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A.A.S.P. NEWSLETTER

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April, 1994 I.S.S.N. 0732-6041 Volume 27, Number 2 J.K. Lentin, Editor

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NEW EDITOR

Dr. Martin J. Head Department of Earth Sciences The University of Toronto Toronto, Ontario Canada M5S 2B1

The AASP NEWSLETTER is published 4 times annually. Members are ENCOURAGED to submit articles, "letters to the editor", technical notes, information about "members in the news" and information about job openings in the industry. Every effort will be made to publish all information received from our membership.

Deadline for the next NEWSLETTER, the third in 1994, is July 15. Please send all information on computer disk, if possible, if not - send a typed manuscript. Information which comes via E-mail is also welcome. We

look forward to contributions from our membership. The new (M. Head) FAX and E-mail numbers for the AASP NEWSLETTER are as follows:

FAX: (416) 978-3938 E-mail: head@mica.geology.utoronto.ca



MESSAGE FROM THE PRESIDENT

Lucy Edwards, President

About this time every three months, I rack (or is in wreck?) my brain trying to think of something appropriate and witty to put in this column. For once, it's easy to come up with something appropriate. It's time to thank Dr. Judith K. Lentin for her service to AASP as Newsletter Editor. In 1991 she volunteered to serve for a year until a replacement could be found. Suddenly it's 1994. Before becoming Newsletter Editor, she was AASP President, racking her brain every three months.

I guess some people think the Newsletter Editor simply gathers information, and maybe, as the name implies, edits this information. A good eye for layout and catchy clip-art is always a plus, too. Judi does a lot more.

She is the institutional memory that gently reminds, then nags, us to give her the material that should go in the Newsletter when it is needed. Things like scholarship announcements, biographies of nominees for office, and messages from the president don't just appear in Judi's mail on disk a month before they are due. I know; I'm one who sends a disk at the last minute, and this month, I'm pushing my deadline and using E-mail. Judi asked for material on disk, but she'd accept it faxed, overdue. And she'd only grumble to me, not the guilty party, when it was proportional-spaced and thus hard to scan in. Last fall, when I called her in the hospital to wish her well, I found out that as an ill but conscientious editor, she had her laptop with her. We ended up talking for over an hour on AASP stuff, until I wore her out completely. Even before she was well enough to be back at work, she put the newspaper together from home, apologizing for being late. Thank you, Judi -- and what are you going to do with all your newfound free time?

Martin Head has a hard act to follow, but I know he's up to it. Welcome to the AASP Newsletter! Let's try to send him our material on time.

I can't pass up a comment on last fall's newsletter. Of course I noticed that the picture above the "Message from the President" heading was of a male, but I just laughed. I figured it was left over from Bob Ravn's tenure and Judi had other, more important, things to worry about. As Judi points out, the new picture of a calm, cool, unruffled, in-charge female bears practically no resemblance to myself. The first thing I noticed is that this character has eyebrows. I always wished I had eyebrows. Actually, I do, but they aren't even red like the rest of my hair -- they are very, very, very pale. Oh well.

AASP ballots will be mailed out soon. Please take time to vote. This is YOUR organization.

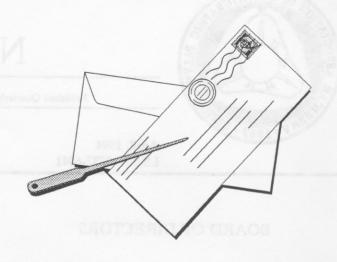
Lucy E. Edwards, President

[Editor's note: I went back to Vol. 25, No. 2 to find a proper photograph of Lucy to use instead of a graphic of some other in-charge person. And... Lucy you do have eyebrows.]

NEW LOGO READY FOR 1995 AASP ANNUAL MEETING



LETTER TO THE EDITOR



Dear Editor:

INFORMATION REQUIRED

The recent changes in academia and the petroleum industry around the globe has lead to a number of marine palynomorph collections being moved to new locations. I am presently compiling an up-to-date listing of type material collections and would welcome information from any researchers on where they curate their material. The condition of the slides, names of researchers who have donated material, access limitations, and curation information would also be of interest.

Please send any data you may have on collections in your country to:

Stan Stancliffe
Department of Geological Sciences
University of Saskatchewan
Saskatoon, Saskatchewan
S7N 0W0 CANADA
Tel: (306) 966-5683
Fax: (306) 966-8593

E Mail: stanc@pangea.usask.ca

Dear Editor:

I am hopeful that you can include the following plea in an upcoming issue of the AASP Newsletter.

Our next-to-last England Slide Finder has had a shattering experience and our purchasing office has been unsuccessful in its attempts to locate a supplier from whom we can purchase replacements.

If an AASP member has recently purchased an England Finder, I would greatly appreciate learning the name and address of the vendor.

Many thanks,

William C. Cornell
Department of Geological Sciences
University of Texas at El Paso
El Paso, Tx. 79968

Fax: (915) 747-5073

Dear Editor:

I recently obtained a new position with IKU Petroleum Research and have moved from Switzerland to Norway. I informed all the professional societies where I am a member, but all my mail goes directly to Geneva before arriving in Trondheim. I think - and I am sure - that the Newsletter is the best way to inform quickly the palynological community of this move. Could you please annouce this change in the next AASP Newsletter? It would be very helpful for me. In the affirmative, please find below my new professional address, as well as my new phone, fax and E-mail numbers. I would greatly appreciate your help in this matter.

Best regards,

E. Monteil

Regional Geology

E. Monteil IKU Petroleum Research N-7034 Trondheim Norway

Phone: (+47) 73 59 12 05 Fax: (+47) 73 59 11 02

E-mail: eric.monteil@iku.sintef.no

P.S. The E-mail number: jones@xenlink.cuc.ab.ca given in the AASP Newsletter of January doesn't work.

[Editor's note: Sorry guys, I messed up and dropped the first letter of the address, it is:

pjones@xenlink.cuc.ab.ca
I am always happy to hear from you.]

Dear Editor:

I would like to bring to your attention an error in the recent edition of AASP (Vol.27/1, January 1994) which may lead to some confusion amongst your readership if not corrected. In your note on StrataBugs (page 5) you make reference to an earlier article on the Strats biostratigraphy software and imply that it is an earlier version of Strats is a VAX/PC software StrataBugs. package developed by Halliburton in association with Logica but is no longer supported by them. StrataBugs is a completely new and separate product from StrataData available for both Unix and PC platforms; while having some of the features of Strats is not derived from this program.

Perhaps you would publish a note to this effect in your next issue and refer your readers to an article in your newsletter (Vol.26/1, January 1993) in which StrataBugs is described in full.

Yours sincerely,

John Athersuch



CANDIDATES

FOR

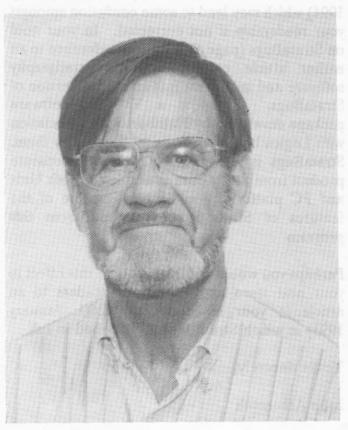
BOARD OF DIRECTOR

For President-Elect

Jan Jansonius

Jan spent 30-plus years in biostratigraphy with Imperial Oil (Esso Canada). He is now retired from Esso but is working as a "visiting scientist" at the Geological Survey of Canada's Institute of Petroleum Geology in Calgary. His continuing interest in palynology is expressed in maintaining activity in

the Genera File of Fossil Spores. He is currently co-editor of AASP's massive "Silver Jubilee Volume": Palynology: principles and applications. He also serves on the editorial board of Elsevier.



