

# March, 1997

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**AASP NEWSLETTER**  
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# A.A.S.P. NEWSLETTER

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Jan Willem Weegink, Editor

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## AASP NEWSLETTER EDITOR

Jan Willem Weegink  
LPP Foundation  
Laboratory of Palaeobotany and Palynology, University of Utrecht  
Budapestlaan 4, 3584 CD Utrecht, The Netherlands  
Vox +31.30.253.1909/2799/2629; Fax +31.30.253.5096  
[janwillem@boev.biol.ruu.nl](mailto:janwillem@boev.biol.ruu.nl)

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" and information about job openings in the industry. Every effort will be made to publish all information received from our membership.

Deadlines for next issues of the newsletter, are April 3, July 3 and October 3, 1997. All information should be sent on computer disks (MS Word for Windows is best) or by email; if possible, send a hard copy. Always send a duplicate typescript of all electronic copy sent for checking. 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.

## Editorial



Being told you're not yourself lately is one thing, being told you never have been, and being accused of swinery raises the occasional brow. But proving it in public makes serious headlines. An observant member of our association whose name eludes me for the moment but whom we'll refer to as Gregory Peccary, informed us of the following alarming details: "I love it!!!! This is one for the AASP Newsletter!! Troops, While wandering around on the internet, I decided to peruse the AASP web site. Having forgotten the complete address, I did a search for "AASP". I did indeed find AASP out there in the world, but to my surprise, there is ANOTHER AASP... and they have about 2000 members!! That AASP is the American Association of Swine Practitioners. We are in good company!"

In our particular case, people have been practicing swines for 30 years now, a moment worth commemorating. Therefore, the editorial boar (sic) would like to invite all members to dedicate a few lines to this milestone. Don't be shy. Resistance is futile.

This issue contains a few pages on what's happening at the Laboratory of Palaeobotany and Palynology in Utrecht, the pigsty where the newsletter editorship is stationed. In several quarterly instalments you are informed of a variety of recent activities. May I invite other institutes to act in a similar fashion?

Most of the information on coming events and new websites emanate directly from Internet discussion groups, and AASP and CAP websites, which are hereby gratefully acknowledged.

As usual, you may submit contributions and suggestions of informative, inquisitive or uplifting nature to my address.

Jan Willem WeegOink, editor and part-time swine partitioner.

## AASP MEETING UPDATE



The annual meeting of the AASP will take place at the Marine Biological Laboratory (MBL) Swope Conference Center in Woods Hole, Massachusetts during the week of September 14 through 19, 1997. AASP will be sponsoring an extended seminar on the evolution of the marine phytoplankton as a theme to the meeting. We have invited several outside speakers to attend, including Andrew Knoll, Woody Wise, Max Taylor, and David Barron. Richard Bambach (VPI) has agreed to give a special evening presentation on the history of trophic relations in the marine realm. We welcome the participation of researchers who are interested in the role of phytoplankton in marine ecosystems and the possibility of using the fossil record of the phytoplankton to study the evolution of oceanic/shallow marine ecosystems. The meeting will also include regular technical sessions on all aspects of palynology. We have secured accommodations for the meeting

at the SWOPE Center at the Marine Biological Laboratories in Woods Hole. Costs for the meeting are based on a room and board plan of \$73 per day, double occupancy. We are limited to 140 places so be sure to register early. Registration should cost under \$120 for the 4 day meeting. Students or professionals who would be willing to help out during the meeting should contact Paul Strother. We will be offering reduced rates for students, and we may be able to cover some additional costs for students who are willing to run projectors. For Meeting information on the web, go to: [http://www2.bc.edu/~strother/1997\\_AASP/1997.html](http://www2.bc.edu/~strother/1997_AASP/1997.html)

For registration or further information please contact:

Paul K. Strother at the Weston Observatory of Boston - College, Department of Geology & Geophysics, Weston MA 02193 - U.S. Tel: 617 552 8395. Fax: 617 552 8388. email: [strother@bc.edu](mailto:strother@bc.edu)  
Reed Wicander at the Department of Geology, Central Michigan University, Mount Pleasant, MI 48859. Tel: 517 774 3179. Fax: 517 774 2142.



### CATALOG OF FOSSIL SPORES AND POLLEN AVAILABLE FOR SALE

During the period 1957 to 1985, forty-four volumes of the Catalog of Fossil Spores and Pollen plus four index volumes and two translation volumes were published at The Pennsylvania State University. The Catalog provides, in concise and standard format, illustrations, descriptions, and other information for all taxa of fossil palynomorphs, except those covered by other catalogs or those of purely animal origin. A sizable portion of the literature is represented by these 44 volumes. The Catalog is a compendium of systematic information intended primarily for nomenclatural-taxonomic use. Nevertheless, it is useful in obtaining a general view of the fossil spores and pollen characteristic of various parts of the stratigraphic column. The Catalog is a condensed library of palynological systematics, making it especially useful to palynologists where library facilities are limited.

Penn State has no plans to publish further volumes of the Catalog. In fact, they had to relinquish the storage space where the volumes were housed, and they sent a "reasonable" number of each volume to the AASP Foundation. As we understand it, Penn State no longer has any copies available, and AASP Foundation is now the sole supplier for the Catalog of Fossil Spores and Pollen.

Until recently, the cost to institutions for a complete set of the Catalog was \$2,760.00, and \$85 for individual issues. In early 1996, Penn State placed the Catalog on sale for a limited time for \$685.00 for the entire set, and \$25 for individual volumes. And now they have completely discontinued sale of these publications.

The two formats for the Catalog are: 1) loose-leaf format and 2) card stock. Both are 8 1/2 x 11" size. Many of the loose-leaf volumes are the originals (vol. 3-4 and 28-44), printed and bound (19-hole "GBC" punched) in sturdy plastic binders; the remaining volumes, plus two indexes and two translation volumes are "out-of-print" but are included in sets as photocopies. The card stock format, printed on 90# or 100# card stock, is also available for 35 of the volumes, with the remaining numbers included in sets as regular paper photocopies.

The AASP Foundation has set a price of \$500 U.S. for a complete set of the Catalog. We will try to supply your choice of card stock or loose-leaf option, but there are not complete sets of "all loose-leaf" or "all card stock" options. Individual printed volumes are available at a price of \$25.00. There is an additional charge for shipping, estimated to be about \$100.00 for shipment within the U.S. and \$165 for overseas shipment by M-Bag for a complete set.

