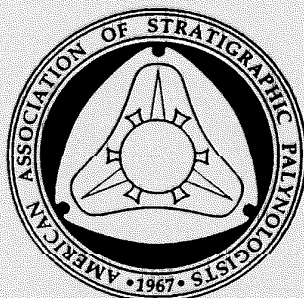


A.A.S.P. NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists Inc.

December, 1999
Volume 32, Number 4

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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 Gucht (awarded 1996)

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 Board of Directors Award recipient

Robert T. Clarke (awarded 1994)

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)
John H. Wrenn (awarded 1998)

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

Student Scholarships to support studies in palynology. Currently up to two scholarships of \$1000 (U.S.) each annually. The qualification of the student, the originality and imagination evident in the proposed project, and the likelihood of significant contribution to the science of palynology are factors that will be weighed in selection of award winners. Previous winners of this award are eligible only if they are pursuing a different degree than the one they were pursuing when they received the previous award. AASP Scholarships are available to all students of palynology in all countries. Students need not be AASP members.

Application forms appear in the January issue of the AASP Newsletter. Chairman of the AASP Awards Committee is Owen K. Davis (palynolo@geo.arizona.edu).

AASP Membership Application - Membership in AASP is for the calendar year. Dues are \$30.00 U.S. per year for individuals and \$40.00 U.S. per year for institutional members. All members of AASP receive *Palynology* which is published annually, the AASP Newsletter, which is mailed out four times a year, and an annual Membership Directory.

Dues may be paid up to three years in advance. Overseas AASP Members (Individual or Institutional) who would like to receive their AASP Newsletter and *Palynology* by air mail, rather than book rate surface mail, need to include the applicable postage surcharge (noted below). Credit card users must pay a \$1.00 U.S. surcharge per transaction.

Air mail surcharge (increased for 1995 and beyond): Europe & South America: \$12.00 U.S. per year. Africa, Asia & Australia: \$15.00 U.S. per year. Credit card surcharge \$1.00 per transaction.



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Marloes Kloosterboer van Hoeve, Editor

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The AASP Newsletter is published four times annually. Members are encouraged to submit articles, "letters to the editor", technical notes, meetings reports, information about "members in the news", new websites and information about job openings in the industry. Every effort will be made to publish all information received from our membership. Contributions which include photographs should be submitted a week before the deadline. Deadlines for next issues of the newsletter, are February 1, 2000 and May 1, 2000. 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.

PRESIDENTIAL ADDRESS by Fred Rich

As I considered what all might be said in my Presidential address, the inevitable list of possible approaches entered my mind. I could offer a witty presentation, like a stand-up comedian, but that is not my style, and it would likely have failed. I could also stand and offer a "state of the science" message that would be filled, possibly, with hand-wringing and admonitions that we need to build our membership base, or I could make bold statements about our bright future, and offer to charge into the darkness as though I were imbued with some kind of prescience that would leave me cast in the image of a seer. This might be particularly appropriate in view of the unceasing flow of claptrap that accompanies our forthcoming entry into the "new millennium". I could even offer some Y2K wisdom so as to fit into the common mold.

Instead of these colorful, silly, or baleful options, let me use my own history as a developing palynologist (and I use the active verb purposefully) as an illustration of how I think we should proceed with our science, and our organization.

Twenty-six years ago as a Junior at the University of Wisconsin I remember talking with a fellow student who was taking micropaleontology with me. She spoke of Dr. Maher (Lou Maher) from whom she was taking a class called palynology. As I sat there sorting through conodont concentrates, she explained how they looked at pollen grains, and expressed amazement at how spiny some of them were, and how she wasn't at all surprised that these spikey things should make us sneeze. I remember very distinctly sitting there and thinking to myself, "Why on earth would anyone want to do that?" I returned to my separatory funnels brimming with bromoform, and later on spent time taking SEM photomicrographs of chitinozoa from the Maquoketa Shale, and it never entered my mind to look at pollen grains.

The year of my epiphany was not long in coming, however, as I left Wisconsin for one brief by marvelous year at Southern Illinois University. There I met a fellow named Art Cohen who taught things akin to paleobotany, and paleobotany was what I thought I wanted to work in. As a youth I came to know a fellow named Ken Van De Bogert who was metal lather by trade, but who also knew where and how to collect Mazon Creek fern fossils. I was interested in both geology and botany, and the fossil plants promised to allow me to work in both sciences. At any rate, I took a class in palynology from Art because he suggested that it might be of value to me.

I gave it a try, and was quickly persuaded that all the conodonts, chitinozoa, and fern leaf compressions in the world couldn't hold a candle to a slide strewn with pollen

grains. I was immediately captivated by the potential power of palynology. I'm sure I was predisposed to succumbing to its influence because I never could make up my mind as to whether I was a geologist or a botanist, so I cheerfully became both that year at SIU.

After leaving SIU, and after having spent a marvelous summer in the Okefenokee Swamp and the Everglades, during which time I met a wiry, persuasive, and energetic gentleman named Bill Spackman, I entered Penn State University. Bill was to offer me unprecedented opportunities for research and success. It was at Penn State that I met another person, however, who was to put a dramatic new spin on my life. He had a bushy moustache, was bald, and, as I recall, wore rather bold plaid trousers when I first met him. He spoke to me as though I was an old friend, though I didn't even know his name. I shortly learned that this surprising fellow was the fabled Al Traverse that I had learned about at SIU. Al was to become one of my closest and most respected professorial friends, and he completed the job of shaping me as a palynologist.

I relate this sequence of events to illustrate one important point, and that is that palynologists do not come into being by decree; they are not born to the trade, but they are taught by their own masters how to be what they become. It is a slow process, partly because we cannot easily see that which we study, so our subject is very unlike structural geology, plant morphology, or archeology. Furthermore, palynology requires synthesis of information from seemingly disparate sources, and so it lacks the benefits conferred by being "an obvious choice", "clearly visible", and "unmistakable".

The need to follow through with what amounts to an apprenticeship, and the requirement that a student palynologist be capable of working in more than one discipline are two of the things that give our science strength, credibility, and distinction, and we should take great pride in that fact. Let me consider these two features separately for illustrative purposes: Considering the apprenticeship portion of the statement first, the necessity for developing a close working relationship with your teacher probably follows from the simple fact that you have to spend long hours sitting elbow-to-elbow at one microscope. At least, that's how it was with me. Art Cohen and Al Traverse both remained patiently with me while I learned to distinguish one microscopic particle from another. The field work can create strong bonds as well, and I have indelible memories of Bill Spackman and I pulling a john boat through hundreds of yards of waterlily-filled marshland where a boat trail in the Okefenokee Swamp had been abandoned. Trudging along, dragging our craft as though we were slaves of the Volga River or the Erie Canal, produced a humbling and leveling affect that I remember to this very moment.

The second part of my statement that deals with the interdisciplinary nature of our science may point to its greatest source of strength. This is made clear to me each time I assemble and distribute another issue of PALYNOS, the newsletter of the International Federation of Palynological Societies. The news items come from all over the globe, and the mix of topics, ranging from stratigraphy, to taxonomy, ethology, and forensic science leaves me

marveling at all the things that palynologists do. As a member of the AASP Student Scholarship Committee I also have the annual opportunity to read and evaluate proposed research topics as they are submitted by palynology students from all over the world. This year's award recipients exemplify the diversity that I speak of - Bob Booth is studying the ecological significance of thecamoebans on the Keweenaw Peninsula, Caroline Davis is working on a paleoclimatic history of the Middle East, as deduced from pollen studies of playas on the Jordan Plateau, and Lindsey Gillson is studying the effects of elephant grazing habits on vegetation changes in eastern Africa. Ultimately her work will come to bear on elephant conservation policy. The eating behavior of elephants, the ancient climate history of the Middle East, and the habitat preferences of little house-building amoebae can all be better understood by using the skills of a palynologist. We are part of a wonderful science.