Dr. Jan Jansonius

Jan can't remember exactly when he joined AASP. It was probably in 1968, because he is not listed as a founding member but joined very soon thereafter. He is currently an AASP representative to IFPS (the International Federation of Palynological Societies). He has served as president of CAP (Canadian Association of Palynologists) and was co-chair of the very successful VI IPC in Calgary in 1984.

Norman J. Norton

Norm received his Ph.D. in 1963 from the University of Minnesota. He served as a palynologist with Humble Oil and Refining Company, as assistant professor at the University of Minnesota, and professor and department chair, Department of Biology, at both Hope College and then Ball State University. At Ball State, he also served as acting vice president of academic affairs and acting dean of the College of Sciences and Humanities. He was Provost, Vice President for Academic Affairs at Indian University of Pennsylvania. He joined Gulf Oil in 1985 as

coordinator of the palynology task force. Since 1985 he has worked for Chevron Overseas Petroleum Inc., and Chevron Production Company, where he is presently Active Division Geologist.



Dr. Norman Norton

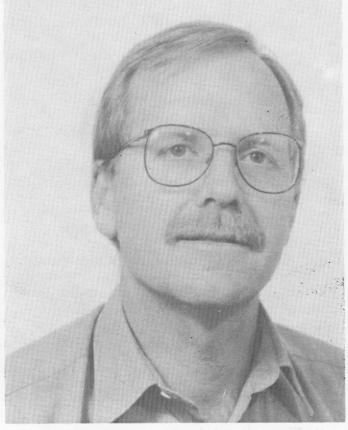
Norm joined AASP in 1968 and has served variously as chair of its nominating committee, financial development committee, archives committee, by-laws revision committee, public relations committee and the Chair-in-Palynology committee. He has been chairman of the Board of Trustees of the AASP Foundation since its founding in 1976. In 1978, he was awarded the AASP Distinguished Service Award.

For Secretary-Treasurer

David T. Pocknall

David T. Pocknall received his Ph.D. from the University of Canterbury, Christchurch, New Zealand in 1979. Her worked for almost 13 years as a palynologist for the New Zealand Geological Survey (now DSIR Geology and Geophysics) in Lower Hutt, New Zealand. In 1991, he joined Amoco Production Compony in Houston as a stratigraphic palynologist working on Cretaceous and Tertiary palynofloras from Egypt, Trinidad, and Venezuela.

David joined AASP in 1985 while on study leave at the U.S. Geological Survey in Denver, Colorado. He was co-editor of the Geological Society of New Zealand Newsletter for two years before moving to the United States, and he remains a member of that society. He has served on the AASP nominating committee in 1992. In 1993, he was elected AASP Secretary-Treasurer and stands unopposed again for the position.



Dr. David Pocknall

For Managing Editor

David K. Goodman

David Goodman received his B.S. and M.S. from Virginia Polytechnic and State University and his Ph.D. from Stanford. He worked as a palynologist at Exxon Production Research Company from 1978 to 1983. He joined ARCO in 1983 and has worked in Dallas and Midland. He transferred to ARCO Alaska in Anchorage in 1993.

Dave joined AASP in 1975. He has served as Director-at-Large (1986-1987), assistant journal editor of Palynology, then journal editor, and Managing Editor (1988 - present). He is a member of the Technical Advisory



Dr. David Goodman

Board for the Treatise on Invertebrate Paleontology, the Technical Advisory Committee for Micropaleontology Press, and the Editorial Board for Marine Micropaleontology. He stands unopposed for Managing Editor.

[Dave promised that a recent photograph would be sent. It hasn't. So the same old mug shot will be used.]

For Director-at-Large

Rosemary A. Askin

Rosemary is an Adjunct Associate Professor at the University of California at Riverside. She has been an AASP member since 1976 and has served as a member of the nominating committee and as a judge for the best poster competition.

Rosemary received her Ph.D. from Victoria University of Wellington, New Zealand in 1976. She was a Fulbright Scholar and postdoctoral fellow at Ohio State University. Her interests focus on the responses of land vegetation and



Dr. Rosemary Askin

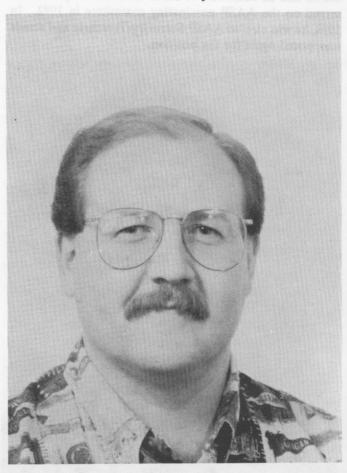
phytoplankton to environmental changes, and on stratigraphic problems. Her research concentrates on the Cretaceous-Paleogene and Permian-Triassic of southern mid- to high-latitudes, especially Antarctica. She has done consulting work for industry and academia since 1981.

Thomas D. Demchuck

Thomas Demchuck is a petroleum paleontologist at Amoco Production Company in Houston. He obtained his Bachelor and Master degrees at the University of Alberta in Edmonton, under the guidance of Chaitanya Singh. He received his Ph.D. in organic petrology in 1992 from the University of Calgary under the supervision of Prof. L.V. Hills. His interests include stratigraphic palynology (pollen, spores, dinoflagellates, and fungal spores), paleoecology, and kerogen and TAI analyses from Roumania, China, southeast Asia, Mexico, and Trinidad.

Thomas has served AASP as a member of the 1990 organizing committee, and as a judge for the L.R. Wilson Award. He is a member of the 1996 IX IPC organizing committee. He has served as chair of the Paleontology Division of the Canadian Society of Petroleum Geologists,

and has served in various capacities with the Coal Geology Division of the Geological Society of America. He is currently involved in co-convening the Coal Geology Division Symposium at the 1994 GSA meeting in Seattle. To the best of his recollection, he joined AASP in 1984.

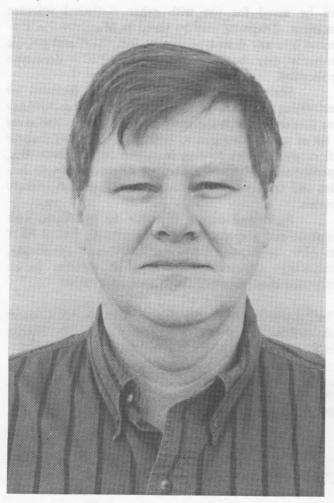


Dr. Thomas Demchuk

Gerald Waanders

Gerald Waanders received his B.A. from Hope College, his M.S. from the University of Oklahoma, and his Ph.D. from Michigan State University. He worked for eight years as a palynologist with Amoco in Tulsa and New Orleans and two years with Anderson, Warren and Associates in San Diego. In 1981, he established Waanders Palynology Consulting, which he continues to run.

