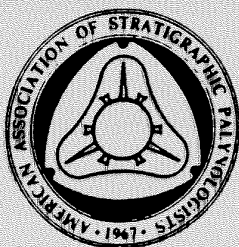


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AASP NEWSLETTER

DEPT. GEOLOGY AND GEOGRAPHY
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AASP NEWSLETTER

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PRESIDENTS ADDRESS-A PROPOSED STRATEGY TO REVITALIZE PALYNOLOGY

Norm Frederiksen's out-going presidential address (this Newsletter) and Don Benson's 1987 Presidential Address both focused on actions palynologists can take to improve the future prospects of our discipline. Don emphasized the need for oil company palynologists to assure maximum applications of palynology to all exploration problems--in effect, to be better disciples of our science. Norm encouraged greater involvement with other scientific societies, to more effectively communicate the potential of palynology to solve varied geological problems.

To explore these and other methods to revitalize palynology, a forum was held at the AASP meeting in Houston. A number of ideas were discussed, including four broad action areas that should help insure an important future role for palynology in the geological sciences:

1. Increase technological innovation in palynology,
2. Strengthen the teaching of stratigraphic palynology in our academic institutions,
3. Improve our own ability to do our science more effectively, and
4. Communicate more effectively to geoscientists the potential of palynology to solve geologic problems.

Starting with technological innovation, I will devote my 1989 Newsletter messages to a discussion of each of these important goals and how we might achieve them.

As palynologists we need to stimulate our imaginations to devise new approaches toward solving problems presented by fellow geoscientists. The opportunity exists for developing new palynological techniques in sequence stratigraphy, palynofacies, image analysis, statistical analysis and in many other areas. Palynology is a relatively new discipline with unrivaled potential in having both land-derived and marine microfossils abundantly represented throughout most of Phanerozoic time. Palynology can also provide the high resolution stratigraphic control necessary to understand geological and evolutionary processes.

One approach to accelerate palynological innovation is to establish a consortium of academic workers to pursue specific innovative projects. Similar programs in other microfossil groups have already been successful in developing new technologies. I envision that participants would primarily be experienced palynologists worldwide who have expertise in particular research areas. It would also be beneficial to solicit research ideas from the palynological community for consideration by those funding the research. Typically, a two-year old publication delay is imposed so that sponsors can benefit from their financial support. AASP's role would be one of providing a forum to nurture programs beneficial to palynology, with no financial support involved.

Technical innovation, a hallmark of the petroleum industry, has met the demands of diverse exploration strategies, from drilling in deep water to examining the earth's surface by satellite. Technical innovation has also made possible exploration and production in harsh, extreme environments in nearly every part of the world. I believe, therefore, that the petroleum industry will also support innovation in palynology. Consequently, I have written to 15 companies inquiring whether they might support a consortium research program with a focus in sequence stratigraphy, but not necessarily restricted to that topic. Ten have expressed interest in exploring the idea, and no negative responses have been received thus far. A possible level of funding might be \$20,000 per year per company, for perhaps a five-year period.

We need to value innovation as a means by which palynology can prosper, and strive to develop new approaches to our everyday problem solving. I want to encourage individual and Association action (in the form of committees, dialogue in the Newsletter, communication between the membership and the Board of Directors, etc.) in regards to technical innovation and the other important topics listed above. I also solicit any comments or ideas you may have for other possible courses of action.

Harry Leffingwell

OUTGOING PRESIDENT'S ADDRESS

The past few years have been a difficult time for palynology. Oil companies are not hiring many people to replace those laid off, and universities are replacing few palynology professors who retire.

Last year in Halifax, Don Benson talked about how each of us must assume responsibility for demonstrating to our employers that palynology is a useful and important science. I would like to emphasize that AASP as an organization cannot afford to be isolated as it largely has been throughout its history. We need to establish relations with other associations and take part in symposia sponsored by other societies in order to influence the scientific directions in which these associations go, and in order to show that palynology is relevant and important to their meetings and symposia.

Just to give a couple of examples of official AASP interaction with other societies, we are now sending a representative to the U.S. Committee for INQUA, which plans the International Quaternary meetings; we are a member of ANAPA, which helps plan North American Paleontological Conventions; and we have become a member society of the American Geological Institute, which is a very high-visibility organization.

At any one time there are always a number of geological and biological symposia in planning stages, that palynologists should consider taking part in. The point is that palynology will only be recognized as an important science if we do take part in activities outside of our own association. Just as an example, a GSA Penrose conference is being proposed for 1989, on the Eocene-Oligocene boundary, including discussion of both marine and nonmarine rocks. The organizers have a long list of proposed invited speakers, including paleontologists, but there isn't a single palynologist among them. We have to make our capabilities and areas of expertise much more widely known, or we're going to be left out in the cold and disregarded. We can't afford to sit in a corner by ourselves any longer. But as Don Benson said, that means each of us must take responsibility for looking for opportunities to show that palynology can solve practical and scientific problems. AASP will only be as strong as the willingness of individual members to participate in the affairs of both AASP and other organizations.

Norm Frederiksen

REVIEW OF FORUM HELD AT THE AASP MEETING IN HOUSTON ON GOALS AND ACTIONS TO REVITALIZE PALYNOLOGY

INTRODUCTION

A forum was held at the AASP Annual Meeting regarding steps which might be taken to revitalize palynology during the present economic crisis in the petroleum industry. The agenda below outlines topics which were discussed. We will attempt to summarize the discussion for the benefit of those not at the meeting, and to list action taken since the forum to implement some of these suggestions.

OUTLINE OF THE FORUM

GOAL: ACCELERATE TECHNOLOGICAL INNOVATION IN PALYNOLOGY

1. Establish a multi-company consortium to support a multi-year, multi-university (including European universities) research program whose central theme would be the application of palynology in sequence stratigraphy. Other projects also would be pursued.
2. Increase oil company commitment to innovative research by strategies such as farming out routine technical service to consultants.

GOAL: INCREASE STRATIGRAPHIC PALYNOLOGICAL EMPHASIS IN ACADEMIC INSTITUTIONS

1. Re-initiate efforts to establish a Chair in Stratigraphic Palynology.
2. Practicing stratigraphic palynologists take more active role in palynological education
 - a. Availability as outside examiners
 - b. Presentation of short courses
 - c. Guest lecturers
 - d. Greater support of summer intern programs by industry
3. Establish an endowment fund in AASP for student scholarships.
4. Improve literature dissemination to academic departments.
5. Increase undergraduate awareness of stratigraphic palynology via the Public Relations Committee brochures.