In view of the strengths that I think we clearly enjoy, I submit that there is little that we need to do to our science to change it or improve it. Neither do we need to change ourselves to ensure easy survival through the coming years. The science itself is strong and clearly is capable of working as an efficient and effective tool to solve a number of different and significant problems; it needs no tinkering. Similarly, the practitioners and teachers of palynology should not change the time-honored way of teaching master to apprentice. This means that our numbers will remain small, and we will never be a "Fortune Five-Hundred" science because we generally lack the means, and the desire to push hordes of students through our programs. In spite of the fact that the oil companies continue with their mergers, and stratigraphic palynologists continue to be laid off, and in spite of the fact that academic budgets have been reduced, and teaching positions have been lost through attrition, we should not resort to the hand-wringing that I alluded to earlier. When the situation looks unfavorable, look at it differently. This is a paraphrase of the advice that appears in a book by one of my favorite mystery writers, Tony Hillerman. If things don't look quite right to you, view them from a different perspective. change you vantage point and perhaps a solution will appear that wasn't obvious.

We need to view palynology from the fresh perspective of a college Junior who doesn't know what the word means, but who is able to be persuaded. We need to speak to our colleagues in other disciplines in order to show them that this is a science that meets many needs. We need to make that fact known before the larger audience of scientists that exists out there, and that doesn't know how useful and interesting palynologists are.

Now, I say this with full knowledge of the fact that we scheduled this meeting in direct conflict with the annual meeting of the Geological Society of America, ostensibly the largest and most eclectic group of earth scientists in North America. In fact, one of our award recipients, Aureal Cross, had to fly from the GSA meeting in Denver in order to attend this meeting in Savannah. I am equally aware, however, that we will hold next year's AASP meeting in conjunction with GSA in Reno. We are a constituent society of GSA, just as we are a member society of the American Geological

Institute. By combining our own meeting with the much, much larger GSA convention, we will have the opportunity to 1) disappear from sight (something I fervently hope we won't do), or 2) elevate ourselves to a new level of visibility. Let us look at ourselves differently, and with the fresh view that we are not only stratigraphers, we are not only oil company employees or academicians who do quaint and curious things, but we are problem solvers. At the GSA in Reno we will have the opportunity to assert our similarities and differences before a large assembly of earth scientists. Those aspects of our science that nicely complement biostratigraphy, paleoclimatology, neotectonics, geochronology, paleobotany, and what-have-you should be clearly show-cased. By seeing and presenting ourselves as a problem-solving "Everyman" we will, I believe, establish ourselves and our science as a remarkable team that we ourselves have never seen in quite the right light.

AASP SECRETARY-TREASURER'S REPORT by Thomas D. Demchuk

Following is a brief summary of the Secretary-Treasurer's Report presented to the general membership at the recent meeting in Savannah, GA.

Secretary's Report: As of October 20, 1999, AASP had a total membership of 771 members. This is down 17 members from the same time last year, but an increase of 21 members since the 1999 mid-year meeting held in April. This membership total includes 648 individual members, 9 retired status members, and 114 institutional members. Of the total 771 members, 56% are members outside North America making AASP a truly international association. Of utmost importance, 188 members on the membership list have not paid their 1997 or 1998 membership dues. 70 of these members, not paid since 1997 are in jeopardy of being removed from the mailing list early in the new year. Please check the mailing label and get your membership up-to-date! A listing of members to be purged from the membership will be printed in the first newsletter issue of 2000. On a more pleasant note, many new members to the association are students.

Elsewhere in this newsletter, you will find notification of changes to the AASP bylaws. Many of the changes are simply to bring the workings of the association into the year 2000. Please take time to read them and cast your vote in the spring.

Treasurer's Report: The AASP financial ledger is solid, boasting total assets of \$88,547. Currently, the AASP financial books carry three Certificates of Deposit totaling approximately \$63,000 and a general checking account from which everyday transactions occur. This general account currently stands at approximately \$15,500 having settled all outstanding accounts with AASP Foundation publications, and membership dues to AGI and IFPS. The final account is the AASP Student Scholarship Account which this year received an anonymous donation, plus proceeds from the sale of Contribution Series #34. The Scholarship Account now

stands at approximately \$10,000. Currently, membership renewals are arriving which means additional income to the general account, in hopes of a financially sound year 2000.

It's been a pleasure serving AASP over the past year, and I look forward to 2000 and the joint meeting with the Geological Society of America in Reno, Nevada. Thank you!!

PROPOSED CHANGES TO THE AASP BYLAWS

To the General AASP Membership: Listed below, you will find a number of proposed changes to the AASP Bylaws. These changes have been discussed at length by the Board of Directors, and were presented to the membership at the recent meeting in Savannah, GA. Please consider this listing here in the newsletter, official notification of these changes before a vote in the springtime; a ballot for these changes will be sent out with the general election ballot. In the listing of the proposed changes presented below, the new wording will be highlighted in italics and underlined.

Proposed Change #1.

These changes reflect the addition of the "Retired Members" as a class of member within AASP. The official wording of the articles will be:

Article 2.01 Membership shall be open to all persons and organizations interested in the science of palynology and the corporation shall have four classes of members. The designation of such classes and the qualifications and rights of the members of such classes shall be as follows:

Article 2.01.d *Retired Members - 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.*

Proposed Change #2.

This change reflects the addition of the Past-President as an official member of the AASP Board of Directors. This Article deals with the Board of Directors, Number and Tenure. The official wording of the article will be:

Article 4.02 The number of Directors shall be nine. Each Director shall hold office until his or her successor shall have been elected and until the next annual meeting of the members. The newly constituted Board of Directors shall take office at the end of the annual business meeting provided for in Article 3.01.

Proposed Change #3.

This change includes the addition of the definition of "resolution", for clarification of the article. The official wording of the article will be:

Article 4.03 A regular annual meeting of the Board of Directors shall be held without other notice than this by-law, during, and at the same place, as the annual meeting of members. The Board of Directors may provide by resolution *(a formal expression of opinion, will or intent, voted on by an official body or assembled group)* the time and place, either within or without the State of Texas, for holding of

additional regular meetings of the Board without other notice than such resolution. The mid-year meeting of the Board of Directors, elsewhere mentioned in these by-laws, is specifically an additional regular meeting of the Board of Directors.

Proposed Change #4.

These changes reflect the addition of the Past-President as an official member of the AASP Board of Directors. This article deals with the Officers, Election and Term of Office and Duties. The official wording of these articles will be:

Article 5.01 The officers of the corporation shall be a President, President-Elect, Past-President, Secretary-Treasurer, Managing Editor, and four (4) Directors-at-Large, all nine (9) of whom shall be members of and constitute the Board of Directors.

Article 5.02 The officers of the corporation shall be appointed annually by the Board of Directors after the annual election of the Board of Directors, and after the newly constituted Board of Directors shall have taken office at the end of the annual business meeting. Further, the Board of Directors shall appoint officers to each office of the corporation as determined by the vote of the membership. Such vote by the membership shall be held in conjunction with the annual election of the Board of Directors. Except as stated in the Article 5.03, each officer shall hold office until his or her successor shall have been duly elected. The President, President-Elect, Past-President, and the Directors-at-Large shall not succeed themselves. The Secretary-Treasurer and Managing Editor may succeed themselves in office.

Article 5.06 The Past-President shall perform such duties as from time to time assigned to him/her by the President or Board of Directors. The President will succeed to the office of Past-President.

(The addition of the Duties of the Past-President as Article 5.06 results in renumbering the subsequent items within this article)

Proposed Change #5

This change deals with the amount of money which may be disbursed by the Secretary-Treasurer without approval of the Board. The wording of this article will now be:

Article 5.07 The Secretary-Treasurer shall keep corporate records in one of more books provided for that purpose; give all notices in accordance with the provisions of these by-laws or as required by law; be custodian of the corporate records; keep current lists of the membership of all committees; keep a register of the post office address of each member which shall be furnished to the Secretary-Treasurer by each member; and, in general, perform all duties incident to the office of Secretary-Treasurer and such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors. In addition, he or she shall have charge and custody of and be responsible for all funds of the corporation, receive and give receipts for all monies due and payable to the corporation from any source whatsoever, and deposit all such monies in the name of the corporation in such banks, trust companies, or other depositories as shall be selected in accordance with the provisions of Article 8 of these by-laws. He or she may disburse funds in payment of normal, recurring obligations of the corporation. For non-

recurring obligations, he or she may also disburse, on his or her own authority, amounts not in excess of two thousand dollars (\$2000.00) in payment for items for which the corporation may become obligated; amounts in excess of two thousand dollars (\$2000.00) shall be disbursed by him or her only with the approval of the majority of the Board of Directors. He or she shall report on the corporation's financial and membership status at the Annual Business Meeting, to the Board of Directors, and at other times upon request of the President. He or she shall prepare and submit to appropriate governmental agencies all financial and administrative forms required to obtain and maintain a tax exempt status as a nonprofit corporation.