Gerald joined AASP in 1969 and has served AASP as a member of the nominating committee and a member of the 1991 local meeting committee. He is a former member and officer of the Southern California Palynological Society.

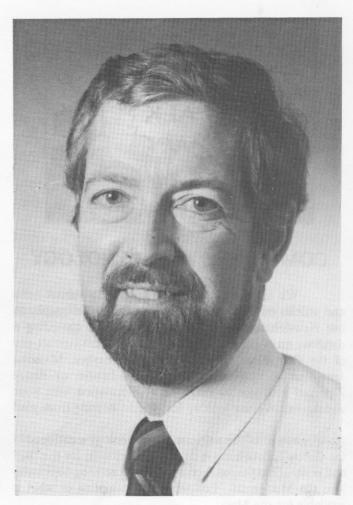


Dr. Gerald Waanders

James M. White

James White is a research scientist at the Geological Survey of Canada in Calgary, where he has been since 1986. Prior to that he was a Senior Research Assistant, Parks Canada. He completed his Ph.D. in 1983 from Simon Fraser University.

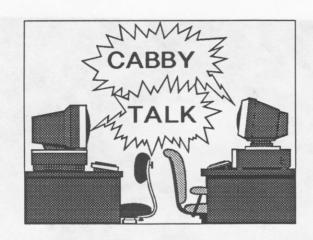
James' interest in palynology began during his M.A. research in Mayan archeology, Chiapas, Mexico. His Ph.D. was a palynological investigation of the southern end of the late Quaternary "Ice-free Corridor," a hypothesized human migration route into the Americas. Since joining the GSC, he has been applying late Quaternary, numerical style palynostratigraphy to the Cenozoic of North America. His current focus is a collaborative project between the GSC and USGS on the Neogene of northwestern Canada and Alaska. James joined AASP in 1981.



Dr. James White

EFFECTIVE PUBLICATION DATE OF PALYNOLOGY VOLUME 17

Due in part to a late completion date for the volume and miscommunication with the printer, PALYNOLOGY Volume 17 (1993) was distributed on January 28, 1994. This is the effective publication date for this issue of PALYNOLOGY. Thus, all new taxonomic names, emendations, etc., published in Volume 17 must be cited with a 1994 date. The effective publication date is critical in establishing priority of publication, one of the principles concerning the nomenclature of taxonomic groups according to the International Code of Botanical Nomenclature. The bibliographic reference for PALYNOLOGY Volume 17 can be cited either as 1993 or 1993 [1994].



COMPUTERS IN PALYNOLOGY

We urge the AASP membership to submit news and articles on computer application in biostratigraphy to our Newsletter. We are still interested in compiling a database on biostratigraphic software. Please contact any of the Committee members (Michael Farabee, Massoud Jameosanaie, Warren Kovach, Judith Lentin, or Pierre Zippi) if you like to share such information with your colleagues. We are looking forward to hearing from you!

Although most of the software for palynology mentioned in the Cabby Talk column is designed specifically for the IBM and compatible personal computers, there are people who love the Macintosh. Following is a sampling of what is available for the Mac:

STRAT/RANGE

Strat/Range Charter is a stratigraphic range charting application that creates large range chart diagrams and ordered species lists from ordinary spreadsheet text files. The data (text files) must contain the species names in the first row, sample names in the first column and count data or qualitative data in the cell matrix. Strat/Range Charter can also process separate species libraries and data files that contain lists of species for each sample horizon. Multiple species libraries can be maintained for different types of information.

Several types of charts can be plotted: interval abundance, presence/absence, rangethrough and coded qualitative-data charts. Each chart type can be sorted by tops, bases, or by unique species number. Colors can be assigned to each species. The species name and the plot symbols will be displaced in the selected color. Grid lines can be added and the gridline spacing can be specified. Diagrams can be scaled at 8 sizes. Any font can be used to display charts and lists. Species lists can be ordered alphabetically or by unique species number. Presence/absence data matrices and ranked order of events

can be saved for use with other statistical software packages. Diagrams may be saved as MacDraw PICT or pasted into any draw-type application. Text and graphic elements may be edited with any PICT draw-type application.

Several additional applications are included for performing various tasks. CommonSaver 1.0 compares any two files created with the same library of names and saves a list of species common to both files. SpeciesTabulator 1.0 creates species reports from spreadsheet data files. SpeciesSearch 1.0 searches through single or multiple data files and creates a list of files that contain the selected species.

Input and output files can be integrated with database and graphics applications. Along with a PICT graphics application and a database application, Strat/Range Charter is the keystone element in an integrated biostratigraphic computer workstation.

The Package Includes: Strat/Range Charter 1.5, Counter 2.0, Species Reporter 1.0, CommonSaver 1.0, Species Tabulator 1.0 and Species Search 1.0.

Any Macintosh. System 7 compatible. \$999 US retail. \$80 US upgrade from any version.

COUNTER 2.0

Counter uses the Macintosh keyboard and mouse to emulate an expanded mechanical point counter. Count data is saved as a tab-delimited text file with sample names occupying the first column, categories (species names) in the first row and count data in the intersecting cells. The data file may be opened with any spreadsheet, word processor, statistics or plotting application. Text files are easily transferred from Mac to DOS. Counter features an unlimited number of counts and automatic totaling. The number of records is limited only by disk space. Each time you click a button or type a key, Counter tallies a count for that category. An audible "click" sound is produced each time a count is tallied, and a distinct "alert" tone is generated each time the total tally reaches a multiple of the alert interval. Errors may be subtracted from any category tally and the total, simply by switching to the subtract mode. A distinct "subtract" sound is produced to audibly indicate the subtraction. The counter is automatically reset after a record is saved. A multiple clicking sound is generated to indicate the resetting action. Counter can be operated from a digitizing tablet.

Platform: Any Macintosh System 7 compatible. \$100 US retail. \$40 US upgrade from any version.

Ternary Plot version 3.5.8

Description: Ternary plots (triangular diagrams) with text and graphics tools. It features: Eleven plot symbols plus tie lines and line segments; eight colors; apex factors; trap or plot negative values; 4 standard graph sizes, data entry from text files, clipboard, keyboard or interactive. Tick marks and legends.

Platform: Macintosh Price: \$150 US retail

Vector Rose version 2.08

Vector Rose is used to create circular normal statistics and vector histograms. Statistics include: mean, mode, standard angular deviation, resultant amplitude, vector magnitude, Rayleigh Z, and F-tests. Plot features: rose or unit circle diagrams; azimuth (360°) or lineament (180°) analysis, length or equal area scales.

Platform: Macintosh Price: \$150 US retail

Counter version 1.0

Description: Utilizes the computer keyboard as an expanded mechanical counter. Data is saved as tab-delimited spreadsheet text files, that can be opened by spreadsheets or statistics packages. Features an unlimited number of counts and records; 7 counting configurations; subtract errors.

Platform: Macintosh Price: \$100 US retail

CounterPC version 1.0

Description: Utilizes the computer keyboard as an expanded mechanical counter. Data is saved as tab-delimited spreadsheet text files, that can be opened by spreadsheets or statistics packages. Features an unlimited number of counts and records; subtract errors; audible tone indicates each count.

Platform: DOS Price: \$100 US retail

Watson U2 version 1.0

Watson's two sample U² statistic provides a criteria to test whether 2 sample differ significantly from each other. The test is robust. Data should be two independent random

samples of circular observations drawn from populations with a continuous distribution.