GOAL: COMMUNICATE MORE EFFECTIVELY WITH GEOLOGISTS AND GEOPHYSICISTS

1. Present more general interest papers at national, regional and local geological societies focusing on palynology's geological problem-solving ability.
2. Publish more general interest papers in widely read geological journals.
3. Partially fund travel to appropriate meetings to present meritorious talks, or assist in page charges for meritorious manuscripts.
4. AASP should organize and/or participate in joint meetings with other societies
 - a. Involvement in the technical planning of NAPC V
 - b. Investigate AASP joint meeting with other paleontological/geological societies.
5. Increase AASP member activity in geological societies
 - a. Committee work
 - b. Technical programs, field trips
6. AASP become a member society of AGI and be active in their affairs.
7. Broaden palynological support between operational and research groups.
8. Increase collaboration in multidisciplinary projects.
9. Increase palynological presentation in parent organizations.
10. Increase personal contacts with other geoscientists.
- *11. Contribute, when appropriate, to paleontological and geological newsletters and magazines.
 - a. Annual AGI article on palynology.
 - b. PS/PRI Newsletter

GOAL: IMPROVE PALYNOLOGICAL INFRASTRUCTURE TO ENABLE US TO DO OUR SCIENCE MORE EFFECTIVELY AND EFFICIENTLY

- *1. Establish curated, centralized facilities for type slide collections.
 - *2. Establish centralized reprint collection center.
 3. Increase local palynological groups to discuss technical and AASP issues.
 - *4. Promote the development of a PC-based system for building palynological catalogues
- * denotes recommendation that an ad hoc committee be formed

RESULTS OF THE FORUM

GOAL: ACCELERATE TECHNOLOGICAL INNOVATION IN PALYNOLOGY

The moderator expressed his belief that an increased rate of innovation was a key ingredient to future palynological growth, and that the petroleum industry would fund well conceived innovative research programs. A consortium was proposed, whose prime focus would be palynological innovations in sequence stratigraphy [see President's message (this issue)].

Membership response: Norm Frederiksen asked whether biostratigraphy is an important aspect of sequence stratigraphy? One oil company palynologist stated that the seismic stratigraphers in his company believe that only seismic signatures are required. This viewpoint was eloquently refuted by L. Stover, based on his eight years of his own work of biostratigraphic support of sequence stratigraphic studies. K. Piel cited statements of Peter Vail, Brad Macurda and Ian Lerche attesting to the value of biostratigraphy as a critical constraint in their studies. B. Morgan cited the 1987 SEPM Research Conference on "Innovative Biostratigraphic Approaches to Sequence Stratigraphy", and especially Armentrout's paper on the utility of biostratigraphy in sequence analysis.

ACTION: The consortium idea is being further developed through discussions with various oil company representatives.

GOAL: INCREASE STRATIGRAPHIC PALYNOLOGICAL EMPHASIS IN ACADEMIC INSTITUTIONS

The moderator expressed alarm at the number or retiring professors who taught stratigraphic palynology and who are not being replaced. The suggestion was made to attempt to fund a chair in stratigraphic palynology, which would provide stability in the teaching of this discipline in a leading institution. The major source of such funding would be individuals rather than institutions.

Membership response: M. Zavada and R. Mathewes both stated they thought the greater need was for student support. Two oil company palynologists stated their companies preferred supporting student projects to academic chairs. O. Davis said identification of some luminary as the name for the chair might be important to some universities. J. Wrenn stated professors should not be bashful in

approaching oil companies because support is often available for worthwhile projects. The problem of administrative overhead costs diluting funding was raised by H. Leffingwell. M. Zavada, P. Gensel and R. Wicander stated in most cases universities can be persuaded to waive them. J. Legault disagreed.

ACTION: The chair in Stratigraphic Palynology Committee was re-activated with Norm Norton as Chairman. Ken Piel also agreed to serve. Additional members would be welcomed. Their objective will be to solicit funds primarily from private individuals.

The Board of Directors is also investigating means of raising an additional fund for student scholarships.

GOAL: INCREASE PALYNOLOGICAL EMPHASIS IN ACADEMIC INSTITUTIONS BY MORE ACTIVE ROLE OF PRACTICING PALYNOLOGISTS

The moderator suggested that palynologists should take a more active role in palynological education.

Membership response: L. Stover stated his efforts and those of his associates were well received and appreciated by academic institutions, as reflected in the granting of full library privileges and titles as adjunct professors. D. Goodman stated his course on seismic stratigraphy was well received and that the university eventually instituted a course of their own on this subject. One member, however, warned of potential problems of academic departments taking advantage of such efforts.

The moderator emphasized the importance of improving earth science teaching in secondary schools, and cited the AGI efforts in this regard in improving geoscience curricula and teaching qualifications.

Membership response: Lew Stover stated that both he and Vaughn Bryant, who had palynological articles in National Geographic, received broad responses from grade school youngsters inquiring about career opportunities in palynology. M. Zavada suggested AASP keep a directory of people willing to lecture on various subjects. R. Wicander suggested AASP perhaps should have a Distinguished Lecturer. (D. Nichols is a Sigma Xi Lecturer, and has several requests to speak).

ACTION: The Public Relations Committee has been re-activated. New members are: L. N. Ford, V. E. Williams, and J. Wrenn. The Board of Directors is investigating the feasibility of establishing a list of members willing to give lectures and a list of member specialties.

GOAL: COMMUNICATE MORE EFFECTIVELY WITH OTHER GEOSCIENTISTS

The moderator expressed the need for greater interaction with larger geological associations to demonstrate that palynology is a relevant and effective method of solving geologic problems (see N. Frederiksen Presidential Address, this issue). He stated most members attend only one technical meeting a year, and asked how we should structure our AASP meeting to provide greater interaction. Specifically, should AASP meet separately in 1992, or in conjunction with IPC or NAPC-V (The fifth North American Paleontological Convention).

Membership Response: J. Lentin suggested an AASP European meeting. B. Tocher cited the large number of European members, and assured AASP meeting in Europe would be well attended. He stated the outlook for palynology in Europe is brighter, in fact three tenure track positions are becoming available in U. K. universities. R. Wicander cited the cheaper costs of European travel as contrasted to Australia. H. Leffingwell mentioned that other North American paleontological societies also feel they have become too isolated, and thus are discouraging single disciplinary topics. Note: The TSOP (The Society of Organic Petrographers) symposium, held in conjunction with the AASP Annual Meeting in Houston, admirably had several sedimentologists as invited speakers. H. Leffingwell suggested that more papers be titled and directed on the resolution of geologic problems to attract a broader readership. Morphologic data, although critical to any study, need not be highlighted to non-paleontological audiences. J. Lentin stated that firms reflect a similar perspective in hiring, seeking biostratigraphers rather than morphologists. The point is that papers have to be titled appropriately to be accepted and widely attended in non-palynology sessions.

ACTION: The Board of Directors voted to hold its 1992 meeting in conjunction with IPC in Aix-en-Provence. The Board also voted to shift the venue of the 1991 meeting to Southern California. The 1991 meeting will be timed so that members can also attend the GSA Annual Meeting in San Diego (see details, this Newsletter).