Proposed Change #6

This change addressed new deadlines for the Nominating Committee to present a slate of candidates for general election. This Article deals with the duties of Permanent Committees. The wording of this article will now be:

Article 6.06.a.6 The list of candidates, their biographies, and their letters of acceptance constitute the final report of the Nominating Committee. The report must be sent to the Board of Directors by February 15 by the Secretary-Treasurer. Except for obvious errors, the report should be accepted by the Board of Directors without alteration. The Board of Directors will resolve any problems and present a ratified list to the President by March 1. Following presentation, a copy of the ratified report will be given to the Ballot Committee Chairman, who will have been selected from among the Directors-at-Large at the preceding annual meeting.

Proposed Change #7

This change reflects the formation of an Editorial Board. The wording of this article will now be:

Article 6.06.c The Editorial Board shall be appointed each year by the Managing Editor. The committee shall consist of the Managing Editor as Chairman, and as many members as the Editor decides to choose. The Editorial Board shall be responsible for administration of the corporation's publication program, and for the editing, printing and distribution of its publications.

Proposed Change #8

These changes address new deadlines for the Nominating and Ballot Committees to present the list of nominees for general election, and mailing of the ballots. This article deals with Nomination and Election of the Board of Directors.

Article 7.01 The Nominating Committee shall propose no more than two (2) candidates for each Board membership. The Nominating Committee shall submit to the Secretary-Treasurer by February 15 of each year a list of nominees, together with a statement that all submitted nominees will accept the positions upon election. Not later than May 1, the names of candidates for the Board as submitted by the Nominating Committee shall be mailed to the membership. This communication may quote Article 7.02. (These dates assume a fall Annual Meeting. Deadlines stated in this Article may be altered as need be to meet Annual Meeting dates).

Article 7.02 Additional nominations may be made by any member in good standing by submitting a petition, signed by at least nine (9) other members in good standing, to the Secretary-Treasurer by June 15.

Article 7.03 The Ballot Committee shall arrange for the preparation and distribution of the ballots to members on or before **July 1**. Ballots returned to the Ballot Committee prior to the final closing date of **August 15** shall be valid; abstaining votes and ballots received later than the closing date shall not be valid. A plurality vote shall be necessary and sufficient for election. In the event of a tie vote, a runoff election will be held. The Ballot Committee shall count all valid ballots and report the results to the Board of Directors through the Secretary-Treasurer.

NEWS FROM DENMARK

Note on the dinoflagellate cyst genus *Epiplosphaera* Klement 1960, by Niels E. Poulsen, Geological Survey of Denmark and Greenland, Mail to: nep@geus.dk

In my review of species of this genus (Poulsen, 1992), I rejected that *E. reticulospinosa* Klement 1960 and "*E. ornata*" (Courtinat and Gaillard 1980) Brenner 1988 were taxonomic synonyms (Poulsen, 1992, p. 68), however, I found that "*E. ornata*" was a taxonomic junior synonym of *E. gochtii* (Fensome 1979) Brenner 1988 (Poulsen, 1992, p. 68).

In the tremendous work Judith Lentin, Graham Williams and Rob Fensome are doing in keeping all of us updated on taxonomic revisions etc., latest in AASP Cont. Ser. 34: The Lentin and Williams index of fossil dinoflagellates: 1998 Edition, this revision was unfortunately not recorded.

References:

- * Poulsen, N. E., 1992: The dinoflagellate cyst genus *Epiplosphaera* Klement 1960 - a re-appraisal. *Journal of Micropalaeontology*, 11 (1): 65-72,
- * Williams, Graham L., Lentin, Judith K., and Fensome, Robert A. 1998: The Lentin and Williams index of fossil dinoflagellates. 1998 Edition: AASP Contribution Series 34, 817 pages)

NEWS FROM AUSTRALIA AND THE UK

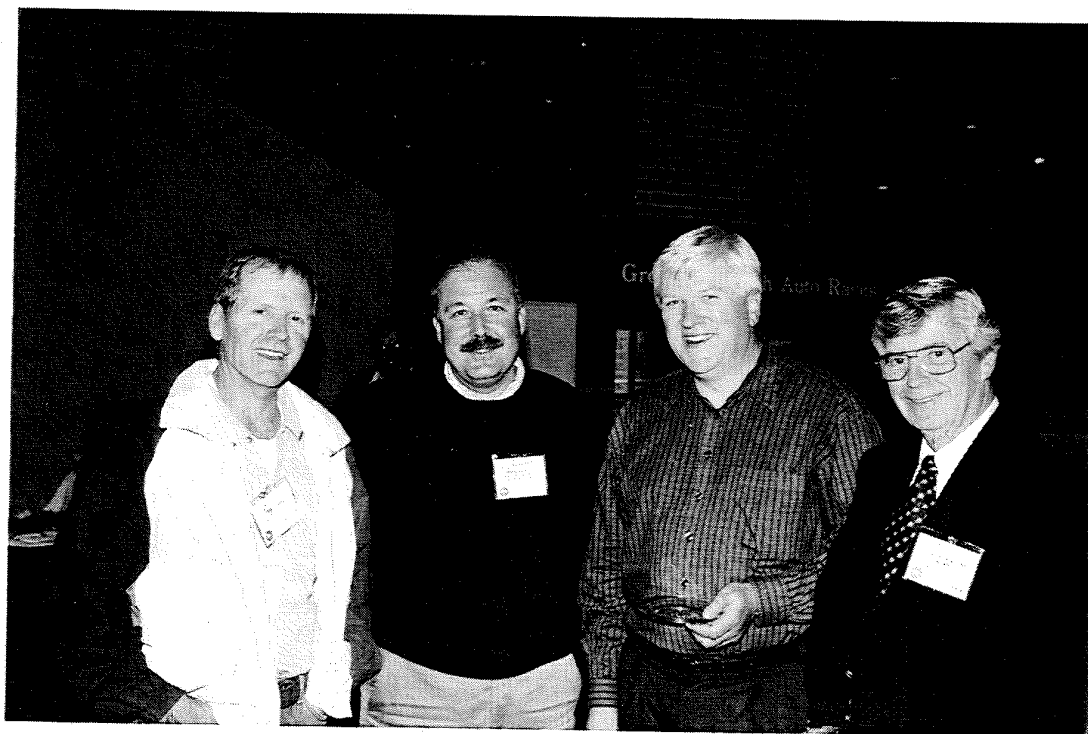
by Jim Riding

As I have not been resident in the UK since early September, the news from there has all been assimilated via e-mail. An office move of interest is that Shell Exploration and Production UK are in the process of moving from Shell-Mex House in London to new premises in Aberdeen. This includes their biostratigraphy coordinators, two of whom, Sandy Smith and Nick Turner, are palynologists. The Centre for Palynology at Sheffield has moved, in an administrative sense, to the Department of Plant and Animal Sciences. (An interesting parallel with Utrecht?). This organisational move is principally because the Geology Department at Sheffield is being phased out. The staff, office and laboratory space of the Centre are unchanged as far as I know. The membership will be aware of the very sad news from Sheffield in the passing of Charles Downie recently. AASP member Bernard Owens was given Honorary Membership of the British Micropalaeontological Society at the Annual General

Meeting in London in late November. This award is to recognise Bernard's outstanding contribution to the Society.