Platform: Macintosh Price: \$55 US retail

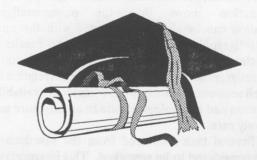
Measure version 1.0

Measure uses the mouse cursor to measure any image displayed on the computer screen. Any scale of measurement may be defined. Set a point of origin and the measurement window continuously displays the distance to the current cursor location in the specified units. Vertical and horizontal scales (rulers) may be displayed for any defined scale and unit of measurement. The custom scales may be copied from Measure and pasted into your Image or diagram document.

Platform: Macintosh Price: \$55 US retail

Pierre A. Zippi, PAZ Graphics, 18640 Roads End Circle, Eagle River, Alaska 99577 (907) 696-5702

THESIS ABSTRACTS



A PALYNOSTRATIGRAPHIC CLASSIFICATION OF THE WESTPHALIAN OF THE SOUTHERN NORTH SEA CARBONIFEROUS BASIN

DUNCAN McLEAN

EXTENDED SUMMARY

Based upon the examination of the palynostratigraphy of 28 well sections and 6 multi-well studies, the Westphalian sequences in the Southern North Sea Carboniferous Basin are divide into 7 biozones and 12 sub-biozones. These are related, via the known regional onshore northwest

European palynostratigraphy, to the chronostratigraphic units of the Westphalian.

In order to calibrate the palynostratigraphic classification with the standard chronostratigraphy, 3 well sections from which independent macropalaeontological control is available were analyzed in detail. These wells are located in the Murdoch Gas Field in Block 44/22 in the Silver Pit area of the southern North Sea and penetrate early Westphalian (Langsettian and Duchmantian) fluviodeltaic sediments. A major reservoir unit (the Murdoch reservoir sandstone) is present, with distinctive high-gamma claystones lying above and below it. Interpretation of these wells in terms of the established classification indicates that the horizon of the Vanderbeckei Marine Band (Landsettian- Duckmantian boundary) immediately beneath the Murdoch reservoir sandstone. This is corroborated by the presence of a sparse but diagnostic macrofauna in the claystones beneath the reservoir sandstones. Taxa recorded belong to the Brachioposa: Spirifer pennystonensis, Spirifer sp., Productus sp., Lingula mytilloides, Lingula sp. and Levipustula sp. (=?L. piscariae). Fragments of crinoid ossicles were also recovered. Despite the absence of diagnostic goniatites the fauna is taken to indicate the presence of the Vanderbeckei Marine Band as S. pennystonensis is stratigraphically restricted to this horizon onshore. The high-gamma claystones above the reservoir sandstone contain the nonmarine bivalve Anthracosia ovum, and serve to highlight the potential pitfalls in identifying marine bands in Carboniferous sequences based upon electric-log evidence alone.

The presence of a productoid fauna indicative of the Vanderbeckei Marine Band at the horizon predicted by the zonation shows that the palynostratigraphic classification can be directly calibrated with the onshore chronostratigraphic stage boundaries. The results show that the classification can be used as a predictive model for palynostratigraphic to chronostratigraphic correlation in offshore well sections. However, the coincident availability of macrofaunas and palynological data in an off-shore section is relatively rare.

Several taxa recovered from the Murdoch Field wells are considered to be reworked. This interpretation is based upon the basis of anomalous spore (or acritarch) colour and/or the recognition of distinctive morphographic types which are known to occur only in strata of different ages. Another indication is the recognition of marine palynomorphs (in this case acritarchs) in non-marine sediments. Taxa which are considered to be reworked indicate that there are two principal ages of reworked material: Lower Palaeozoic (mainly Ordovician - Silurian) and Visean to mid Namurian; with less well represented Cambrian and possible Devonaian - Tournaisian ages. Mapping of the pre-Permian subcrop in the southern North Sea indicates the presence of extensive Devonian to Namurian sediments around the margins of the Westphalian depositional centre and so the provenance of reworked Devonian - Carboniferous palynomorphs is likely to be around the basin margins. The provenance of the Lower Palaeozoic reworking is more problematic. Seismic mapping indicates that there may be isolated subcrops of Lower Palaeozoic strata penetrating the Devonian cover on the Mid North sea High. Other possible source areas are in Scandinavian or, alternatively, the material may have undergone several cycles of erosion and redeposition, having been first reworked in to Visean - Namurian (or Devonian?) sediments and subsequently reworked (along with Upper Palaeozoic palynomorphs) into the West phalian sediments.

During taxonomic analysis of the palynological assemblages from the Murdoch Field wells one undescribed genus and eighteen undescribed species of miospore were recognised. These are, as yet, ineffectively published.

Thanks are given to Conoco (UK) Ltd. for provision of access to off-shore well material and to the University of Sheffield Industrial Palynology Unit for provision of access to biostratigraphic data. Due to the confidential nature of much of the data used in this study the thesis will remain unavailable for public inspection for five years.

Duncan McLean
Industrial Palynology Unit
University of Sheffield
Mappin Street
Sheffield S1 3JD, England

LATE QUATERNARY MARINE PALYNOLOGY RECORDS AS INDICATORS OF PALEOCLIMATIC AND

PALEOHYDROLOGICAL ENVIRONMENTS OF THE EASTERN EQUATORIAL ATLANTIC.

Fabienne MARRET

ABSTRACT

Palynological analyses (dinocysts, pollen and spores) of surface and Late Quaternary sediments from the Eastern Equatorial Atlantic provide continuous paleoclimatic and paleohydrological information for the last 140 ky. Recent distribution of dinocysts in the Gulf of Guinea has been linked with environmental parameters (sea-surface temperature, salinity, primary production and water-depth). Late Quaternary dinocyst assemblages, as observed in two marine cores located on both sides of the present oceanic upwelling, show that during glacial periods (isotope stages 6, 4 and 2) the Eastern Equatorial Atlantic was characterized by lower sea-surface temperatures than the present ones. The eastern part of the Gulf of Guinea displayed lower temperatures as well as a lower seasonality than those of the western part of the Gulf of Guinea. Two mechanisms of cooling occurred in the Gulf of Guinea: 1)

a strengthened oceanic upwelling and 2) an input of cool surface waters brought by the Benguela Current and resulting from the migration of the Subtropical Convergence toward the equator and the intensification of superficial circulation. In contrast, sea-surface temperatures and circulation patterns at the end of the Eemian (isotope sub-stage 53) are comparable to the present ones.

Primary production variability, reflected by dinocyst concentrations, is related to oceanic upwelling variability. Periods of high productivity (stages 6, 4 and 2) are concomitant of periods of strenghthened atmospheric circulation, as shown by pollen and spores spectra and concentrations. These glacial periods are also characterized by a migration of the oceanic upwelling toward the equator, except during Stage 2 during which the oceanic upwelling was more developed in the western part of the Gulf of Guinea than in the eastern part. At the same time, a rainfall deficit was identified on the continent, as a consequence of decreasing sea-surface temperatures and reduction of the monsoon area. However, pollen spectra show that 1) the rain forest persisted during the last 140 ka and 2) the afromountain flora probably extended towards mid and low lands. This situation was also observed during the last Interglacial (Stage 5).

