taylor, a botanist from Indiana University Southeast contributed a statistical analysis of pollination methods among living and early plants. A Smithsonian Institution paleobiologist, Conrad Labandeira, who specializes in insect-plant associations, and who is unassociated with the study, said that the authors' ability to demonstrate pollen clumping in basal angiosperms adds one more piece to the puzzle of several pollination types established in the mid-Cretaceous. "These data are very comparable with parallel data such as flower structure, pollen structure, and insect mouthpart morphology, that now documents a wide variety of pollination types that occurred before the Cenomanian," Labandeira said.

Shusheng Hu notes...

Pollen clumping sheds light on angiosperm-pollinator coevolution

Although pollen clumping is not new in the fossil record its full importance was not appreciated until the recent study by Shusheng Hu, David Dilcher, David Jarzen, and David Winship Taylor, which was recently published in the Proceedings of the National Academy of Sciences, January 8, 2008. Nine species of fossil pollen clumps were identified from three sites in Minnesota's mid-Cretaceous Dakota Formation. These relatively phylogenetically unrelated pollen clump species indicate that insect pollinators most likely have played an important role in the evolution of angiosperms. Based upon an examination of the pollination biology of extant basal angiosperms and the pollination modes of fossil angiosperms, the hypothesis that early flowering plants were insect pollinated is supported. Character reconstruction based on recent molecular trees

of flowering plants indicates that the most parsimonious result is that zoophily is the ancestral state. Combining pollen ornamentation, size, aperture characteristics, and the abundance of pollen clumps of Cenomanian angiosperm pollen species from the Dakota Formation, Hu, et al. demonstrated a dominance of zoophilous pollination (76% versus 24% wind pollination). Moreover, the zoophilous pollen species have adaptations for pollination by generalist insects (39%), specialized pollen collecting insects (27%), and other specialized pollinators (10%). These data quantify the presences of more specialized pollination modes during the mid-Cretaceous flowering plant diversification. So this research suggests that insect pollination was well established by the Cenomanian, just before the explosion in diversity and distribution of angiosperm families.



The 42nd Annual AASP Meeting September 27-30, 2009, Tennessee

The 2009 AASP meeting will be held in the Tri-Cities area of East Tennessee at The Meadowview Resort and Conference Center.

Information on the resort can be found at:

(<http://www.marriott.com/hotels/travel/tricc-meadowview-conference-resort-and-convention-center/>)

The meeting begins Sunday September 27- with all day registration and the evening ice breaker. The meeting ends Wednesday, September 30, 2009 with the business meeting. This will be co-sponsored by East Tennessee State University and the ETSU General Shale Brick Natural History Museum and Visitor Center at the Gray Fossil Site. We are planning workshops prior to the start of the meeting on Saturday September 26, 2009. I am hoping that Vaughn Bryant will agree to a Forensic Palynology workshop and we are hoping a theme for another workshop will be "Educating the next Generation of Palynologists" workshops designed to include the regions K-12 teachers and how they can incorporate lecture or laboratory exercises in the lower grades, and may provide innovative ideas to our academic members. As an added feature of the meeting I would like to have three public lectures that would begin on Monday afternoon, Tuesday afternoon and Wednesday afternoon, the public and local educators will be invited to attend in addition to our students and professionals to hear talks on e.g., "Pollen and Allergies", "Palynology and Petroleum: Supplying Americas Energy Needs" *If you have any other suggested topics or speakers or wish to volunteer to speak that may inform and entertain a wide audience please let me know.* We are also entertaining a number of field trips to begin on Thursday October 1, and return Saturday October 3, among the suggestions are "Appalachian Habitats, a trip through the southern Appalachians for bear and bird watching, it will also include local geology", another is a "Visit to Dayton Tennessee

to the Rhea County Courthouse (Home of the scopes monkey trials) an then on to Paris, Tennessee for collecting in the Eocene Claiborne Formation of West Tennessee. These localities have superb plant fossils and also produces some very nice pollen floras. A third suggestion is the Appalachian flora and Cumberland gap either a hiking trip through the gap or a more sedate road trip through the gap and include the Paleozoic of Harlan County Ky. *Any other suggestions are welcome and anyone wishing to take a lead on any of these trips or other trips is welcome to contact me.* I would also like to open the field trips up to local teachers so they too can mingle with the professionals. Finally I need some input with regard to the cost of the meeting. I am trying to hold down the cost as much as possible to insure student participation, here is what I have so far;

This includes Sunday, Monday, and Tuesday night stay, coffee breaks, all meals, icebreaker, and registration fees. However, **no** Tuesday Night Banquet, **no** Wednesday Business Lunch.

	<u>Single</u>	<u>Double</u>	<u>Triple</u>	<u>Quadruple</u>
Total estimated Cost	775	1075	1375	1700
Per person rate	775	540*	460	425

If two students occupy one room, each student will have to pay \$540 each, 3 = \$460 each, 4 students to a room each pay \$425 each.

This includes Sunday, Monday, and Tuesday night stay, coffee breaks, all meals plus Tuesday Night Banquet and Wednesday Business lunch, icebreaker, registration fee.

	<u>Single</u>	<u>Double</u>	<u>Triple</u>	<u>Quadruple</u>
Total Estimated Cost	850	1225	1600	1950
Per Person rate	850	615	535	490

This includes Sunday Monday and Tuesday night stay, coffee breaks, all meals plus Tuesday Night Banquet and Business lunch, icebreaker, registration fee, plus one additional night for field trip (Wednesday Night) or workshop (Saturday night).