The next big meeting on Micropalaeontology in the UK will be a symposium entitled 'Plankton Evolution and Climate Change' and will be part of the 'Geoscience 2000' conference to be held at the University of Manchester from 17th to 20th April 2000. The conference itself is being organised by the Geological Society. Jamie Powell is organising the symposium on behalf of the British Micropalaeontological Society (BMS). The keynote speaker will be Hans Thierstein (Geological Institute, ETH-Zentrum, Zürich) who will present the Lyell Lecture on 'The climate-plankton link: when models confront evidence'. Other speakers are Paul Bown (calcareous nannoplankton), Peter Doyle/Andy Gale (Mesozoic macroplankton), Dave Lazarus (radiolaria), Alain Le Hérisse (acritarchs), Alex Mitlehner (diatoms), Paul Pearson (foraminifera), Jamie Powell/Jim Riding (dinoflagellates) and Sue Rigby/Barrie Rickards (Palaeozoic macroplankton). As ever, we cordially invite AASP members to this BMS symposium. For more information please contact Jamie Powell on ajp@dinosystems.co.uk or visit the BMS website at <http://www.bmsoc.org.uk>. Details of Geoscience 2000 can be found at <http://www.geolsoc.org.uk>. Moving on to Australia, palynology continues to thrive on this continent at oil companies such as Santos in Adelaide, South Australia and Woodside in Perth, Western Australia. There are consultants such as John Backhouse, Robin Helby, Roger Morgan and associates, Alan Partridge and Peter Price. This listing is not exhaustive; I apologise if I have missed anyone off. Finally, palynology is represented at Australian Universities by Basil Balme, Mary Dettmann, and Geoff Playford. Talking to people here, however, the use of the word 'thrive' in the first sentence of this paragraph would be an extremely moot point. In the petroleum industry, the number of palynologists has declined markedly in the last few years due to factors such as outsourcing policies and cutbacks and pullouts due to the relatively low oil price recently. This year the low levels of drilling activity because of the oil price and political uncertainty in East Timor have caused the amounts of work being sent out for contract biostratigraphy to be reduced. Furthermore, in the academic sector, the age structure of palynologists gives cause for concern. The global trend for retiring palaeontologists to be replaced with earth scientists of other disciplines has been followed here and there is real worries about the future of our subject in Australian universities. Furthermore, the Australian state surveys appear not replacing retiring palynologists. These situations have given rise to much debate as to how to bolster palaeontology across Australia. I hope to have further news on this topic in the first Newsletter of the next century.

G'day, Jim Riding



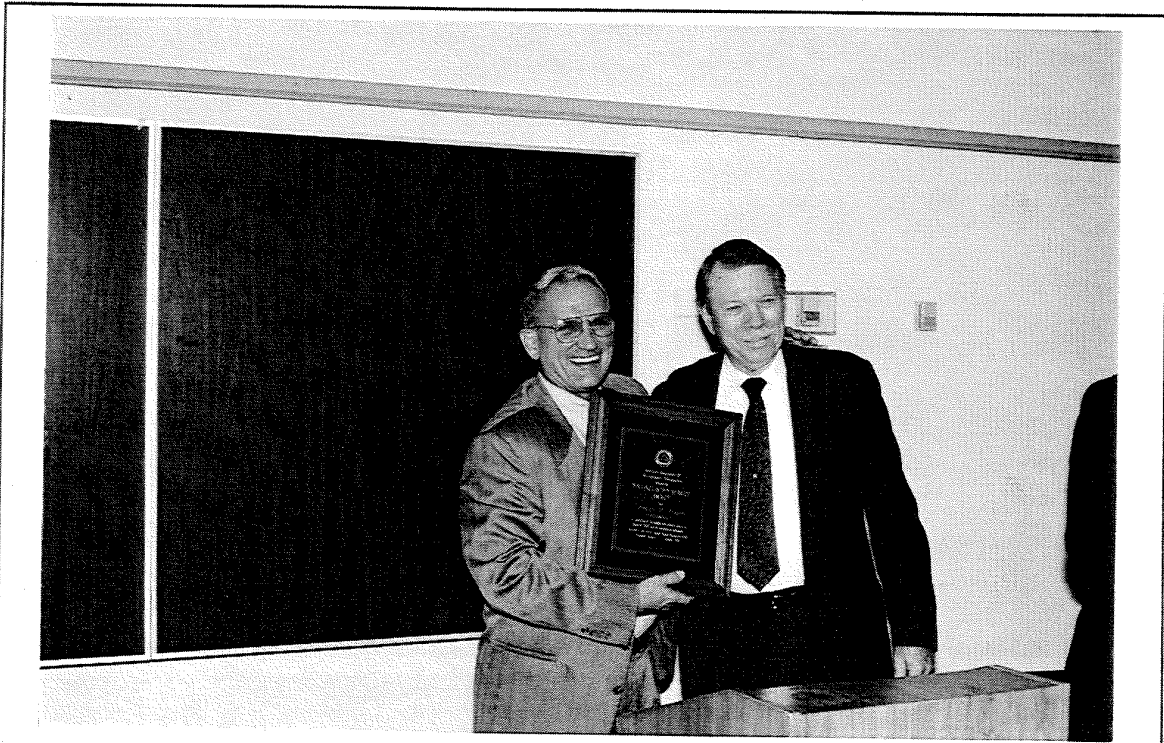
Incoming President-Elect David Pocknall, AASP Awards Owen Davis, outgoing Past-President Rolf Mathewes and long time AASP member and one time President Harry Leffingwell enjoying the Icebreaker.

MEETING REPORT OF THE ANNUAL MEETING OF THE AASP, SAVANNAH, GEORGIA, October 1999

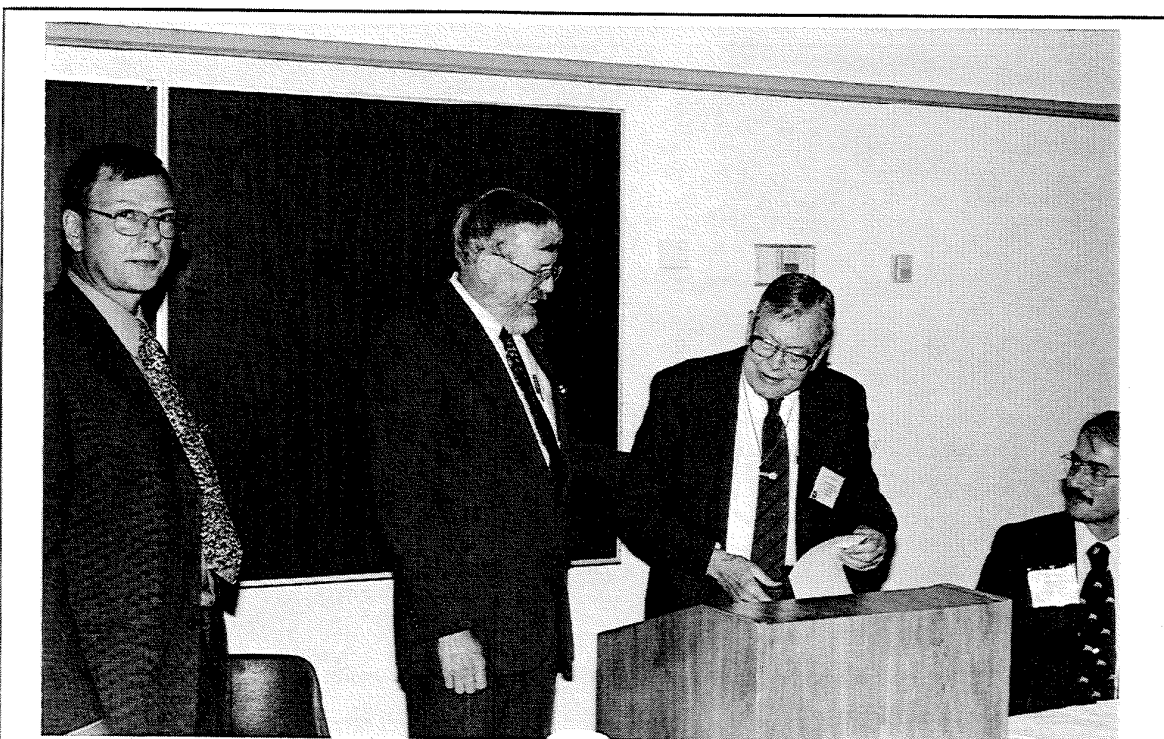
The meeting was hosted by Dr. Fredrick Rich, Department of Geology and Geography, Georgia Southern University, Statesboro, Georgia. Sixty-two members and spouses attended the meeting, which was held in the Coastal Georgia Center, a conference facility located near downtown Savannah. Meeting activities began with a reception held in the Savannah History Museum on the evening of October 26. Heavy hors d'oeuvres and beverages were served in the gallery, in the company of a steam locomotive, bales of cotton, and other memorabilia of Savannah's long and colorful history.