Kay-words: Eastern Equatorial Atlantic - Oceanic upwelling - Late Quaternary - Palaeoclimates - Palaeohydrology - Marine palynology -

Fabienne MARRET
Department of Geology and Oceanography
University of Bordeaux I
Avenue des Facultes
F-33405 Talence cedex, France.

DINOFLAGELLATE RESPONSE TO SEA LEVEL CHANGE IN THE CRETACEOUS WESTERN INTERIOR

Huan Li

Abstract

Detailed palynological analysis of depositional environments in carbonaceous shales and marlstones in the Cenomanian-Turonian (C-T) interval of the Western Interior Cretaceous Seaway indicates that (1) dinoflagellate species diversity, (2) ratio of *Spiniferites* to *Cyclonephelium* (S/C ratio) and (3) depositional organic facies are collectively useful for distinguishing cycles of marine transgression and regression. The increase in number of dinoflagellate species and of the S/C ratio within a matrix of abundant amorphous debris is interpreted to have

resulted from the expansion of an epeiric seaway. The marked drop in species diversity in the interval of mixed amorphous debris and detrital inertinite adjacent the Sciponoceras-Neocardioceras zonal boundary and prior to or at the C-T boundary indicates two short periods of shoreline progradation. The S/C ratio increases in the offshore direction as well as in the transgressive intervals. The largest number of species occurs in the lower part of the transgressive intervals, and not in peak transgression. The successive decrease in species diversity from the early stage to late stage within the transgressive interval and into the next highstand interval is the result of shoreline progradation. The downlap surface (maximum starvation surface) which delimits the boundary between the transgressive and highstand intervals may be indicated by an inflection in the trend of decreasing species diversity. The position of the inflection point within the C-T transgressive sequence shows the same trend as the position of the condensed interval that shifts higher in the offshore direction.

The preservation of dinocysts in sediments is highly variable and closely corresponds to lithology, with best in calcareous shales and worst in limestones and marlstones. The concentration of dinocysts in the C-T sediments decreases semi-logarithmically with increasing percentages of carbonate fraction. The organic matter deposited in the C-T sediments is mostly marine amorphous fecal debris and there is little landplant detritus even within the interval of progradation. The amount of terrigenous inputs from the western highland may not be as large as other studies showed. The bottom condition in the coastal and nearshore areas may have been oxygenated or sub-oxygenated during transportation and deposition, providing the potential for oxidation and degradation of landplant material.

This dissertation was submitted to the Faculty in Earth and Environmental Sciences of the Graduate School of the City University of New York in partial fulfilment of the requirement for the degree of Doctor of Philosophy, 1994. Adviser: Professor Daniel Habib

Huan Li
Department of Geology
Queens College
65-30 Kissena Blvd.
Flushing, New York 11367

THE LITHOSTRATIGRAPHY, PALYNOLOGY AND SEQUENCE STRATIGRAPHY OF THE PEBBLE POINT FORMATION

By KAREN KEATING

A thesis submitted for Bachelor of Science with Honours in

Geology, at La Trobe University Bundoora, Victoria, Australia. October, 1993.

ABSTRACT

The lithology, distribution and the sequence stratigraphic position of the Pebble Point Formation is analysed, with eight stratigraphic sections described from the coastal outcrops between Point Margaret and The Gables. Three members and a reference sectin for the Pebble Point Formation are defined.

The palynology of the formation is studied, and over 80 spore-pollen species are recorded, with Dilwynites spp., Proteacidites spp., and Tricolporites taxa being the most abundant species present. Four species are described, two of which are new, Basopollis otwayensis n.sp and Anacolosidites crescentis n.sp. Two dinoflagellate assemblages are recognized which can be characterized by their key species, Eisenackia crassitabulata and Sengalinium dilwyneense. The age of the formation is reviewed and based on palynological and palaeontological evidence is Upper Paleocene (57-54 Ma) in age.

Biostratigraphic correlation of the Pebble Point Formation with spore-pollen assemblages from the Gippsland and Bass Basins revealed that several key sporepollen species have extended ranges in the Otway Basin compared to the other basins and the top of the formation represents a transitional zone between the Upper and Lower L. balmet Zones.

The affinities of the fossil spores and pollen indicates their origin from a cool temperature rainforest with possibly heath type vegetation along the shoreline.

The Pebble Point Formation was deposited in a marine environment during an overall sea level transgression. A sequence stratigraphic interpretation suggests a correlation to the TA.2 cycle of the Cainozoic Cycle Chart (Hag et al. 1987).

AASP STUDENT **SCHOLARSHIPS**

The American Association of Stratigraphic Palynologists is pleased to announce its program of Student Scholarships to support studies in palynology. Currently, two such scholarships for \$300 (US) each may be awarded annually. Ordinarily the scholarships will be awarded to graduate students, but advanced undergraduate students may also

Basis of Awards - The qualification of the student, the

originality and imagination evident in the proposed project, and the likelihood of significant contribution to the science of palynology are factors that will be weighed in selection of award winners.

Please note that because the January AASP NEWSLETTER suffered delays in mailing, the Scholarship deadline was extended. All applications received before May 3, 1994 have been accepted. Winners will be announced May 31, 1994.

PALYNOLOGY

IN



THE NEWS

[This article by Prof. Vaughn Bryant from Texas A & M University is an example of Good News that our science needs to produce. It was first published in 1993 in the newsletter of the Wild and Useful Plants of Texas Society.]

BILLIONS AND BILLIONS

POLLEN AND SPORES IN THE SKIES OF TEXAS

by Vaughn Bryant

Most Texans don't realize that the same material that makes some sneeze and others miserable is also one of nature's most valuable products. Palynology is the technical term for the study of pollen and spores, and there are fewer than 5,000 palynologists worldwide.

Today a group of Texas palynologists is busy helping geologists locate new oil and gas deposits by studying the fossil pollen and spore record. Others work with climatologists helping them reconstruct and understand the cyclic patterns of Texas' environments during the last 30,000 years. Still other palynologists are working with archaeologists to unlock the secrets of what prehistoric Texas Indians ate, how healthy they might have been, and how those earliest Texans gathered and prepared their foods thousands of years ago. Some palynologists are forensic specialists who are aiding Texas law enforcement agencies in finding and prosecuting criminals by using modern and fossil pollen as evidence to associate a person with the scene of a crime or to trace the origin and transportation routes of illegal drug shipments. Palynologists working with agriculturalists are helping beekeepers identify the floral sources used to produce Texas honeys, while others are searching for ways to eradicate agricultural insect pests such as the corn earworm and cotton boll weevil that ruin millions of dollars worth of Texas corn and cotton crops each year. Palynologists are able to do this because both of these insects rely on pollen as one of their primary food sources.

In technical terms, microscopic pollen grains are defined as the "multinucleate gametophytes" of flowering plants. In simple terms, they carry the male genetic materials (sperm) needed for plant reproduction. Spores, on the other hand, are produced by nonvascular plants such as algae, fungi, mosses, and ferns. Spores can be either male or female, or both types of genetic material can be contained in a single spore. After spores are dispersed by the wind, they develop into tiny, free-living, gamete-producing plants called gametophytes. Later, these gametes combine and form a new spore-producing plant, called the sporophyte.

