



A.A.S.P. NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists Inc.

September 2001
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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)

AASP Board of Directors Award recipient

Dr. Robert T. Clarke (awarded 1994)

Teaching medal recipients

Professor Aureal T. Cross (awarded 1999)

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 Aureal T. Cross (elected 1991)

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)

Awards at each Annual Meeting: Unocal Best Applications Paper Award, Best Student Paper Award, and Best Poster Award.

Student Scholarships to support studies in palynology. Currently up to two scholarships of \$1000 (U.S.) each annually. 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. 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. Students need not be AASP members. Application forms appear in the January issue of the *AASP Newsletter*. Chairman of the AASP Awards Committee is Owen K. Davis (palynolo@geo.Arizona.EDU).

AASP Membership Application - Membership in AASP is for the calendar year. Dues are \$30.00 U.S. per year for individuals and \$40.00 U.S. per year for institutional members. All members of AASP receive *Palynology* which is published annually, the *AASP Newsletter*, which is mailed out four times a year, and an annual *Membership Directory*. Dues may be paid up to three years in advance. Overseas AASP Members (Individual or Institutional) who would like to receive their *AASP Newsletter* and *Palynology* by air mail, rather than book rate surface mail, need to include the applicable postage surcharge (noted below). Credit card users must pay a \$1.00 U.S. surcharge per transaction. Air mail surcharge (increased for 1995 and beyond): Europe & South America: \$12.00 U.S. per year. Africa, Asia & Australia: \$15.00 U.S. per year. Credit card surcharge \$1.00 per transaction.



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Marloes Kloosterboer-van Hoeve, 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. Deadlines for next issues of the newsletter, are December 1, 2001 and March 2002. All information should be sent on computer disks (preferably Word-Perfect) or 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.

PRESIDENT'S PAGE

by David Pocknall, September 2001

Over many years as a member of AASP I have been constantly amazed at the wide diversity of interests our members have. This is always clearly illustrated by the variety of papers that are presented at our annual meetings. My first studies in palynology were in morphology of New Zealand conifers and modern pollen rain. Following completion of my university studies I began work at the New Zealand Geological Survey as a stratigraphic palynologist, which is what I consider myself to be 22 years hence. As we all know AASP was founded largely by a bunch of oil company stratigraphic palynologists, hence the name of our organization, but over the past 10 years or so there has been a decline in the focus on stratigraphy for palynologists. This has been a concern to many of us still in industry, although I think most of us tend to shoulder some of the blame on behalf of our industry because it is the industry that has bought this on themselves. The cyclic nature of our business, combined with the inability of companies to sustain downturns, as well as a drive to outsource as much as possible has resulted in the situation in which we presently find ourselves. But I digress - this is clearly a much wider issue and one we could spend a whole career discussing!

It has been a revelation receiving and organizing the program for the upcoming meeting in San Antonio. With most of the abstracts in for the meeting up to half of the papers are on stratigraphic palynology, many from Central and South America in response to a symposium proposed on the subject. There is a key learning here for our meeting organizers in that having theme sessions is an important component of our meeting structure (as has been shown in the past) and I hope will be shown in the future. I am sure that some of our sub-discipline specialties in palynology may feel they are experiencing declining levels of interest and numbers of people; I suggest that proposing a symposium and making contact with the key people in the specialty will certainly enlist support and participation at an annual meeting.

Like me, many of our fraternity have come from a different area of palynology that we currently work in and take an active interest in what our co-members of the association are doing. For instance, as stratigraphic palynologists we need support from morphological studies, modern distribution patterns as they relate to taphonomic patterns in assemblages, studies of present day environments help us

in paleoenvironmental reconstructions, climate studies help us understand the depositional patterns we see through geologic time, and so on. The point I am trying to make is that although I am delighted at the encouraging numbers of papers in stratigraphic palynology that are going to be presented in San Antonio, I would emphasize that we are an integrated discipline and can all help, and learn from each other.

Looking forward to seeing some of you in San Antonio!!

FINAL ANNOUNCEMENT FOR AASP 2001, SAN ANTONIO, TX, OCTOBER 21-24, 2001

This notification is your final reminder to register and attend the 2001 AASP Annual Meeting to be held in San Antonio, Texas from October 21-24. All events have been finalized and all will have a great time. A couple of deadlines to be immediately aware of:

Deadline for Hotel Reservation: Friday, September 20, 2001

Deadline for Registration: Friday, September 28, 2001

This year's meeting will be held at the historic Menger Hotel in downtown San Antonio, right next door to the Alamo, and two blocks away from the lively RiverWalk. You can make your hotel reservation by phoning the Menger at 1-800-345-9285 or visiting the website, <http://www.historicmenger.com>. Room rates have been guaranteed at US\$110/night, but you must make your reservation before September 20.

Three full days of technical sessions are anticipated, as well as several other social and business events. The schedule of events will be as follows.

Sunday, October 21, 2001

AASP Golf Tournament, TBA, *Please contact David Pocknall for details

Registration Desk, 5:30-7:00PM, Hotel Foyer
Icebreaker and Opening Ceremonies, 7:00-9:00PM, Minuet Room

Monday, October 22, 2001

Technical Oral and Poster Sessions, AM and PM, Ballrooms B and C
Registration Desk, 8:00AM, Ballroom B
Outgoing Board Meeting, 7:00-11:00PM, Sam Houston Boardroom

Tuesday, October 23, 2001

Technical Oral and Poster Sessions, AM and PM, Ballrooms B and C
Social Evening on the RiverWalk, 7:00PM - Whenever, Republic of Texas Restaurant

Wednesday, October 24, 2001

Technical Oral and Poster Sessions, AM and PM,

Ballrooms B and C
Group Picture, 11:30AM, East Steps of Hotel
Business Luncheon, 12:00-2:00PM, Minuet Room
Incoming Board Meeting, 7:00-9:00PM, Sam Houston Boardroom

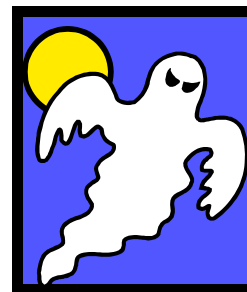
Thursday and Friday, October 25-26, 2001

Fieldtrip to Cretaceous localities in Central Texas
*Contact Jeff Stein (steinja@bp.com) or David Pocknall (pocknadt@bp.com) for more details regarding the fieldtrip

All registration material was mailed out with the last AASP Newsletter, however, everything can be found on the AASP website at <http://www.palynology.org>. Registration fees for AASP members are set at \$125, \$140 for non-members, and \$80 for students. This fee includes admittance to the Icebreaker, all technical sessions, and the Business Luncheon. Cost of the fieldtrip is \$150. You are strongly urged to mail or fax your registration as soon as possible to Thomas Demchuk (AASP Secretary-Treasurer) so all events at the meeting can be properly planned.

For questions or concerns, please contact Thomas Demchuk at thomas.d.demchuk@usa.conoco.com.

The organizing committee look forward to seeing everyone in San Antonio. See y'all there!



GHOSTLY SIGHTINGS AT THE MENGER HOTEL, SAN ANTONIO

This year's Annual Meeting at the Menger Hotel will provide a new experience for the attendees...the possibility of seeing a ghost. The Menger Hotel is home to several apparitions, as part of its long history. The Hotel, built in 1859 is the host to several spirits. The Menger's Assistant Manager has a string of ghost stories that will scare the daylights out of you. Along with several bumps in the night and moving kitchen utensils, is the presence of several people with no bodies to accompany them.

Maid Sallie White was murdered by her husband and buried at the expense of the Menger Hotel. She has been seen walking the corridors of the hotel, especially at night. She is wearing an old long grey skirt with a bandana around her head. She is carrying towels, which she never seems to deliver.

Captain Richard King, founder of the Texas King Ranch appears infrequently entering his room, the King Suite. The unusual thing is that he does not use the door of the suite, but instead goes directly through the wall. At one time, there was a door in that location where Captain King entered his suite many years ago. He has been seen by several employees and guests.

A man in a Buckskin jacket and grey trousers is standing by your bed as you step out of the shower and enter your room. The man is speaking to someone else in the room, someone that cannot be seen. Three times, the Buckskin-clad man asks the question, "Are you gonna stay, or are you gonna go?"

In the lobby of the Hotel, a lady sits and knits. She is wearing an old-fashioned blue dress, a beret with a tassel, and small glasses with metal frames. An employee asks, "Are you comfortable....may I get you something?" The old lady snaps, "No!" and disappears.

Built just a few steps away from the Alamo, only 23 years after the historic battle, the immediate area lends itself to such folklore. The ghosts are all harmless, but the guests of the Hotel are obviously not alone.

(From the Menger Hotel website, <http://www.historicmenger.com>)
By Thomas Demchuk

AWARDS

* The recipients of a AASP student scholarship



JAMES ELDRETT: I completed my B.Sc. Hons in Geography at University College London in 1997. In 1998 I undertook a M.Sc. in Oceanography at Southampton Oceanography Centre, completing a research project on magnetobiostratigraphy of Oligocene sediments from the Ross Sea, Antarctica. During this time my interest in the Eocene-Oligocene Boundary, and in particular, the magnetobiostratigraphic chronology of this interval increased to a point where I decided to continue this research by doing a PhD.

My project proposal is entitled 'An integrated high-resolution magnetobiostratigraphic investigation of the palaeoceanographic conditions leading to the Eocene-Oligocene boundary in the Norwegian-Greenland Sea'. Supervision is by Dr I. Harding (SOC), Prof J. Murray (SOC) and Dr J. Firth (ODP). The Eocene to Oligocene interval is a critical period in earth history, marking a major climatic transition from greenhouse conditions in the Cretaceous to icehouse conditions in the Cenozoic. These climatic changes appear to be associated with major tectonic reorganisation, in particular the opening of the Norwegian-Greenland Sea, which may have been an important factor influencing the initiation of thermohaline circulation in the Northern Hemisphere. High latitude sediments from the Norwegian-Greenland Sea generally lack calcareous microfossils usually used as biostratigraphic constraints. Thus the development of an integrated high-resolution magnetobiostratigraphic zonation based on palynomorphs from Site 913B (ODP Leg 151) and Site 338 (DSDP Leg 38) is important. The bioevents leading up to the Eocene-Oligocene boundary will then be set against this temporal framework.



KHUM NARAYAN PAUDYAL : I earned my degrees [BSc. (Geology and Biology, 1988) and MSc.(Geology, 1993)] from Tribhuvan University, Kathmandu, Nepal. In 1994, I joined the Central Department of Geology of the Tribhuvan University as a research and teaching assistant in palaeontology and sedimentology.

After receiving a scholarship from the Austrian Government (Osterreichischer Akademischer Austauschdienst) in 1997, I had an opportunity to learn palynological laboratory techniques at the Institute of Palaeontology at the University of Vienna, Austria. I returned to Vienna at the beginning of 1999 to study for a PhD under the guidance of Professor David K. Ferguson and Dr. Reinhard Zetter. The topic of my research is "The Pleistocene Environment of the Kathmandu Valley, Nepal Himalaya".

*** The 2001 recipient of the Cranwell portion of the AASP Student Scholarship**



FREEA ITZSTEIN-DAVEY is a postgraduate student in the Department of Geography at the University of Western Australia. She is currently researching the history of vegetation in south-western Australia, focussing on the Proteaceae family (Banksias, Grevilleas, Hakeas etc.) for her PhD. She completed her undergraduate degree in Environmental Science in 1998 with honours.

Around 9000 species of flowering plants occur in the southwestern most corner of Australia and 80% of these are endemic to this region. The vegetation is therefore unique and globally significant. The Proteaceae is an important part of the flora with a variety of spectacular flowering plants. Perhaps the southwest is one of the best regions in the world to study vegetation, especially seeing as though we know so little about this biodiversity. Why is the vegetation in southwestern Australia so special? Why is the Proteaceae so important? We just don't know.

I use pollen to reconstruct past vegetation. Pollen forms a basis for obtaining information on groups of species that occurred at specific locations and from these we can infer what the vegetation looked like. I am looking at vegetation in the Eocene, when modern flowering plants were still developing; the Pliocene, a pivotal time of evolution of modern climates and vegetation; and the Holocene, when modern communities were established. These important times in the past will almost certainly hold keys to unlock the mysteries of today's rich flora. My studies can help to explain why southwestern Australian vegetation is so special and can aid in conservation for the future, especially with human induced climate change.