Technical sessions began on the morning of the 27th, and continued on the 28th and 29th. Thirty papers were accepted for oral presentation, and ranged widely in their content, illustrating the many directions that palynology has taken. Eleven poster presentations were also displayed in the lobby of the Center. General session papers included Paul Strother's description of the morphology and stratigraphic significance of Paleozoic cryptospores, as well as Gretchen Jones' analysis of the feeding behavior of Western Corn Rootworms. Two special sessions were held, including one

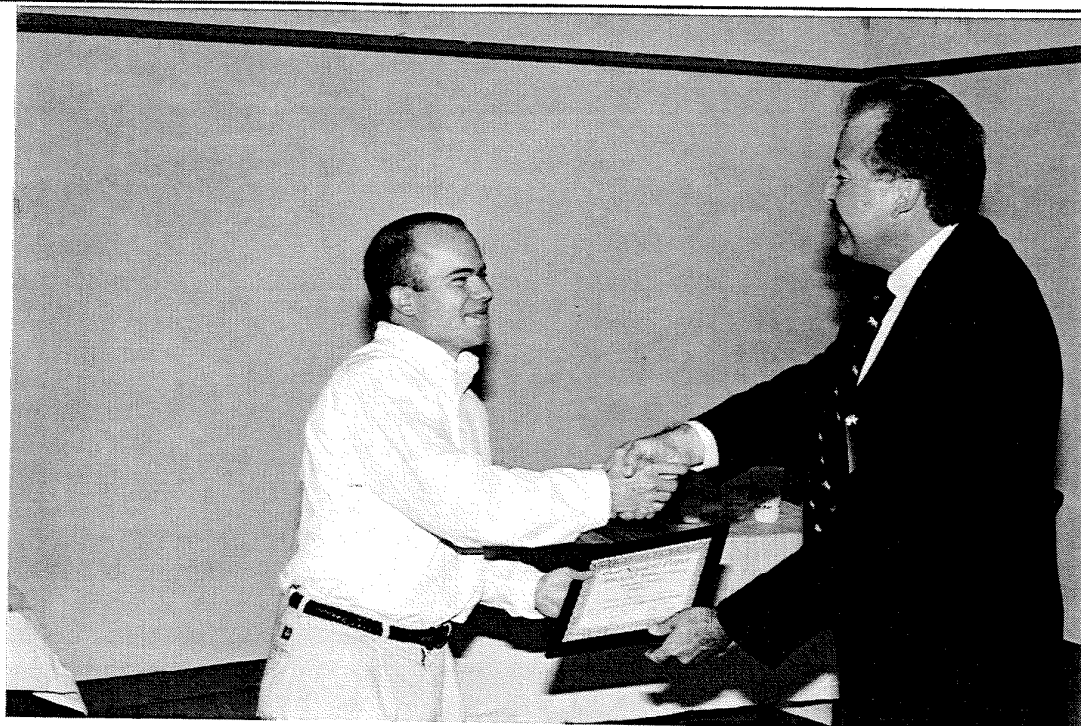
on Short-term Palynological Records with Emphasis on Human Influences, hosted by Art Cohen, and a second session hosted by Joyce Lucas-Clark on the Cretaceous and Tertiary Palynology of the Atlantic and Gulf Coastal Plains, Southeastern United States. Following the Friday morning talks, a guest lecture was presented by Dr. Steven Emslie, University of North Carolina at Wilmington, on the paleontology of a Pliocene catastrophic death assemblage from Florida. The death assemblage consists largely of seabirds, and is believed to have been caused by red tides. Following Dr. Emslie's lecture, a group photograph was taken, and the annual business luncheon was held. Participants were treated to roasted chicken, fried shrimp, a variety of side dishes, and pecan pie, all items that are representative of a meal in the American South. Following the meal, President Chris Denison convened the business portion of the meeting. Various reports were made by officers in the organization. All reports show that AASP, and the AASP Foundation are in excellent financial condition and continue to offer publications and service at remarkably little cost to the members of the organization.



Vaughn Bryant Jr. receives the AASP Distinguished Service Awards from citationist Ken Piel



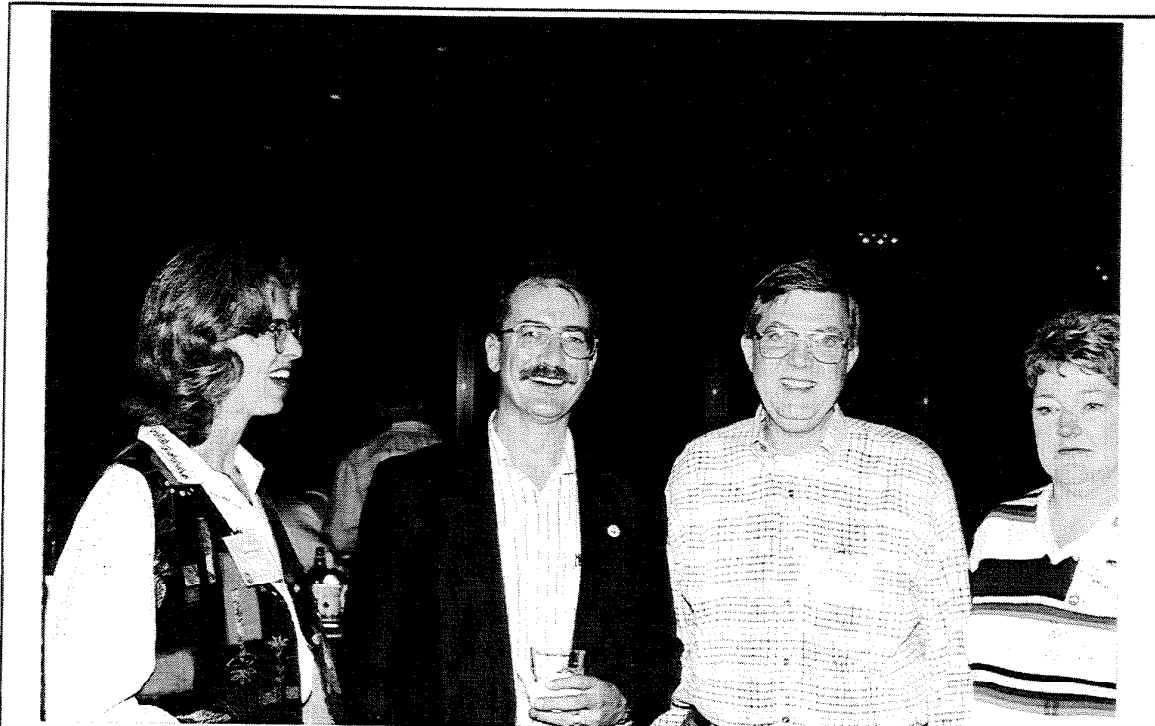
Aureal Cross receives the AASP Medal of Excellence in Education from citationist Len Eames at the business Luncheon, Chris Denison and Fred Rich look on.



Robert Booth, University of Wyoming, receives the AASP Best Student Paper Award from Owen Davis, AASP Awards Chair. Robert has also been a recent recipient of an AASP Student Scholarship.



AASP Awards Chair Owen Davis presents the AASP Best Poster Award to Daniel Michoux.



Incoming AASP President Fred Rich and AASP Foundation Director Bob Clarke enjoying festivities with their respective spouses Sherry and Carol. Awards Chair Owen Davis presents the AASP Best Poster Award to Daniel Michoux.