Spores and pollen are similar in size, content, and chemical composition. Both are produced in vast numbers, both can be carried long distances on air currents, and both have very durable cell walls that can remain preserved in sediments for millions (or even billions) of years. The oldest fossil evidence of life on earth is spores that have been recovered from sediments that are more than two billion years old.

As indicated earlier, there are many applications of pollen data. However, for this article I want to focus on an area that is of the most concern to many of us, especially those who suffer from hay fever.

Each year thousands of Texans are immobilized by the crippling effects and allergic reactions caused by inhaling pollen and spores. It is estimated that during an average spring day in Texas, the pollen count reaches 500+ pollen grains and spores per cubic meter of air. On those days, a non-active individual who spends much of the time indoors, will inhale about 7,200 pollen grains during a 24hour period. If that same person were active and working out-of-doors, the amount of inhaled pollen would be many times larger than that amount. The reason this figure is so high is that a single blooming tree, like pine or oak, can produce and disperse between 5 and 10 billion airborne pollen grains within a few days. And, if you think that the figures for pollinating trees are astounding, and that they are the primary producers of airborne allergens, then consider the following statistics. In the moister regions of Texas hundreds of types of fungi grow, mature, and disperse their spores into the air. One example is the bracket fungus (Ganoderma applanatum), which can discharge 30 billion fungal spores every day beginning in

early May and not ending until the end of September. This means that just one plant of this fungus can discharge a total of 4,500,000,000,000 spores in one season. This is equivalent to one spore per dollar of the current national debt owed by the U.S. government.

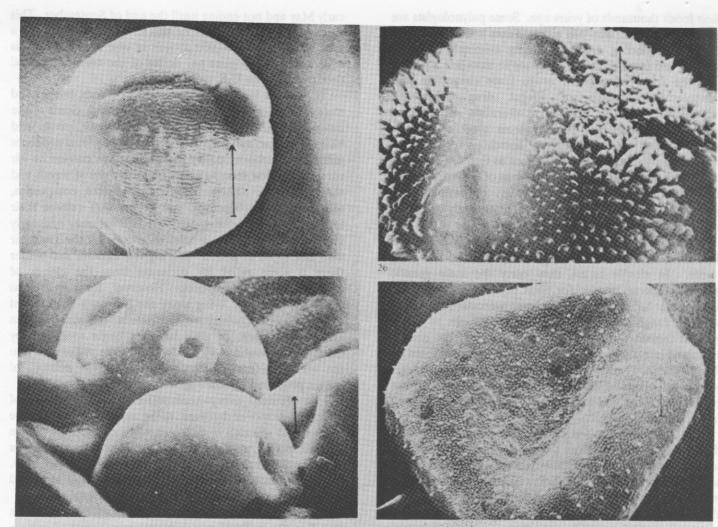
In the springtime thousands of weeds, bushes and trees cast billions of pollen grains to the wind. Some of the main offenders include ash, elm, pine, oak, pecan and hickory, poplar, and walnut. Each of these plants produces millions of airborne pollen grains that are carried on air currents. A few months later, other species of weeds and shrubs mature. These include the grasses, composites, sedges, cattails, goosefoot, and others that release their loads of pollen to the winds. By late summer and early fall, ragweed and other species of grasses fill the Texas air with new types of pollen. During the autumn and winter there is some relief for sufferers from the clouds of airborne pollen and spores. However, for some Texas residents, like those living along the Balcones Escarpment and in the Hill Country west of Austin, the winter pollen cycle is the worst of all. Junipers begin to bloom by October and continue to produce airborne pollen late into the winter. Worst of all, for some, are the millions of spores produced by some species of mold and mildew.

Humans everywhere suffer from the effects of pollen and spores because these microscopic cells are inhaled and are rich in different types of proteins. Once inhaled, pollen and spores rupture when they come in contact with our moist nose and lung membranes. Next, our body's natural defense system goes on full alert and treats the newly released proteins as foreign substances.

Part of our immune system consists of mast cells that line the walls of our respiratory system and release histamines and other compounds into our bloodstream as a defense. It is this immune response that causes our runny nose, congestion, itching, and sneezing.

So, the next time your eyes water and you sneeze because the hay fever season is upon us, try not to be too upset; and please don't curse the existence of the tiny pollen grains and spores that float on our air currents. As I mentioned earlier, without pollen and spores we couldn't find the oil and gas deposits in Texas that you burn in your car or use to heat your home in winter.

Without pollen we would not know the sequence of past climatic changes in Texas or be able to verify the origins of honey samples. Gone too would be our information about the diets of prehistoric Texans, and we would still be wondering about how Native Americans gathered and processed plant products into foods. Finally, our hope of finding a new way to eradicate insect pests such as the corn earworm and boll weevil would be slowed without our knowledge gained from pollen research. In short, Texas would not be a better place without pollen and spores in the air!!!



Four examples of minute pollens on the cloth identified by Dr Max Frei of Zürich.

[INTERNATIONAL CENTRE, TURIN]

[Editor's note: I love wandering through used book stores. I recently found a surprising article about the use of Palynology in an unusual setting. The book by Rex Morgan is called simply "Shroud Guide" (Runciman Press, 1983) and is the story of the Shroud of Turin which is regarded by many as the burial shroud of Jesus Christ. It is an unlikely subject for your editor, but the book fell open at my feet when I reached for another. It was meant to be! The article appears here exactly as written.]

MAX FREI - MASTER PALLINOLOGIST

Until his untimely death in January 1983, Dr. Max Frei of Zurich, Switzerland made an exceptional contribution to our knowledge of the Shroud. Having spent his life as head of the Scientific Service of the Criminal Police of Zurich, he was one of Europe's best known police investigators. Most of his work was based on the study of pollens which are universally existent.

He was present as an expert witness to the Turin Commission of investigation into the Shroud simply to testify as to the accuracy of photographic work being done. He was given permission to take samples of dust containing pollen from the surface of the cloth itself, then began identifying and analyzing them. Pollen is indestructible and provides a proof of the presence of any article in various parts of the world.

By 1976 he had identified a number of pollens from the Shroud which showed that it had been in Europe, Asia Minor and the Holy Land. He also discovered many that even he, with his vast knowledge, could not identify. In collaboration with Ian Wilson who had proposed where the Shroud had been historically, Frei visited parts of the world and then found examples of plants producing many of the pollens he could not previously identify. In the last report he made, late in 1981, he had identified 57 pollens from the cloth showing that it had been in the areas of the Dead Sea, Palestine, Constaninople, Anatolia, Lake Gennesareth, France and Italy. Some were extinct and Frei

was able to conclude that "the Shroud traveled from Palestine through Anatolia to Constaninople, France and Italy" thus confirming the historical evidence of its movements.

DONALD KENZIE CAMERON, JR

August 20, 1930 - February 2, 1994

A Memorial

Don Cameron graduated with a B.Sc. geology from McGill University in Montreal and an MS in paleontology from Indiana University. His entire career was with Chevron oil company, from 1954 until his retirement in 1992.

He joined the California Company in New Orleans, Louisiana as a foraminiferal paleontologist. After transferring to Jackson, Mississippi, in 1961, he spent four years as a development geologist, before returning to foraminiferal paleontology. In 1969, Don began a 12 year period with ARAMCO as a paleontologist, mainly in Dhahran, Saudi Arabia, with two years in Croydon, England. For six of those years he was Supervisor of Paleontology. His palynological experience began in Dhahran, working on Late Paleozoic spore assemblages.