Orders or further information may be obtained from: Robert T. Clarke, Mobil E&P Technical Center, P.O. Box 650232, Dallas, Texas 75265-0232. Tel: 214-951-2971; Fax: 214-951-4415; E-mail: [rtclarke@dal.mobil.com](mailto:rtclarke@dal.mobil.com)



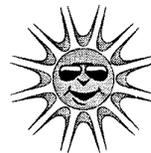
Nickel, B. (1996): Die mitteleozäne Mikroflora von Eckfeld bei Manderscheid/Eifel. Mainzer Naturwissenschaftliches Archiv, Beiheft, 18: 148 pp., 5 fig., 13 pl.; Mainz (Naturhistorisches Museum). ISSN 0174-6626

The late Middle Eocene (Geiseltalian) sedimentary filling of a maar-lake at Eckfeld near Manderscheid (Eifel, Germany), recently became well known as Fossilagerstaette. The Eckfeld-maar is of special interest if compared to other famous nearby Middle Eocene localities like e.g. Messel and the Geiseltal-area. Due to its origin and palaeogeographic position it was an exceptional trap preserving biota from outside of peat-forming coastal lowlands. An enormous number of plant remains represents the zonal flora of late Middle Eocene Europe possibly even better than Messel. The microflora (spores and pollen) of Eckfeld was studied systematically and 190 "species" could be distinguished (7 of them new). They are described and discussed in great detail in the present volume. By far most of them are documented by photographs on plates of high quality. The stratigraphic resolution of pollen and spore taxa and assemblages throughout the Middle Eocene of Europe is critically discussed. Incongruencies of pollen/spore floras may obviously be due to different facies of the respective deposits whereas slight differences in age are not clearly reflected. The volume may be obtained from: Naturhistorisches Museum Mainz, Reichklarastr. 10, D-55116 Mainz, Germany. Please make cheques payable to the above address (\$25.-- including postage by surface mail).

Volker Wilde, Frankfurt am Main, Germany

Carmelo Tomas' two books: Identifying marine diatoms and dinoflagellates & Marine phytoplankton will be combined into one paperback book- and be published sometime in February- the price is suppose to be around \$80.00.

Contact Balogh Scientific Books <http://www.balogh.com/~balogh/>  
voX: +1 217 355 9331 fax: +1 217 355 9413; [balogh@balogh.com](mailto:balogh@balogh.com)



### LPP PART ONE - INTRODUCTION AND Ph.D RESEARCH - by Henk Viisscher

The Laboratory of Palaeobotany and Palynology (LPP) is very pleased that Jan Willem Weegink has been appointed as Editor of the AASP Newsletter. This choice may underline the strong international orientation that LPP has always attempted to establish in its scientific and organizational activities. In order to provide some background information on the institute in which he was trained and indoctrinated to become a well-respected palynologist, Jan Willem insisted that LPP should present itself in a series of contributions to the AASP Newsletter. We'll give it a try.

The palaeobotanical/palynological research unit of the Faculty of Biology of Utrecht University, that later became LPP, was founded in 1960 by the late professor Frits P. Jonker. Ever since its foundation, LPP has recognised that the study and interpretation of past plant life pervades multidisciplinary research aimed at the

better understanding of the processes and effects of biosphere/geosphere interaction. In The Netherlands, the rationale for a fundamental 'palaeobotany component' is now fully appreciated in research related to topical issues such as 'global change' and 'energy resources'. As a consequence, LPP has become a partner in the interuniversity 'Netherlands Research School for Sedimentary Geology' (NSG), supported by the Free University of Amsterdam and the Utrecht University. Within this multidisciplinary community, LPP collaborators and students are consistently challenged to investigate the macroscopic and microscopic residues of former phytomass of land plants and algae, buried in terrestrial and marine sediments. By using complementary analytical methodologies, their work should provide biologically validated insight in:

- the role of land plants and phytoplankton as monitors, recorders, motors and moderators of climatic and environmental change;
- the predictive value of organic remains with respect to genesis, composition, occurrence, quality and quantity of fossil fuel reserves.

In harmony with these targets, long-term research at LPP is aimed to provide for basic contributions to the palaeoecological study and interpretation of Palaeozoic, Mesozoic and Cenozoic plant life.

Well-considered selection of actual research topics is largely determined by three factors: (1) commitments to the multidisciplinary community in which LPP operates, (2) availability of suitable fossil material, and (3) availability of relevant complementary chemical and physical information.

These constraints imply the necessity of a flexible research strategy, emphasizing long-term research areas rather than research projects. At present, LPP recognizes four interconnected areas of scientific emphasis:

- 'biotic change': documentation and causal analysis of changes of past plant biota in terrestrial and marine environments, both at short (Quaternary) and long (pre-Quaternary) time scales;
- 'selective preservation': identification of the biological, physical and chemical factors that determine selective preservation of organic matter during transport, sedimentation, diagenesis and katagenesis;
- 'methodology': development and introduction of new analytical methodology relevant to the study and interpretation of fossil plant remains;
- 'systematics': generation and compilation of systematic data aimed at the accurate identification and classification of fossil plant remains.

In following contributions, these research areas will be briefly explained, together with an outline of LPP's efforts for implementation. In general, scientific results are largely determined by progress of Ph.D research. In The Netherlands, a Ph.D thesis usually consists of a series of research articles, either published, in press or publishable. The following list of recently completed (1992-1996) and ongoing Ph.D. projects may thus provide a first impression of the variety of scientific output.

Oscar A. Abbink (ongoing). Objective: Integration of the palynological record in the analysis of the Late Jurassic-Early Cretaceous environmental history of the North Sea region.

Karin P. Boessenkool (ongoing). Objective: Recognition of palaeoenvironmental and palaeoclimatic changes in the eastern North Atlantic realm during the last deglaciation: a palynological approach to land-sea correlation.

Hanneke Bos (ongoing). Objective: Effect analysis upon vegetation of palaeolithic Man during the last deglaciation in The Netherlands.

Henk Brinkhuis (1992). Late Eocene to Early Oligocene dinoflagellate cysts from Central and Northeast Italy.

Frans P.M. Bunnik (ongoing). Objective: Establishment of the interaction between post-Neolithic human activities and plant cover in loess landscapes of western Germany.

Peter P. Hoen (ongoing). Objective: Pollen morphology of the Rosaceae of northwestern Europe, as an actualistic data base for the identification of fossil pollen from Quaternary deposits.

J.H.J. (Hans) Joosten (ongoing). Objective: Reconstruction of landscape development in the 18th-20th century by integration of historical and palaeoecological data.

Wolfram M. Kürschner (1996). Leaf stomata as biosensors of palaeoatmospheric CO<sub>2</sub> levels.

Han Leereveld (1995). Dinoflagellate cysts from the Lower Cretaceous Rio Argos succession (SE Spain).

Cindy V. Looy (ongoing). Objective: Palynological analysis of terrestrial and marine ecosystem collapse at the time of the Permian/Triassic biotic crisis.

Petra Lutat (1995). Die Fluktuationen der palynomorphen-Vergesellschaftungen des Hauterive Nordwest-Deutschlands: Steuerung durch Meeres- und Klimaschwankungen. (This thesis was defended in Germany as you may have guessed; English presentation not allowed.....)

José E. Mateus (1992). Holocene and present-day ecosystems of the Carvalhal Region, southwest Portugal.

Christian D.M. Mulder (1996). Analisi comparata della struttura della vegetazione attuale con lo studio palinologico di campioni di superficie in differenti regioni Europee. (....., neither in Italy)

Ruud J. Poort (1996). The reproductive biology and extinction of the Walchiaceae (late Palaeozoic conifers).

Andrea Santarelli (ongoing). Objective: Integration of the dinoflagellate cyst record in the Milankovitch-scale environmental analysis of the marine Miocene from the Mediterranean region.