Several awards were also presented, including one made to Dr. Vaughn Bryant, Jr. (Texas A&M University) who was honored with the Distinguished Service Award. After a brief introduction by Dr. Len Eames, Dr. Aureal Cross (Michigan State University) was presented with the AASP Medal of Excellence in Education. The Best Student Paper Award was presented to Robert Booth, University of Wyoming, for his talk entitled "Impacts of Historical Logging and Fire on a Lake Superior Coastal Wetland, Keweenaw Peninsula, Michigan". Mr. Booth co-authored his paper with Dr. Stephen Jackson. The Best Poster Award was presented to Dr. Daniel Michoux of TOTALFINA whose poster was entitled "Organic Sedimentation in the Early Cretaceous of the Austral Basin (Tierra Del Fuego, Argentina)". Dr. Michoux's co-authors were Samuel Piriou and Rene Braun. The Best Student Poster Award was shared by Jennifer Hopkins and Sarah Tiffin, both students at Brock University in St. Catharines, Ontario. Following the presentation of the awards, president Denison introduced Dr. Fred Rich, President-Elect of AASP, who was given the ceremonial gavel and copy of Roberts Rules of Order. President Rich offered a brief address to the group, and concluded by reminding participants of a Friday afternoon fieldtrip to the Savannah and Ogeechee Canal. While the Board of Directors held their first meeting under Rich's leadership, 30 participants went for a tour of the canal, a historic structure that served the transportation needs of Savannah for most of the 19th Century. Dr. Eddie Robertson lead the trip, which was hosted by his institution, Reinhardt College, located in Waleska, Georgia, and Georgia Southern University. The trip was of both historical and scientific interest as the canal

lies on the floodplain of the Ogeechee River, and is the home of many interesting plant and animal species that are typical of the American Southeast. On Saturday 38 brave souls boarded a bus for a fieldtrip to the Okefenokee Swamp National Wildlife Refuge. The trip was lead by Fred Rich, and included a bus ride along the coast, accompanied by a narrative designed to acquaint the participants with some of the natural and cultural history of the Georgia coast. After arriving at the swamp, participants were first introduced to the displays in the visitors' center, then climbed into boats for a trip down the Suwanee Canal and into Chesser Prairie. The Okefenokee Swamp is one of the largest largely intact freshwater ecosystems remaining in the continental United States. It is home to a variety of endangered species, and constitutes one of the most important natural landmarks in Georgia. While the persistent winds, and easily fouled outboard motors gave the boat captains plenty to do, the passengers are reported to have had a very enjoyable time. Fred Rich hopped out of his boat from time to time to take peat samples with a Russian peat corer, and described the geological and botanical history of the Swamp. Following the retreat from the swamp, and a long bus ride back to Savannah, participants were eager to spend one more night on the town!

Ps: what happened to Eddie Robertson one night? He was watching the filming of scenes for THE LEGEND OF BAGGER VANCE in downtown Savannah one night when the director came over to Eddie pointed across the street and then said, "You are out of position, you are suppose to be over there." Eddie was stunned and just stood there until

another member of the cast came over and said to the director, "I know he looks like one of our extras, but he isn't!" Well, that Eddie's moment of fame...He almost made it into the movies!!

GOLFING IN OLD SAVANNAH, reported with a bit of poetic license by Vaughn M. Bryant

Tuesday was a beautiful morning in Savannah. At dawn the team of AASP golfers headed off to play in the Tenth Annual AASP Golf Tournament at the second most famous course in Georgia—second only to the famous Masters Course in Augusta. After turning off Interstate 80 the group followed a winding road through rows of stately mansions, some dating to the turn of the century and before. The gated entrance to the Southbridge Gold Course led down an old tabby-paved road lined with Spanish moss-laden live oaks many of which must have been well over 100 years old. At the elegant club house we parked and entered the main room with beautifully polished oak floors full of wall art and antiques. Downstairs we checked in, got the keys to our golf carts, several bags of practice balls and then headed for the driving range near the first tee box. After 20 minutes of practice few of us wanted to practice longer for fear we would "lose" our edge; after all, there is an old golfing belief that each day a person is only entitled to just so many good shots. If you waste them on the driving range, the myth goes, then you will have a terrible score during the game!

Soon the six players assembled on the first tee box. The first group, consisting of Dave Pocknall, Ken Piel, and Blair Parsons, were already on the elevated tee box and were ready to go. We could tell from the lack of golf cart tracks in the wet dew along the fairways that we were among the first players at the course that day. Dave Pocknall stepped up to the tee box and placed his AMOCO logo ball on the tee. He smiled and turned to us and said, "those are already collectors items!" There was a loud pop as the metal driver struck the ball and sent it sailing high above the ground fog and pine trees that lined the first fairway. As we watched we lost it in the haze and fog as it finally returned to earth. Ken was next up on the box and began complaining that hitting behind a golfer as good as Dave was very intimidating. Nevertheless, Ken hit a great shot and smiled as he mumbled about how he wished all his drives were that good. As the first group disappeared into the fog and haze, the second group of golfers, Gretchen and Stanley Jones and Vaughn Bryant, got their clubs out and walked to the tee box. Stanley Jones is nearly a scratch golfer and his long, arching, drive showed the results of endless hours of practice. Nervous, as usual on the first tee box, Vaughn approached the ball, swung, and missed the ball entirely. He stepped back and laughed as he said, "just checking the air resistance and barometric pressure!" This brought a loud laugh from Gretchen and Stanley. Vaughn's next swing connected with the ball and after Gretchen teed off from the ladies tee box, both groups were now off and running.

Soon the sun burst through the trees and burned off the dew and fog. By the fourth green the golfers were so taken by the quiet and serenity of the setting and the beauty of the course that it was hard for each of them to focus on the task at hand. The scores of azaleas and dogwoods along the

edges of the fairways, the half-million and more homes set back from the fairways, and the live oaks full of Spanish moss made for the type of scene one usually only sees in commercials or during weekend pro golf tournaments on TV. Several other points need to be mentioned. As one of our golfers leaned over a pond on the fifth fairway looking for his lost golf ball, he noticed the shadow of an 8-foot alligator slowly gliding towards him just below the surface. He guessed by the gator's size that he was waiting for another tasty arm to reach in for one of the lost balls laying on the sandy pond bottom. On another hole as the second group approached the green they thought they could hear the "roar of the crowd" cheering them on. As they got closer, however, they found about 30 geese on the green all honking in unison!

The competition on the front nine was fierce and at times quite seriously contested. This was no more evident than on the 8th green. In the first group Pocknall had laid his approach shot in the long par 4 in an optimum position, just five feet below the hole with a straight uphill putt. Meanwhile over the back side of the elevated green Blair Parsons was in a familiar position, down in a gully. The latest rookie on the AASP circuit then decided to "lay open" his 60-degree pitching wedge and hit an "up and down shot" that is suppose to land softly on the green near the hole. However, Blair "bladed " his wedge shot just as Pocknall bent over to mark his ball on the green. Suddenly, there was a loud shout "four" and the sight of a white sphere being propelled at great speed towards Pocknall's head. Poor Dave had no option but to hit the deck, just like anyone would do when under an auxiliary attack and someone yells "incoming." It was a close shave and Parsons apologized. Nevertheless, for the rest of the game Pocknall was wary of again turning his back toward the rookie. In spite of the near miss, Pocknall made his birdie and then proceeded to birdie the next par 5 which proved to signal the last hurrah for the rookie.

By the end of nine, some players were doing better than others. During the early going some of the golf balls had landed in lakes and ponds (it is said that golf balls go into lakes because they are thirsty—this problem can be avoided by soaking the balls in water the night before so they aren't thirty anymore). Vaughn kept saying that if he wanted sand he would have gone to Cancun, Mexico, not this course. Poor guy, he hit his golf ball into eleven sand traps before finally reaching the green on the last hole of the front nine. At the turn Dave was in the lead, as usual, but Stanley was only one stroke behind. Meanwhile the rest of us were doing a good job of earning our 30+ handicaps.

Until the 16th fairway we hadn't seen any other golfers on the course. After hitting off the tee box on this long par five hole, the first group headed up the fairway to make the dogleg towards the green. The second group was now on the tee box and also had hit down the course. After finding their balls, the second group noticed that the first group was just standing in the fairway. After a few minutes the second group drove up to the first group to see what was the matter. As the six of us stood in the fairway we noticed a half-dozen golf carts running back and forth across the fairway up near the 16th green. We couldn't hit because they were too close, so we decided to drive up and find out why they were holding us up. As we approached the first cart

Dave said in his Kiwi accent, "mind if we hit our balls and play through?" The blond driver of the cart slowly turned and smiled at Dave from behind his dark glasses.

"Sorry to get in your way," the driver replied.

Gretchen kept looking at the driver and then whispered, "He sure looks like Robert Redford, but I guess it couldn't be!"

The driver of the other cart now got out, removed his glasses and headed toward us.

"Sorry we are in your way, we are out here looking over the course for next week's filming," he continued.

"Filming?" asked Blair.

"I guess you will have to see the movie," the blonde driver smiled as he put his glasses back on and drove off.

"That was Robert Redford....the Robert Redford!! I can't believe we didn't ask him for his autograph," we all said to each other as we stood there in disbelief.

The fairway ahead of us was now clearing as the group of carts drove off toward another part of the course. We returned to the task at hand and finished our game, but the rest was anti-climactic. Who cares what you score, who cares who wins when you have met face-to-face with Robert Redford and seen him up close and personal—just like the title to one of his earlier movies!