Don returned to New Orleans from 1980 to 1985, where he was Supervisor of Palynology. At the time of the Chevron/Gulf merger, he was appointed Supervisor of Stratigraphic Services for Chevron Overseas Petroleum Inc., in San Ramon, California. At COPI, the Neogene of the Far East maintained his interest in palynology. Towards the end of this career, Don was instrumental in the design and staffing of laboratory facilities for handling palynology, nannofossils and foraminifera at the new Chevron Nigeria Ltd. compound at Lekki, Nigeria. The travelling involved in this project, and other COPI business, allowed Don to indulge the fondness for England that he had developed during his time with ARAMCO.

C.N. Denison COPI, San Ramon, CA.

SHORT COURSE SURVEY

Please take the time to fill in the survey on short courses put together by Martin Farley. It is attached to the back of the Newsletter. Your input will help the Education Committee determine needs of the membership.



Dr. Reed Wicander, Book Review Editor

REVIEWS

BOOK

Department of Geology Central Michigan University Mt. Pleasant, Michigan 48859

Terrestrial Ecosystems through Time: Evolutionary paleoecology of Terrestrial Plants and Animals.

Behrensmeyer, Anna K., John D. Damuth, William A. DiMichele, Richard Potts, Hans-Dieter Sues and Scott L. Wing (eds.). 1992, University of Chicago Press, 568p.

Paleontology can be approached from the geological or biological side and it makes a big difference which way you choose. Briefly, the geological need for paleontology is with biostratigraphy and facies interpretation (I call this, "paleontology in service to Geology"); far more interesting is the need in evolutionary biology for a record of the history of life on the Earth. Evolutionists can use the fossil record both to test theories based on neontological observation and to generate new hypotheses about the evolutionary process through analysis of the patters of fossil occurrences. Paleoecology is similar to paleontology in its relation to the biological and physical sciences, and for this it suffers as a discipline composed of two different views of the world.. But if there is a truly interdisciplinary field of scientific inquiry, it must be that view of paleoecology in which the relations between the biological and physical world define the field of interest. For those studying extant Earth systems, the geological record of former biological/physical interaction is the only test for long-term change. For an evolutionist, the reason for studying such relations backwards through time is the importance of the relationship between organism and environment in determining the outcome of Natural Selection. It is this latter purpose which is the general concern of Terrestrial Ecosystems through Time.

The more specific goal of this work is to "outline the material and conceptual basis" for the comparative study of terrestrial ecesystems over "the long periods of time over which evolution can happen." This is a rather ambitious undertaking, but the volume largely succeeds in this goal. The book is fundamentally divided into two parts: I would call them, "The Principles" and "The Manual," after Lyell's method of separating an historical review of Earth history into a separate volume. In Terrestrial Ecesystems, the first 200 pages provide the conceptual principles for the latter 350 page review of terrestrial biomes through time.

The introductory chapter constructs a definition of evolutionary paleoecology and sets out an agenda for its This is followed by an excellent chapter on taphonomy that reviews the gamut of depositional environments in which terrestrial plants and animal fossils are found. The characterization of terrestrial deposits now puts geology clearly in service to Biology -- in providing a descriptive context of depositional setting, we begin to form hypotheses about the physical habitats of former biomes. Chapters three and four discuss the easy in which former plant and animal communities can described in such a way as to allow comparisons between similar "objects" over evolutionarly long periods of time, i.e. long enough so that direct species to species (taxonomic) comparisons are not possible. The animal people call this, "taxon-free characterization." For plants, it is achieved either by using form follows function to infer adaptive response to physical conditions (=ecomorphic analysis), or by using sedimentological context, in combination with plant morphology, to describe ecological or community types. This follows what workers like Jablonski and Banbach have tried to do for the long-term comparison of benthic marine communities. In the description of animal community structure it is possible to infer something about trophic structure and estimate biomass. To a large extent, these are purely biotic factors, and, therefore, the description of plant communities provides a better interface with the physical features of habitat description such as temperature, rainfall, seasonality of climate, soils and drainage, etc.

Chapters six through eight summarize the current state of knowledge of the history of the terrestrial ecosystem through the Paleozoic, Mesozoic and Early Cenozoic, and Late Cenozoic intervals. This comprises the core of the book and is a major contribution to the study of Earth history in bringing together a huge amount of rather dispersed (in the bibliographic sense) information. The coverage is biased toward megafossil plants and vertebrates and this wealth of data tell us much about the characterization and change of the terrestrial ecological landscape. As a palynologist, I was struck by how little information derived specifically from palynology is

incorporated into this review. For the Late Cenozoic chapter (including the Qaternary), only about 4% of the references specifically concern palynology. In the Paleozoic chapter my rough palynology citation index dropped to just 2% of the 32 pages of citations. I mention these numbers not as a critique of a job well done but more in the way of surprise at the underutilization of palynological data in such a general work.

The palynological database should have great potential for the quantification of ecological parameters over long time periods - the numbers of elements per sample in palynological preparations is far more likely to be statistically significant than even the best macroscopic fossil data. Palynological data could be at the center of a book such as this which is concerned with the description of biomes and their change through time. Instead, palynology seems relegated to playing only a minor role in the world view of "paleoecology in service to Evolutionary Biology." I wonder why?

Paul K. Strother Weston Observatory of Boston College Department of Geology & Geophysics Weston, Massachusetts 02193-1340

COMING EVENTS

1994

May 16-18: G.A.C./M.A.C. Joint Annual Meeting. Waterloo, Ontario. Details: Alan V. Morgan, Department of Earth Sciences, University of Waterloo, Waterloo, Ontario. N2L 3Gl. Tel: (529) 885-1211, Ex. 3231, FAX: (519) 746-2543.

June 12-15: American Association of Petroleum Geologists Annual Meeting. Denver, Colorado. Details: AAPG Meetings, Box 979, Tulsa, Oklahoma 74101, USA. Tel: (918) 584-2555, FAX: (518) 584-0469.

September: 4th European Palaeobotanical-Palynological Congress. Heerlen, The Netherlands. Details: Dr. G.F.W. Herngreen, c/o Geological Survey, P.O. Box 157, 2000 AD, Haarlem, The Netherlands.

September 6-10: CIMP 1994 Conference "Stratotypes and Stages, Palynology, Palaeoenvironments and Stratigraphy". Sheffield, England. Details: Dr. D.W.Joffey, The University of Sheffield, Earth Sciences, Mappin Street, Sheffield S1 3JD, England. Tel: (0742) 768-555. FAX: (0742) 824-207.

October 24-27: Geological Society of America Coal Geology Division Symposium at GSA Annual Meeting. Seattle, Washington. Details: Dr. Thomas Demchuk, Amoco Production Company, PO Box 3092, Houston, Texas 77253, USA. Tel: (713) 366-2993, FAX: (713) 366-2404.



November 2-4: American Association of Stratigraphic Palynologists, Annual Meeting. College Station, Texas. Details: Prof. Vaughn M. Bryant, Jr., Texas A&M University, Department of Anthropology, College Station, Texas 77843-4352. Tel: (409) 845-9334/5242, Fax: (409) 845-4070.