Jordi Targarona (ongoing). Objective: Integration of the palynological record in the palaeoclimatic analysis of deglaciation dynamics with special reference to the Younger Dryas cooling event in the Mediterranean region. Marloes L. Van Hove (ongoing). Objective: Milankovitch-scale reconstruction of Late Neogene climatic and environmental history in the eastern Mediterranean region through the palynological study of lake deposits.

Isabel M. Van Waveren (1993). Planktonic organic matter in surficial sediments of the Banda Sea (Indonesia) - a palynological approach.

Harry H. Veld (1995). Organic petrology of the Westphalian of the Netherlands - deviations in vitrinite reflectance trends.

Gerard J.M. Versteegh (1995). Palaeoenvironmental changes in the Mediterranean and North Atlantic in relation to the onset of northern hemisphere glaciations (2.5 Ma B.P.) - a palynological approach.

F. (Rike) Wagner (ongoing). Objective: Establishment of the relationship between stomatal indices of fossil leaves and Late Quaternary palaeoatmospheric CO<sub>2</sub> levels.

Martin Wilpshaar (1995). Applicability of dinoflagellate cyst stratigraphy to the analyses of passive and active tectonic settings during phases of relative compression.

Daan Zevenboom (1995). Dinoflagellate cysts from the Mediterranean late Oligocene and Miocene.

C. (Karin) A.F. Zonneveld (1996). Palaeoclimatic and palaeoecologic changes in the Eastern Mediterranean and Arabian Sea regions during the last deglaciation: a palynological approach to land-sea correlation.





## THE UK PALYNOLOGICAL SCENE

by James B. Riding

At the last British Micropalaeontological Society (BMS) committee meeting on November 20th 1996, Jamie Powell agreed to become Society Secretary. This keeps Jamie on the committee as he simultaneously finished

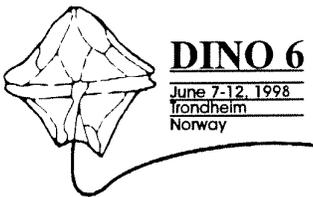
his four-year reign as editor of *The Newsletter of Micropalaeontology*. Incidentally, Jamie has recently left Millennia and is operating as DinoSystems Limited from Richmond-upon-Thames. Jamie has joined Sue Matthews and Bill Chaloner on the team teaching palynology for the University College London Micropalaeontology MSc course. Sue Matthews visited the UK over Christmas from her two-year sojourn in Houston and was able to input her teaching to the UCL MSc course.

The Annual General Meeting of BMS was held at University College London during the afternoon of 20th November last year. Around 130 members of the Society attended and saw Mike Stephenson of the University of Sheffield receive the Robertson Research International Stratigraphy Prize for his project on the Permian palynology of Botswana. This award is given to the MSc student who, in the judging panel's view, produced the best MSc dissertation on micropalaeontology each year. We offer our sincere congratulations to Mike, who is staying on at Sheffield to do his PhD research on the Permian of Oman, supervised by Bernard Owens. Professor Dr Helmut Willems (Universität Bremen, Germany) then presented a lecture entitled "Calcareous dinoflagellates ('calcspheres') - their significance in micropalaeontology". Helmut gave a discourse on the history of study of calcareous dinoflagellates and went on to describe his diverse programmes of research on these fascinating microfossils. This includes work on modern calcsphere fluxes in the South Atlantic. Karen Zonneveld, latterly of Utrecht, is one of Helmut's research fellows at Bremen. The other talk at the AGM was by Martin Brasier of Oxford University who gave a lecture entitled "Nutrients, ocean chemistry and the explosion of animal life across the Neoproterozoic-Cambrian transition". AASP member Chris Denison of Chevron was in the UK on vacation at the time and attended the BMS AGM.

The Palynology Group of BMS did organise a one-day meeting on 'Current Research' at the University of Southampton during early December last year. This was postponed as the date proved difficult for many of the potential attendees. I understand that a new date has been selected; if you are interested in attending, contact the Palynology Group Secretary, Duncan McLean on d.mclean@sheffield.ac.uk.

The US representative of BMS is Mary McCann of the US Geological Survey, Menlo Park, California. Mary will be pleased to collect the 1997 annual dues from the US membership.

Apparently the interviews have taken place at Sheffield University for the new lecturer in palynology. At the time of writing, however, no further details are available.



Objective and scope - This international meeting is aimed at integrating biological, biochemical and geological research on dinoflagellates. The main goal is to bring together specialists with various backgrounds, but

related research interests in studies of modern and fossil dinoflagellates. The conference will focus on all aspects of

dinoflagellate research, including life-cycles, morphology/taxonomy, biochemistry, growth and productivity, ecology, biostratigraphy and dinoflagellate distribution in recent and ancient environments. Themes of direct interest to both biologists and geologists are emphasised. These include:

- Dinoflagellate evolution
- Productivity of Recent and ancient seas
- Biogeography and Ocean Circulation (present and past)
- Dinoflagellates and the climatic record
- Dinoflagellate habitats
- Calcareous dinoflagellates
- Biochemistry and fossil biomarkers
- Harmful dinoflagellates

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

### Call for papers

Papers which highlight new developments in dinoflagellate research and demonstrate aspects of general interest to both biologists and geologists are involved. In this context studies that can serve as a link between the present day dinoflagellate distribution and the paleo-record are particularly welcome. It is intended that examples from around the world and from a variety of recent and ancient environments will be presented. The following keynote speakers are invited to address selected themes.

- **Henk Brinkhuis** (Laboratory of Palaeobotany and Palynology, The Netherlands): Milankovich cycles, dinoflagellates and time-scales.
- **Jonathan Bujak** (Lexis Group, United Kingdom): Paleogene dinoflagellates: changes from a greenhouse to a glacial world.
- **Barrie Dale** (University of Oslo, Norway): Dinoflagellates as indicators of eutrophication, industrial pollution and short term climatic change.
- **Sarah P. Damassa** (Winchester, MA, USA) and **Graham Williams** (GSC Atlantic, Canada): Paleobiogeography of North Atlantic Paleogene dinoflagellates.
- **Anne de Vernal** (Université de Québec à Montréal, Canada): Dinoflagellates and (paleo)temperature models.
- **Paul G. Falkowski** (Brookhaven National Laboratories, N.Y. USA): The evolution of biochemical cycles and the impact on the biological CO<sub>2</sub>-pump in the ocean.
- **Martin J. Head** (University of Toronto, Canada) and **Niels Poulsen** (GEUS, Denmark): Neogene dinoflagellates and acritarchs: biostratigraphy and climate change.
- **Eystein Jansen** (University of Bergen, Norway): North Atlantic paleoclimate.
- **Kazumi Matsuoka** (Nagasaki University, Japan): Dinoflagellate cysts and harmful algal blooms.
- **Øyvind Moestrup** (University of Copenhagen, Denmark): Naked dinoflagellates.
- **Ted Smayda** (University of Rhode Island, USA): Dinoflagellate blooms: some patterns, regulation and consequences.
- **Max Taylor** (University of British Columbia, Canada): The evolution of dinoflagellates reconsidered.
- **Gerard Versteegh** (Netherlands Institute for Sea Research): Dinoflagellate biomarkers and biochemistry: a general overview.
- **Helmut Willems** (University of Bremen, Germany): Calcareous dinoflagellates: systematic concept, applicability and present state of investigation.
- **Karin Zonneveld** (University of Bremen, Germany): What can dinoflagellates tell us about climate change? Some examples from the Late Quaternary.

A separate abstract volume will be published prior to the meeting. We also intend to publish papers presented at the meeting in a special volume of the international journal Grana. Authors who want to submit a paper for publication should indicate this on the pre-registration form.

**Timetable** - Offers of papers or posters should be sent to the secretariat, using the circular forms, no later than May 15th 1997. A second circular will be issued to respondents to the first circular in October 1997. It will include details of registration and accommodation costs, together with booking forms and instructions for abstract formats. Deadline for submission of abstracts will be January 15th 1998.

**Conference field excursion** - A pre-conference field excursion is planned on Sunday June 7th. This will include a plankton survey in the Trondheimsfjord, and sediment sampling at selected sites in the outer fjord area. Plankton samples and palynological preparations from the sea-bed sediment will be available for examination during the conference. The field trip will also demonstrate new equipment developed for remote sensing of phytoplankton concentrations/blooms in the open sea. The deadlines for registration to the field trip is January 15th 1998.

**Location, travel, accommodation and meals**. The meeting will be held in the city centre of Trondheim. Trondheim is easily reached by air and railway-links from major cities in Europe. Non-stop flights are available from Copenhagen, Oslo, Bergen and Stavanger, and railway connections are from Oslo or Stockholm. Discounted fares are usually available if staying over Saturday night. Accommodation and meals will be available at a variety of standards, typically at 70-150 US\$ per night. Details will be given in the 2nd circular. To assist in planning, please indicate your likely hotel accommodation requirements.

**Registration**. A registration fee of US\$ 250 will be charged (US\$ 125 for students). On-site registration will be available at a raised cost. A registration form and details will be provided in the second circular.

Dino 6 is organised jointly by the Norwegian University of Science and technology (NTNU), the Geological Survey of Norway (NGU), IKU Petroleum Research and OCEANOR - Oceanographic Company of Norway. The organisation committee are:

**Morten Smelror** - NTNU Museum of Natural History and Archaeology; **Kari Grøsfjeld** - NGU; **Eric Monteil** - IKU Petroleum Research; **Egil Sakshaug** - NTNU Trondheim Biological Station; **Karl Tangen** - OCEANOR.

Special theme convenors include:

- **Robert Fensome** (GSC Atlantic, Canada) and **Max Taylor** (University of British Columbia, Canada): Dinoflagellate evolution (taxonomy, molecular phylogenetics, life-cycles etc.).
- **Martin J. Head** (University of Toronto, Canada), **Kari Grøsfjeld** (NGU, Norway), **Niels Poulsen** (GEUS, Denmark) and **Anne de Vernal** (Université de Québec à Montréal, Canada): Workshop on Neogene and Quaternary dinoflagellates.
- **Helmut Willems**, **Dorothea Janofske** and **Karin Zonneveld** (University of Bremen): Workshop on calcareous dinoflagellates.

Dino 6 secretariat

NTNU Museum of Natural History and Archaeology

Attn. Morten Smelror

N-7004 Trondheim

Norway

Vox +47.73.592147

Fax +47.73.592223

email morten.smelror@vm.ntnu.no

Latest details at website: <http://www.ntnu.no/vmuseet/dino6>



## 7th INA CONFERENCE

La Parguera, Puerto Rico - February 10-13th 1998



This conference provides high latitude palaeontologists a welcome opportunity to escape toward the tropics. It is organised by the International Nannoplankton Association but open to anyone interested. It will present results on all fields of nannoplankton research, including both palaeontological and biological aspects, with a special session on the role of coccolithophores in global change (proceedings of this session to be published in Marine Micropaleontology).

Full details of the conference and on-line pre-registration are available at: <http://wwei.ucsd.edu/INA7.htm>

Current weather conditions in PR: Daytime high 27C nice breeze from the east at 10 knots. Water temperature 27C.

## CIMP 1998

Preliminary Circular



The next general Symposium of the Commission Internationale de Microflore Paleozoique (CIMP) will be held in Pisa, Italy, September 11 to September 15, 1998.

**Scientific programme** - The provisional programme includes plenary lectures, two Subcommission symposia (running in parallel), short workshops of CIMP working groups and a microscope session. Contributed oral and poster communications will be accepted, and no parallel scientific activities will take place during the poster session. Business Meetings also are foreseen.

Exhibitions of scientific equipment and books will be possibly arranged. Potential exhibitors should contact the Organizing Committee.

**Publications** - All registered participants will receive a copy of the book of abstracts at the Symposium. A proceeding volume will be published, probably as a special volume of the Bollettino della Societa Paleontologica Italiana (SPI).

**Language** - The official language of the CIMP Symposium will be English.

**Social program** - Social events will include guided visits to the medieval towns of Pisa and Lucca and a gala dinner. Special guided visits to archaeological and medieval sites and/or museums will be possibly organized for accompanying persons.

**Field excursion** - The Palaeozoic sequence and palynology of Southern and Central Sardinia.

**Deadlines (provisional)** - The First Circular will be distributed not later than June 1997.

**Estimated costs** - Costs will depend on the number of participants as well as on the possible sponsors. Our major objective is to bring most CIMP members together, by keeping the accommodation costs down. The provisionally estimated registration fee does not exceed 100 US\$. Cheap accommodation (full day board for one person: about 38 to 48 US\$) is possible, together with more expensive options in hotels. Campings also are available not far from the Symposium seat. More precise information about costs (comprising excursion) will be given in the First Circular.

**Correspondence address** - Organizing Committee CIMP '98 - Universita di Pisa - Dipartimento di Scienze della Terra - Via S. Maria 53 - I 56126 - Pisa (Italy)

Email: [albani@dst.unipi.it](mailto:albani@dst.unipi.it) - Fax: +39 50 500932

**Organizing Committee** - General Chairman: Marco Tongiorgio, Field excursion Chairman: Paola Pittau, Secretary: Roberto Albani

## FRESHWATER ALGAE



A freshwater algal course will be conducted at the Kindrogan Field Centre in the Scottish highlands from 26th July to 2nd August 1997 by Dr. Eileen J. Cox and Dr. L. Elliot Shubert (Department of Botany, The Natural

History Museum, London). The area around Kindrogan has many different kinds of habitats (streams, rivers, ponds, lochs and bogs) supporting a diversity of freshwater and subaerial algal species. During last year's course over 120 taxa representing seven divisions were identified to genus/species. The course is designed for advanced undergraduate students, postgraduate students, biology teachers, and other interested in freshwater ecosystems. Participants will receive both field and laboratory experience.

Non European students might consider combining attendance at the Freshwater Algal course with attendance at the 6th International Phycological Congress (IPS/PSA) to be held in Leiden, The Netherlands from 10-17 August 1997.

FOR MORE INFORMATION AND APPLICATION FORMS: Please contact: Ms. Alison Gimingham, Director, Kindrogan Field Centre, Enochdhu, Blairgowrie, Perthshire PH10 7PG, UK or Dr. L. E. Shubert.

Museum's Web Site at <http://www.nhm.ac.uk>



### **FIELD COURSE - ALGAE IN FRESHWATER ECOSYSTEMS**

University of Michigan Biological Station. The course runs from June 23 through August 16, 1997. Students will become familiar with the algae of streams, bogs, fens, swamps and the Laurentian Great Lakes. The area is particularly rich in Diatoms, Desmids and Chrysophytes. Special attention is given to field investigations of periphyton and phytoplankton community ecology and their application in water quality assessment. Scholarship money is available for attending. Outstanding graduate students are invited to apply for a special \$1,000 Algal Training Scholarship.

UMBS's web site <http://www.umich.edu/~umbs/>

Contacts for additional information: <http://www.umich.edu/~umbs/>  
<http://www.bgsu.edu/departments/biology/facpages/lowe/>



### **MAIN CHANGES IN THE MARINE AND TERRESTRIAL ATLANTIC DURING THE NEOGENE**

Salamanca, Spain

The RCANS Second Congress (Regional Committee on Atlantic Neogene Stratigraphy, Subcommission on Neogene Stratigraphy) will take place from September 29 to October 6, 1997, with field activities in the continental Neogene of the Duero Basin (pre-scientific sessions) and the Guadalquivir Basin-Spain/Portugal (post-scientific sessions).

Scientific sessions 1 - 3 October:

1. Main changes: event-stratigraphy and eco-stratigraphy
2. Marine and continental biogeography
3. Geodynamic evolution
4. Neotectonic processes
5. The Atlantic realm and the relation with other regions

Attending members: 33.000 pts., students: 22.000 pts., accompanying persons: 20.000 pts. scientific correspondence to the Secretary of the Organizing Committee: Departamento de Geologia (Paleontología), Facultad de Ciencias-Universidad de Salamanca, 37008 Salamanca, Spain - Phone: 34-23-294497, Fax: 34-23-294514, e-mail: [civis@gugu.usal.es](mailto:civis@gugu.usal.es) / [angel@gugu.usal.es](mailto:angel@gugu.usal.es)

Registration and non-scientific correspondence to: Secretaria Técnica RCANS Second Congress, Viajes y Congresos, S.A., c/Sierpes, 9, 37002 Salamanca, Spain - phone: 34-23-267292, Fax: 34-23-269208

Charo Rivas Carballo, Phone 34 23 294497, Fax 34 23 294514, [crivas@gugu.usal.es](mailto:crivas@gugu.usal.es)

### **FIRST INTERNATIONAL SYMPOSIUM ON EVOLUTION OF LIFE ON THE EARTH**



Tomsk State University (West Siberia, Russia) cordially invite you to present a paper at the upcoming Symposium to be held in November 27-29, 1997. The scientific programme will cover all aspects of evolutionary researches including speciation, phylogeny, evolution of paleoecosystems and other. Papers may be delivered in English or Russian. Absolute Deadline for registration and abstracts is 1 May, 1997. The Proceedings containing all papers presented in the oral and poster sessions will be published shortly after the Symposium. Registration fee is \$ 50 (US). These expenses will be paid at the meeting.

Tomsk region occupies a great place of the West Siberia. It is 317 thousands kilometers square. Tomsk is the large siberian center of culture, education and science. Tomsk State University is the oldest in Asian part of Russia. The first paleontological collections for it were received in 19th century. Now the funds of the Paleontological Museum include more than 60 scientific collections on Devonian to Carboniferous, Jurassic to Cretaceous, Paleogene to Neogene flora, Paleozoic brachiopods, molluscs, corals, stromatopora, bryozoans, crinoids and large Cenozoic Vertebrates. Micropaleontological section consist of foraminiferal, radiolarian, ostracodian, conodont, tentaculite and spore-pollenial collections. Tomsk can be reached by air from Moscow (Domodedovo).

Symposium Co-chairs: Prof. Podobina Vera M. (General Chairman, Tomsk State University), Academician Ushakov Sergei A. (Museum of Earth, Moscow State University), Prof. Boucot Arthur J. (Oregon State University).

Address: Department of Paleontology and Historical Geology, Tomsk State University, Lenin Ave. 36, Tomsk 634050 Russia  
Phone (7-3822)231101, 410291 Fax (7-3822)222466, 226162, E-mail : [natalia@mineral.tsu.tomsk.su](mailto:natalia@mineral.tsu.tomsk.su)

### **7th INT. CONODONT SYMPOSIUM ECOS VII**



The 7th European Conodont Symposium will be held in Italy (Bologna and Modena) between 24-26 June 1998. The Organising Committee invites you to take part and extends you a deeply warmest welcome. Three days of scientific section (two in Bologna and one in Modena) are scheduled. English is the working language. We invite papers on all aspect of conodont research. Two field trips, a pre-symposium excursion in Sardinia (18-23 June) and a post-symposium excursion in Southern Alps (27 June-2 July), are planned.

For further information, contact: M. C. Perri, Dipartimento di Scienze della Terra e Geologico Ambientali, via Zamboni 67, 40126 Bologna, Italy - phone: 39 51 354560 - fax: 39 51 354522 - e-mail: [perri@geomin.unibo.it](mailto:perri@geomin.unibo.it)

### **PHYCOLOGIST**



The latest issue of the Phycologist is on the WWWeb at <http://www.dundee.ac.uk/~amjohnst/bps.htm>. It includes a booking form file (Word) for Sheffield BPS '97...

Andrew Johnston - University of Dundee - Scotland

### **BIOSTRATIGRAPHY IN PRODUCTION AND DEVELOPMENT GEOLOGY**



The 2nd Circular for the "Biostratigraphy in Production and Development Geology" conference (Aberdeen, June) can be viewed at: <http://www.abdn.ac.uk/~gmi265/confer/petro2.html>



## PALAEONTOGRAPHIA ITALICA

Palaeontographia Italica is on Internet at the following address: <http://www.dst.unipi.it/dst/pal/index.html>

This is an experimental page. Please visit us and send criticisms and suggestions to my Email address ([ton@dst.unipi.it](mailto:ton@dst.unipi.it)). The following pages are available: Palaeontographia Italica Home page (in English); History of Palaeontographia Italica (in Italian), Index 1986-1996; abstracts 1995-1996 (in English); General Index 1895-1996; Instructions to the authors (in English).

Marco Tongiorgi

Universita' di Pisa - Via S.Maria 53 - 56126 PISA - Italia - tel.+39 50 847268 - Fax +39 50 500932 - E-Mail [tong@dst.unipi.it](mailto:tong@dst.unipi.it)



## PALEONET

PaleoNet has a new page called "The Geologic Column".

It will contain links to online sources for specific time periods. PaleoNet West - <http://www.ucmp.berkeley.edu/Paleonet/> PaleoNet East - <http://www.nhm.ac.uk/paleonet/>



## FOSSIL MAMMALS



Searchable paleofaunal and taxonomic data for North American fossil mammals are available at the following

URL's: <http://homebrew.si.edu/nampfd.html> - faunal lists  
<http://homebrew.si.edu/nafmtd.html> - synonymies.

The faunal lists are searchable by list name, author, formation, county, genus, and species; the taxonomic synonymies, by genus, species, and author. The data cover the Cretaceous and Cenozoic and include about 4000 faunal lists and 5000 genera and species. Everyone is encouraged to visit the site and search the databases.



## LATE CENOZOIC CHRONOSTRATIGRAPHY OF THE GULF OF MEXICO

The chart entitled "Late Cenozoic Chronostratigraphy of the Gulf of Mexico" is now available from the Gulf Coast Section SEPM Foundation. The chart details Shell's Gulf coast biostratigraphic zonation and interpretation of how it fits into commonly used industry and standard worldwide zones. It includes forams (b&p), nannos, and pollen. See the GCSSEPM homepage at <http://www.gcssepm.org> for details. The Foundation is a non-profit organization. Michael J. Styzen, Shell Offshore Inc., New Orleans LA 70161 E-mail: [mstyzen@shellus.com](mailto:mstyzen@shellus.com)



## ALGAE

A new URL for the BGSU Center Algal Microscopy and Image Digitization Web page:

<http://www.bgsu.edu/departments/biology/algae/index.html>

The change just brings it's address into accepted standards. The old URL is still active. it just prompts the user to the new one.

Dave Johnson - Dept. of Biol. Scie. - BGSU - Oh 43402



## ANY GEOSCIENCE ?

A "nifty" listserv setup which allows you to receive information about upcoming geoscience meetings, books, and sends you table of contents for just about ANY paleo- or geo-related journal. User friendly and available in digest form.

Check out <http://www.wei.ucsd.edu/lists.htm>



## CORALLINE ALGAE

The coralline algae website is now online in its revised form. It includes a page for corallinologists to add their contact email address and web page (if any) at:

<http://www.botany.uwc.ac.za/clines/ologists.htm>

## 1997 MEETINGS

**March 29 - April 1:** International Union for Quaternary Research Commission on Palaeoclimate Working group on Milankovitch and Plio-Pleistocene vegetation succession from 2.6 to 0.9 Ma - INTER-INQUA colloquium, Ankara, Turkey. Theme: "Vegetation successions at the scale of the Milankovitch cycles in between 2.6 and 0.9 Ma". Details: Dr Suzanne A. G. Leroy, Centre for Palaeoecology, School of Geosciences, Queen's University Belfast, Belfast BT7 1NN, Northern Ireland. Tel: +44-1232-335 143 and 273 978; FAX: +44-1232-321 280; E-mail: [s.leroy@qub.ac.uk](mailto:s.leroy@qub.ac.uk).

**April 1-4:** The Late Quaternary in the Eastern Mediterranean. Symposium sponsored by INQUA. Ankara, Turkey. Details: Gill Giles, Department of Geography, Loughborough University, Loughborough, LE11 3TU, England, UK. FAX: +44 1509 223930, E-mail: [g.giles@lboro.ac.uk](mailto:g.giles@lboro.ac.uk).

[http://info.lboro.ac.uk/departments/gy/INQUA\\_symposium/index.html](http://info.lboro.ac.uk/departments/gy/INQUA_symposium/index.html)  
**May 19-21:** GAC-MAC Joint Annual Meeting Ottawa, Ontario. 50th Anniversary of the GAC. Details: Charles Smith, Tel: (613) 733-3980, FAX: (613) 733-9344, E-mail: [csmith@nrcan.gc.ca](mailto:csmith@nrcan.gc.ca)  
<http://www.NRCan.gc.ca/~ottawa97>

**May 22-24:** CANQUA 97 - Canadian Quaternary Association 8th Biennial Meeting, Montreal, Quebec. To submit abstracts via email or snail mail, to receive the next announcement, or to give notice of intention to attend, please contact: [geologic@erc.umontreal.ca](mailto:geologic@erc.umontreal.ca). Details: Michel A. Bouchard, Chairman of the Organizing Committee, CANQUA 97, Tel: (514) 343-6821, FAX: (514) 343-5782 E-mail: [bouchami@erc.umontreal.ca](mailto:bouchami@erc.umontreal.ca)  
<http://www.unites.uqam.ca/~sct/canqua97.htm>

**June 9-13:** First International Conference on Applications of Micropaleontology in Environmental Sciences Tel Aviv, Israel. Details: Prof. Valentina Yanko, Institute for Nature Conservation Research, Tel Aviv University, Ramat Aviv Tel Aviv, Israel 69978. FAX: 972 640 7304, E-mail: [valyan@post.tau.ac.il](mailto:valyan@post.tau.ac.il)

**August 17-21:** PaleoForams '97 Bellingham, Washington, U.S.A. Details: Charles A. Ross, Department of Geology, Western Washington University, Bellingham, WA 98225-9080. Tel: (306) 650-3624, FAX: (306) 650-3148  
E-mail: [rossjrp@henson.cc.wvu.edu](mailto:rossjrp@henson.cc.wvu.edu)

**August 28 - September 2:** 7th International Symposium on Palaeolimnology. Heiligkreuztal/Riedlingen, Germany. Details: Dr Andy Lotter, Geobotanisches Institut, Universitaet Bern, Altenbergrain 21, CH-3013 Bern, Switzerland. Tel: +41 31-631 4932, FAX: +41 31-332 2059, E-mail: [lotter@sgi.unibe.ch](mailto:lotter@sgi.unibe.ch)

**September 7-12:** Peribaltic Group of the INQUA Commission on Glaciation - A Field Symposium on Glacial Geology at the Baltic Sea Coast in Northern Germany. University of Kiel, Germany. Details : Dr. habil. Jan A. Piotrowski, Institute of Geology and Palaeontology, University of Kiel, Olshausenstr. 40-60 D-24118 Kiel, Germany, Tel: +49 (0)431 880 2878, FAX: +49 (0)431 880 4376, E-mail: [noe57@rz.uni-kiel.d400.de](mailto:noe57@rz.uni-kiel.d400.de)

**September 7-13:** Third Symposium of African Palynology. University of the Witwatersrand, Johannesburg, South Africa. Details: Dr Ann Cadman, BPI (Palaeontology), University of the Witwatersrand, PO WITS, 2050, South Africa. FAX: 27 11 403 1423, E-mail: [106caa@cosmos.wits.ac.za](mailto:106caa@cosmos.wits.ac.za)

**September 12-14:** RECOVERIES '97: The final meeting of the UNESCO IGCP Project 335 "Biotic Recoveries from Mass Extinctions". Prague, Czech Republic. Details: Conference Manager: Petra Hovorkova, Recoveries '97, Eurocongress Centre, Budejovicka 15, CZ 140 00 Praha 4, E-mail: recovery@gli.cas.cz See: <http://www.gli.cas.cz/conf/recovery/recovery.htm>

**September 26-30:** Canadian Paleontology Conference, Saskatoon, Saskatchewan. Details: Brian Pratt, Convenor, Department of Geological Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 5E2, Canada. Tel: (306) 966-5725 E-mail: brian.pratt@usask.ca

**September 29 - October 6:** RCANS Second Congress - Main Changes in the Marine and Terrestrial Atlantic During the Neogene Salamanca, Spain. RCANS = Regional Committee on Atlantic Neogene Stratigraphy, Subcommission on Neogene Stratigraphy. Scientific correspondence: Secretary of the Organizing Committee, Departamento de Geologia (Paleontologia), Facultad de Ciencias-Universidad de Salamanca, 37008 Salamanca, Spain. Tel: 34-23-294497, FAX: 34-23-294514

E-mail: civis@gugu.usal.es, angel@gugu.usal.es. Registration and non-scientific correspondence: Secretaria Tecnica RCANS Second Congress, Viajes y Congresos, S.A., c/Sierpes, 9, 1ºB, 37002 Salamanca, Spain, Tel : 34-23-267292, FAX: 34-23-269208

**October 20-23:** Geological Society of America, Annual Meeting. Salt Lake City, Utah, U.S.A. General chair: M. L. Allison, Utah, Geological Survey. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

**November 20-21:** Pleistocene Glaciations of NW European Shelf Seas: North Sea versus Irish Sea. Amsterdam, The Netherlands. Details: Dr C. Laban, Marine Geology Division, Rijks Geologische Dienst, Richard Holkade 10, 2000 AD Haarlem, The Netherlands. Tel: ++31.23.5300302, FAX: ++31.23.5352184 E-mail: c.laban@rgd.nl

1998

**April 6-10:** 3rd International Symposium 14C and Archaeology. Lyon, France. Details: Secretariat of the 14C and Archaeology Symposium, Centre de Datation par le RadioCarbone - Batiment 217, 43, Bld du 11 Novembre 1918 69622 Villeurbanne Cedex, France. FAX (33) 72 43 13 17, E-mail: cdrc14@cismun.univ-lyon1.fr

**May 18-20:** GAC/MAC Meeting Québec City, Québec. The Association québécoise pour l'étude du Quaternaire (AQQUA) will hold its annual meeting during the conference, and will co-sponsor, with the Canadian Geomorphology Research Group (CGRG), a symposium on "Quaternary sea levels in Canada, particularly during the Holocene". Details: Mme Agathe Morin, Département de géologie et génie géologique, Université Laval, Pavillon Adrien-Pouliot, Sainte-Foy, Québec, G1K 7P4, Canada. Tel: (418) 656-2193, FAX: (418) 656-7339 E-mail: quebec1998@ggl.ulval.ca See <http://www.ggl.ulaval.ca/quebec1998.html>

TBA. Canadian Paleontology Conference Antigonish, Nova Scotia  
**September 21-25:** IAEG 1998 - 8th Congress of the International Association of Engineering Geology Vancouver, British Columbia, Canada. Theme: Engineering Geology, A Global View from the Pacific Rim, Vancouver, British Columbia, Canada. Information: Ms Kim Meidal, Secretariat, 8th Congress IAEG, c/o BC Hydro, 6911 Southpoint Drive, Burnaby, British Columbia, Canada, V3N 4X8. Tel: (604) 528-2421, FAX: (604) 528-2558, E-mail: kim.meidal@bchydro.bc.ca See <http://www.bchydro.bc.ca/bchydro/IAEG/IAEG98.html>

**October 26-29:** Geological Society of America, Annual Meeting. Toronto, Ontario. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

1999

TBA. GAC/MAC Meeting Sudbury, Ontario  
TBA. Fourth Symposium of African Palynology Sousse University, Tunisia

**August 3-12:** XV INQUA Congress. Durban, South Africa. Theme: "The Environmental Background to Hominid Evolution in Africa". Details: Dr. D. M. Avery, Secretary-General, South African Museum, P.O. Box 61, Cape Town 8000, South Africa. Tel: +27-21-243330, FAX: +27-21-246716 E-mail: mavery@samuseum.ca.za

See also <http://www.geoscience.org.za/inqua/inqua.html>

**October 25-28:** Geological Society of America, Annual Meeting. Denver, Colorado, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

2000

TBA. 10th International Palynological Congress (IPC) Nanjing, China.

**November 13-16:** Geological Society of America, Annual Meeting. Reno, Nevada, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

2001

**November 5-8:** Geological Society of America, Annual Meeting. Boston, Massachusetts, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

2002

**October 28-31:** Geological Society of America, Annual Meeting. Denver, Colorado, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org



#### STRATIGRAPHY OF MALT WHISKY

Dr. Nigel Trewin of The University of Aberdeen - on the occasion of the PGK (Petroleum Geological Circle of the Royal Dutch Geological and Mining Society) meeting late 1996.

The presentation investigates the relationships (if any) between geology and the single malt Scotch whiskies. An introduction includes the distribution of distilleries, and the history and process of whisky distilling. This is followed by a stratigraphic survey of malts, which amazingly reveals that the rocks of two geological periods are favoured for the location of distilleries. These occur in the Devonian (Old Red Sandstone) and the late Precambrian. The significance of this observation will be discussed in terms of whisky reservoirs, maturation, and sequence stratigraphy.

The scientific content of the talk degenerates at this point due to the fact that the investigator had to visit many distilleries several times before he could remember anything.

It is also believed that a revision of sequence stratigraphic nomenclature is required since it was generally found to be impossible to say "highstandsequencetract" after more than five large drams of The Macallan. (Ed. suggests to try and say "highlandsequencetract")



### SPECIAL HISTORICAL DOCUMENTS THE POLLEN & SPORE CIRCULAR

Here's the opportunity to obtain copies of some special historical documents: Paul Sears and the pollen & spore circular.

History of science is always fascinating and teaches us much about ourselves. Paul Bigelow Sears was one of the premiere North American ecologists of the 1930s, '40s, and 50s. His book *Deserts on the March* is as fully current today as it was at its writing in 1935. He was not the very first person to apply palynological methods to Quaternary sites in North America, but he was an early and successful champion of such research.

During World War II and somewhat afterward, Sears initiated and sponsored a newsletter originally called *Pollen Analysis Circular*, later changed to *Pollen and Spore Circular*. The LRC (Limnological Research Center) at the University of Minnesota has a full set of these mimeographed circulars. They are fascinating reading (see below). On the basis of an earlier request for interest, we have decided to have sets made on acid-free archival paper and bound with a continuous coil binding. There are 180 pages (single side). This is a volunteer-based project. Please make checks payable in US\$. We can not accept credit cards, and we have not allowed for any extra costs incurred for handling POs or international funds.

If you find yourself interested in a copy of the *Pollen and Spores Circular*, e-mail specifically to [shane002@maroon.tc.umn.edu](mailto:shane002@maroon.tc.umn.edu). Enough interest has already been expressed to justify a run of 25 copies. This project is self-funded, so please do not offer to get a copy unless you really plan to do it.

Linda C. K. Shane - University of Minnesota - Limnological Research Center - 310 Pillsbury Drive SE - Minneapolis, MN



### PALAEONTOLOGICA ELECTRONICA

The first electronic paleontological journal - *Palaeontologica Electronica* - is now accepting papers for volume 1. *Palaeontologica Electronica* is an internationally-sponsored, peer-reviewed general paleontological journal of the widest possible scope. Technical contributions in the form of papers, editorials, book reviews, announcements, etc. from any branch of paleontology (micropaleontology, palynology, invertebrate paleontology, paleobotany, vertebrate paleontology) or related biological discipline and on any topic will be welcome within its pages. These contributions will come from members of the professional paleontological and biological communities in the same way that contributions to standard print-based paleontological journals are authored and submitted. All technical papers will be reviewed by professional palaeontologists and biologists (using advice from an international panel of associate editors), edited to be accessible to non-specialists, and published as html documents accessible to all with Internet connections via the World Wide Web (WWW). The publication of descriptive taxonomic papers-especially those having to do with the naming of species and higher taxa-will not be encouraged in *Palaeontologica Electronica* at the present time because the current codes of zoological and botanical nomenclature do not recognise electronic publications (though we expect this situation to change in the foreseeable future). All other types of formal paleontological and biological papers will be considered.

Unlike traditional print-based journals, *Palaeontologica Electronica* will be highly graphical in both format and content. Authors will be encouraged to make use of color in their figures and tables and to include high-resolution digital images as illustrations. Moreover, *Palaeontologica Electronica* will encourage active experimentation with animation, 2D and 3D modelling of morphologies, online access to databases, and the creation of online data analysis tools. There will be NO PAGE LIMIT and NO PAGE CHARGES for articles published in *Palaeontologica Electronica*, though all articles will be edited to optimise their information content. This freedom from normal print-publishing overheads is made possible because of the unique advantages of the digital format and because there will be no analogue to paper, typesetting, and distribution costs. Each volume of *Palaeontologica Electronica* will also be available free-of-charge via the WWW for one publishing year. After this time, archive copies will be available to individuals and institutions on CD-ROM from the Paleontological Society and the Palaeontological Association.

Authors wishing to submit manuscripts for review should consult the WWW addresses listed below for style and format guidelines. We would prefer that manuscripts be submitted to either of the executive editors as electronic word processor documents (MS-Word or WordPerfect for Macintosh or Windows platforms preferred), with figures submitted in GIF, TIFF, JPEG, or EPS graphics formats (minimum resolution for review: 200 dpi). Tables may be submitted as tab-delimited text files, or as MS-Excel worksheets (both Macintosh or Windows versions accepted). If you cannot match these formats please contact the editors for alternatives. Hard-copy manuscripts will be accepted for review, but will require additional time to process. [Note: if you need to submit a hard-copy manuscript please contact one of the executive editors prior to the actual submission.] Manuscript files may be sent as compressed archives on 3.5" floppy disks to the executive editor's surface mail addresses, as e-mail attachments (by prior arrangement with the editor) or deposited in a public ftp site (by prior arrangement with the editor).

Additional information about *Palaeontologica Electronica* and Author Guidelines are available from:

N America - <http://www.ucmp.berkeley.edu/Paleonet/pe/glines.html>

Europe - <http://www.nhm.ac.uk/paleonet/pe/glines.html>

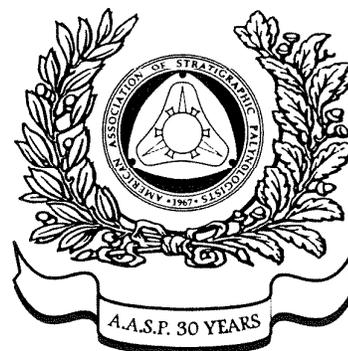
Norman MacLeod (PE Executive Editor), Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD U.K.

[Palaeontologica\\_Electronica@nhm.ac.uk](mailto:Palaeontologica_Electronica@nhm.ac.uk) (E-mail)

R. Timothy Patterson (PE Executive Editor), Ottawa-Carleton Geoscience Centre and Department of Earth Sciences, Carleton University, Ottawa, Ontario K1S 5B5 Canada

[Palaeontologica\\_Electronica@carleton.ca](mailto:Palaeontologica_Electronica@carleton.ca) (E-mail)

And remember:



**American Association of Stratigraphic Palynologists**  
**Student Scholarship**

The American Association of Stratigraphic Palynologists is pleased to announce its program of Student Scholarships to support studies in palynology. Currently, two scholarships for \$1000 (US) each may be awarded annually, and a third award of \$1000 may be given through the Lucy Cranwell Fund. Ordinarily, the scholarships will be awarded to beginning graduate students, but advanced undergraduate students may also apply.

**Basis of Awards** - 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 selection of award winners.

**To Apply** - Part A of this form is to be filled out by the student and Part B by the student's faculty supervisor. The faculty supervisor will send both forms together to the address given at the end of Part B. A total of four pages, including forms A and B will be accepted. Additional material will not be considered. Scholarship applications must be received no later than **April 4, 1997** and awards will be announced by May 2, 1997.

**Part A - Application for A.A.S.P. Student Scholarship**

**Student's name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Three most recent universities or other institutions attended (earliest listed first). Include the institution that you will be attending during tenure of the scholarship, the degree you will be seeking, and the anticipated completion date:

Institution	Degree	Beginning Date	Completion Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Project Supervisor:** \_\_\_\_\_

**Background in palynology: Palynology classes, seminars and short-courses:\***

Date	Instructor	Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Professional experience: Research and publications\***

Date	# Samples Counted	Citation or description
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Awards, honors and funding (include institutional support):\***

Date	Amount	Agency (source of award)	Title
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

\*Use additional sheets as needed, but a total of only 4 sheets, including forms A and B will be accepted.

**Title of proposed investigation:** \_\_\_\_\_  
 \_\_\_\_\_

Summary of the investigation (250 words or less); include objectives, why you selected this problem, its significance, and how you plan to approach and carry out the investigation.

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I agree that the recommendation I am requesting from my faculty supervisor will be held in confidence by officials of my institution, and I hereby waive any rights I may have to examine it. **yes** \_\_\_\_\_ **no** \_\_\_\_\_

Date: \_\_\_\_\_ Applicant = s signature \_\_\_\_\_

**Part B - Endorsement by Faculty Supervisor**

1. Ranking of the applicant versus other students you have known who are pursuing the same degree:  
lower 50% \_\_\_ upper 50% \_\_\_ upper 25% \_\_\_ upper 10% \_\_\_ upper 5% \_\_\_
2. Did the idea for the project originate from student? **yes** \_\_\_\_\_ **no** \_\_\_\_\_
3. Can you verify the student = s statements as to other awards, honors, or financial aid received or applied for?  
**yes** \_\_\_\_\_ **no** \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Please provide a brief summary (100 words or less on an attached sheet) or your assessment of the applicant = s project and his or her potential to attain the objectives. Among other traits, please comment on the student's native intellectual ability, ability to express him (her)self, perseverance, imagination and the probable creativity, and the value of the project.

Faculty supervisor's name \_\_\_\_\_

Position: \_\_\_\_\_

Institution: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please return Parts A and B to: Owen K. Davis Phone 520 621 7953  
Department of Geosciences FAX 520 621 2672  
University of Arizona palynolo@geo.arizona.edu  
Tucson, AZ 85721-0077 http://www.geo.arizona.edu/palynology  
U.S.A.

***N.B. A total of only 4 sheets, including forms A and B will be accepted.***