NEWS FROM AUSTRIA, GERMANY, AND SWITZERLAND
compiled by Jörg Pross (joerg.pross@uni-tuebingen.de)
August 2001

For the present Newsletter, Brigitta Ammann has provided an update on the palynological research interests of the paleoecology group of the University of Bern, Switzerland. Being part of the Institute of Plant Sciences, the group is involved in research on

ecosystem dynamics mainly during the Late Glacial and Holocene. Research interests concentrate on climate change and human impact as recorded in terrestrial and aquatic ecosystems.

To address these questions, a number of projects uses the relationships between species' ecological (especially climatic) requirements and their biogeographical ranges. The relationships between species' climatic tolerances and optima and climatic parameters are essentially used in two directions: Firstly, if independent evidence for climate change is available, the response of organisms to climate change can be assessed. For instance, members of the Bern group correlated the stable isotope ratios of bulk samples and of ostracods from Lake Gerzensee and Leysin (Switzerland) to one of the GRIP ice cores, thus providing an estimate of summer temperature changes and establishing a chronology at the same time. Moreover, the Bern team was able to assess the biotic responses of plants, chironomids, beetles, and cladoceres for the beginning and the end of the Younger Dryas. An overview on the group's current activities and recent publications is given under <http://www.botany.unibe.ch>.

Secondly, the Bern group is involved in the development of numerical techniques for the reconstruction of past climates. André F. Lotter has developed and applied such techniques in the framework of national and European projects. Andy has left Bern for Utrecht at the beginning of 2001 - the Bern group congratulates him to his new position and looks forward to further collaboration. In the field of diatom analysis, Andy will soon be replaced by Christian Bigler, who will be a postdoc in a new project of the National Center of Competence in Research on Climate.

At the ETH Zürich, Peter Hochuli will further coordinate projects on pre-Quaternary palynology. He will, however, focus increasingly on palynological consulting. More details on Peter's current non-academic activities are available at <http://www.stratconsulting.com>.

At the University of Göttingen, Germany, Michael Prauss has finished his "Habilitation" thesis entitled "The oceanographic and climatic interpretation of marine palynomorph phytoplankton distribution from Mesozoic, Cenozoic, and Recent sections". Copies of Michael's 235-pages work may be ordered from the author (mprauss@gwdg.de).

Even further north (at least from a South German perspective), the German working group on vegetation history will hold its annual meeting from October 26th to 29th in Wilhelmshaven, northern Germany. The meeting will cover all aspects of vegetation history including archeobotany. More information can be obtained from the homepage of the Niedersächsisches Institut für historische Küstenforschung Wilhelmshaven (<http://www.terramare.de/nihk/>) or directly from Wiebke Kirleis (wiebke.kirleis@nihk.terramare.de) or Felix Bittmann (felix.bittmann@nihk.terramare.de).

OBITUARY: Harold V. Kaska 1926-2001

Submitted by Alfred Holck



Harold Victor Kaska, retired Chevron Overseas Petroleum paleontologist and palynologist, died in his sleep on April 29, 2001. He was born in Brooklyn, NY on January 11, 1926. The family soon moved to nearby Queens where Harold spent his formative years. He served in Germany with the 69th Infantry during the later stages of World War II and was awarded the Bronze Star. Following this, he enrolled at Hofstra University. There he realized that he was not good at mathematics and needed to find a more qualitative academic pursuit. He transferred to New York University in his junior year, discovered geology, and received a Bachelor of Science degree.

His education was further advanced when he received a graduate assistantship at the University of Indiana where he earned a Masters Degree in micropaleontology in 1952. At Indiana he studied under J. J. Galloway, a renowned micropaleontologist of the time. This association led to the publication, jointly with Galloway, in 1953, of Geological Society of America Memoir 69, "Genus *Pentremites* and its Species".

In 1952 he began a 32-year career with the Chevron Group of companies. His initial employment took him to a four-year assignment in Trinidad, B.W.I. His first duty was to set up a laboratory for micropaleontology. This proved to be a good experience in organizing and purchasing.

In 1957, he was transferred to San Francisco for a short period. His talents, however, were more needed in Guatemala. Again, he was called on to set up a laboratory. His experience in Trinidad proved valuable, not only in this regard, but also in the firm grounding he had received in studying planktonic and benthonic foraminifera of the Caribbean area. His work also encompassed analysis of orbitoids and fusulinids.

After five and a half years in Guatemala the next two were spent in Coral Gables, FL. There he continued to focus on the Caribbean region. At about this time his emphasis shifted to palynology - a specialty that would occupy him for the rest of his career.

From 1965 to 1966 he worked for the Western Australian Petroleum Proprietary (WAPET), a Chevron affiliate, in Perth, Australia. There he established a palynological laboratory, the first in that area for a commercial company.

He returned to the States in 1968 and worked in the Bakersfield, CA office until 1972, applying his skills to problems in the San Joaquin Valley. His final move brought him back to San Francisco to become a Staff Paleontologist for Chevron Overseas Petroleum Inc.

His palynological studies spanned the geologic column from the Ordovician through the Tertiary. They encompassed analyses of spores and pollen, dinoflagellates and acritarchs from forty countries. His extensive studies of the palynology in Chevron's wells in Sudan were of particular importance.

Following retirement he maintained his interest in palynology and undertook consultative work in various domestic and overseas areas.

In 1984 he presented results of his investigations in Central Sudan at the 17th Annual Meeting of the American Association of Stratigraphic Palynologists (AASP) and published them in abstract form the following year. Results of this work were also presented at the 7th International Palynological Congress in 1988. A full paper appeared in 1989 in Volume 13 of Palynology entitled, "A Spore and Pollen Zonation of Early Cretaceous to Tertiary Nonmarine Sediments of Central Sudan". A brief note entitled, "Palynology helps company avoid drilling costs", appeared in Chapter 32, V. 3 of Palynology: Principles and Applications, 1966.

He was a member of the American Association of Petroleum Geologists, SEPM - Society for Sedimentary Geology, and AASP.

In 1987-1988 he was a Director at Large of AASP. Prior to that, he chaired the 1983 meeting committee of that society. He served two terms as a Director of the International Federation of Palynological Societies for the period 1984-1992.

While in Trinidad, he developed a keen interest in sailing, an activity he and his family enjoyed for many years. In later times he focussed on classical music and opera. He developed an early interest in model trains and in recent years became an avid collector of the Marklin Line. He maintained a close relationship with the University of Indiana Geology Department, particularly in the last five years.

He is survived by his wife of 51 years, Cecille; a daughter Diane Andrews of New Fairfield, CT; sons Alan of Valencia, CA and Neil of Florence, OR; and three grandchildren.

Interment, in the presence of a military honour guard, was at Oakmont Cemetery, Pleasant Hill, CA.

ADDRESSES

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BOOKREVIEWS

* Fossil Spores and Pollen of China (volume 1)-The Late Cretaceous and Tertiary Spores and Pollen

by Song Zhichen et al. (in Chinese with English Abstract).
1999. Science Press, Beijing, China.
ISBN 7-03-006724-X, 910pp., US\$66.00 +US\$14.00
postage by sea mail.

AND

Fossil Spores and Pollen of China (volume 2)-The Mesozoic Spores and Pollen

by Song Zhichen, Shang Yuke et al. (in Chinese with English Abstract) 2000. Science Press, Beijing, China.
ISBN 7-03-007588-9, 710pp., US\$62.00 +US\$14.00
postage by sea mail.

Reviewed by David M. Jarzen and Xin Wang, Florida Museum of Natural History, University of Florida, Gainesville, Florida, 32611-7800.

This two volume set represents an enormous amount of data on Mesozoic and Tertiary pollen and spores of China. The authors have collectively assembled and presented in systematic fashion the taxa typical of Chinese deposits. Non-Chinese readers may find it difficult to benefit from the descriptions. However, since the systematics and synonymy are in Latin, readers may still find the treatment of value. Palynological work in China had its beginnings in the 1940s with the work of Jen Hsu (Ren Xu). Very limited work continued through the 1950s and 1960s, with rapid progress being made since the 1970s.

Volume I of the set provides the description of genera and species of fungal spores, trilete spores, gymnosperm and angiosperm pollen from the Late Cretaceous to Tertiary. The authors have incorporated publications up to 1990. A total of 412 genera incorporating 2212 species are described in Chinese using the Potonié system. Within this mass of information are the newly described genera *Spatulosporonites*, *Moxiepollis*, *Planotricolporites*, *Yizhengpollis* and *Moraceoipollenites*. These genera are described in Chinese and in English. Type species repository is not noted. All other taxa are described in Chinese only. A translation of one randomly selected taxon follows:

Planotricolporites lagerstromiaformis (Zheng) Song
comb. nov.
(Plate 120, fig 1)

1989 *Tricolporopollenites lagerstroemiaformis* Zheng,
Guan, X.T. et al., p115, pl. 40, fig. 9

Diameter about 25 µm; tricolporate, planaperturate, big pore with diameter about 4.5 µm, with pore margin thick 4-5 µm, pore region wide up to 12.5 µm, colpi narrow, like rupture, extending beyond pore region; exine 3 µm thick, with strong striate in polar region, smooth surface.

This species is distinct from other species by its

unique aperture; it is named after the living plant *Laerstroemia subcostata* Koehne (Lythraceae), which has pollen similar to this species.
Occurrence: Bo Sea, sparse in Guantao Formation.

As may be seen from this translation the format and details are easily translated and easy to understand. Readers may benefit by having a few of the descriptions translated for their particular interests. Following the taxonomic treatment, the authors provide a discussion of the various pollen/spore floras and their distribution throughout China.

A total of 207 plates with about 15 to 35 taxa illustrated per plate are included. The light photomicrographs are for the most part clean, of adequate contrast and sharpness to illustrate the necessary details of the morphological features described in the text. SEM and TEM photomicrographs are not included. References (pp. 579-590) are arranged with Chinese first followed by English and Cyrillic. An alphabetical listing (pp. 591-613) of all taxa, including page number of the description, plate and figure numbers is provided following the references.

Volume 2, represents a contribution of the **10th International Palynological Congress**, held in Nanjing, China, in the year 2000. It focuses on monolete and trilete spores, and gymnosperm and angiosperm pollen assemblages from Chinese Triassic, Jurassic and early Cretaceous deposits. It includes taxa published before 1992. A total of 304 genera, 1800 species, including 46 new species, 71 new combinations are included. A translation of the description, of a randomly selected taxon, from this volume provided the same well-written and well-structured, if not brief, text as was found in Volume 1.

Monosulcites fusiformis (Nilsson) Lei, 1981
(Plate 162, fig 6)

1958 *Monocolpopollenites fusiformis* Nilsson, p.60, pl.5, fig. 6

1981 *Monosulcites fusiformis* (Nilsson) Lei, Lei, Z.Q. et al., p236, pl2, fig. 7

1984 *Monosulcites fusiformis* (Nilsson) Zhang, Zhang, L.J. et al., p44, pl.12, fig.22

Outline fusiform, size 46 um x 22 um; exine 1.2 um thick, smooth; distal single colpus as long as pollen grain, slightly open, with exine thickening along colpus, wider in the middle and tapering to the ends.

Occurrence: Upper Triassic, Langan, Yunnan Province; Xujiage Formation, Weiyuan, Sichuan Province.

The format and organization of Volume 2 follows that of Volume 1. As in the earlier volume the 167 plates provide light micrographs of the described taxa. These figures are sharp, with fine contrast, and of adequate size to

allow most surface details to be seen. Unlike Volume 1, this volume provides a few SEM photomicrographs of some of the pollen forms.

As is to be expected in a work of this magnitude, spelling errors, and typographical errors occur occasionally. This does not distract from the overall value of these volumes. We find that these mammoth tomes are well worth the very reasonable prices quoted. Orders may be made through: Huayu Center for Environmental Information Services

Jianneidajie Youju, P.O. Box 4088, Beijing 100001, CHINA, Email Orders hceis@263.net.cn

* **Paleoethnobotany: A Handbook of Procedures**, Deborah M. Pearsall. Academic Press, 2000 (2nd edition), 700 pp., illus. (B&W), tables, biblio, index, ISBN: 0-12-548036-9. (\$79.95) (Paperback).