November 15-17: Oklahoma Geological Survey, Workshop and Field Trip. Geology and Resources of the Eastern Frontal Belt, Ouachita Mountains, and Southeastern Arkoma Basin, Oklahoma. Poteau, Oklahoma. Details: Neil H. Suneson, Oklahoma Geological Survey, 100 E. Boyd St. Norman, Oklahoma 73019, USA. Tel: (405) 325-3031, FAX: (405) 325-7069.

1995

March 5-8: American Association of Petroleum Geologists Annual Meetings. Houston, Texas. Details: AAPG Meetings, Box 979, Tulsa, Oklahoma 74101, USA. Tel: (918) 584-2555, FAX: (918) 584-0469.

August 28-September 2: XIII International Congress on Carboniferous-Permian. Kraków, Poland. Details: Prof. dr. hab. Sonia Dybova-Jachowicz, Pañstwowy Instytut Geologiczny, Oddzial Górnoslaski, 1 Królowej Jadwigi, 41-200 Sosnowiec, Poland. Tel: 48 32, 66 20 36 (38), FAX: 48 32, 66 55 22.



October 10-14: 28th Annual Meeting of the American Association of Stratigraphic Palynologists. Ottawa, Ontario, Canada. Symposia, Technical Sessions, Posters, Field Trip. Details: Ms. Susan A. Jarzen, Canadian Museum of Nature, P.O. Box 3443, Station "D", Ottawa, Ontario, Canada

K1P 6P4, FAX: (613) 954-4724.

1996

June 22-29: 9th International Palynological Congress. Houston, Texas. Symposia, Technical Sessions, Posters, Field Trips. Details: Prof. Vaughn M. Bryant, Jr., Texas A & M University, College Station, Texas 77843-4352. Tel. (409) 845-5242. Fax: (409) 845-4070



Editor [old], Judith Lentin

FROM

THE

EDITOR

EDITORIAL

When I first took the job as EDITOR of the AASP NEWSLETTER I had great plans. The NEWSLETTER would expand into a truly international venue with letters and articles from our diverse membership around the world. It was a good plan. Unfortunately, few people from around the world can take time away from their daily activities to write articles, or even send interesting items they read which have been written by others. Even more unfortunately, the editor herself often found it difficult to find the time to really search for news items.

The search for news requires long distance telephone calls to beg help from friends, letters to solicit articles from friends abroad, and a constant eye for articles which could be used within the context of our NEWSLETTER. Past editors of the NEWSLETTER have experienced the same pressing problem of finding news. It is, after all, much easier to find pollen grains than stories about them. One former editor who has constantly and consistantly provided items for the NEWSLETTER is Prof. Vaughn Bryant of Texas A & M University.

Vaughn is another of the fantastic individuals who work to keep the AASP going. He is a former president of AASP, a former Editor of AASP (back in the days when one guy did it all) and now sits on the Board of Directors of the AASP Foundation. He is responsible for the

distribution of all AASP Foundation Publications. In addition, he is the Chairman of the organizing committee for this year's annual meeting. Vaughn is always "there" for the organization and for his friends. He is also a great golf partner. I want to personally and publically thank him for his unflagging dedication to AASP and support given to the NEWSLETTER editor.

This is my last chance on the soap box as editor, my last NEWSLETTER. Leaving the job of editor is a mixed blessing. I will savour the free time, but I will miss the chance to directly participate in the organization. From the point of view of a "has been" (has been Director at Large, has been President, and now, has been Newsletter Editor), serving the membership of the AASP has been really a wonderful experience. Participating in the internal machinations of the Board of Directors allows one to meet and work with some of the best people in our business. I had the chance to work with, eat with, drink with and enjoy the company of many great palynologists. It is interesting to discover just how "real" and genuinely kind the people behind the great names in our science are.

Every member of the AASP has the right to participate in the organization. Yet there are always more jobs than there are people willing to do them. It is the first job of the President of the AASP to find individuals to chair the many committees which contribute to the workings of the AASP. Just in case you are one of those who sleep through the business meeting after the annual business lunch, I will try to remember the various committees which always need members:

Nominating Committee **Ballot Committee** Archives Committee Awards Committee Public Relations Committee Local Societies Committee Data Exchange Committee **Bylaws Committee** Center for Excellance Funding Committee Financial Development Committee Education/Workshop Committee AGI Representative IFPS Representative US INQUA Representative Type Collection Committee Annual Meeting Organizing Committee

There are other Committees which the President creates when the need arises. During my time on the Board of Directors we had a committee for the PC-Based Catalog System Committee which successfully integrated the needs of palynologists into what became the PALCAT System. We had a very hard working committee to help with the selection of the Center for Excellence in Palynology. We also had a Committee to create a "Silver Jubilee Volume". This turned into a monster project, lasting long past the 25th anniversary of the AASP. Jan

Jansonius and Colin McGregor are now in the final editing stages of the most comprehensive textbook on palynology ever attempted. The monster has grown into two volumes, the first of which should appear soon.

As you can see, there are a huge number of jobs to do. In my opinion, we need much more input from outside the USA and Canada. But, the AASP is run by volunteers. Many committee chairmen (and women) and members "volunteer" with their arms firmly twisted behind their backs by friends. Volunteers are an endangered species.

About 20 years ago, when Richard Hedlund was the editor of the NEWSLETTER, the AASP had a system of "correspondents" all around the world. In those days, the membership didn't include much of the world. Five years later the "correspondents" no longer had by-lines in the NEWSLETTER and the concept seems to have gotten lost. Now that we have membership on every continent it seems to me that volunteer correspondents could greatly enhance the quality of the NEWSLETTER and provide a more wide-ranging subject matter. I am sure Martin Head, the new editor of the AASP NEWSLETTER would be delighted to hear from anyone who would like to contribute to the NEWSLETTER on a quarterly basis.

Speaking of Martin Head, I would like to introduce our new editor. Martin is a Research Associate at the University of Toronto. His name is very familiar to those palynologists who study Neogene dinocysts. He has published numerous scientific papers on the subject and is the coeditor (with John Wrenn) of a compilation of papers on Neogene-Recent dinoflagellates published by the AASP Foundation. Martin has also organized three workshops on Neogene



Newsletter Editor [new], Martin Head

Dinoflagellates, the first at the AASP meeting in New York (1986), the second at Dino-4 in 1989 and the most recent at Dino-5 in 1993. In addition to writing papers and presenting Workshops, Martin also teaches in-house courses for oil companies.

It may seem that he will have little time to devote to the job of editor of the AASP NEWSLETTER but I am completely convinced that he will do a far better job than I have and look forward to the pleasure of reading an AASP NEWSLETTER that I have not written.

Good Luck, Martin!

Short Course Survey

The A.A.S.P. short course/education committee is interested in receiving input from the membership on possible short courses. Please fill out the following survey, fold, and mail to Martin B. Farley, Exxon Production Research Co., P.O. Box 2189, Houston, Texas 77252. Alternatively, fax to (713) 965-7279.

To design short courses to best suit the needs of the membership, we would appreciate responses to the following:

1) Should short courses be held in conjunction with an Annual Meeting of A.A.S.P.?

In conjunction with some other scientific meeting? What other meeting would be appropriate and why?

As a free-standing course? If yes, are there particular locations that might be best?

- 2) What range of length and cost is reasonable for a short course?
- 3) What short courses would be attractive (and who might organize them)?

4) Comments: