



A.A.S.P. NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists Inc.

April, 1998 Volume 31, Number 2

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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

Robert T. Clarke (awarded 1994)

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

Robert T. Clarke (awarded 1978)
Norman J. Norton (awarded 1978)
Jack D. Burgess (awarded 1982)
Richard W. Hedlund (awarded 1982)
John A. Clendening (awarded 1987)
Kenneth M. Piel (awarded 1990)
Gordon D. Wood (awarded 1993)
Jan Jansonius (awarded 1995)
D. Colin McGregor (awarded 1995)

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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Jan Willem Weegink, Editor

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Martin J. Head: head@quartz.geology.utoronto.ca
<http://www.geology.utoronto.ca/AASP>

AASP NEWSLETTER EDITOR

Jan Willem Weegink: janwillem@boev.biol.ruu.nl
LPP Foundation - Laboratory of Palaeobotany and Palynology,
University of Utrecht - Budapestlaan 4, 3584 CD Utrecht, The
Netherlands - Vox +31.30.253.1909; Fax +31.30.253.5096

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 March 31st 1998 and June 31st 1998. 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.

A NEW CLASS OF MEMBER - A change to the By-Laws

The AASP Board wish to propose a new membership class for retired members of the association. In accordance with the by-laws of the association this proposal must be posted in the newsletter 6 months prior to a vote being taken. A vote on the proposal will be held at the business luncheon meeting at the 1998 annual meeting in Ensenada in October. The time and place of this meeting will be posted at a later date. If you have any comments on the proposal then please forward them to David Pocknall (dtpocknall@aol.com) or Rolf Mathewes (r_mathewes@sfu.ca) well in advance of the October meeting.

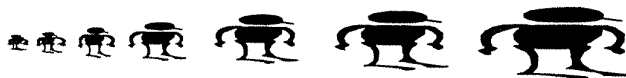
The proposal is:

The AASP Board of Directors proposes a new class of membership entitled "**Retired Member**". This class of membership is as follows:

Retired members shall be persons who are retired from professional activities in palynology. Retired members will pay annual dues to AASP at a rate to be established by the Board of Directors, and will enjoy all privileges of active membership, with the exception of receiving the journal *Palynology*. A retired member can revert to full individual membership at any time.

The addition of a new class of member will require a minor amendment to article 2.01 (Classes of Members) of the by-laws and the addition of item (d) under 2.01.

David Pocknall (for AASP Board of Directors)



THE CURRENT NOMINEES FOR THE AASP BOARD OF DIRECTORS

- | | |
|-------------------------|----------------|
| 1. President elect: | Gretchen Jones |
| | Fred Rich |
| 2. Secretary/Treasurer: | Tom Demchuck |
| 3. Managing editor: | Dave Goodman |
| 4. Directors-at-large: | Bob Cushman |
| | Hideyo Haga |
| | Paul Strother |



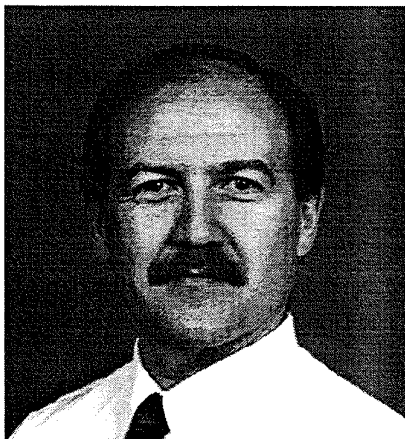
Gretchen D. Jones is a Research Palynologist for the U.S. Department of Agriculture Agricultural Research Service, Areawide Pest Management Research Unit, at College Station, TX. She has been a member of AASP since 1994.

Gretchen received her B.S. in Biology in 1984 from Sul Ross State University, Alpine, TX; M.S. in Botany in 1987 from Stephen F. Austin State University, Nacogdoches, TX; and Ph.D. in Botany in 1993 at Texas A&M University, College Station, TX, studying under Vaughn M. Bryant, Jr.

Gretchen has served AASP as Director-at-Large from 1996-1998. She was coordinator of the Melissopalynological and Entomopalynological Symposia at the 9th International Palynological Congress in 1996. She received the L. R. Wilson Award for Best Student Paper in 1994 and UNOCAL Award (jointly with Vaughn M. Bryant, Jr., Pete D. Lingren, and Michael Pendleton) for Best Applications Paper Award in 1993.

Gretchen's research for USDA centers around the use of pollen to determine foraging resources, migration, and source zones of insect pests that attack agricultural crops such as corn and cotton. She has written numerous journal articles and was the senior author of the *SEM Atlas Pollen of the Southeastern United States*, Contributions Series No. 30. Along with her research duties for USDA, she is presently trying to finish a light micrograph companion atlas.

Fred Rich is Professor and Chair of the Department of Geology and Geography at Georgia Southern University. Before taking his present position he was a coal geologist on the faculty of the South Dakota School of Mines and Technology for nearly ten years. He received his B.S. in geology from the University of Wisconsin in 1973, and a Ph.D. in geology from The Pennsylvania State University in 1979; While at Penn State he also took a minor in botany. His interest in wetlands has been life-long, and resulted in his choosing the Okefenokee Swamp as a field area for his doctoral research. It was some of the results from the Okefenokee work that led to Fred receiving the Best Student Paper Award from AASP in 1976. He has published in a variety of national and international journals, with most of the work relating to the geology of coal deposits (actually just ancient wetlands and their palynology). In 1982-83 he was selected to participate in the Distinguished Lecturer program of the American Association of Petroleum Geologists, with the topic of the lecture being "Modern Wetlands and Their Potential as Coal-forming Environments". He has remained very active in RRSP, having been the Newsletter editor from 1988-1991, and serving twice on the Nominating Committee (Chair in 1995). He has served for some time as an evaluator of student research proposals, and has been asked to judge student presentations as well. In 1996 he was co-leader of a very successful pre-meeting field trip associated with the IX International Palynological Congress. He is currently the editor of PALYNOS, and is the designated chair of the organising committee for the 1999 annual meeting of AASP, which is slated for Savannah, Georgia. His current research interests include the paleoecology of the Georgia and Florida coasts and the interrelationships among the hydrology, botany, structural history, and geomorphology of the Georgia coastal plain. He lives with his wife, Sherry, and three children next to a pond, adjacent to a swamp, in Brooklet, Georgia.

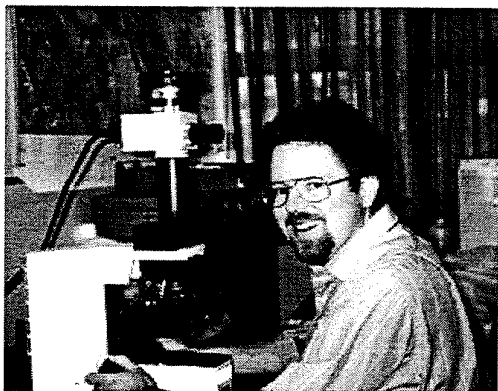


Thomas Demchuk has been an AASP member since the early 1980's, and currently works for Conoco Inc. in Houston, Texas, as a Senior Research Geologist - Biostratigraphic Coordinator in their Predictive Stratigraphy Group. He joined Conoco after almost five years with Amoco Exploration and Production Technology (escaping the cruel, inhumane sense of humor of Gordon Wood). Previously, Thomas served as AASP Director-at-Large (1994-96), is presently serving on the AASP-GSA affiliation ad-hoc committee, and is AASP representative to the American Geological Institute. He is also secretary-treasurer and webmaster of the Geological Society of America Coal Geology Division, and is a member of The Society for Organic Petrology honorary membership committee.

A native of Edmonton, Alberta, Canada, he received his B.Sc. and M.Sc. from the University of Alberta in that city, and later received his Ph.D. from the University of Calgary studying palynology and coal petrology.

Thomas is happy to accept the nomination of AASP Secretary-Treasurer, and hopes he can carry out the requisite duties with as great efficiency and dedication as his predecessors.

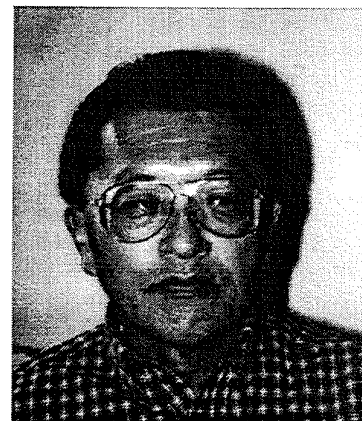
David K. Goodman (no fish available) is an ageing paleontologist who lives, fly fishes, and works for ARCO Alaska in Anchorage. He has previously held assignments with ARCO in Midland and Plano, both in Texas; he was at Exxon Production Research Company in Houston from 1978 to 1983, prior to joining ARCO. He holds B.S. and M.S. degrees from Virginia Tech and a Ph.D. from Stanford. Remarkably, he still maintains more than a passing interest in the fossil history of the dinoflagellates. He has served on the Technical Advisory Board for the Treatise on Invertebrate Paleontology and the Technical Advisory Committee for the PALCAT Project sponsored by the AMNH in New York. He has been managing editor of AASP since 1987. He currently serves on the editorial boards for Marine Micropaleontology and Paleontologica Electronica. Dave joined AASP in 1976. He is the ghillie for the Alaska Fly Fishers and collects trilobite fossils, armadillo fetishes, photographs of Gordon Wood, and bamboo fly rods (last year's biography).



Robert A. (Bob) Cushman earned his Ph.D. in Geology from the Colorado School of Mines in 1994 under the direction of Dr. Douglas J. Nichols at the U.S. Geological Survey. His dissertation topic was *The Palynostratigraphy of the Upper Cretaceous (Cenomanian-Campanian) Mancos Shale in western Colorado*. Bob earned an MS in Geology from Loma Linda University in Riverside, California in 1983. His thesis topic was *The Palynology and Paleocology of the Eocene Green River Formation in Fossil Basin, southwestern Wyoming*. From 1988 to 1991 Bob worked as an exploration geologist for BP in Houston, Texas. Bob is currently an assistant professor of geology at Loma Linda University in the Department of Natural Sciences where he teaches Historical Geology, Paleopalynology, Paleocology, Paleobotany, and Invertebrate Paleontology. Bob's current research projects include the palynostratigraphy and paleocology of the Mid-Cretaceous Cedar Mountain and Dakota Formations in eastern Utah and western Colorado and the palynology and history of the Eocene Green River Formation in Fossil Basin, Wyoming. Bob appreciates the opportunity to give something back to the AASP organization, which has meant a lot to him over the years.

Hideyo Haga is a founding partner of Micropaleo Consultants, Inc., a consulting firm established in 1983 and based in San Diego, California. He received his degrees in geology at the University of California at Los Angeles (BA, 1960) and the University of Southern California (MS, 1964). During the period from 1963 to 1974 the Standard Oil Company of California employed Hideyo. His initial assignments were as a foraminiferal biostratigrapher and geologist working in the onshore and offshore southern California region. After a "conversion" period at Chevron Oil Field Research Corp., under the guidance of Dr. Warren Drugg, he conducted palynological investigations in the San Francisco and Denver offices.

Hideyo began his consulting career in 1974 and ultimately formed a multidisciplinary biostratigraphic consulting firm with three other partners in 1983. His assignments have encompassed stratigraphic palynology and organic maturation of sections ranging in age from Devonian to Quaternary, and ranging geographically from North to South America as well as parts of Asia and eastern Russia. Recently his work has been concentrated in Alaska and Peru.



Paul K. Strother (no face available at the time) holds a B.S. from Penn State (1975) and Ph.D. from Harvard (1980) and is currently adjunct research professor at Boston College, with laboratory facilities at the Weston Observatory. His research interests are in lower Paleozoic palynology and paleobotany, especially cryptospores and the origin of land plants. He has been a member of AASP since the middle seventies and has served previously on the elections committee, student awards committee, and, most recently, as co-chair of the annual meeting. He is interested in expanding the role played by AASP as a voice for the discipline of palynology, especially in the areas of paleobotany and evolutionary biology.



The UK Palynological Scene
J. B. Riding

I do not have very much news this quarter. However, the Palynology Group of the British Micropalaeontological Society (BMS) have had an election, by postal ballot, for the next Group Secretary. The previous Secretary, Duncan McLean of Sheffield University, has done the job since 1993 and wishes to retire. Paul Dodsworth (Robertson Research, Aberdeen), Gary Mullins (Portsmouth University) and Sandy Smith (Shell Exploration and Production, London) offered to take on this position, thereby engendering an election. It is very unusual for positions on the BMS committee to be contested these days and we hope it is a reflection of the interest in, and activity levels of, palynology in the UK. I will report on the result of this election in the next newsletter. The Palynology Group hope to have a joint meeting, focussing on the Paleozoic, late this summer in conjunction with the BMS Ostracod and Foraminifera groups.

The BMS Annual General Meeting this year will be held on the afternoon of Wednesday 18th of November 1998 in the Gustave Tuck Lecture Theater, University College London. We hope to have at least one talk on organic biomolecules, but the speakers are not confirmed yet. I will give further details next time. As ever, AASP members are invited to attend this event.

My piece on Sheffield University in the last newsletter elicited some feedback from Bill Sarjeant in Saskatoon, Canada. Apparently, it contained an inadvertent inaccuracy. Bill informs me that Charles Downie's PhD thesis was not on palynology, but was instead a study of the stratigraphy of the Upper Jurassic Kimmeridge Clay of Dorset. For reasons which are unclear to me, Charles preferred the spelling 'Kimeridge'. The thesis was not submitted to the University of Sheffield, but instead, it was successfully presented to the University of Glasgow in 1955. Bill tells me that it is an excellent piece of work, which has remained unpublished as the resultant paper was inexplicably rejected by the Proceedings of the Geologists' Association. Further details on this appear in Bill's 1984 paper in the *Journal of Micropalaeontology*, vol. 3, pp. 1-6.

Palynology at the P/E Boundary
Koldo Nuñez-Betelu

Biostratigraphy is one of the main applications of palynology. This has been demonstrated again in a conference held in January in Paris on the Paleocene/Eocene boundary (P/E bdry.). The meeting was entitled "The Palaeocene/Eocene Boundary in Europe: Events and Correlations" and was held in Paris during the 19 and 20 of January, 1998 sponsored by many institutions and private companies. Although the conference was focused on the Paleogene of Europe, adjacent regions as well as a couple of works from other regions of the globe were also presented at the conference.

In fact, the goal of this meeting was to summarize the present knowledge on the P/E bdry. to try to give further steps towards the election of a suitable Global Stratotype Section and Point (GSSP). In that sense, both in previous conferences and in this one, several sections, mainly from the Thetys and adjacent areas have been shown to be possible candidates for such endeavor, albeit not perfect. But perfection does not exist. These sections are located in an wide array of regions such as southern Spain, Italy, the Basque Basin, Israel and Egypt, among others.

Micropaleontology has played a significant role in the selection of these sections and, for instance, the Benthic Foraminifer Extinction Event has already been selected as a good possible marker for the

P/E bdry. But not only this, dinocyst zonations have also been established in many of the sections together with biozonation schemes based on other groups such as calcareous nannofossils, planktonic and benthonic foraminifers as well as the magnetostratigraphy, clay mineralogy and the isotopic ($\Delta^{13}\text{C}$ and $\Delta^{18}\text{O}$) distribution. The palynological schemes are, obviously, useful as reference for sections where palynomorphs may be the best, or even the only fossils, to establish the biostratigraphy.

In fact, the relevance of palynology in the study of the Paleogene was reflected in this meeting by the assistance of a relatively large number of palynologists, some of which presented excellent research studies.

Although it is impossible to summarize in a few lines all the information exposed in the meeting, the data presented in Paris, further established the occurrence of unusual events at the end of the Paleocene. At that time, hydrous methane was released from the oceanic depths and a global warming, reflected in a polarward shift of climatic belts, induced stress conditions in the oceans. The warmer and wetter climate, and related stress conditions, did not produce, however, a concomitant global mass extinction, but rather a readjustment of many taxa to the new conditions. This represents a lesson that could be useful in the debated present-day climatic warming. In this topic, as well as in helping to elect a good GSSP, palynology has lots to say, as has been shown in the Lutetian meeting.



Palynological investigations in the Jurassic of the North Sea region - Oscar A. Abbink - Thesis defended April 20, 1998, Utrecht

LPP Contribution Series No.8, LPP Foundation, Utrecht, 1998
ISBN 90-393-1995-2, NSG Publication No 980301, LPP 9233

In the past decade, stratigraphic concepts applied in hydrocarbon exploration and production have become profoundly influenced by sequence stratigraphy. Sequence stratigraphic principles are aimed at the identification of sea-level changes that can be used as a basis for achieving high-resolution time/space frameworks in which to place well-log and seismic data.

Sequence stratigraphy emphasizes the necessity of recognizing time-equivalency among sedimentary successions that have been formed in different depositional environments. In every individual basin, therefore, the temporal aspect in sequence stratigraphic models can only be biostratigraphically validated by the recognition of bio-events that enable the accurate correlation of sediments in contrasting environments. Moreover, sequence stratigraphy increasingly demands biochronology with a temporal resolution of better than 0.5 Ma. Such resolutions can only be achieved by the quantitative analysis of microfossil assemblages. Quantitative analysis of microfossils provides the possibility of constructing environmental models for each time-successive

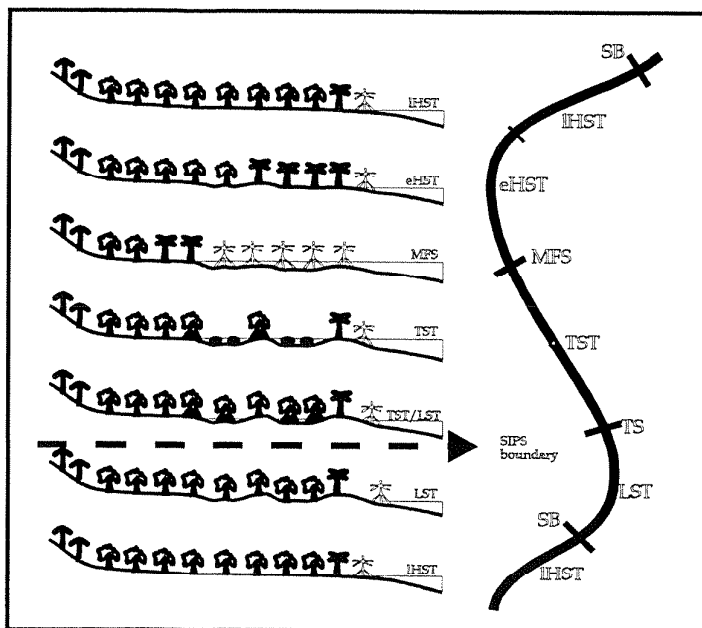
depositional sequence. Distribution patterns of marine palynomorphs can reflect the shift of water masses and substrates, independent of configurations predicted by physical analysis. Cyclicity can be independently recognized, whereas quantitative changes can also provide the necessary proxy records that may discriminate between eustatic or tectonically induced sea-level fluctuations.