"Yes, we are filming scenes for the LEGEND OF BAGGER VANCE in downtown Savannah this week and next we will be filming out here for a month on this course," replied the driver. "I hope you'll go see it next year when it is released. Most of the movie takes place on this course, as it did in 1931 when two of the world's greatest golfers Walter Hagen and Bobby Jones challenged each other to a 36-hole playoff to determine who was the better golfer. Just for kicks, they let a third person join them. He was a one-time-winner amateur who was trying to make a come back and become a pro. The only thing he had going for him was that his caddie was a black man called Bagger Vance. He couldn't join the pros because blacks weren't admitted to the pro ranks back then. Nevertheless, Vance had perfected the 'authentic swing' and had taught it to the amateur golfer."

By this time several of the other carts had come over. The blond driver turned around in his cart and got ready to drive off.

"Hey, what happened in the story? Who won the tournament?" asked Ken.

Oh, I almost forgot. Who won? Well, as usual it was a hard-fought and close game. Each member had to overcome excellent competition and rise to the challenge to beat all others in his/her group. When all the scores were tallied we are proud to report that Gretchen Jones won the Woman's Division. David Pocknall won the AASP Membership Championship Division for the second year in a row. Ken Piel won the Retired Palynologists Division. Vaughn Bryant again won the Academic Palynologists Division. Stanley Jones won the AASP Non-Member Championship Division, and Blair Parsons won the 1999 Rookie Division.

So, next year when the LEGEND OF BAGGER VANCE opens at your local movie theater, go see it. As you watch the movie, think of us out on the course talking to Robert Redford. Then, as you watch the shots of the movie filmed in downtown Savannah, realize that they were shooting the movie just one block from our AASP hotel. See what you missed by not going to Savannah!

A DIGITAL DINOFLAGELLATE IMAGE LIBRARY

The Dinoflagellate Image Library (DIL) has gone digital. The DIL is an integrated database consisting of a collection of more than 30,000 digital images of fossil dinoflagellates and a database to access images and view data concerning each of the stored images. The DIL is contained on a single CD, and the DIL software runs an ACCESS in WINDOWS95/98/NT4. Users can view multiple images of dinoflagellate species quickly and efficiently, review age information for those images, and make basic taxonomic identifications, species comparisons, and preliminary age interpretations without the need for an extensive literature library or exotic storage devices.

The microfossil images are mainly from the published literature, as well as non-published photomicrographs from other sources. The database includes full taxonomic citation (based on the Lentin & Williams indexes) and the following information for each photomicrograph: age, geographic location, author(s), date, plate and figure data from original source, photograph type (SEM, brightfield, phase, Nomarski), and orientation.

The image library represents considerable potential value for your organization, regardless of size, as a primary reference tool for biostratigraphic applications using fossil organic-walled dinoflagellates.

The image library can save both time and money, and it will allow palynologists to spend more time at the geological integration of palynological data rather than routine data collection. It also serves as a marvelous training tool for students or micropaleontologists who must gain a working knowledge of the group in a short amount of time. The library provides immediate access to otherwise widely disseminated (or perhaps unavailable) photographs for the fossil group, and thus saves effort by substantially reducing the time spent on literature searches and species identifications. In short, the image library can put a significant part of the published photographic record of fossil dinoflagellates at your fingertips for immediate access.

Hardware requirements for the DIL are a PC running WINDOWS95/98/NT4, and a CD drive. The interface software is bundled with the DIL package. The DIL database software is compatible with the PalSys/DINOSYS platform developed by the Laboratory of Palaeobotany and Palynology at the University of Utrecht. Please contact their group, inc. directly for additional details, pricing, and delivery information.

David K. Goodman, the irf group, inc.
6721 Round Tree Drive, Anchorage, AK 99516 USA
phone: 907-346-4090, e-mail: flvfish@alaska.net

VARIOUS ANNOUNCEMENTS

☒ The "Database of Palaeontological Types in Austrian Collections" has been updated again. It contains now about

42 000 types kept in 14 collections and published in 1100 papers. Visit <http://www.oeaw.ac.at/~oetyp/palhome.htm>

☒ The University of Chicago Press will soon publish KILLER ALGAE by Alexandre Meinesz (translated by Daniel Simberloff). KILLER ALGAE is the Meinesz's account of the discovery of *Caulerpa taxifolia* in the Mediterranean and the subsequent scientific investigations and political turmoil. A bit in advance of the book's publication you may read an illustrated excerpt: <http://www.press.uchicago.edu/Misc/Chicago/519228.html>

☒ This is to inform that a checklist of Fijian marine algae is now on-line and regularly updated, at the following URL: <http://www.usp.ac.fj/marine/fijilist.htm>. Please also visit the Marine Studies site, at <http://www.usp.ac.fj/marine>, and <http://www.usp.ac.fj/marine/phyecology.htm>

☒ The abstracts of the III Mexican Congress of Phycology which was held between October 25 and 29 in La Paz, Baja California Sur, Mexico can be downloaded from our ftp server. Point your web browser to the following address: <ftp://ftp.cibnor.mx/pub/mpc3/>, and you will find two files with the abstracts: ABS-LIST.DOC, saved in Word 6.0 for Windows and ABS-LIST.hqx, saved in Word 5.1 for Macintosh. The congress was organized by M.C. Gustavo Hernandez Carmona (CICIMAR), M.C. Rafael Riosmena Rodriguez (UABCS), and a number of additional people. There were 117 presentations between standard talks, posters, and 9 special lectures by invited speakers from Mexico, United States, Canada, and Argentina. The congress dealt with any aspect of phycology, although it mostly focused on Mexican algae, including both freshwater and marine species.

☒ This should be all over the Internet by now - not the project, but the stage of the project: <http://www.msnbc.com/news/292726.asp>

"Oct. 20 — An international team has successfully airlifted a woolly mammoth from Siberia's ice — and will slowly thaw out secrets that date back more than 20,000 years. The experiment could reach its climax with an attempt to clone the long-extinct creature, a la "Jurassic Park."

☒ The latest issue of the Journal of Micropalaeontology will appear shortly, the contents can be viewed on the British Micropalaeontological Society web site http://www.nhm.ac.uk/hosted_sites/bms/ => follow the 'Latest BMS news' link on the home page.

☒ Announcement: The abstracts from the VII International Symposium on Mesozoic Terrestrial Ecosystems which was held in Buenos Aires, Argentina from the 26th of September to the 1st of October, 1999 are now available online at: www.paleonet.com.ar The abstracts are available as a winzip word file that can be downloaded from the above site.

☒ The abstracts of the forthcoming (december 1999) vol 105 n. 3 of the Rivista Italiana di Paleontologia e Stratigrafia can be browsed at this site: www.gp.terra.unimi.it/105N3.html and basic features of the journal along with links to abstracts of other printed volumes: www.gp.terra.unimi.it/rivista.html

✉ NEW: Eighth Bibliographic Index to the pollen morphology of Angiosperms by K. Thanikaimoni and R.W.J.M. van der Ham. (ISSN 0971-3107). This book will be reviewed in a following newsletter. For more information contact Dr. Van der Ham or K. Thanikaimoni (instfran@glasmd01.vsnl.net.in)

AGENDA (with thanks to the CAP website)

2000:

✉ TBA. Canadian Paleontology Conference Antigonish, Nova Scotia, Canada

✉ **January 6-7 2000.** Quaternary Research Association: Annual Discussion Meeting Southampton, England, UK. Theme: Millennial Scale Changes. Details: Jane Hart (jhart@soton.ac.uk), Tel: 01703-594615, Keith Barber (Keith.Barber@soton.ac.uk), Tel: 01703-593215, Antony Payne (A.J.Payne@soton.ac.uk), Tel: 01703-593823, Paul Hughes (Paul.Hughes@soton.ac.uk), Tel: 01703-592489, Dept of Geography, University of Southampton, Southampton, SO17 1BJ, England, UK.: <http://www.qra.org.uk/>

✉ **March 16-18, 2000.** 30th International Arctic Workshop, Institute of Arctic and Alpine Research (INSTAAR), University of Colorado, Boulder, Colorado, USA. The meeting will consist of oral and poster presentations covering all aspects of high-latitude environments, past and present. Website: <http://instaar.colorado.edu/AW2000/>

✉ **March 27 - 31 2000.** INQUA - Commission for the Holocene Meeting: Environmental Changes During the Holocene: Correlations Between Temperate and Semiarid Regions. Seville, Spain. Details: Secretary of the Meeting: Ana I. Porras, Departamento de Geografía Física, Facultad de Geografía e Historia c/Maria de Padilla, sn., Universidad de Sevilla, Spain, Tel: +34 954.551.377 Fax: +34954.556.988, E-mail: aipor@cica.es Environmental conditions during the last 10,000 years have been increasingly governed by the human factor and in some regions the climate controlled geodynamics have been altered. Geomorphic responses to climatic fluctuations and episodes vary spatially and temporally. We would like to shelter a forum for discussing the significance of climatic and antropic impulses: High spatial variability of the paleoenvironmental processes in small areas is a major topic. This meeting of the Commission is intended to bring together new research conceptions from worldwide researchers. Website: <http://www.ku-eichstaett.de/MGF/geo/inqual.htm>

✉ **May 29 - June 2 2000.** GEOCANADA 2000 Joint meeting of Canada's major geoscience societies, including the Geological Association of Canada (GAC), the Mineralogical Association of Canada (MAC), the Canadian Society of Petroleum Geologists (CSPG), the Canadian Society of Exploration Geophysicists (CSEG), the Canadian Well Logging Society (COOLS) and others. This meeting will feature a CAP-sponsored symposium on Palynology and

Micropaleontology in Canadian Geoscience: New Frontiers and Applications. University of Calgary, Alberta. Details: Dr Grant Mossop, Geological Survey of Canada, 3303-33rd Street N.W., Calgary, Alberta, T2L 2A7, Canada. Tel: (403) 292-7049, Fax: (403) 292-5377, E-mail: mossop@gsc.nrcan.gc.ca. Website: <http://www.geocanada2000.com>

✉ **May 29 - June 3 2000.** Canadian Association of Geographers (CAG) Annual Meeting Brock University, St Catharines, Ontario. Details: Hugh Gayler (hjgayler@spartan.ac.brocku.ca)

✉ **June 2000.** 17th International Radiocarbon Conference near Jerusalem, Israel: <http://www.radiocarbon.co.il/>

✉ **June 24-30 2000.** 10th International Palynological Congress (IPC), Nanjing, China. Details: Secretary of the Organizing Committee for 10th International Palynological Conference, Nanjing, Institute of Geology and Palaeontology, Academia Sinica, 39 East Beijing Road, Nanjing, 210008, People's Republic of China, Electronic version of first circular, with registration form, available at: <http://members.spreed.com/sip/spore/index.htm>. Information on International Palynological Congresses is available at <http://geo.arizona.edu/palynology/ifps.html>

✉ **July 10-14 2000.** 8th International Symposium on Pollination Mosonmagyaróvár, Hungary. Theme: "Pollination: integrator of crops and native plant systems" Details: Prof. P. Benedek, Zoology Department, Faculty of Agricultural Sciences, Pannon University of Agricultural Sciences, H-9201 Mosonmagyaróvár, Vár 4. Hungary, Fax: 36(96)215-931, E-mail: benedek@movar.pate.hu

✉ **July 12-14 2000.** 5th International Ancient DNA Conference Manchester, England, U.K. Details: Terry Brown adna5@bi.umist.ac.uk

✉ **July 30 - August 3 2000.** Sixth Quadrennial Conference of the International Organization of Paleobotany (IOPC IV -2000) Qinhuangdao, Hebei, China. Details: Prof. Lujun Liu, Secretary-General of IOPC-VI Organising Committee, Nanjing, Institute of Geology and Palaeontology, Academia Sinica, 39 East Beijing Road, Nanjing 210008, PR China, Tel.: +86-25-6637 208, Fax: +86-25-3357 026 E-mail: paleobot@public1.ptt.js.cn

✉ **August 6-17 2000.** 31st International Geological Congress, Rio de Janeiro, Brazil. Theme: "Geology and Sustainable Development: Challenges for the Third Millennium". Details: Secretariat Bureau, Av. Pasteur, 404 - Casa Brazil 2000 - Urca, Rio de Janeiro - RJ - Brazil, CEP 22.290-240. Tel: 5521 295 5847, Fax: 55 21 295 8094, E-mail: 31igc@31igc.org, Website: <http://www.31igc.org>

✉ **August 18 - 25th, 2000,** the International Subcommission on Cambrian Stratigraphy (ISCS), field meeting, Argentina: "Precordillera and Eastern Cordillera of western and northern Argentina". This meeting will highlight important Cambrian sections of the Precordillera Basin (allochthonous / para-autochthonous ?) and the Central Andean Basin (typical

Gondwanan siliciclastics). The meeting starts right after the IGC in Rio de Janeiro (for those travelling to that event). For more information contact: the Secretary: Guillermo F. Aceñolaza, UEI Paleontología, Instituto de Geología Económica, Facultad de Ciencias Geológicas, 28040 Madrid, Spain, E-mail: eg17112@autovia.com

● **August 20-24 2000.** 8th International Symposium on Paleolimnology, Queen's University, Kingston, Ontario, Canada. Details from co-organizers John P. Smol (smoli@biology.queensu.ca) and Brian Cumming (cummingb@biology.queensu.ca). Paleoeological Environmental Assessment and Research Lab (PEARL), Department of Biology, Queen's University, Kingston, Ontario, K7L 3N6, Canada. Details also appear at the PEARL website at <http://darwin.biology.queensu.ca/~pearl/>

● **August 27-31, 2000** The Second International Conference "Application of microorganisms to environmental problems", Winnipeg, Canada. This International Conference is the second in a series of conferences - the previous conference was held in Israel in 1997. The conference is organized by the Avalon Institute of Applied Science, Canada, the Centre for Marine Geology-Dalhousie University, Canada, and the Geological Laboratory-University of Angers, France. The main aim of the Conference is to present results of innovative multidisciplinary research in microorganisms (e.g., bacteria, foraminifera, ostracoda, radiolaria, diatoms, calcareous nannoplankton, dino-flagellates, pollen, spores) and to show their significance in solving environmental /paleoenvironmental problems in the fields of biosciences, geosciences and agriculture. In view of the success of the previous conference, it is expected that a large number of the Canadian and international environmental scientists specializing in micropaleontology and microbiology will take part in this event. Details: Dr. Irena Motnenko, Scientific Secretary, Avalon Institute of Applied Science, P.O.Box 60013 - RPO Tuxedo Park, Winnipeg MB R3P 2G9, Canada, eMail: imot@ilos.net, phone +1 (204) 489 4569, fax +1 (204) 489 5782

● **September 4-8 2000.** International Symposium on "High Mountain Lakes and Streams: Indicators of a Changing World", Innsbruck, Tyrol, Austria. University of Innsbruck, Institute of Zoology and Limnology, Technikerstr. 25, A-6020 Innsbruck, Austria. E-mail: hmls2000@uibk.ac.at Website: <http://zoology.uibk.ac.at/congress>

● **November 13-16 2000.** Geological Society of America, Annual Meeting. Reno, Nevada, U.S.A. Conference theme: "Crossing Divides". Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

2001:

● **TBA.** CANQUA Meeting Whitehorse, Yukon Territory, Canada (proposed).

● **TBA.** Canadian Paleontology Conference London, Ontario, Canada

● **May 27-30 2001** GAC/MAC Joint Annual Meeting St John's, Newfoundland

● **May 29 - June 2 2001** Canadian Association of Geographers (CAG) Annual Meeting McGill University, Concordia University and Université de Montréal, Montreal, Canada. A joint event arranged by the 3 Montreal universities in celebration of the 50th anniversary of the founding of the CAG. Tim Moore (moore@felix.geog.mcgill.ca), Patricia Thornton (thorpat@vax2.concordia.ca) or André Roy (royandre@ere.umontreal.ca)

● **November 5-8 2001.** Geological Society of America, Annual Meeting, Boston, Massachusetts, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org

2002:

● **TBA.** GAC Meeting Saskatoon, Saskatchewan

● **October 28-31 2002.** 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

2003:

● **TBA.** CANQUA Meeting Halifax, Nova Scotia, Canada (proposed).

● **TBA.** INQUA XVI Congress Reno, Nevada, USA

● **November 2-5 2003.** Geological Society of America, Annual Meeting. Seattle, Washington, U.S.A. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020, X133, E-mail: meetings@geosociety.org