Reviewed by *Vaughn M. Bryant, Jr. Texas A&M University*

For nearly 40 years as the field of paleoethnobotany (first defined by Helbeak in 1959) emerged as a discipline, many workers in, and out of that field lamented the absence of a good textbook that would provide an overview of the discipline, offer guidelines and answers for students' questions about how and where to sample, and would discuss the many different sorting and analytical approaches that were being developed and tested. As Helbeak originally stated, "Paleoethnobotany...is the analysis and interpretation of the direct interrelationships between humans and plants...as manifested in the archaeological record." Thus, the primary emphasis of the discipline remains the analysis of botanical materials found in archaeological sites.

In 1989, Pearsall partly solved the problem with the publication of the first edition of her book, *Paleoethnobotany: A Handbook of Procedures*. That edition had large print, was well illustrated, and the book was 470 pages long. It provided an excellent beginning point but as the author later admitted, it was heavily weighted toward examples taken from sites in the New World, there were significant imbalances among the chapters (i.e., especially in her discussion of palynology), and she regretted the omission of some important primary source data. All of those problems have been thoroughly corrected in the second edition. The current edition is 700 pages long, has much smaller print, is much better illustrated, and devotes 18% of the text to a comprehensive discussion of the role of palynology as it applies to paleoethnobotany. In addition, there are over 1,500 entries in her bibliography. Yes, that is correct, 1,500 citations, that is not a typo!

The book contains an excellent opening chapter on the history and development of paleoethnobotany as a discipline that details the progress and growing acceptance of this technology during the last century. It also discusses the current and potential future status of

the discipline. Later chapters focus on techniques used in sample recovery, the interpretation of botanical macro remains (i.e., wood, leaves, seeds, fruits, charcoal, etc.), the importance and role of phytoliths (plant crystals) in documenting the past use of plants by humans, how pollen studies continue to provide critical documentation about past interactions between humans and their use of plant resources, the use of specific types of botanical remains (i.e., coprolites) to infer the diet and health of ancient cultures, and various other types of techniques that are used to integrate biological data into a meaningful analysis.

The bibliographical section is extensive. I spent several hours just reading the many entries in that section and marking some of the more interesting citations that I want to look up and read at a later date. I was especially amazed by the breadth of the many references she included in the pollen section.

Because I am writing this review primarily for palynologists, I would like to focus my remaining attention to the 18% of the book dealing with pollen studies. On page 352, Dr. Pearsall says, "I am not a palynologist, and so my perspective on how pollen analysis contributes to archaeology and paleoethnobotany may differ from that of active researchers in the field." My reply to her comment is that she is too modest. What she has produced in the pollen chapter of her book does justice to the topic. Her chapter is a comprehensive review of the topic of pollen studies, as they apply specifically to the field of paleoethnobotany. It is so thorough and useful that I plan to insist that students in my graduate pollen courses use that chapter as the beginning point for their further studies on that topic. Because the pollen section in her first edition of this book was short (less than one-half the length or breadth of her current chapter) and received pointed criticism from palynologists, I suspect that Dr. Pearsall wanted to make sure that her pollen chapter in this second edition would "pass muster." I can assure her that it does!

When I read the palynology portion of her book, it was almost as if I were reading the opening chapters of a standard textbook in palynology. Dr. Pearsall offers fairly detailed discussions of a range of topics that include pollen formation, dispersal techniques, morphology types, pollen keys, pollen distribution, and pollen preservation. She then launches into thorough discussions of pollen sampling techniques (both modern and fossil), offers a detailed look at current types of pollen processing techniques, recommends types of slide mounting procedures, suggests ways to count pollen and tracer spores, how and why to use tracer spores, and finally she details many of the problems one can encounter when trying to identify damaged or corroded pollen grains in fossil sediments. She concludes her discussion of palynology with some excellent case studies that document some of the many ways pollen data can be used and then focuses on the problems that can be encountered during the analysis and later interpretation of pollen counts. I was also pleased to see that she strongly recommends caution

against "over interpretations" of the pollen data. Finally, she explores a number of statistical techniques that are currently used to interpret pollen data, define pollen biozones, and correlate stratigraphic sequences. Best of all, her summary section of the pollen chapter entitled, "Issues and Directions in Archaeological Pollen Analysis," should be required reading for all archaeologists who want to, or plan to, or are even considering collecting pollen data from sites that they will excavate. That final section very effectively summarizes many of the critical points that palynologists have been trying to convey to archaeologists for decades!

Are there any problems with what she has presented about archaeological palynology? That depends on your personal perspective. Did she cover all the major and most important topics of that subject, yes. Did she present a well-rounded global perspective rather than focusing only on examples from the New World, yes. Did she cite many of the major and key research papers published on this topic, yes. Did she provide a well-rounded and informative look at pollen studies in paleoethnobotany and presented it in a manner that non-palynologists can understand, yes.

If Pearsall has done all of the above, then why should I have any objections at all? My only criticism is that a few of the papers and works she cites and discusses in her chapter reflect research that I believe is less than stellar. In other words, some non-palynologists who read her book may not be as aware or as critical of some of the discussed pollen topics or conclusions as professional palynologists might be. Nevertheless, I admit this is a "thin criticism" and one that almost any palynologist could levy against almost any text on the subject because each of us has our own beliefs and perspective about many topics.

There are a few minor typos and some errors in the pollen chapter that could be corrected if there is to be a third edition, but these are not serious flaws and they won't be noticed by most who read the book. There are a number of photo micrographs of pollen grains yet no indication of relative size even though many of them are pictured at different magnifications. She incorrectly says that palynology is limited to the study of pollen and spores, she notes that the pollen exine is composed mostly of sporopollenin, and suggests that the only way to distinguish specific taxa of *Chenopodium* pollen is through the use of SEM studies. There are also a few primary citations missing, which I might suggest she add in the next revision, but these do not detract from what is included.

The bottom line is that this is an amazing book and it is well worth the cost. The original, first edition of this book, if I recall correctly, was as least as expensive as this second edition, if not more expensive. That was 11 years ago, so in today's dollars the current edition is a bargain. For any member of the palynology discipline who plans to interact and work with archaeologists, or who wants his/her research to be recognized and used by paleoethnobotanists, this book is an essential purchase.

NEW BOOKS

* New Palynology books from China

Following please find 6 books of palynology that are newly published. How to order! Contact: Huayu Center for Environmental, Information Services, Jianneidajie Youju, P.O.Box 4088, Beijing 100001, China, Email order: hceis@263.net.cn. Delivery: We shall send the book(s) to you after receiving your order within the days you requested. Payment: Check, bank transfer or cash, or international money. More details please visit: <http://www.hceis.com>

1. Palynology of Petroliferous Basins in China (English)

Edited by Gao Ruiqi et al,
Publishing date: June of 2000,
ISBN: 7-5021-3002-0, 250pages +47 plates,
Soft cover, 185x210mm Price: US\$47 +\$8 seamail
US\$47+\$18 airmail.

This book comprise of three main parts. Part one, the general introduction, describes the geological background of distribution patterns of the petroliferous basins, main features of reservoir beds, and the current progress in oil and gas exploration of Mesozoic and Cenozoic petroliferous basins in China. In this part a brief introduction was also made to the late Palaeozoic, Mesozoic and Cenozoic palynological sequence for each palyno-geographical region. Part two, descriptions of individual areas, is composed of five chapters based on the petroliferous regions (Western Province, Central Province, Eastern Province, Southern Province and the East China Sea (Donghai) and South China Sea. The third part is a composite section. In this part stratigraphical correlation is made based on palynological evidence among the petroliferous basins within a palyno-geographic region.

2. Symposium On Palynology of Petroliferous Basins In China (Chinese -English)

Edited by Zhu Zonghao et al
Publishing Date: June of 2000 ISBN: 7-5021-3023-3
262pages+26 plates, 185x210 mm, Soft cover Price: US\$38+\$8 seamail US\$38+ \$18 airmail

This book contains 29 papers. Some papers are in English and Some other papers are in Chinese with English Summary, English tables and figures.

English papers list:

1. New Subspecies of *Quercoidites microhenrici* and their Significance in Reservoir description of Shengli Oil-Bearing Region
2. Eocene Palynology of Well Lufeng 13-2-1 . Pearl River Mouth Basin
3. Jurassic and Cretaceous Boundary Palynology in NE China
4. A discussion on the Biota and the Paleoenvironment of the Tengger and Duhongmu Formations
5. Study on the Assemblages of Spore and Pollen of Mesozoic and Cenozoic in Turpan-Hami Basin
6. Correlation of the Tertiary Sporopollen Typical Section of Western and Eastern China-in addition:A discussion

on the palynoecostratigraphy

7. The relationship between planktonic Algae Fossils and petroleum Accumulation in Paleogene of Liaohe and Jizhong Oil and gas bearing regions

8. Neogene palynology from North of Shandong

9. New Species of Tertiary Sporopollen in Jiangnan Basin

10. Redescribe about the parts of palynomorphs from Paleogene in Jizhong depression.

3. Cretaceous oil strata Palynology From Songliao Basin (Chinese with English abstract)

By Gao Ruiqi et al, 1999
ISBN: 7-116-02372-0373 pp. + 94 plates 190x260mm
Softcover Price: US\$48 + Postage\$9 seamail

The Songliao Basin is one of the Largest Mesozoic to Cenozoic sedimentary basin in China. It's from Heilongjiang province and Jilin province to Liaoning province and Nei Mongol Autonomous Region with an area of over 260, 000 Km². The Cretaceous sediments are more than 7,000 m in thickness, which are the main stage of the basin development. A well-developed section with well-preserved and abundant palynoflora is found in the basin, which is an nice region to study Cretaceous palynology in China. The study has been going deep with the exploration and development of the Daqing Oil Field. More than 10, 000 samples from 500 wells have been analyzed and identified in thirty years. A lot of palynological information has been obtained. Some researches on palyno-stratigraphy, palyno-organic geochemistry, palyno-paleoclimatology and palynomorphology have also got much achievements.

4. Fossil Spores and Pollen of China (Vol. 1) - The Late Cretaceous and Tertiary Spores and Pollen (Chinese with English abstract)

By Song Zhichen et al. Pub.
Date: 1999, 910pages+207 plates, 200x265mm,
Hardback ISBN: 7-03-006724-X Price: US\$66 Postage:
US\$14 by sea mail

Introduction: The monograph, summarizing up the Late Cretaceous and Tertiary palynological materials published before 1990 in China, consists of two parts: The part one is morphological taxonomic system and the descriptions of the Late Cretaceous and Tertiary spores, 11 new combinations and 2 nominations of fungal spores; 77 genera and 392 species including 1 new species, 10 new combinations and 2 new nominations of Bryophyta species and 16 new combinations of porate redescrbed in Chinese text. The total number of palynological taxa is about 412 genera and 2212 species including 5 new genera, 104 new species, 186 new combinations and 13 new nominations. The new genera are: *Spatulosporonites*, *Spatulosporonites*, *Moxiepollis*, *Planotricolporites*, *Yizhengopollis* and *Moraceipollenites*. The taxonomic system of spores and pollen described in Chinese text is chiEfly according to R. Potonie's (1956, 1958, 1960) and with some revisions based on the Chinese materials. The part two is spore-pollen flora and assemblage sequence recounting in the Late Cretaceous, the Palaeogene and the Neogene three chapters.

5. Fossil Spores and Pollen of China - Vol. 2 The Mesozoic Spores and Pollen (Chinese with English Summary)

By Song Zhihen, Shang Yuke et al.

Pub. Date: 2000, ISBN:7-03-007588-9 Size: 200x265 mm, Hardback 710 pages+167 plates Price: US\$62 Postage US\$14 by sea mail

6. Tertiary Stratigraphy and Micropaleontology of the Central Hebei Petroleumiferous Area (Chinese)

Edited by Cai Zhiguo et al

ISBN: 7-03-006172-1 Publishing Date: 1998, 550 pages+143 plates, Hard, 210x290 mm Price: US\$57 + \$12 sea mail Central

Hebei petroleumiferous area is a large oil and gas-bearing depression located in the western part of the Bohai Gulf Basin. Tertiary strata are well developed in this area consisting of the Kongdian, Shahejie, Dongying, Guantao, and Minhuazhen formation in ascending order. In the present paper, 244 genera and 888 species of Ostracods, gastropods, foraminifers, dinoflagellates, acritarchs, and pollen and spores have been described. Three distinct shifts of depositional center have occurred during this period, leading to three sets of excellent oil-generating formations which contain abundant oil and gas resources.

*** New palynology books from Poland**

1. Atlas of pollen and spores of the Polish Neogene, Volume 1 Spores

by Leon STUCHLIK, Maria ZIEMBIENSKA - TWORZYDLO, Aleksandra KOHLMAN - ADAMSKA, Irena GRABOWSKA, Hanna WAZYNSKA, Barbara SLODKOWSKA, Anna SADOWSKA

158 pages, 4 black and white figures and 42 plates

ISBN 83-85444-79-3

price 40 US\$ (porto included)

With the first volume we are beginning the edition of an "Atlas of pollen and spores of the Polish Neogene, which will be published in four volumes: 1 spores; 2 gymnosperms; 3 angiosperms I and 4 angiosperms II. The four volumes will be published between 2001 and 2006 with the approximate dates of publication for volumes 1 and 2 in 2001; vol. 3 in 2003/4 and vol. 4 in 2005/6.

The main goal of this series is to present a synthesis of palynological studies from the Polish Neogene carried out during the last 50 years. During this time more than 300 pollen floras have been studied. Many of the results have been published in Polish and international scientific periodicals; many others remain in the archives of Polish geological institutions, mainly in the Polish Geological Institute in Warsaw, the Geological Department of Warsaw University, Museum of the Earth, Polish Academy of Sciences in Warsaw, the Institute of Geological Sciences of Wrocław University, and the Wrocław Szafer Institute of Botany, Polish Academy of

Sciences in Kraków. Most of the existing archival materials stored in these institutions have been studied and revised for this synthesis, and many previously unpublished original photographic materials have been used for the purposes of this contribution. Our intention is to give a complete overview of all identified pollen and spore taxa from the Neogene sediments of Poland. We hope, that this contribution will be of a great value for scientists dealing with stratigraphy and palaeobotany of European Neogene, as well as for the students studying palaeobotany, palaeoecology and palaeophytogeography.

2. The origin and early evolution of the diatoms, fossil, molecular and biogeographical approaches

A. Witkowski and J. Siemińska (eds)

Cracow 2000, 160 pages, 4 tables, 108 black and white figures, 6 colour figures, format: B5 (17 x 24 cm)

Price 30,00 US\$ (porto included)

ISBN: 83-85444-73-4

To the common opinion that diatoms derive from the Lower Cretaceous the supposition was set against, that they belong to the oldest organisms of the world (N. I. Strelnikova). As well the molecular investigations indicate the older provenance - Permian Triassic boundary - than Cretaceous of this group. (L. Medlin). The new classification system of centric diatoms is proposed (V.A. Nikolaev and D.M. Harwood); it includes significant number of new taxa of highest rank described from Early and Late Cretaceous. The oldest known the Neogene lacustrine diatom flora on the Balcan Peninsula was presented (N.G. Ognjanova-Rumenova). The method of diatom organic molecular biomarkers was used in studying Carpathian Oligocene Menilite Formation (M. J. Rospondek et al.). The information of ca. 30 discoveries of fossil diatoms older than the Cretaceous - together with well documented Cambrian occurrences - was discussed (J. Siemińska). The Proterozoic diatom remains found in the Przeworno marbles in Poland were documented (J. Siemińska, B. Kwiecińska).

3. The Proceedings of the Fifth European Palaeobotanical and Palynological Conference June 26-30. 1998, Kraków - L. Stuchlik, Acta Palaeobotanica - Supplementum no. 2, Kraków 1999, pp. 661.

ISSN: 0001-6594; Price 48,00 USD

In this volume are published papers originally presented at the Fifth European Palaeobotanical and Palynological Conference, which was held in Kraków from June 26-30 1998, followed by four field sessions from June 30 - July 5. This was the first time the conference was organized in Eastern Europe, with previous meetings taking place in Montpellier (France 1983), Madrid (Spain 1989), Vienna (Austria 1991) and Kerkrade near Heerlen (the Netherlands 1994). Kraków was chosen for the conference location because of its scientific and cultural significance not only for Poland but also for this part of Europe.

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All together 81 oral contributions in two parallel sessions were presented: 33 Mezo-Palaeophytic, 23 Tertiary, 19

Quaternary and 6 general contributions, and during two poster sessions a total of 91 posters were presented. In the 5th European Palaeobotanical and Palynological Conference 217 palaeobotanists and palynologists participated from nearly all European countries and also from Saudi Arabia and USA. The most numerous groups apart from the Polish (78), came from United Kingdom (25), Germany (20), Czech Republic (11), Russia (10), Hungary (9), Belarus, Sweden and The Netherlands (7 respectively), Bulgaria and Italy (5), Ukraine (4), Austria, France and Spain (respectively 3), Belgium, Georgia, Ireland, Slovak Republic and USA (2), and Croatia, Estonia, Greece, Latvia, Lithuania, Norway, Romania, Saudi Arabia, Turkey and Yugoslavia represented by single participants.

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POLLEN POSTERS

The American Association of Stratigraphic Palynologists is now offering two different pollen posters and each is available in two sizes. We offer both in both sizes because some researchers have limited wall space for these and might prefer the smaller size of the same poster.

Both of the original posters were developed by the Pollen Laboratory at the USDA-ARS, Area Wide Pest Management Research Unit (APMRU) located in College Station, TX. Dr. Gretchen Jones is the Director of the unit's Palynology Laboratory and was assisted in making the posters by Ester Wilson and John Martin.

Light Micrograph Poster

The first pollen poster is a compilation of 222 B & W light micrographs of 117 different pollen taxa. The light micrographs were made using bright-field microscopy. All pollen used for the micrographs were collected from vouchered plant specimens, acetolyzed, and stained. The micrographs are grouped by aperture and family. More tricolporate types shown than any other type. Both anemophilous and entomophilous taxa are represented. Aperture, family, and scientific name are printed above the micrographs, but the photos are not all to the same scale. The majority of the pollen micrographs come from plants that are common in the vegetation of the Southeastern United States, including East Texas. Micrographs from common and uncommon occurring taxa can be represented in the poster including common

taxa such as *Pinus palustris* and *Magnolia virginiana*; and uncommon taxa such as *Pithecellobium calostachys* and *Berchemia scandens*. The poster is ideal for students who can use it as a starting place for learning pollen identification. It is also a handy reference for those examining pollen samples from various regions of North America. The same poster comes in two sizes; 1) 3' x 5' (about 91 X 152 cm) and 2) 2' x 3' (about 60 x 91cm).

SEM Poster

The second pollen poster is a compilation of 137 B & W SEM micrographs of 89 different pollen taxa all within the plant family Fabaceae. Each micrograph has a scale in micrometers. The scientific names are printed above each micrograph. The majority of the pollen types represented in this SEM poster come from plants that are common in the vegetation of either the Southeastern United States and/or Texas. It is a handy reference for those palynologists examining pollen samples from various regions of North America, especially samples that contain many insect-pollinated taxa. The poster is particularly useful for those wanting to identify the many species of clover. The same poster comes in two sizes; 1) 3' x 5' (about 91 X 152 cm) and 2) 2' x 3' (about 60 x 91cm).

You may order either size of either poster. Each poster is priced at \$25 (US dollars). Purchase price includes postage and air mail, first class mailing within the U.S. Add \$15 for air mail, first class mailings outside the U.S. MasterCard, check, and Visa are accepted.

To order a poster, contact:

Vaughn M. Bryant, Jr.
Professor and Director
Palynology Laboratory
Department of Anthropology (TAMU 4352)
Texas A&M University
College Station, Texas, 77840-4352
USA
Telephone: 979-845-5242
FAX: 979-845-4070

AGENDA (partly from <http://www.ualberta.ca/~abeaudoi/cap/cap.html>)

2001

September 18-22, PAGES - PEP III Conference, Le Centre de Congres, Aix-en-Provence, France. PAGES - PEP III is concerned with studies of past climate variability in Europe and Africa. Key aims are to assess variability on different time-scales, to assess the impacts of past climate change on natural ecosystems and human society, and to provide a firm basis for the verification and testing of climate models. Details: Dr Catherine E. Stickley, Environmental Change Research Centre, University College London, 26 Bedford Way, London, WC1H 0AP, England, UK [E-mail:C.stickley@ucl.ac.uk](mailto:C.stickley@ucl.ac.uk), Website: <http://www.geog.ucl.ac.uk/ecrc/pep3>

September 22-24, 11th Canadian Paleontology Conference (CPC-XI), London, Ontario. Details: Jisuo Jin, Chair, CPC Organizing Committee, Department of Earth Sciences, University of Western Ontario, London, Ontario, Canada, N6A 5B7, Tel. (519) 661-4061, Fax (519) 661-3198, E-mail: jjin@julian.uwo.ca,

October 21-24, the AASP annual meeting 2001, San Antonio Texas, for details see this newsletter page 4. More information can also be found at <http://www.palynology.org> or contact thomas.d.demchuk@usa.conoco.com.

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

August 29 - September 2, 6th European Palaeobotany - Palynology Conference, Athens, Greece. Details: Prof. D. Evangelos Velitzelos, Organizing Committee, 6th European Palaeobotany-Palynology Conference, Department of Historical Geology-Palaeontology, Faculty of Geology, University of Athens, Panepistimioupolis, Zografou, 157 84 Athens, Greece. Tel./Fax: +30-1-7274162, E-mail: velitzel@geol.uoa.gr

September 1-6, Vienna, Austria The Third International Congress "Environmental Micropaleontology, Microbiology and Meiobenthology", EMMM'2002. Webpage: <http://www.isemmm.org>, or contact congress@isemmm.org.

September 2-7, Environmental Catastrophes and Recovery in the Holocene: Brunel University, 2002. The central theme of this conference is the inter-disciplinary investigation of past geological and environmental catastrophes, and their impact on our society. This conference will involve not only the Quaternary community but also biologists, archaeologists, historians and economists. See for more information: <http://www.brunel.ac.uk/depts/geo/Catastrophes/>

September 5-7, CIMP Symposium and Workshops, Lille, France. Details: Thomas Servais (thomas.servais@univ-lille1.fr) or Ludovic Stricanne (ludovic.stricanne@univ-lille1.fr), University of Lille

September 11-13. (Proposed), Joint Meeting of AASP, BMS and NAMS (American Association of Stratigraphic Palynologists, British Micropalaeontological Society, North American Micropaleontology Section of SEPM), University College London, England, UK. Details: James Powell, Dinsystems, 105 Albert Road, Richmond, Surrey TW10 6DJ, England, UK, Tel: +44 20 8948 6443; Fax: +44 20 8940 5917, E-mail: ajp@dinosystems.co.uk

2003

March 29 - April 2, 3rd International Limnogeology Congress, Tucson, Arizona. The organizing committee at the University of Arizona invites all interested participants to submit proposals for theme sessions and field trips. A first circular, describing the meeting venue and general plans for the Congress will be circulated by mailings and electronically later in 2001. Contacts: Theme session proposals should be sent to Andrew Cohen, general chair of the Congress. Dept. of Geosciences, University of Arizona, Tucson, AZ 85721. Tel: 1-520-621-4691. Fax: 1-520-621-2672. E-Mail: acohen@geo.arizona.edu. Field trip proposals should be sent to David Dettman, field trip coordinator for the Congress. E-Mail: dettman@geo.arizona.edu. For further information concerning housing and registration, please contact Noah Lopez. E-Mail: noahl@u.arizona.edu

November 2-5, Geological Society of America, Annual Meeting, Seattle, Washington, 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

2004

July, 4-9, 2004., 11th International Palynological Congress (*IPC*) in Granada, Spain. Website <http://www.ugr.es/local/bioveg>, or contact palacio@pcgr.org.