The principal challenge in the integration of the fossil record in sequence stratigraphy is the high-resolution correlation of non-marine and marine sediments. Spores and pollen (sporomorphs) of land plants can be dispersed by wind and water far into the marine environment. Consequently, the potential of a palynological approach to "land-sea" correlations is obvious.

In relation to hydrocarbon exploration and production, in Northwest Europe notably Middle Jurassic-Early Cretaceous palynology is challenged to improve data sets that can be used as an aid to sequence stratigraphic interpretation. In this thesis, the relevance of a palaeoecological interpretation of Jurassic sporomorph assemblages is emphasized. Similar to Quaternary research, this interpretation largely depends on a reconstruction of the dynamic responses of terrestrial plant communities to changing environments.

Despite effects of transportation, sporomorph assemblages reflect the composition of plant communities. In Quaternary palaeoecology, this relationship is successfully applied in the identification of local and regional environmental change. Quaternary studies can strongly benefit from actualistic data and models of the relation between sporomorph signals and environmental gradients. When going back in time, however, reliable environmental interpretation is increasingly influenced by uncertainties with respect to an accurate identification of extinct palaeocommunities on the basis of spore and pollen categories.

In the Jurassic such uncertainties are considerable. In this thesis, therefore, a "top-down" approach is followed. Based on actualistic principles, one may assume the existence of broadly defined plant (palaeo)community types which have similar ecological characteristics through time. These may serve as a basis for a palaeocommunity model in which Jurassic plants of Northwest Europe can be grouped with a varying degree of accuracy. Since the botanical affinity of most of the quantitatively important Jurassic sporomorphs is known, the palaeocommunity types can also be palynologically characterized, so that they can serve as a palaeoecological framework for a Sporomorph EcoGroup model of co-existing sources of dispersed spores and pollen. The term Sporomorph EcoGroup (SEG) is introduced to denote the total of types of dispersed spores and pollen of land plants that reflects the composition of an individual source community. It may be hypothesized that palaeoenvironmental changes are reflected by changes between and within SEGs. This hypothesis is tested in various sections of the paralic Middle Jurassic-Early Cretaceous of the North Sea region.



Since most areas in Northwest Europe experienced marine deposition in the Late Jurassic, marine biostratigraphy and, in particular, marine dinoflagellate cyst stratigraphy is well developed. In contrast, sporomorph biostratigraphy for the Late Jurassic is virtually non-existent. As a necessary basis for quantitative studies, in Chapter I a conventional sporomorph biozonation is proposed for the Callovian - lower Ryazanian of the Southern North Sea area.

This biozonation is based on six wells from the southern Central Graben (The Netherlands offshore), and two wells and a set of outcrop samples from East Anglia (onshore UK). The zonation scheme is calibrated against the standard ammonite zonation.

Based on recent vegetation distribution and an integration of macropalaeobotanical and palynological information, in Chapter 2 a palaeocommunity model is explored that may permit detailed interpretations of quantitative sporomorph distribution patterns in the Jurassic and Early Cretaceous of Northwest Europe in terms of changes in palaeoenvironment (sea-level, climate). The conceptual model is based on the recognition of Sporomorph EcoGroups (SEGs) that reflect broad co-existing plant communities, viz. upland, lowland, river, pioneer, coastal, and tidally-influenced SEGs. In successive palynological assemblages, shifts in the relative abundance of SEGs are thought to be indicators of sea-level changes. Climatic changes may be recognized through significant shifts in the quantitative composition of individual SEGs. The model is applied to and tested against data from a marginal marine, uppermost Callovian - middle Oxfordian succession from the South Central Graben.

In Chapter 3 the Sporomorph EcoGroup model is applied to quantitative palynological data of Callovian - Early Kimmeridgian paralic sediments of three exploration wells from the South Central Graben. Five events reflecting maximum floodings are recognized. In combination with age-diagnostic palynostratigraphical data,

these five events enable, for the first time, direct, high resolution correlations between shallow marine and non-marine strata. Furthermore, the identified sea-level fluctuations can be correlated to reference curves for the Late Jurassic.

In Chapter 4 existing palynological data of seven wells from the Ness Formation of the Middle Jurassic Brent Group is used in order to test and refine the Sporomorph EcoGroup model. Through application of this model, in the Ness Formation four climate cycles and three sequences induced by sea-level fluctuations can be identified on the basis of palynological analysis. The results allow detailed

palaeoenvironmental reconstruction, improvement of the existing stratigraphic framework and correlation of the studied wells along north-south and west-east transects. The interpretations are compared with existing geological interpretations and sequence stratigraphic concepts.

In Chapter 5 the combined quantitative sporomorph data of five wells from the southern Central Graben (offshore The

Netherlands) and from two wells and an outcrop section from East Anglia (onshore UK) is used to establish a Callovian - early Ryazanian climatic curve for the southern North Sea region. The palaeoclimate proxy record indicates subtropical temperatures and humid conditions for the late Callovian and early Oxfordian interval. Thereafter, the results show stepwise warming and aridization. The onset of this trend is here related to global palaeogeographical changes related to the break-up of Pangea. The aridity and temperature reached their maximum development during the late Kimmeridgian and Portlandian. In the earliest Cretaceous the palaeoclimate returned to slightly cooler, tropical and humid conditions. These conditions suggest, when combined with existing regional palaeogeographical reconstructions, that the recorded Late Kimmeridgian to Portlandian arid phase may be linked to the arrival of cooler high latitude waters to the North Sea region due to the opening of the North Atlantic seaway connecting the warm Tethys Ocean in the south to the Boreal Ocean. Finally, in Chapter 6 summary information on the taxonomy of the palynomorph taxa of the Callovian - lower Ryazanian of the Southern North Sea area is given.



A Palynological Analysis of Upper Jurassic Dinoflagellate Cysts from the Chihuahua Trough and Bisbee Basin, Northern Mexico and Southeastern Arizona

Gary A. Olmstead^{Sr.} The University of Texas at El Paso, Department of Geological Sciences, El Paso, Texas 79968

Two Upper Jurassic dinoflagellate cyst assemblages, including 25 genera and 17 species from the La Casita Formation in Cerro Los Panales, Chihuahua, Mexico, and 25 genera and 34 species from the Basin Trail Shale Member of the Crystal Cave Formation in the northeastern Chiricahua Mountains, southeastern Arizona, are defined in this study.

These dinoflagellate cyst assemblages suggest that an active exchange of dinoflagellate taxa was occurring from the western Tethyan, Boreal, and Euro-Atlantic paleo-oceanographic provinces into the Chihuahua trough and Bisbee basin during Late Jurassic time. These assemblages have direct affinities with dinoflagellate cyst taxa occurring in northwestern Europe, England, and southwestern Atlantic Ocean.

Concurrent age ranges of key dinoflagellate cysts in the Basin Trail Shale Member suggest marine incursion into the Bisbee basin by Middle Oxfordian time (base of the *Tenuisserratum* Zone) and extending to the Oxfordian-Kimmeridgian boundary (base of the *Baylei* Zone). Concurrent age range of dinocysts in the La Casita Formation suggest marine incursion into the region during Early Kimmeridgian time (*Baylei* Zone through *Eudoxus* Zone). Shifting shelf conditions during periods of transgressive-regressive sea level changes resulted in fluctuating dinoflagellate cyst populations. Proximate and proximochorate cysts dominate over cavate and chorate forms suggesting proximal to middle neritic zone environments. Upper Jurassic strata in the northeastern Chiricahua Mountains and Cerro Los Panales can be correlated with the Bossier and Haynesville formations and Cotton Valley Group of the United States Gulf Coast and with an unnamed unit and Cat Gap Formation in the Blake-Bahama Basin southwestern Atlantic.

These correlations provide an important stratigraphic link between Upper Jurassic stratigraphy of northern Mexico, the United States Gulf Coast, and southwestern Atlantic Ocean.



1998 AASP Annual Meeting

Wednesday, October 28 - Friday, October 30

One-day workshop on Tuesday, October 27 (limit 12-14)

Field Trip Saturday October 31 (limit 30)

Ensenada, Baja California, Mexico

Hotel Coral & Marina (approximately \$75 US + tax per night)

DEADLINE: Title and Abstracts Due July 31, 1998

Proposed Agenda and Registration Information

Estimated Fees:	Before August 31	After August 31
Professionals	\$US 125.00	\$US 145.00
Students	\$US 65.00	\$US 75.00
Workshop	\$US 50.00	\$US 60.00
Field Trip	\$US 25.00	\$US 30.00

Registration fee includes: Icebreaker; Dinner/Wine Tasting/Guitar Concert (Thursday); Business Luncheon; admission to talks Wed. - Fri.; abstracts, and coffee breaks.

Workshop fee includes: notes, transportation to CICESE and coffee breaks.

Field Trip fee includes: transportation, lunch and guidebook.

PROPOSED MEETING ACTIVITIES

Tuesday - October 27

8:00 a.m. - 6:00 p.m.
(Instructor, Jim Riding)
4:00 p.m. - 7:00 p.m.
7:00 p.m. - 10:00 p.m.

Workshop: Jurassic Dinoflagellates
Registration
Ice Breaker

Wednesday - October 28

8:00 a.m. - 6:00 p.m.
7:00 p.m. - ????

Technical Sessions
AASP Board of Directors Meeting

Thursday - October 29

8:00 a.m. - 6:00 p.m.
7:00 p.m. - 10:00 p.m.
Bodegas de Santo Tomas

Technical Sessions
Dinner/wine tasting, guitar concert:

Friday - October 30

8:00 a.m. - 12:00 noon
12:00 noon - 2:00 p.m.
2:00 p.m. - 6:00 p.m.
6:00 p.m. - ????

Technical Sessions
Business Luncheon
Technical Session
AASP Board of Directors Meeting

Saturday - October 31

7:00 a.m. - 7:00 p.m.

Field Trip

PROPOSED SYMPOSIA:

Mesozoic and Cenozoic Palynostratigraphy of the Tethys.

Contact: Sharma L. Gaponoff (SLGA@chevron.com), or Joyce Lucas-Clark (jluc Clark@pacbell.net)

Ecological - Paleocological Signals in the Marine Realm.

Contact: Barrie Dale (barrie.dale@geologi.uio.no)

Quaternary Terrestrial Ecology

Contact: Cristina Penalba (penalba@servidor.unam.mx), or Owen Davis (palynolo@geo.arizona.edu)

General Technical Sessions

Contact: Javier Helenes (jhelenes@cicese.mx)

The road to Ensenada Viva Mexico



Dear Sir/Madam,

We know you are an research scientist on Palynology. We know your email from Wordwide Palynology E-mail & WWW Directory. We think the following 2 books and a map may be useful to your research work. Read the details please and contact us free.

Thank you.

The Quaternary of China. Chief editor: Zhang Zonghu;
1991, English Edition 185X260mm, 575pages, 155 figures,
Hardback.
Price: US\$47; Postage: \$12 sea mail. 2 or 3 month arrival

Introduction It is dedicted to the 13th INQUA congress (1991 China), Sponsored by Chinese Academy of Geological Sciences(CAGS), Ministry of Geology and Mineral Resources. With the aim to make a comprehensive elaboration of the history and characteristics of the geological evolution since the beginning of the Quaternary in the main land and offshore areas of China, the book is written by experts working in various relevant regions of China or specialized in QUaternary geological problems and it represents a summary of results of many year's work and research in their respective fields. It contains stratigraphic correlation tables of various regions and necessary figures as well as an appended Quaternary geological map of China (1:18,000,000)

CONTENTS:

- Chapter 1 Geological History Of The Quaternary In China;
- Chapter 2 Neotectonic movements in China;
- Chapter 3 The evolution of Quaternary Climate in China;
- Chapter 4 Quaternary stratigraphy in China;
- Chapter 5 Quaternary lithofacies and palaeogeography in China;
- Chapter 6 Quaternary geology in offshore areas of China;
- Chapter 7 Quaternary transgressions and sea-level Changes in China;
- Chapter 8 Quaternary glaciers in China;
- Chapter 9 Quaternary volcanic activity in China;
- Chapter 10 Quaternary mammalian fossil human beings;
- Chapter 11 Quaternary palynoflora of China;
- Chapter 12 Quaternary microbiotas (Ostracods and Foraminifers) in China;
- Chapter 13 Quaternary Geology of the Qinghai-Tibet(Xizang) plateau;

Chapter 14 Laterite in China;

Chapter 15 Loess in China;

Chapter 16 Quaternary geology of the great eastern China Plain;

Main reference

1:2,500,000 Quaternary Geologic Map of the People's Republic of China and Adjacent Sea Area (9 Sheets)

Chief Compiler: Zhang Zonghu, 1990 ISBN 7-5031-0752-9

English Edition with Explanatory Notes (78 pages)

Price=US\$36+Postage \$12=US\$48

This map covers whole land of China and its adjacent sea areas. The compilation of the map is an important task of basic geological research significant in theory and practice. It is a systematic summarization of rich materials of quaternary geology accumulated in China for more than 30 years. The contents of the map include genetic types, lithologic characters and ages of the Quaternary accumulations on land and in sea areas of China, as well as the pre-Quaternary bedrocks at different elevations, traces of neotectonic movement and geomorphologic features, Quaternary volcanic activities and physico-geological phenomena.

A list of important localities for Quaternary geology and palaeoanthropology is appended to the map.

Contents of the Explanatory Notes

1. Brief history of Quaternary Geology in China
2. The Quaternary System of China
3. The Major Genetic Types and Distribution of the Quaternary Deposits of China
4. The Characteristics of Neotectonic Movements in China
5. Quaternary Paleoclimate of China
6. The Appearance and evolution of ancient men in China
7. Lower limit of the Quaternary in China
8. Quaternary geology of China's Adjacent Sea Area
9. Some Explanations related to the compilation work of the map.

Quaternary Geology and Environment In China

Edited by Liu Tungsheng 1991, English Edition, 508 pages, Hardback, Price US\$55; postage: US\$12 sea mail.

Introduction: This book presents results gained by Chinese quaternary scientists in various aspects of Quaternary research in recent years. It is an up-to-date summary of present position of Chinese Quaternary research and also a comprehensive introduction to Chinese quaternary for scientists all over the world.

CONTENTS

Geological Records (evidences) of the Quaternary environmental changes

1. The hunting for the Quaternary vanished glaciers in China
2. Glaciers and glacial geomorphology in China
3. The existing glaciers in China
4. On the origin and evolution of the modern gobi-desert in China
5. Quaternary plain deposits in China
6. Late Cenozoic Lake sediments in China
7. Geological aspects of red soil in South China
8. Holocene coastal sedimentation of China
9. Quaternary cave accumulations and mammalian fauna in China
10. Quaternary periglacial environment in China
11. Changes of permafrost in China during Quaternary
12. Quaternary peat bogs in China and their distribution regularities
- Chronology and Evolution of the Quaternary Biosphere
13. Quaternary Mammals of China
14. Quaternary Marine micropalaeontology
15. Environmental and Climatic changes during the last 1,000,000 years in the Kunming Basin, as evidenced by the mollusc fossils
16. Fossil humankind of China
17. The paleolithic of China
18. The natural environment of the neolithic age of China

19. Vegetation and Environment of the Quaternary in China
 20. The latest advance in Quaternary magnetostratigraphy of China
 21. Pedostratigraphy of Chinese loess and Quaternary Climatic fluctuation
 22. Stable isotope composition of continental sediments and climate variation
 23. Chinese Quaternary radioisotopic chronology
 24. Advances in ¹⁴C geochronology in China
 25. ¹⁴C chronology of loess plateau in China
 26. A new concept of dating loess(0~{ })~}400 ka) by Ar+ laser Quaternary Paleoclimate
 27. Climate changes in recent 1000 years in China
 28. Holocene palynological research in China
 29. Paleoenvironmental changes of China during the last 18,000 years
 30. An evolution model for paleomonsoon of China during the last 130,000 years
 31. On extracting proxy data of climatic change from tree-ring width in China~{ })~} Wu xianding etc.
 Quaternary Neotectonics
 32. Major morphotectonic patterns and regions of China
 33. The uplift of the Qinghai-Xizang plateau and its effects on environment Relationship between geological progresses, mass flux and the quaternary environment
 34. A preliminary study on the loess plateau and its environment - a comparison between earth and soil on the Loess Plateau- Zhu Xianmo etc.
 35. Sedimentation flux of the modern Yellow River delta
 36. Natural Hazards and geological processes: an introduction to the history of natural hazards in Gansu Province, China
 37. Quaternary deposits and foundation soils of China
 38. Quaternary geochemistry and environmental change
 39. A comparison of Vertical profiles of ²¹⁰Pb and ¹³⁷Cs in sediment cores from two lakes: Lake Greifen (Switzerland) and Lake Hongfeng (China)
 40. Production and transportation of ¹⁰Be and its application in earth science
 41. Paleomonsoon and the mid-holocene climatic and sea level fluctuations in China
 42. Influences of climatic and sea level changes on the alluvial processes of the mid-lower reaches of the Yangtze River in the last 10,000 years
 Regional Quaternary Geology Quaternary sedimentation in Chinese basins
 43. Quaternary sediments in Nihewan basin, Hebei Province
 44. The Quaternary sediments and human fossils of Yuanmou Basin, Yunnan Province
 45. Stratigraphic and geochronologic analyses of the quaternary deposits in middle part of Qaidam basin, Western China Quaternary Sediment on Chinese Plains
 46. A study on the Pleistocene strata and their depositional environment on the Songliao Plain of northeast China
 47. The Quaternary deposits in the north China Plain
 48. Quaternary deposits and environmental evolution in Guangzhou plain and Zhujiang River Delta Quaternary geology in Chinese mountains
 49. Quaternary geology in Kunlun Mountains
 50. Quaternary geology of Tianshan Mountain in China
 51. Holocene sedimentary sequences and developing models of Yangtze and the Yellow River estuaries
 52. Chinese soft soil in the quaternary
 53. Karst in Southwest China and its comparison with north China karst
 54. Salt lakes in China
 55. Late quaternary paleoceanography

56. Quaternary Geology of the Huanghai Sea shelf
 57. Late quaternary stratigraphy in the western Taiwan Strait
 58. Quaternary sediments of China's Shelf sea
 59. China's research on geomorphology, Quaternary geology and environmental changes in the Antarctica
 Applied Quaternary Geology
 60. Quaternary mineral resources of China
 61. Quaternary geochemistry and endemic diseases in China
 62. Quaternary Geology and territorial planning in China
 63. Quaternary geology and environment in China
 - How to Order !
 Mail Order: Huayu Center for Environmental Information Services
 P.O.Box 4088, Beijing 100001, P.R. China.
 Fax Order: +86-10-68575909 Tel: +86-10-68415522 ext.6757
 (Business time only)
 E-mail: hceis@mx.cei.gov.cn
 Payment: from check or bank transfer on receipt of book.
 We shall mail the book to you on receipt of your order.

Dear Computer Taxonomists,
 This is to announce the pre-release of the Digital Taxonomy home page, a WWW resource for biodiversity data management "tips and techniques".
 Digital Taxonomy is an attempt to present a wide-ranging resource of information for biodiversity data management in the World Wide Web. The page provides a number of links on software, methodologies, standards for data exchange, and information sources related to biodiversity data management, with emphasis on the exchange of *free* scientific software tools (preferably those including *source code*), computer techniques, and software developers' Internet addresses.
 The page intends to be not a mere collection of links, but a place for the exchange of useful tools for the *developer* of biodiversity software and not only for the user of such software. So, I have tried to include as possible direct links to software packages (especially those including full source code) and relevant documents, but some of the linked pages point to other pages containing further documents and software.
<http://www.geocities.com/RainForest/Vines/8695>
 The Digital Taxonomy page is still under construction.
 Suggestions, criticisms, and contributions are welcome.
 Prof. Mauro J. Cavalcanti
 Departamento de Biologia Geral
 Universidade Santa Ursula
 Rua Fernando Ferrari, 75, Botafogo
 22231-040, Rio de Janeiro, RJ
maurobio@uerj.br

The U.S. National Herbarium at the Smithsonian Institution has developed a World Wide Web site that includes a general introduction to the algae, recent staff publications (including selected abstracts), and information about the herbarium. The URL address is:
<http://www.nmnh.si.edu/botany/projects/algae>
 The herbarium collection is comprised of marine, estuarine, freshwater, terrestrial (including cave), and airborne algae. The algal holdings are worldwide in origin, with strong representation of tropical and subtropical marine algae. The collection includes over 183,000 pressed specimens plus an additional 61,600 specimens on microscope slides, in boxes, or preserved in liquid. The entire collection, including all type specimens, has been computer inventoried on the museum collection database. At the present time, the museum database is only available through in-house computer terminals, but printed reports can be generated upon request. TYPE COLLECTION is a database that is directly

searchable via the World Wide Web. It is still under construction and currently includes only the type specimens in the Phaeophyta.

ADDRESS CORRECTIONS

The most recent AASP membership directory regrettably states an incorrect e-mail address of Volker Wilde.

The complete correct address is:

vwilde@sngkw.uni-frankfurt.de

("snkw" should be replaced by "sngkw").

New addresses and corrections

Dr. Glenn G. Fechner

Freie Universität Berlin

Institut für Paläontologie

Malteserstrasse 74-100, HausD

D-12249 Berlin

Germany

Richard Carroll's e-mail address is incorrect. It should read:

rcarroll@ogb.gsa.tuscaloosa.al.us

This is probably due to my illegible handwriting or something, but would appreciate some mention of this.

Thanks.

Richard E. Carroll, Geological Survey of Alabama, 420 Hackberry Ln., P.O. Box O, Tuscaloosa, AL 35486-9780 -

Phone: 205-349-2852 ext. 380, Fax: 205-349-2861

email: rcarroll@ogb.gsa.tuscaloosa.al.us

Doug Nichols is embarrassed to note that he neglected to correct his e-mail address before the publication of the latest AASP Membership Directory.

Doug's e-mail address is: nichols@usgs.gov

The technology is getting the better of me. I have given wrong information. The postmaster in Ottawa came back and informed me that: for e-mail at the GSC office, the OLD address is correct, and continues to be recognized, as it is written in the AASP 1998 Directory:

jjansonius@gsc.nrcan.gc.ca

but that, in another (BORG) system, messages will also reach me at:

jjansonini@nrcan.gc.ca

I have now been straightened out, and I apologize for the confusion I may have caused you; please uncorrect -- or adjust -- your address books, whichever you prefer.

Jan Jansonius

MISCELLANEOUS

There are still 16 sets of the original Jansonius and Hills Genera File available. Anyone considering acquisition should perhaps take action. Supplement 12 has 304 pages ('cards') and should be available as you read this. Please contact Jan Jansonius at one of his addresses.

There is now an official INA (International Nannoplankton Association) web site. This probably won't revolutionise your lives but it may be worth noting the URL - the site is meant in particular to act as a focal point for web information on nannofossils, so if you do need to know about them for research or teaching it may come in handy.

London Site: www.nhm.ac.uk/hosted_sites/ina/

California Mirror: gs.ucsd.edu/ina/

The updated pages relating to the Lower Devonian Rhynie cherts are available for scrutiny at the following URL:

<http://www.abdn.ac.uk/~gmi265/research/rhynie/rhynie.htm>

Due to reorganization of The Natural History Museum's World Wide Web site the address of the PaleoNet Pages (East) has changed. The new address is:

http://www.nhm.ac.uk/hosted_sites/paleonet/

The address of The PaleoNet Pages (West) is unaffected.

The electronic version of the Journal of Phycology is now available through the PSA website at the following URL:

<http://jupiter.phy.ohiou.edu/psa/Pubs/pubs.html>

It is free to everyone through June '98. Please check it out.

BugWin '98 is now available, and as usual, at no charge for academic use. You can view some screen captures of some of the user interface and graphing capabilities at www.bugware.com.

BugWin is an all purpose paleo data entry program that requires Windows 95, and interfaces with MS Excel for importing and exporting data as well as for drawing publication quality, annotatable distribution charts.

BugWare products are downloadable from the url above, and users are supported by a free listserver for tech support and announcements about upgrades, fixes, and general discussion.

Have a look at the web site, and if you're interested in trying BugWin and other BugWare products, drop an email to mitch@bugware.com and/or register from the BugWare web site.

Mitch Covington - mitch@bugware.com

BugWare, Inc - <http://www.bugware.com>

10053 Collins Hole Rd., Tallahassee, FL 32312 - (850)-668-3894

Postdoctoral Research Fellowship

Origins of Modern Conifer Families:

Evolutionary Ecology and Phylogenetic Systematics of Fossil and Living Taxa. Ohio University is seeking a Postdoctoral Research Fellow to participate in an ongoing program of seed plant phylogenetics. The position is for a minimum of one year, beginning September 1, 1998, with salary of \$28,600 including benefits.

Qualifications

1. Ph.D. completed.
2. Experience with phylogenetic approaches employing fossil evidence.
3. Experience with preparation of fossil gymnosperms in various modes of preservation, preferably coniferophytes or conifers.
4. Proficiency with manuscript and grant preparation.

Responsibilities

1. Prepare fossil and modern specimens
 2. Conduct phylogenetic analyses
 3. Capture and process digital images
 4. Write manuscripts and prepare grant proposals
 5. Take responsibility for laboratory operations
- Applications should send curriculum vita; statement of research interests; names, e-mail addresses and phone numbers of at least 3 references; and copies of relevant publications to:

Dr. Gar W. Rothwell

Department of Environmental and Plant Biology

Ohio University, Athens, Ohio 45701

Inquiries and applications may be directed to:
rothwell@ohiou.edu

Palaeontologia Electronica (PE), the first electronic paleontology journal, was released on 1 February 1998

(http://www-odp.tamu.edu/paleo/1998_1/cover1.htm).

In its first month the journal had been read by more than 1000 people worldwide; mostly paleontologists. This means that PE already enjoys as large an audience as many well-established journals (e.g., *Palaeontology*) and should soon rival the circulation of the largest paleontological journals (e.g., *Journal of Paleontology*).

Issues of the PE are available free-of-charge on the World Wide Web for one year. After that year they will be placed onto CD-ROM and turned over to the sponsors (see below for a list). These organizations have redistribution rights, which will include selling subscriptions to libraries or distributing them with other print journals. In this way the long-term availability of PE will be insured.

All of the preliminary indications are that PE is a great success: readership is high, several high-profile professional paleontological organizations have contributed their names and their funds to the project, and there has been considerable attention lavished on the journal, both by professional paleontologists and the media. This is both because of the novelty of electronic publication and because of its advantages. Turn around times between submission and publication are short, there are no page charges, lavish illustration is possible (including color, animations, and large image-archives), and there are never any page charges.

Furthermore, the journal obviously reaches many scientists, including those in the third world and in the former eastern bloc, that may not have access to many paleontological print journals (both our usage statistics and user feedback attest that this audience exists). And the journal is rigorously peer-reviewed, just as with any other major journal.

Palaeontologia Electronica is currently soliciting papers to appear in upcoming issues. Contributions from any area of paleontology will be considered. All technical contributions will be subject to normal peer-review. Because of restrictions imposed by the ICZN, formal taxonomic naming is not currently valid when published in electronic journals.

However, any other content would be welcomed. Papers submitted now could well be published in the second issue (scheduled for June/July release)!

Palaeontologia Electronica Sponsors:

- ❖ The Paleontological Society
- ❖ The Palaeontological Association
- ❖ The Cushman Foundation for Foraminiferal Research
- ❖ El Sociedad Espanola de Paleontologia
- ❖ The British Micropalaeontological Society
- ❖ The Canadian Association of Palynologists
- ❖ The Society of Vertebrate Paleontology

Executive Editors

- ❖ Norman MacLeod, The Natural History Museum, London UK
- ❖ Tim Patterson, Carleton University, Ontario, Canada
- ❖ Section Editors
- ❖ Mark Purnell, Leister University, Leister UK (Ms Reviews)
- ❖ William Riedel, U. Calif. San Diego, California USA (Web Sites)
- ❖ Whitey Hagadorn, USC, California USA (Book Reviews)
- ❖ Jennifer Rumford, ODP, Texas USA (Technical)
- ❖ David Polly, Queen Mary & Westfield College, London UK (Technical)

Ocean Drilling Program is beginning to make primary observational data available on their website at:

<http://www-odp.tamu.edu/database>

Paleontological data are presently available there for only Legs 171 and 150, but we can presumably anticipate that data from one more Leg will henceforth be released every two months.

The range-chart data are available in both tab- and comma delimited form, ready for input into spreadsheets of databases, and as (convenient to read, but slow to download) HTML tables.

LOWER AND MIDDLE CRETACEOUS TERRESTRIAL ECOSYSTEMS: FILLING THE GAP

An international symposium to present new findings on the lower and middle Cretaceous terrestrial biota

to be held at the Dinamation's Dinosaur Discovery Museum

550 Jurassic Court Fruita, Colorado 81521

October 7 & 8, 1998

THE GRAND VALLEY, WESTERN COLORADO - Fruita, Colorado is located 10 miles west of Grand Junction, Colorado in the Grand Valley of the Colorado River in western Colorado near the Colorado-Utah border. The Grand Valley is world known for its mountain biking trails, peaches, microbrewers, and fine wines. The south side of the valley is rimmed by the red Triassic and Jurassic cliffs of the Colorado National Monument and the north side of the valley by the extensive Cretaceous escarpment known as the Book Cliffs. Additionally, the valley is within 150 miles of Dinosaur National Monument, Arches National Park, Canyonlands National Monument, and the central Rocky Mountains.

The Late Jurassic Morrison Formation preserves abundant dinosaur remains. There are several self guided hiking trails in the area, where dinosaurs can be viewed in situ. Dinosaur Hill south of Fruita, Riggs Hill (type locality of *Brachiosaurus*) south of Grand Junction, and the Trail through Time by the Mygatt-Moore Quarry near the Utah-Colorado stateline. There is also the Dry Mesa Quarry, Split Rock Trail, and Fruita Paleontological Area, where guided tours are conducted. Both Dinamation's Dinosaur Discovery Museum and the Museum of Western Colorado's Dinosaur Valley in Grand Junction have extensive exhibits of the areas fossil record. There are also Lower Cretaceous exposures within one mile of the symposium location.

TRAVEL - Those not attending the SVP field trip should fly into the Grand Junction Airport. It is served by Delta Airlines out of Salt Lake City, Utah and United Airlines out of Denver, Colorado. Those attending the Society of Vertebrate Paleontology meeting or going on the field trip should plan on flying into Salt Lake City, Utah and returning via Grand Junction, Colorado. Booking the Grand Junction leg as a round trip from Salt Lake City vs. a one way back to Salt Lake City will provide considerable savings. Additionally for those attending the SVP meeting Delta is offering discounted fairs through Flying Colors at (800) 477-4402.

ACCOMMODATIONS - The Super 8 Motel in Fruita, is across the Street from the Dinamation Dinosaur Discovery Museum. Attendees may reserve housing there on the attached registration form. For other hotels in the area contact the Grand Junction Visitor & Convention Bureau, 740, Horizon Drive, Grand Junction, CO 81506, 1 (800) 962-2547., <http://www.grand-junction.net>

COLLECTIONS - Opportunities to study extensive collections of "middle" Cretaceous vertebrate fossils will be possible during the SVP field trip at the College of Eastern Utah, Prehistoric Museum in Price, Utah and during the symposium at Dinamation in Fruita, Colorado and at the Museum of Western Colorado in Grand Junction, Colorado.

THE SYMPOSIUM - More than 30 papers on biostratigraphy biogeography, and terrestrial faunas are being presented. The proceedings volume will be distributed to those attending the meeting.

LOWER TO MIDDLE CRETACEOUS TERRESTRIAL ECOSYSTEMS: FILLING THE GAP

edited by James I. Kirkland & Spencer Lucas

New Mexico Museum of Natural History & Science Bulletin

The preliminary table of contents includes 15 papers on North America, 6 papers on Europe, 6 papers on Asia, 3 papers on Africa 2 papers on Australia, 2 papers on South America, and 4 overview papers. Taxonomic groups to be covered includes invertebrate and vertebrate ichnofossils, charophytes and ostracods, insects, fishes, amphibians, lizards, crocodilians, pterosaurs, dinosaurs, and mammals. Additionally four new dinosaurs are described from western North America. Other papers provide reviews of important and in some cases undescribed Early and "Middle" Cretaceous faunas. This volume will be a must for anyone interested in the transition from the faunas of the Late Jurassic to those of the Late Cretaceous.

The symposium follows the 1998 Annual Meeting of the Society of Vertebrate Paleontology in Salt Lake City, Utah Sept 30-Oct 3, 1998, and a SVP sponsored post-meeting field trip, Oct. 4-6, 1998
LOWER TO MIDDLE CRETACEOUS TERRESTRIAL FAUNAS OF THE CENTRAL COLORADO PLATEAU

For information regarding attending the SVP Annual Meeting and the SVP sponsored field trip contact:

SVP Business Office

401 N. Michigan Ave.

Chicago, IL 60611-4267

phone: (312) 321-3708

FAX; (312) 321-3700

e-mail: svp@sba.com

To review a guidebook for an earlier version of this fieldtrip prepared for the 1997 GSA Annual Meeting check out:

<http://www.rmwest.com/cretaceous/>

Anderson, D.M., A.D. Cemballa, & G.M. Hallegraeff. (advertized as due in April, but my Springer Verlag Representative says it is more likely) due in summer 1998. *Physiological Ecology of Harmful Algal Blooms*. XIX, 662 pp. 201 figs., 1 in color, 45 tabs. US price not set (DM 378).

Kahru, M & C.W. Brown. 1997. *Monitoring Algal Blooms*. New Techniques for Detecting Large-Scale Environmental Change. The incidence of harmful algal blooms appears to be increasing in European and Asian waters, and along the Atlantic coast. The data available for this observation, however, is patchy, and data for earlier periods is completely non-existent. The traditional technique to identify and monitor phytoplankton includes microscopic examination of water samples collected aboard research vessels. The information provided by this methodology is often limited in temporal and spatial scope because of the limitations of shipboard sampling and the enormous amounts of time and effort which are involved in analyzing the samples. New techniques are required to furnish appropriate information in order to identify and monitor algal blooms. This book explores these new technologies in depth. 172 pp. 60 figs., 3 in color, 6 tabs. \$99.95

Longhurst, AR. due June 1998. *Ecological geography of the sea*. This is the first attempt to divide the ocean into distinguishable regions that permit detailed comparisons. Based on patterns of algal ecology, the book divides the ocean into four primary compartments, which are then subdivided into secondary compartments. These are then identified and characterized by biogeochemical features including nutrient dynamics, continental shelf topography, and algal blooms. Because ocean-wide regional classification has broad impact on the way oceanographers and ecologists study ocean patterns, this book will have wide and long-term appeal. contents: Ecological gradients: fronts and the

pycnocline; physical fording of biological processes. Biomes: primary compartments in ecological oceanography. Oceans, seas and provinces: the secondary compartments; temporal variability and the adjustment of boundaries; Atlantic Ocean, Indian Ocean, Pacific Ocean, The Southern Ocean. subject index. ca. 385 pp., B&W and color illustrations. hardcover. \$74.95 (tentative!).

Contact: Dr. Pamela Burns-Balogh balogh@balogh.com

Balogh Scientific Books, <http://www.balogh.com>

1911 N. Duncan Rd., Champaign, Illinois 61821 USA

fax: +1 217 355 9413; phone: +1 217 355 9331

Duplicate copies of some reprints from the Loeblich and Tappan collection are available, while supplies last. A list of available reprints is posted on the UCMF web site at:

<http://www.ucmp.berkeley.edu/collections/micreps.html>

Subjects covered include foraminifera, calcareous nannoplankton, acritarchs and tintinnids. For more information see the web site or contact:

Karen L. Wetmore, Ph.D., Museum Scientist, Museum of Paleontology, 1101 VLSB #4780, University of California, Berkeley, CA 94720-4780

office (510) 642-0203, lab (510) 643-2559, fax (510) 642-1822

karenw@ucmp1.berkeley.edu

A Web Page giving details of the Irish Marine harmful algal bloom monitoring programme and the National Marine Biotoxin Reference Lab is now online at:

<http://www.marine.ie/frc/toxins/>

FIELD/LECTURE COURSE OFFERED ON MODERN COAL-FORMING ENVIRONMENTS WITH EMPHASIS ON PREDICTING SOURCES AND DISTRIBUTIONS OF METHANE & OIL IN COAL BEDS

(JUNE 14-18, 1998)

Location: Summer Beach Resort, Amelia Island, Florida (lectures) and Okefenokee Swamp, Georgia (field)

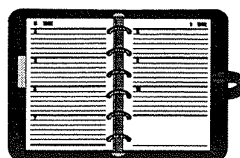
Instructor & Contact : Dr. Arthur D. Cohen, Department of Geological Sciences, University of South Carolina, Columbia, SC 29208 (Tele: 803-777-4502; Fax: 803-777-6610;

E-mail: cohen@geol.sc.edu)

Cost: \$1750 per participant - includes guidebook, lodging, boat rental, most meals, all coffee breaks. Participants responsible for transportation to and from field.

Course: Dr. Art Cohen, Professor of Geological Sciences at the University of South Carolina, conducts this seminar on modern coal-forming environments through a series of lectures from Amelia Island, Florida and complementary field demonstrations in nearby Okefenokee Swamp of Georgia. Lectures deal with: 1) classification and composition of macerals; 2) botanical source plants and diagenetic alteration processes; 3) evaluation of coal components as generators of liquid or gaseous hydrocarbons; 4) field & lab evidence that liquid HC's can be generated by coals; 5) depositional environments and their influence on locations of H-rich or O-rich deposits; 6) effects of depositional environment on vitrinite reflectance & interpretation of thermal maturation history; 7) origins of mineral matter and sulfur in coals; 8) factors effecting expulsion of liquid and/or gaseous hydrocarbons from coals. Field trips are designed to provide first hand observations of organic sedimentation processes and geologic, hydrologic, & geometric characteristics of peat deposits. Petrographic/botanical facies and pre-macerals facies composing peat sequences and the origin and distribution of mineral matter in peat deposits are also topics demonstrated in the field. Field stops are augmented by poster displays and freshly taken core materials.

The course is meant for geologists, geochemists, coal petrographers, palynologists, paleobotanists, geophysicists, engineers, or anyone else who might have need to understand coal composition or who might be working on a coal degas or source-rock project.



AGENDA 1998

☞ May 16-23: Environmental Change in Atlantic Islands, Torshavn, Faroe Islands. Details: C. Caseldine, University of Exeter, UK., Tel: +44 1392 263 347, FAX: +44 1392 263 342
E-mail: c.j.caseldine@exeter.ac.uk

☞ May 18-20 1998: GAC/MAC Meeting Québec City, Québec, Canada. Will include a Special Session on "Distribution Patterns of Fossils in Paleozoic Sequences of Northeastern North America". Field trip on "Paleontology, Stratigraphy and Sedimentology of Lower to Middle Paleozoic Rocks of the Anticosti Basin, National Park of Mingan Islands and Anticosti Island". 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.ulval.ca/quebec1998.html>

☞ May 18-21 1998: 1998 UNESCO Conference: "Learning from the Past: Global Paleoclimatic Changes". Yarmouk University, Irbid, Jordan. Details: Prof. Ali Jawad Ali, UNESCO Chair for Desert Studies and Desertification Control, Faculty of Science, Yarmouk University, Irbid, Jordan. FAX: +962-2-247983

E-mail: ajawad@yucc.yu.edu.jo

☞ May 18-23 1998. 11th Meeting of the IWGP (International Working Group on Palaeoethnobotany). Toulouse, France. Details: George Willcox, IPO, CNRS Jales-Berrias, 07460, France. FAX: +33-4-75 39 37 96.

☞ June 2-6 1998: Canadian Association of Geographers Annual Conference Ottawa, Ontario, Canada. Will include a symposium on "Impacts of Global Climate Change in Southwest Yukon" organized by Peter G. Johnson at peter@aix1.uottawa.ca. Conference details: Marc Brosseau, Tel: (613) 562-5800, Ext. 1058, FAX: (613) 562-5145

E-mail: mbrossea@uottawa.ca

Web site: <http://www.uottawa.ca/academic/arts/geographie>

☞ June 7-12: Dino 6. Trondheim, Norway. Details: Dino 6 Secretariat, NTNU Museum of Natural History and Archaeology, Attn: Morten Smelror, N-7004 Trondheim, Norway. Tel: +47-73-592147, FAX: +47-73-592223,

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

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

☞ June 24-26: 7th International Conodont Symposium (ECOS VII). Bologna and Modena, Italy. Details: M. C. Perri, Dipartimento di Scienze della Terra e Geologico Ambientali, via Zamboni 67, 40126 Bologna, Italy, Tel: 39-51- 354560, FAX: 39-51-354522, E-mail: perri@geomin.unibo.it

☞ June 26-30 1998: 5th European Palaeobotanical and Palynological Conference Krakow, Poland. Details: Mgr. Grzegorz Worobiec, W. Szafer institute of Botany, Polish Academy of Sciences, Lubicz 466, 31-512 Krakow, Poland. FAX: (48 12) 21 97 90

E-mail: worobiec@ob-pan.krakow.pl

☞ June 28-July 5: Gondwana 10: Event Stratigraphy of Gondwana. An International "Out of Africa" Symposium. University of Cape Town, South Africa. Details: Deborah McTeer, Gondwana 10 Congress Co-ordinator, Postgraduate Conference Division, UCT Medical School, Anzio Road Observatory, 7925, Cape Town, South Africa. Tel: +27-21-406-6348, FAX: +27-21-406-6263

E-mail: deborah@medicine.uct.ac.za

Website: <http://www.uct.ac.za/depts/cigc>

☞ July 6-9 1998: Pollen and Spores: Morphology and Biology Palynological conference organized by the Linnean Society Palynology Specialist Group (LSPSG) in collaboration with the Royal Botanic Gardens, Kew and the Natural History Museum, London. Includes: Pollen development; Anther and tapetum; Pollen-pollinator interactions; Pollen-stigma interactions; Pollen morphology in systematics and evolution; Ultrastructure (fossil and living groups); Pre-Cretaceous palynology; Cretaceous palynology; Tertiary palynology; Quaternary palynology; Palynology and archaeology; Preparation and techniques. Details: Lisa von Schlippe, Conference Administrator, Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AB. FAX: + 44 (0)181 332 5176/5278, E-mail: l.von.schlippe@rbgkew.org.uk

☞ July 8-10 1998: Geocongress '98 Geological Society of South Africa, Pretoria, South Africa. Theme: "Past Achievements/Future Challenges". Details: Geocongress '98, P.O. Box 798, Pretoria 0001, South Africa, FAX: (012) 841-1221

E-mail: eaucamp@geoscience.org.za

☞ July 7-11 1998: FORAMS '98. Monterrey, Mexico. Details.

Martha A. Gamper, E-mail: gamperma@fiu.edu

See <http://www.fiu.edu/~longoria/forams98.htm>

☞ July 19-25 1998: 7th International Congress of Ecology (INTECOL) Florence, Italy. Details from the congress web site at <http://www.tamnet.it/intecol.98>

☞ July 26-30 1998: The Society for Organic Petrology (TSOP) 15th Annual Meeting. In conjunction with the Canadian Society for Coal Science and Organic Petrology (CSCOP). Halifax, Nova Scotia, Canada. Details: P.K. Mukhopadhyay, Global Geoenergy Res., Ltd., Box 9469, Station A, Halifax, Nova Scotia B3K 5S3, Canada, Tel:/FAX: (902) 453-0061

E-mail: avery@agc.bio.ns.ca.

Web site: <http://agc.bio.ns.ca/tsophalifax98>.

☞ August 16-20: 5th International Symposium on the Jurassic System IUGS Jurassic Subcommission. Vancouver, British Columbia, Canada. Field trips, 12-16 August and 21-25 August. Details: Paul L. Smith, Earth and Ocean Sciences, University of British Columbia, 6339 Stores Road, Vancouver, British Columbia, V6T 1Z4, Canada. Tel: (604) 822-6456, FAX: (604) 822-6088

E-mail: psmith@eos.ubc.ca

See <http://www.eos.ubc.ca/jurassic/announce.html>

☞ August 23-29 1998: International Council for Archaeozoology (ICAZ) 8th International Congress. Victoria, British Columbia, Canada. Details: Rebecca Wigen (rwigen@uvvm.uvic.ca) or Quentin Mackie (qxm@uvic.ca). Includes a symposium on "High Resolution Faunas at the Pleistocene/Holocene Boundary" organized by Jon Driver (driver@sfu.ca)

Conference web site: <http://www.uvcs.uvic.ca/conference/archzool/>

☞ August 27-28 1998: Second International Meeting on Phytolith Research Aix en Provence, France. Details: 2nd IMPR, J.D.

Meunier, CEREGE, BP 80, 13545 Aix en Provence Cedex, FRANCE. Tel: (33) (0) 4 42 97 15 26, FAX: (33) (0) 4 42 97 15 40
E. mail : phytomeeting@cerege.fr
Web site: <http://www.cerege.fr>

☞ August 31 - September 5 1998: 6TH International Congress On Aerobiology. Perugia, Italy. Includes sessions on "Fundamental Mechanisms in Aerobiology" convened by Franco Di-Giovanni (digi-sci@freespace.net) and Mervi Hjelmroos (mervih@ibm.net) and "Pollen as allergen carriers" convened by Estelle Levetin (Biol_el@centum.utulsa.edu) and Ann Cadman (106caa@cosmos.wits.ac.za).
Details: Giuseppe Frenguelli, Congress Secretariat freng@unipg.it

Web site: <http://www.fisbat.bo.cnr.it/AERO/News.html>

☞ September 5-7 1998: AMQUA 15th Biennial Meeting. Puerto Vallarta, Mexico. Theme: "Northern Hemisphere-Southern Hemisphere Interconnections". Details: Dr Socorro Lozano García, Instituto de Geología, Universidad Nacional Autónoma de México, Ciudad Universitaria, Apartado Postal 70-296, 04510, México D.F., México. Fax: +52 5 550 6644.

E-mail: AMQUAMEX@servidor.unam.mx

Website: <http://www.usu.edu/~amqua/>

☞ September 6-11 1998: SEQS Symposium - "THE EEMIAN - local sequences, global perspectives". Kerkrade, The Netherlands. Details: Dr Th. van Kolfschoten, Institute of Prehistory, Leiden University, P.O. Box 9515, 2300 RA Leiden, The Netherlands, Tel.: +31- 71-5272640 / 5272390, FAX: +31- 71-5272429

E-mail: T.van.Kolfschoten@Rulp.leidenuniv.nl or Dr J.H.A. Bosch, Netherlands Institute of Applied Geoscience TNO - National Geological Survey, Department Geo-Mapping, North and East Netherlands, P.O. Box 511, 8000 AM Zwolle, The Netherlands, Tel.: +31- 38-4574588, FAX: +31- 38-4574557

E-mail: A.Bosch@nitg.tno.nl

Website: <http://www.nitg.tno.nl/eqmal/eqmal.html> (See the agenda)

☞ September 7-11 1998: The Second International Conference on Climate and History. Norwich, UK. Theme: "Climate and History: Past and Present Variability - A Context for the Future". Arranged to coincide with the 25th anniversary of the Climatic Research Unit at the University of East Anglia. Details: Prof. Trevor D. Davies, Climatic Research Unit, University of East Anglia, Norwich, NR4 7TJ, England, UK. Tel: +44 1603 592721, FAX: +44 1603 507784. Website: <http://www.cru.uea.ac.uk/cru/conf/>

☞ September 11-15 1998. CIMP Symposium 1998. Pisa, Italy. Details: Organizing Committee CIMP '98, Università di Pisa, Dipartimento di Scienze della Terra, Via S. Maria 53 - I 56126 - Pisa, Italy. FAX: +39 50 500932

E-mail: albani@dst.unipi.it

☞ Date: TBA. Canadian Paleontology Conference. Place TBA

☞ September 21-25 1998: 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>

☞ September 26-29 1998: Canadian Paleontology Conference. Toronto, Ontario, Canada.

☞ September 29 - October 2 1998: The Spanish-speaking Palynologists Association (Asociación de Palinólogos de Lengua Española - APLE) 12th Annual Meeting. Leon, Spain. Details: Congress Secretary, Dr. María Amor Fombella Blanco

E-mail: dbvmfb@isidoro.unileon.es

Web site: <http://aple.usal.es>

☞ November 10-13 1998: 18th International Symposium North American Lake Management Society (NALMS). Banff Springs Hotel, Banff, Alberta, Canada. Theme: Cooperative Lake and Watershed Management: Linking Communities, Industry and Government. Includes a special session on "Paleolimnology In Lake And Watershed Management" Details: Symposium Chair - Brian G. Kotak (kotak@compusmart.ab.ca), Program Chairs - Al Sosiak (asosiak@env.gov.ab.ca) or Everett Fee (efee@telusplanet.net), Paleolimnology Session Chair - Ian D. Campbell, Canadian Forest Service, 5320-122 St. Edmonton, Alberta, T6H 3S5, Canada. Tel: 403-435-7300, FAX: 403-435-7359

E-mail: icampbel@nrcan.gc.ca

Web site: <http://www.biology.ualberta.ca/alms/1998.htm>

☞ October 26-29 1998: Geological Society of America, Annual Meeting. Toronto, Ontario, Canada. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133

E-mail: meetings@geosociety.org

☞ October 26-30 1998: International Geological Correlation Programme (IGCP) Project No. 396 'Continental shelves in the Quaternary' 3rd Annual Conference. National Institute of Oceanography, Dona Paula, Goa, India. Topics to be covered: Regional Perspectives; Palaeoceanography; Dating of shelf sequences; Seismic stratigraphy; Shelf processes; Geochemistry of sediments; Marine geotechnics; Non-living resources; Modelling. Details: Co-convenors Dr M. Veerayya and Mr K.H. Vora, IGCP 396 3rd Annual Conference, National Institute of Oceanography, Dona Paula, Goa, India. Tel: 221322 / 226253, Fax: 91(0) 0832 223340 / 239102

E-mail: veerayya@csnio.ren.nic.in, vora@csnio.ren.nic.in. (At present there is a problem with csnio.ren.nic.in, hence you are requested to send your e-mails to:

veerayya@darya.nio.org, vora@darya.nio.org)

Web site: <http://www2.env.uea.ac.uk/gmmc/index.html>

☞ October 27-31 1998: AASP 1998 Annual Meeting. Ensenada, Mexico. Details: Javier Helenes, CICESE, Departamento de Geología, Ensenada, Baja California, Mexico, E-mail: jhelenes@cicesc.mx or Cristina Penalba, UNAM, Instituto de Ecología, A. P. 1354, Hermosillo 83000, Sonora, Mexico

E-mail: penalba@servidor.unam.mx

Web site: AASP Web site

☞ November 11-13 1998: 18th International Symposium of the North American Lake Management Society (NALMS). Banff Springs Hotel, Banff, Alberta, Canada. Includes a session on: "Application of Paleolimnology in Lake and Watershed Management"; for details of this session contact Ian D. Campbell

E-mail: icampbell@nofc.forestry.ca

For details of the conference, see the web site at <http://www.biology.ualberta.ca/alms/home.htm>

AGENDA 1999

☞ Date: TBA. CANQUA Meeting. Calgary, Alberta, Canada
Conference website: <http://pc56.ss.ualgary.ca/>

☞ Date: TBA. Fourth Symposium of African Palynology. Sousse University, Tunisia

☞ Date: TBA. Canadian Paleontology Conference. Calgary, Alberta, Canada.

Date: TBA. International Botanical Congress St Louis. Laure Civeyrel and Annick Le Thomas are trying to organize a symposium on "Palynological Contributions to Phylogeny and

Systematics" at this Congress. For more details on this symposium, contact Laure Civeyrel

E-mail: civeyrel@isem.isem.univ-montp2.fr

☞ January 5-6 1999: QRA Annual Discussion Meeting. Department of Zoology, University of Cambridge, U.K. Title: 'Recent Advances In Quaternary Biostratigraphy'. The primary emphasis will be on the record from the British Isles, although evidence from further afield is also welcomed. It is envisaged that a wide range of taxonomic groups will be discussed, including vertebrates, pollen, plant macrofossils, molluscs, ostracods, beetles, chironomids and foraminifera. Details: Dr Danielle Schreve, c/o Department of Palaeontology, Natural History Museum, London SW7 5BD. Tel: (0044) 0171 938 9258, Fax: (0044) 0171 938 9277
E-mail: D.Schreve@nhm.ac.uk or Gill Thomas, Tel: (0044) 01242 543311, Fax: (0044) 01242 532997

E-mail: gthomas@chelt.ac.uk

☞ January 10-14 1999. Fourth Meeting of the World Archaeology Congress. Cape Town, South Africa. Theme: Global Archaeology at the Turn of the Millennium. Details: Carolyn Ackermann, Congress Secretariat, P.O. Box 44503, Claremont, 7735, South Africa. Tel: +27 (21) 762-8600, FAX: +27 (21) 762-8606

E-mail: wac4@globalconf.co.za or globcon@iafrica.com

Web site: <http://www.uct.ac.za/depts/age/wac>

☞ May 26-28 1999. GAC/MAC Meeting. Sudbury, Ontario, Canada. Details: P. Copper, Department of Earth Sciences, Laurentian University, Sudbury, Ontario, P3E 2C6, Canada. Tel: (705) 6675-1151, Ext: 2267, FAX: (705) 675-4898

E-mail: gacmac99@nickel.laurentian.ca

☞ May 1999, days TBA: Second International Limno-Geology Conference Brest, France. Details: Jean-Jacques Tiercelin, Directeur de Recherche au CNRS, UMR 6538 "Domaines Oceaniques", CNRS URA 1278, Groupe Riftogenese Est-Afrique, Universite de Bretagne Occidentale, Departement des Sciences de la Terre, 6, Av Le Gorgeu, 29285 Brest - France, Tel:/ax1: (33) 298 01 61 80

E-mail: tiercelin@univ-brest.fr

☞ June 1-5 1999: Canadian Association of Geographers (CAG) Annual General Meeting. Lethbridge, Alberta, Canada. Details: Dr. Robert Rogerson, Local Arrangements Committee Chair
E-mail: rogerson@hg.uleth.ca

☞ August 3-11 1999: 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://inquanlh.no/congress/congress.html>

☞ September 6-10 1999: 9th International Conference on Luminescence and Electron Spin Resonance Dating. Rome, Italy. Details: Scientific Secretariat, Dr. Emanuela Sibilia, Dipartimento di Scienza dei Materiali, Milano, E-mail: sibilia@mater.unimi.it or Organizing Secretariat, PR & Co., Roma

b.fersini@flashnet.it

Web site: <http://www.mater.unimi.it/LED99/>

☞ September 13-17: 81th International Conference On Accelerator Mass Spectrometry. VERA Laboratory, Universitaet Wien, Vienna, Austria. Details: Conference Secretary Gabriele Kratschmann, Tel. +43 1 40480-700, FAX +43 1 4076200

E-mail: gabikra@pap.univie.ac.at

☞ 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

AGENDA 2000

☞ Date: TBA. GAC/MAC Meeting. Calgary, Alberta, Canada

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

☞ Date: TBA. Canadian Paleontology Conference. Antigonish, Nova Scotia, Canada

☞ 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

AGENDA 2001

☞ Date: TBA. GAC Meeting

☞ Date: TBA. CANQUA Meeting. Whitehorse, Yukon Territory, Canada (proposed).

☞ 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

AGENDA 2002

☞ Date: TBA. GAC Meeting

☞ 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

AGENDA 2003

☞ Date: TBA. CANQUA Meeting. Halifax, Nova Scotia, Canada (proposed).



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. Artwork is 100% proof digital, and is stolen oops ahem borrowed from Corel Clipart and some uncited websites.

Email to the Editor

"One thing that catches my eye is that we always had a Presidential Address in each issue of the Newsletter. This seems to have stopped with Gordon Wood. I enjoyed these sermons from the mount (I'm sure others did too), and I wonder if they could be reinstituted?"

- Martin Head, University of Toronto -