	<u>Single</u>	<u>Double</u>	<u>Triple</u>	<u>Quadruple</u>
Total Estimated Cost	1000	1350	1800	2075
Per Person Rate	1000	675	600	520

This includes Sunday, Monday, and Tuesday night stay, coffee breaks, all meals plus Tuesday Night Banquet and Wednesday Business lunch, icebreaker, registration fee, plus one additional night for the Workshop (Saturday Night) and one additional night for the field trip (Wednesday Night).

	<u>Single</u>	<u>Double</u>	<u>Triple</u>	<u>Quadruple</u>
Total Estimated Cost	1100	1500	1850	2200
Per Person rate	1100	750	620	550

NOTE: A Friday arrival with a Friday night stay for the workshop, or on return from the field trip a one night stay (Saturday) will cost \$126.99

The cost will be presented in a traditional manor, i.e., as a registration fee which will have the option of alterative accommodations and food. I wanted to run this scenario by the members.



THIRD INTERNATIONAL WORKSHOP ON QUATERNARY NON-POLLEN PALYNOMORPHS

University of Padova - Department of Biology
June 25-28, 2008

The successful meetings of NPP researchers during the last International Palynological Congress in Granada and during the two International Workshops in Greifswald and Innsbruck, showed that the attention to NPPs is steadily spreading. Starting from the early 1970s, at the University of Amsterdam, hundreds of NPP types have been described and many of them have been identified as fossil diaspores or remains of cyanobacteria, algae, rhizopods, fungi, invertebrates and remains of chormophytes. Their value as palaeoenvironmental indicators has been demonstrated in more than one hundred publications. The number of labs interested in NPP analysis has increased to about 30 in Europe and of course the list of identified NPPs increased. Up to now more than one thousand NPPs have been described. Since the certainty and speed of determination rises with the number of previously identified NPPs, the different groups of researchers started to organise systematic meetings in which information on identified and not-yet-identified NPPs is shared.

The third workshop will take place in Padova from June 25 to June 28, 2008.

It will start at 3 pm at the ancient Botanical Garden of Padova in the old town centre. Other sessions will be held at the Department of Biology, at walking distance from the old town centre (<http://www.unipd.it/mappe/map/MapsUnipd.pdf>). The workshop is scheduled to end on Friday June 27 at 7 pm. On Saturday 28 a one-day field trip to Colli Euganei will be organized. The workshop language will be English.

For the 3rd Workshop we adopt the traditional and successful organization of the previous workshops and plan the following sessions:

1. key-lectures on principal NPP-groups and their interpretation;
2. practical classes on selected NPP-groups on microscopic slides; experienced researchers are kindly invited to propose reference materials; everyone, experienced or beginner, is warmly invited to bring his/her own material - microscope slides, reference collections, specific literature; microscopes, binoculars, a microscope with video-camera to project images and some high power microscopes with camera are available during the wks;
3. oral and poster presentations by the workshop participants of their published or ongoing researches where NPP analysis is applied,
4. discussion time for problematic NPPs: please bring photos, digital pictures, and microscope slides; during the wks the "Innsbruck list" of identified and only described NPP types will be updated and distributed to all the participants;
5. discussion time for possible future projects for a NPP network; the project manager of the Department of Biology will present the opportunities given by the COST programme which funds the co-operation among the European scientists;
6. discussion time for the results of the NPP exercise (see below)



7. further suggested topics may be added !

This year a new activity is proposed to the NPP researchers:

an exercise of NPP identification and counting

The exercise could be an occasion for each participant to test his/her own ability, but also and mainly to test if we are able to produce comparable results in the case (normally very rare) we analyse the same sediment, processed with the same technique. The evaluation of the "between analyst variance" is the necessary basis for any qualitative and quantitative approach in the comparison of NPP data.

The exercise will be organized as follows. 2 or 3 different bulks of sediments will be processed with the usual procedure of the laboratory of Padova; microscope slides will be prepared and sent to the participant labs without informing about the origin. Not more than 6 slides will be distributed to each lab. The labs will identify and count NPPs, following their usual procedure. Counts and information about tools used during identification will be sent to Padova by e-mail. The Colleagues of Greifswald will kindly carry out the statistical analysis of the results, that will be discussed during the workshop. Each lab will be able to identify its own results, but not those of the others.

Please see the attach for a more detailed presentation of the exercise.

The workshop fee is 50 € and includes the abstract volume, coffee/tea/sweeties, the official dinner on June 27th in a characteristic "Hostaria" in the old town centre and the one-day field trip in Colli Euganei.

Travel and lodging is up to your own organization. Padova is about 30 km far from the Venice airport (<http://www.veniceairport.it/>); there is a bus service (SITA) to Padova every half an hour. The railway station is close to the town centre and to the Department of Biology. For those coming by car, there are parking facilities at the Department. Suitable hotel accommodations are listed below.

Please send your pre-registration (please see attach) by fax or e-mail by December 31, 2007. If you are interested in participating to the NPP Exercise, please let me know by November 30 with a short e-mail/fax. You will receive microscope slides soon after Christmas Holydays.

Important dates:

End November 2007 - pre-registration for the NPP Exercise (by e-mail/fax)

End December 2007 - pre-registration to the WKS (by e-mail/fax, please see attach)

End January 2008 - second circular to the registered persons with further details about the WKS and about the submission of abstracts

End April 2008 - submission of abstracts and final registration with payment of WKS fee

Beginning of June - final circular with WKS definitive program and details about transport, lodging, etc.