GOAL: IMPROVE PALYNOLOGICAL INFRASTRUCTURE TO ENABLE US TO DO OUR SCIENCE MORE EFFECTIVELY

The moderator called on L. N. Ford to present his proposals on Item 4, development of a PC-based system for building palynological catalogues. Ford cited two basic problems: getting the data into the computer; and developing a PC-based system to catalogue fossil groups. The first problem has been solved with the use of digipad technology. The second is being addressed by the American Museum of Natural History which is using a PC-based system to display the Ellis and Messina Catalogue of Foraminifera. Could their system be developed for dinoflagellates and other palynomorph groups?

Membership response: The call for involvement in developing a PC-based system for cataloging palynomorphs drew a varied response covering a wide array of issues, including the cost of the system and software development (J. Lentin), the tradeoff between data entry and data storage costs (L. Edwards), the quality of imagery that might be accommodated (line drawings versus true images; J. Lentin and G. Williams), and the effort to produce a hard-copy update of the Eisenack catalog currently underway at the Geological Survey of Canada (G. Williams).

ACTION: A committee was formed to promote the development of a PC-based system for cataloging microfossils. Members of the committee are: L. N. Ford, Jr. (Chairman), D. Goodman, L. Satchell, T. Davies, C. Cigler, L. Edwards, R. Fenton, and N. Albert. The Chairman wishes to clearly differentiate between the development of a system for cataloging microfossils, and the task of loading data (whatever the source may be into such a system, since development of a database is not the goal of this committee).

L. N. Ford attended the first technical meeting of the DIGIBASE catalogue group (American Museum of Natural History), and along with D. Goodman visited C. Cigler at Everest Geotech to compare imagery digitized at 512 pixels with that digitized at 1024 pixels. Future plans include comparisons of analog with digital imagery systems.

SUMMARY

A modest start has been made on the proposed strategy to revitalize palynology. Norm Frederiksen emphasized, however, it will take commitment from the membership to work in areas which they believe are worthy. Please notify anyone on the Board of Directors of your interest, and we assure you your talents will be utilized.

MIDYEAR MEETING: AASP BOARD OF DIRECTORS

The next meeting of the AASP Board of Directors will be held on Saturday, March 18, and Sunday, March 19, at the Ramada Renaissance Hotel in Richardson, Texas. Meetings will commence at 8:00 AM.

The meeting is open to all members of AASP, and you are encouraged to attend. We hope to see you there!

We have booked a block of rooms at the Ramada, so please indicate that you are an AASP member when making your reservations. The rate is \$50 single. The hotel is located on the northeast corner of the Campbell Road-Central Expressway intersection, approximately 20 miles north of downtown Dallas. One-way taxi fare from D/FW Airport is about \$30; the Super Shuttle (call 817-329-2000 from the airport) fare from the airport to the hotel is \$13 each way. Participants can also fly into Love Field, which is somewhat closer to downtown.

Ramada Renaissance Hotel
701 East Campbell Road
Richardson, TX 77081
Telephone: (214) 231-9600

There will be an informal reception for all AASP members at the home of Dave and Barbara Goodman (about 2 miles from the Ramada) beginning at 7:00 PM on Friday, March 17, to kick off the business meeting. Call (214-754-6504) or write Dave for a map and details.

1991 MEETING SITE CHANGED TO SOUTHERN CALIFORNIA 1992 MEETING SITE WILL BE AIX EN PROVENCE, FRANCE

The 1991 meeting site has been changed from New Orleans to Southern California because of the transfer of the Chairman of the 1991 Organizing Committee to Houston. Roger Witmer of the Unocal Science and Technology Division is the new Chairman of the 1991 Organizing Committee. Our 1991 annual meeting will be timed so that our

members can also partake of the GSA Annual Meeting to be held in San Diego that year. The exact dates and arrangements will be decided at the Midyear Board of Directors Meeting on March 18th in Dallas from options presented by the Organizing Committee, and will be reported in the next newsletter.

The Board of Directors also decided at the Annual Meeting in Houston to hold its 1992 meeting in conjunction with the 8th International Palynological Congress in Aix-en-Provence, France. Dr. Owen Davis, Director-at-Large, visited with members of the 8th IPC Committee in France on January 8-9, 1989, to coordinate initial arrangements for AASP. The Board, by not scheduling a North American meeting in 1992, encourages its North American members to meet with our AASP and IFPS colleagues in the delightful venue in southern France.

NAPC-V TO BE HELD IN CHICAGO IN 1992

NAPC-V will be held at the Chicago Field Museum of Natural History in late June or early July, 1992, with at least one social event to be held at the University of Chicago. The meeting will celebrate the centenaries of both the Field Museum and the University of Chicago. Previously planned for 1993, the date was changed because all centennial celebrations of the Field Museum must be held in 1992. The re-scheduling presents some difficulties for both the AASP and the Paleobotanical Section of the Botanical Society of America because of international meetings both groups will have in 1992. The June date was scheduled to avoid direct conflicts with the 8th International Palynological Congress (Aix-en-Provence) and the 4th International Paleobotanical Conference (Paris) which will be held in late August - early September. The organizing committee currently consists of Drs. Peter Crane, J. Flynn, S. H. Lidgard (Field Museum); M. C. LaBarbera (University of Chicago); and R. E. Plotnich (University of Illinois at Chicago).

The program will include symposia, contributed papers and poster sessions. The Organizing Committee will not organize any field trips, but it is open to having field trips organized by member societies.

Symposia suggestions were solicited from all member societies, to be submitted by Spring of 1989. If AASP is to have a voice in the program, we should submit a list of symposium topics. The ANAPS Committee is encouraging broad-based themes suitable for multi-disciplinary

participation. Please send any symposium topics to Dr. Fredrick Rich, LB 8149, Georgia Southern College, Statesboro, Ga 30460.



PALYNOLOGY MANUSCRIPTS REQUESTED

There is room for a number of manuscripts in volume 13 of Palynology, to be published in late 1989. Dave Goodman, Journal Editor, is seeking quality papers on any aspect of palynology and requests that authors follow the Palynology format. Authors should refer to a recent issue of Palynology as a useful guide in the preparation of manuscripts, paying particular attention to the section entitled "Instructions for Authors" in the back of each volume (pages 266-268 in Volume II). Manuscripts to be considered for publication should be sent to Dave at the following address:

Dr. Dave K. Goodman
ARCO Oil and Gas Company
2300 West Plano Parkway
Plano, TX 75075 U.S.A.
Telephone (214) 754-6504

Remember, Palynology is published yearly and, believe it or not, time is running short to have your paper appear in next year's volume as your A.A.S.P. journal. **SUPPORT YOUR LOCAL JOURNAL - PUBLISH IN PALYNOLOGY!** The Editorial Staff appreciates your support.

AASP BECOMES MEMBER SOCIETY OF THE AMERICAN GEOLOGICAL INSTITUTE

At the AASP Annual Meeting in Houston, the Board of Directors voted that AASP become the 20th Member Society of the American Geological Institute. Some of the other member societies include the AAPG, AIPG, GSA, Paleontological Society, SEPM, Society of Vertebrate Paleontologists and the Association of Women

Geoscientists.

AGI is an umbrella organization for the geological sciences which can speak as a single voice for the geological community on selected issues, and thus compete more effectively for federal and international funds for broad programs within the geological sciences. AASP also benefits by having direct communication with the member societies; an exchange of societies' newsletters; experience of member societies on similar issues; greater exposure of palynology to other geoscientists; and access to detailed manpower surveys AASP might wish to conduct on the AGI database.



AMERICAN GEOLOGICAL INSTITUTE

One of AGI's major programs is to upgrade the K through 12 secondary school program in the geological sciences, so that college students will have a better knowledge of the geosciences when entering college. After a series of regional conferences in 1989 to define issues and to develop a framework program, AGI in 1990 will establish criteria for desired curricula, teacher qualifications and preparation, and enhancements to educational programs. A better K to 12 geoscience education should provide the geosciences with a better opportunity to attract the best scientific minds produced by our secondary educational system.

AGI also is involved in reference databases, such as Georef, and in the Directory of Geoscience Departments, U.S. and Canada.

Norm Frederiksen initiated contacts with AGI which resulted in the Board's action in Houston, and one of the prime benefits will be to enhance palynological awareness and cooperation among geoscientists of Member Societies.

INTERNATIONAL PROGRAM IN CRETACEOUS RESOURCES, EVENTS AND RHYTHMS

Cretaceous Resources, Events and Rhythms (CRER) is a new international research project directed toward global aspects of Cretaceous sedimentary geology and resources. Six working groups have been established thus far: (1) Sequence Stratigraphy and Sealevel Changes, (2) Sedimentation in Oxygen Deficient Oceans, (3) Cyclostratigraphy, (4) Development and Demise of

Carbonate Platforms (5) Paleogeography, Paleoclimatology, and Sediment Flux, and (6) Geochronology. In addition, an Advisory Committee has been established for Data Management.

In September, each working group held a workshop in southern France, and position papers were prepared by working group convenors to provide basic information and initial suggestions of research directions. Copies of the position papers can be obtained from Professor R. N. Ginsberg, Chairman, Program Development Committee for CRER, University of Miami, Fisher Island, Miami Beach, Florida 33139.

Gonvenors of each working group and their abbreviated addresses are as follows: WG1-Sequence Stratigraphy-Nicholas Christie-Blick, Lamont-Doherty; Ashton Embry, Canadian Survey, Calgary; Miguel Uliana, Astra CAPSA, Buenos Aires. WG2-Organic-Rich Sequences-M. A. Arthur, University of Rhode Island; H. C. Jenkyns, Oxford University, U. K.; H.-J. Brumsack, Geochemisches Institute, Gottingen; and S. O. Schlanger, Northwestern University. WG3-Cyclostratigraphy-Alfred Fischer, University of Southern California and Isabella Premoli Silva, Milan. WG4-Cretaceous Carbonate Platforms-Wolfgang Schlager, Free University, Amsterdam; Jean Philip, Univ. de Provence, Marseille; A. Bosellini, Univ. of Ferrara, Ferrara, Italy. WG5-Paleogeography etc.-Dr. Larry Frakes, Alelaide; Marita Bradshaw, Canberra; Brian Funnell, Univ. East Anglia, U. K.; Elda Di Paola, Buenos Aires; and Fred Mackenzie, Univ. of Hawaii, Honolulu. WG6-Geochronology-Erle Kauffman, Univ. of Colorado; Jan Van Hinte, Free University, Amsterdam; J. Hazel, LSU; and J. M. Hancock, University College, London.

An update of the CRER project was presented at the GSA meeting in Denver in October, 1989 by Professor Ginsberg.

Future meetings will be at the International Geological Congress, Washington, where 10 papers will be presented, in conjunction with the Tethys and Nonmarine Cretaceous working groups; and at the 1990 International Sedimentological Congress at Nottingham, England.

Interested palynologists should contact conveners directly, or limited additional information can be obtained through Harry Leffingwell, Unocal Research, CA.



AASP DATA COMMITTEE FORMED

At the Houston Meetings, one of Harry Leffingwell's first actions as President of AASP was to create a (for lack of a better name) Data Committee, and appoint me its head. The basic role of this committee is to promote and facilitate the exchange of information and data via electronic media. What this really means is the collection and distribution of bibliographies, stratigraphic data, software, and other useful information on floppy diskettes and magnetic tape. We already have some information to share--but more on that later.

Several AASP members have already expressed interest in the committee, and I have informally invited them to become members of the committee. I herewith extend that invitation to any AASP member who is willing to exchange data. That is, envision a "committee" made up of all members who are interested in the service, rather than a small group, working to make these data available to the membership as a whole.

I would like to see the exchange work on a barter basis. Rather than sending money to purchase a data set compiled by other members, I suggest that each Data Committee member provide a diskette of original material as an "initiation fee" to receive comparable material in return. For this to work, of course, the material must be in the "public domain." The author should formally state the material is available for non-profit distribution in order to receive similar material. Of course, there will be instances of "From each as they can give, to each as they have need", but it seems unlikely that anyone who can use electronic media will be unable to provide something in exchange. As an example of the process, Steve Hall gave me a floppy disk containing a word-processor file of 548 publications he compiled for the late-Quater-

nary AASP Volume (Hall, 1985). I deleted the word-processor codes from the file and added to the bibliographic references of Linda Cummings, Sue Fish, Jan Gish, Jim Schoewetter, Jim West and myself--nearly doubling the number of references. Since the two Jims provided their data on floppy disk I provided Hall, Schoenwetter, and West with ASCII files of the bibliography. This is the sort of "barter" I hope will make the Data Committee work.

The "Bibliography of Late-Quaternary Palynology of the Southwestern United States" is currently the Data Committee's sole offering. I soon will make available several pollen statistics programs and published data sets I have written. Glen Fredlund has given me a copy of a pollen diagram program that produces beautiful plots on a EGA monitor, and I have copies of several pollen statistics programs written by Lou Maher and by John Birks. None of these programs will be available until the authors notify me of their interest in becoming an AASP Data Committee Member by making them available for distribution to committee members.

These programs bring up another issue. Each one reads and stores data in a different format. George Hart has mentioned a data file he may make available in yet another format. I can foresee no easy way to standardize the information we exchange. Therefore, I suggest that all programs and data be offered on an "as is" basis, with any necessary conversion the responsibility of the user.

Finally, the Data Committee can serve AASP in other ways. It can maintain the AASP membership list, and notify members of other sources of data --such as PALYNODATA. Since most manuscripts are now prepared on personal computer word processors, perhaps the data from papers in PALYNOLOGY could be "published" by the Data Committee. Members can review one another's software in the Newsletter. The committee's values will be limited only by the level of activity of its subscribing members. If you're interested in exchanging data, or have a suggestion write, or call (602) 621-7953, Telex: 187 167 AZUTUC, Fax: (602) 621-2672, Binet: PALYNOLO @ ARIZRVAX.

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Reference Cited

Hall, S.V. 1985. A bibliography of Quaternary palynology in Arizona, Colorado, New Mexico, and Utah. In: Bryant, V.M. and Holloway, R.G. (eds.) Pollen Records of Late-Quaternary North American Sediments. American Association Stratigraphic Palynologists Foundation, Dallas, Texas, 405-423



Book Reviews

THE EVOLUTION AND PALAEOBIOLOGY OF LAND PLANTS by Barry Thomas, National Museum of Wales and Robert Spicer, Dept. of Biological Sciences, Goldsmith's College. ISBN #0-931146-06-2. Dioscorides Press. 318 pp, 163 figures and line drawings. Price: cloth - \$51.95; paper - \$28.95.

In *The Evolution and Palaeobiology of Land Plants*, the authors describe the evolutionary history of land plants, largely in terms of embryophytes and with brief consideration of algal forms or putative algal ancestors. The book is reasonably priced, readable, and covers the basic information one would want to see in such a treatment. The underlying theme of the book centers on adaptive features of various types of land plants, ecological factors that might influence adaptive changes, and evolutionary innovations and their possible consequences. These provide a direction and unity to the whole book. However, treatment of each plant group or evolutionary innovation or scenario is rather brief and one is left with the feeling that while the authors have made good start at integration of evolutionary, systematic and ecological theory with fossil evidence, in most cases this is not sufficiently or consistently developed for a book purported to be for advanced students or workers in paleobiology and evolution.

The book begins with a few pages devoted to pre-land plants (Precambrian-Silurian), followed by consideration of the environment at the time plants first became adapted to the land. This is followed by a description of the early land plant record and the diversification of early land plant groups. The next two chapters depart from the theme of the earlier ones to concentrate on aspects of geology, geologic time, taphonomy, evolutionary theory (especially at population level), species concepts,

extinction and types of evolution. While some parts are quite elementary, the latter part of Chapter 5 on evolution is potentially useful when considered in conjunction with the fossil evidence being presented. Placement of these chapters is problematical, since it interrupts the thought-line established in the first section and resumed in Chapter 6. Further, the uninitiated reader is not sufficiently prepared to evaluate data or interpret fossil remains, especially the rather problematic ones such as exist in Ordovician-Devonian times that are considered in relation to early land plant evolution. The absence of photographs to document details of the fossils being treated is a major shortcoming of this book as they would admirably supplement line drawings and provide evidence for the interpretations being presented.

The evolutionary history of major plants is resumed, with a summary of increasing specialization in form and function in terms of evolution of leaves, secondary tissues, roots, abscission, large size, etc. Major groups of pteridophytes are discussed next, followed by a section entitled the second phase of diversification that deals with seed plants. The treatment of early seed types, especially in terms of interpretation of morphology and homologies is not well developed, but most groups are adequately treated. Evolution of coniferalean lines and other gymnospermous groups is reasonably covered. I note with interest the inclusion of several Angaran taxa that haven't been treated in other paleobotanical books, except for Meyen, and at times more consideration of southern hemisphere types.

The last part of the book, entitled the third phase of diversification, presents a well integrated discussion of the origin and evolution of flowering plants, considering the role of cladistic methodology in relation to these topics and with emphasis on floral evolution and reproductive biology. This is followed by a brief discussion of possible angiosperm changes at the Cretaceous-Tertiary boundary, evolution of the modern vegetation from the late Cretaceous to the Early Tertiary and a very brief mention of late Tertiary-Pleistocene changes (mainly in terms of the angiosperm component).

The adaptive theme of the book and the authors' selection of taxa to illustrate major points are good. The authors at times use different taxa to illustrate evolutionary trends than the ones normally encountered in such treatments, which is refreshing. The emphasis is on macrofossils, with little palynological information other than discussion of selected *in situ* spores/pollen and the

angiosperm pollen diversification story. Discussion of evolutionary patterns/scenarios is uneven and often introduced before most readers would be prepared to consider them, such as the origin of the lycopod sporophyll. Many are not illustrated. The circle diagrams at the beginning of the book are very difficult to use.

Some more specific complaints, which in some cases reflect personal preference are: The delineation of major plant groups is sometimes fuzzy, such as which organisms in the charophytes are most significant relative to origin of land plants, and a nebulous definition of lycophytes. Cladoxyls are discussed once again relative to ferns, to which they probably are not closely related. Iridopterids were not discussed at all, and Rhacophyton is puzzling relative to fern evolution not only on the basis of its morphologically plastic leaves, but also in having secondary tissues. The presence of rhizophores is used in regard to zosterophylls being related to lycophytes; this structure may not be a good indication of phyletic affinity, as it may be convergent (some flowering plants have a similar type of structure). While the text is concise, at times it appears that editing has resulted in meaningless sentences or ones whose relevance to the discussion underway is not clear. Several generic names or words relating to geologic time are misspelled.

In summary, this book provides a basic understanding of the evolution of land plants and problems and practices in interpreting the fossil record in terms of evolution, given some taphonomic, geologic and ecologic constraints. It is worth perusing for these aspects and for a current treatment of land plant evolution, but the whole could be strengthened by more thorough integration throughout.

Patricia G. Gensel
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Chapel Hill, North Carolina 27599

PALYNOLOGICAL AND PALAEOBOTANICAL STUDIES IN HONOUR OF BASIL E. BALME

P.A. Jell and G. Playford, eds., 1988. Association of Australasian Palaeontologists, Memoir 5, 341 p. Published by the AAP, Sidney, N. S. W. and available from: Dr. Peter A. Jell, Queensland Museum, P.O. Box 300, South Brisbane, Queensland 4101, Australia.

This volume was published as a tribute to Dr. Basil Balme on his retirement from the University of Western Australia. The introduction to the volume portrays Dr. Balme as a pioneer in Australian palynology who maintains his research in his

original field of upper Carboniferous and Permian spores while branching out to produce key studies in other areas. The volume is a fitting tribute to the man, being a compilation of 17 original papers covering Australian sections.

The wide range of ages and of fossils included in the volume makes characterization of the book difficult. Papers on Paleozoic sections include those on Ordovician acritarchs (Playford and Wicander), late Paleozoic spores (Foster and Helby; Backhouse), and glossopterid remains (Rigby, Chandra and Sarange). Mesozoic palynology is a significant part of the volume, with papers on spores (Raine, de Jersey and Ryan; Filatoff and Price; Burger; Alley), dinoflagellate cysts (Helby, Wilson and Grant-Mackie; Parker; Marshall) and pollen (Dettman and Jarzan). Eocene studies include a paper on a new acritarch genus (Marshall and Partridge) and on pollen (Truswell and Owen; Milne). Finally, papers on modern flora compare fossil and modern Eucalyptus (Martin and Gadek) and describe Recent dinoflagellate cysts (Bint).

The inventory of papers sorted by age does not do justice to the volume. A volume containing descriptions of fossil floras from scattered Australian sections could have limited appeal. The utility of the volume for palynologists working in other geographic areas lies in the applications of the data.

Taxonomy is a key element, with the originality of the papers reflected by the number of new taxa erected. This is especially true for Ordovician acritarchs (Playford and Wicander) and Santonian dinoflagellate cysts (Marshall), but pertains to other palynological groups and different age sections. Parker describes a new late Jurassic dinoflagellate cyst; Helby, Wilson and Grant-Mackie illustrate, but do not describe, a number of new Jurassic dinoflagellate cysts in a preliminary study. Redescriptions of taxa are also important, including taxonomic changes and emendations in glossopterids (Rigby, Chandra and Sarange), a lycopsid spore (Raine, de Jersey, and Ryan), and Eocene pollen (Milne).

Biostratigraphy plays an important role in most of the papers. Biostratigraphic applications range from tracking morphological changes in a pteridacean spore lineage through the Mesozoic (Filatoff and Price) to finer scale correlation within the Eocene based on a new acritarch genus (Marshall and Partridge).

Paleoenvironmental and paleogeographic consideration also appear in several papers. Two papers on Early Cretaceous formations (Burger;

Alley) relate palynomorph assemblages to major sea level changes. Dettman and Jarzan reconstruct Late Cretaceous terrestrial communities based on angiosperm pollen, and Martin and Gadek trace Pliocene climate changes using pollen from a species of *Eucalyptus*. Bint raises questions on environmental control of protoperidiniacean cysts by describing Recent cysts from an area with no apparent upwelling or terrigenous input.

Additional features commend this volume. The number of recent (including 1988) references attests to the currency of the papers. The editors deserve special recognition for making this collection of diverse papers a consistent whole. Particularly noteworthy is the complete documentation of collection localities and horizons for all samples and specimen locations on slides for illustrated specimens. Figures are clear, and plates are excellent. Typographical errors are few and in no way detract from the volume unless, perhaps, you are Dr. Wordon Good. As an aside, at least two of the papers provide us with new ways to describe old problems; most paleontologists face occasional (or not so occasional) instances of "inimical preservation" (Playford and Wicander) and a "quirky biostratigraphic datum" (Filatoff and Price).

The editors and authors have produced a volume which can be used by most, if not all, AASP members.

Susan L. Duffield
Amoco Production Company
P.O. Box 50879
New Orleans, LA 70150

THE ART OF GEOLOGY, edited by E. M. Moores and F. M. Wahl. The Geological Society of America Special Paper 225, 1988, 147 pages. Geological Society of America, 3300 Penrose Place, P.O. Box 9140, Boulder, Colorado 80301. \$37.50 postpaid.

This special volume celebrates The Geological Society of America's 1988 Centennial and features 250 full color photographs in a 9" x 12" format. The photographs in this volume were all taken by geologists, and not by professional photographers. They were selected from the more than 650 photographs that have been submitted to the editors for the cover of GSA's monthly journal, **Geology**.

A brief Introduction states that the volume "has two purposes: to celebrate the 100th anniversary of the Geological Society of America and to convey the visual beauty of Earth and its neighbors as seen from a geologic perspective." In those regards, the book succeeds admirably. Starting

with the founding of The Geological Society of America in Ithaca, New York, in December, 1888, the Introduction then traces the important milestones and events that have had an effect on the development of geology as a science and on human history, such as the San Francisco earthquake.

Following the Introduction, the rest of the book contains 250 color photographs arranged with 69 short essays that briefly explain the geology and importance of the areas in the photographs. These essays are written for nonscientists. Photographed areas include the Andes Mountains, Peru; Tambora Volcano, Indonesia; the Zagros Mountains, Iran; Thrust Faults, Spain; Mount St. Helens, Washington; Tower Karst, China; Deep Marine Deposits, Antarctic Peninsula; these include just a few of the places in this book. There also are photographs of a few places out of the world, including Pele Eruption, Io; Valles Marineris, Mars; and Folds on Venus.

For the most part I found the book visually satisfying, especially after seeing photographs of such familiar places as the Grand Canyon and Death Valley photographed from a different perspective. The title of the book is **The Art of Geology** and the photographs are certainly beautiful and artistically arranged.

Reviewed by: Reed Wicander, Dept. of Geology;
Central Michigan University; Mt. Pleasant,
Michigan 48859

MULTILINGUAL THESAURUS OF GEOSCIENCES, edited by G. N. Rassam, J. Gravesteijn, and R. Potenza. 1987, 600 pages. Pergamon Press, Maxwell House, Fairview Park, Elmsford, New York, 10523. \$95.00.

This thesaurus contains 4871 key terms which are translated into six languages, English, French, German, Italian, Russian, and Spanish. These terms are classed into 36 groups, 20 of which correspond to the major subdivisions of the geosciences, such as Stratigraphy, Paleontology, Petrology, etc., while the other 16 represent related fields or minor subdivisions such as Elements, Soils, Environments, etc.

The contents include a historical introduction to the development of the thesaurus, followed by an explanation of the technical methodology used in its preparation. Both of these sections are presented in all six languages. The body of the thesaurus contains 4871 entries arranged in alphabetical order and carrying a sequential reference number with the abbreviation for one of

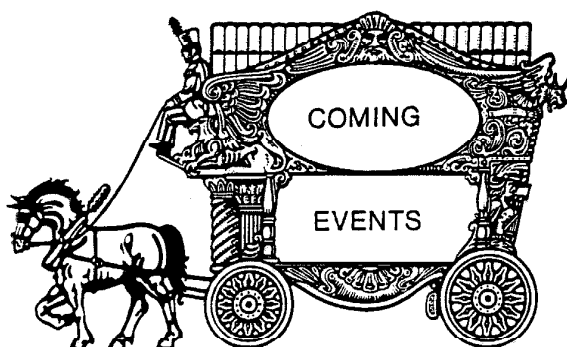
the 36 major groups below it. The column containing the entry is followed by six columns in which the term is translated into the six languages covered by the thesaurus. That section is followed by indexes compiled for each language in which each of the key words is translated. Finally, a field index completes the thesaurus in which all the words pertaining to each of the 36 groups are listed under that group.

This book, priced at \$95.00, is certainly expensive for an individual. However, considering what it offers in terms of being able to look up what an equivalent term is in one of the six subject languages, it is worth the price and could be an essential reference for everyone.

Reviewed by: Reed Wicander; Dept. of Geology
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WORLD DIRECTORY

There was some problem with mailing out copies of the World Directory of Palynologists to AASP members, but everybody should have their copy by now. If you didn't get yours, Gordon Wood still has some copies.



AASP SHORT COURSE - NEOGENE TO RECENT DINOFLAGELLATES - TULSA, OKLAHOMA, OCTOBER 15-17, 1989

First Announcement

An AASP short course on Neogene - Recent Dinoflagellates will be held in Tulsa, Oklahoma, during October 15-17, 1989. It is to take place during three days prior to the AASP Annual Meeting which will also be held in Tulsa. Instructors for the short course are Lucy E. Edwards (U.S. Geological Survey), Martin J. Head (University of Toronto), and Karen A. Steidinger (Florida Marine Research Institute). The organizer is Martin J. Head.

The purpose of this three day short course is to provide a current review of Neogene through Recent dinoflagellate research in what is a rapidly expanding field of interest in palynology. We hope this course will bridge some of those gaps in understanding between living and fossil dinoflagellates. We hope it will lead palynostratigraphers to be more concerned with living dinoflagellates, and to consider the entire life cycle of their fossil "marker" taxa. It will also address the high potential utility of Neogene to Quaternary dinoflagellates in biostratigraphic and paleoecological studies.

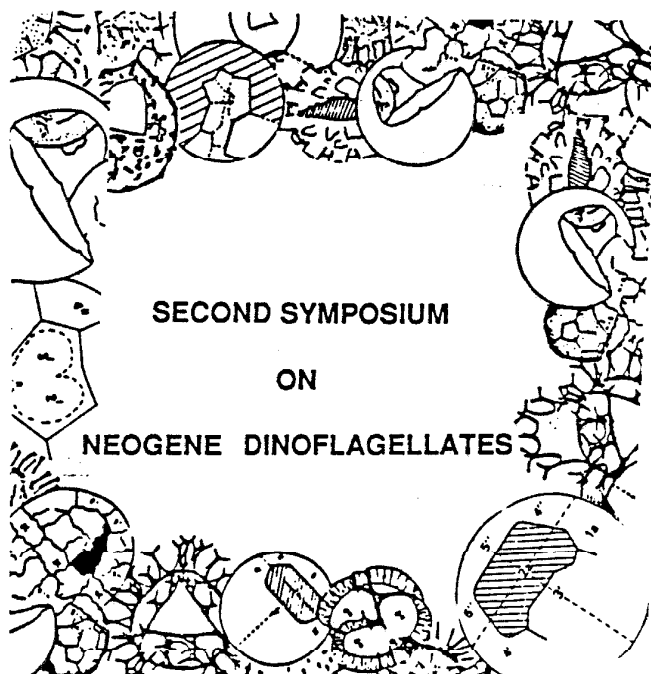
The short course will be most useful to graduate students, and to professional palynologists including modern dinoflagellate workers, who wish to increase their understanding of dinoflagellates from the Neogene to Recent. A basic understanding of dinocyst morphology will be assumed.

The short course will cover:

- 1) Holocene dinoflagellates (topics will include the basic morphology of free living species, cytology, known life cycles and their corresponding vegetative and sexual stages, and distributional patterns). Instructor: Karen A. Steidinger
- 2) Neogene and Quaternary dinoflagellates (topics will include a morphologic overview of significant taxa together with their biostratigraphic distribution, paleoenvironmental significance, and provincial distribution). Instructors: Lucy E. Edwards, Martin J. Head.

Other topics may be included and subjects will be generously illustrated with 35mm slides. Registrants will receive a short course volume. The registration fee has not been finalized but our aim is to keep this within reasonable bounds. Students will be offered a reduced registration fee. We anticipate a maximum attendance of 30 or 40 people. As an expression of interest in attending the AASP Short Course on Neogene to Recent Dinoflagellates please write to Martin Head stating whether you are a student or professional and giving brief details of your palynological experience in the areas covered by the short course. Please include your address, phone, FAX, and Telex numbers. We look forward to seeing you in Tulsa.

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The second Symposium on Neogene Dinoflagellates will be held under the auspices of the Fourth International Conference on Modern and Fossil Dinoflagellates ("Dino-4", Woods Hole, Massachusetts U.S.A, April 17-22, 1989). The Symposium consists of oral presentations, poster displays, a workshop and a post-meeting Symposium Volume. Over 35 palynologists, from 13 countries, have registered an interest in one or more of the Neogene Symposium activities. A news update on each of the four activities is given below.

Neogene Symposium (8:00 am to 12:30 pm, Wednesday, April 19, 1989)

All available time-slots for oral presentations (2 invited; 10 contributed) are now taken. The invited speakers for the Symposium are **Dr. Kazumi Matsuoka** (Nagasaki University, Japan) and **Dr. Peta Mudie** (Atlantic Geoscience Centre, Canada). The topics of contributed papers range in age from latest Oligocene to Recent. They cover a broad range of geographic areas including, onshore and offshore Europe, the Arctic, Labrador Sea, U.S. Atlantic Coastal Plain, the Gulf of Mexico, West African Margin, India, Australia, and the Western Pacific.

Symposium Poster Displays

A few places are still available. Submissions for the presentations of posters will be considered up to the abstract deadline of February 28. Send abstracts to Martin J. Head.

Neogene Workshop (Saturday, April 22, 1989)

The workshop will be an opportunity to discuss and examine material under the microscope in an informal environment. Registration is free. The workshop should be both useful and fun but it will rely for its success upon the active participation of those who attend. We thus strongly encourage workshop participants to **bring microscopic slides** (holotype and topotype material especially welcome). A number of microscopes (one of which will have a camera attachment) will be available, as will be an England FinderTM for the convenient location of specimens. We shall also have a slide projector for viewing of 35 mm photo-slides, and a videotape recorder (non-North American tapes may not be compatible with our equipment - in any case please check with us if you wish to show a videotape). The Workshop will feature a "sample-swap" and participants are asked to make every effort to **bring spare material** (microscope slides, residues, or sediment) to exchange with colleagues.

At some time before the conference we will circulate a tentative agenda of selected topics (evolution, taxonomy, provincialism, problematical species etc.) to give the workshop a loose but purposeful framework. If you would like a particular topic to appear on the agenda, please let us know. An edited transcript or summary of discussions may be included in the volume, which will be published after the conference.

The Volume

We presently have about 20 prospective authors for this Volume, with subjects ranging from latest Oligocene to Recent. The Volume will be published shortly after the Conference and will include both summary papers of the talks presented at the Symposium, and additional papers not presented at the Symposium. **The Volume is still open** for contributions (see deadlines below), and all aspects of Neogene to Recent dinocyst research, including systematic contributions will be considered for inclusion. Manuscripts will be submitted to peer review prior to acceptance. In order to standardize papers for review, we request that contributors follow AASP instructions to authors. Please notify us if you wish to submit a manuscript to the Volume.

Volume deadline: submission of manuscript (first draft) March 31, 1989

Manuscripts and enquiries should be directed to Martin J. Head.

A final word: We wish to thank all those of you who have expressed an interest in the Second Symposium on Neogene Dinoflagellates, and we look forward to seeing you at Woods Hole for what promises to be a most exciting Symposium and Conference.

Co-Convenors:

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CURRENT RESEARCH IN PALYNOLOGY AND QUATERNARY PALEOECOLOGY AT THE LABORATORY OF PALYNOLOGY, NORTHERN ARIZONA UNIVERSITY, FLAGSTAFF, ARIZONA

For nearly two decades, Northern Arizona University has had an active program in palynology, housed within the Department of Biological Sciences and Bilby Research Center, and directed largely from the laboratories of Richard Hevly. In 1987, the University began construction of new palynological facilities, which included a state-of-the-art fume hood system with filtered air, positive pressure and a scrubber unit. Scott Anderson was hired to direct this new facility, which opened in the fall of 1988. Today, the new Laboratory of Palynology at the Bilby Center is home to two faculty members, the Quaternary Studies Program, as well as the Department of Biological Sciences. Current projects include stratigraphic, archeological and coprolitic palynology. The following is a synopsis of specific faculty projects:

R. SCOTT ANDERSON (Quaternary Studies Program), concentrating on:

- vegetation and climate of the Sierra Nevada, CA, and Arizona;
- biogeography of the giant sequoia in California's National Parks;
- pollen in packrat middens and coprolites;
- vegetation history of northern New England.

RICHARD HEVLY (Department of Biological Sciences, and QSP), concentrating on:

- pollen and plant macrofossils from archeological sites and cave fill;
- pollen from late-Tertiary sedimentary basins in AZ
- pollen, phytoliths and parasites from human coprolites;
- pollen and plant macrofossils from packrat middens.

Student projects include:

SUSAN SMITH (QSP) is working on an M.S., examining the late-Quaternary vegetation and fire history of a lake site in Yosemite National Park, California.

LYNDON MURRAY (QSP), working on an M.S., is studying pollen from cave sediments in Idaho.

GLORIA JUDGES-EDWARDS (QSP), working on an M.S., is examining pollen and plant macrofossils from cave sediments and packrat middens in southeastern Utah.

DIANE ELDER (QSP), is working on an M.S., examining alluvial pollen as part of a study on Quaternary stratigraphy of a large wash in southeastern Utah.

STEVE DIVELEY-WHITE (QSP), working on an M.S., is studying pollen and plant macrofossils from cave sediment and packrat middens in northeastern Nevada.

SCOTT CLAYPOOL (Biological Sciences), working on a Ph.D., is examining late-Quaternary alluvial palynology.

STEVE CINNAMON (Biological Sciences) recently finished his M.S. on prehistoric vegetation reconstructions within Wupatki National Monument, utilizing remains in packrat middens.

BETTY BYARS (Biological Sciences), working on an M.S., is studying pollination ecology.

Students interested in pursuing graduate projects in palynology or paleoecology should contact either of the following faculty:

Dr. R. Scott Anderson
Quaternary Studies Program
Bilby Research Center
Box 6013
Flagstaff, AZ 86011

Dr. Richard Hevly
Department of Biological Sciences
Box 5640
Northern Arizona University
Flagstaff, AZ 86011

**AASP BOARD OF DIRECTORS MEETING,
ANNUAL MEETING, WESTIN OAKS
HOTEL, HOUSTON NOVEMBER 9, 1988**

Though BOD meetings can be tedious affairs, and oftentimes are not attended by members who are not on the board, the meetings provide the best means of determining the health of an organization. The state of health of palynology in general is a topical issue right now, as you can see by the nature of other contributions in this edition of the Newsletter. Please read the following reports so that you will know where you, and we as an organization stand.

Secretary's Report (March 3 to November 8)

	Individual	Institutional	
	Members	Members	Total
I. Total Membership at (3/1/88)			
Midyear Meeting	837	129	966
II. Membership changes			
1. New Members	21	2	23
2. Resignations	2	3	5
3. Non-paying Members			
A. Honorary			
(K. Faegri,			
L. R. Wilson,			
C. Downie	(3)	(0)	(3)
B. Outstanding			
Paper Award			
(T. Demchuk)	(1)	(0)	(1)
C. Archives (Hunt			
Archives)	(0)	(1)	(1)
D. Total	(4)	(1)	(5)
III. Membership Total	856	128	984*

Respectfully submitted,
Gordon D. Wood, Secretary-Treasurer A.A.S.P., Inc.
*Total includes 183 "members" in areas for 1987 and/or 1988.

Treasurer's Report (amounts shown to date,
November 4, 1988)

MBank Money Market	
Checking Account (#702 385)	\$ 202.20
(A.A.S.P., Inc., -1) +	
MBank Money Market	
Checking Account (702 438)	21,657.34
(A.A.S.P., Inc.-2)++	
MBank CD (#7066, matures	
12/9/88 @ 6.85%)	18,613.04

MBank CD (#6620, matures	
11/17/88 @ 6.45%)	4,728.12
(L.R. Wilson account)	
TOTAL	45,200.70

DISBURSEMENTS	
(from 3/2/88 to	
11/4/88)	
TOTAL	\$ 5,814.06

+ A \$2,000 loan to the Association from Robin Helby. It is not possible for foreign residents to receive interest on their U.S. accounts; hence, Robin offered to place the money from his personal U.S. checking accounting on loan to A.A.S.P. The Association receives the interest (total interest to date is shown here). The \$2,000.00 principle is due and payable upon demand.

++Includes Scholarship Fund donations and transfer of funds from closing of MBank checking account #307 065 on 11/3/88.

Respectfully submitted, Gordon D. Wood,
Secretary-Treasurer A.A.S.P., Inc.

Ballot Committee Report (Harold Kaska, Chairman)

The Ballot Committee Report on the Election of Officers to the Board of Directors of A.A.S.P., Inc. for the 1988 Election is as follows:

A total of 852 ballots were sent to individual members, as per the membership mailing labels supplied by John Wrenn. These members were verified by Secretary-Treasurer Gordon D. Wood to have paid their current dues.

The actual ballot forms were received from President Norman O. Frederiksen on June 25. The sealed addressed ballot envelopes were sent to Gordon Wood on June 28 in two Express Mail packages. He arranged for first class and/or airmail postage which was paid by ARCO Oil and Gas Company. The mailing complied with A.A.S.P. Inc., bylaws (Article 7.04) which states that ballots must be mailed no later than July 1.

The following is a breakdown of ballot distribution by destination:

United States	385
Canada	67
Other foreign	400
Total	852

The first ballots were received back by July 5. A total of 275 ballots were returned by the August 15 closing deadline date for counting. Ballots received after that date were not counted.

All ballots were held sealed until opened and counted on August 16 by the full ballot committee.

The results of the election were communicated by phone directly to President Norman Frederiksen on August 17 because the Secretary-Treasurer (to whom election results should be reported) was not available.

Two addenda by Harold Kaska are enclosed. The first is an analysis of membership based on ballot distribution and the second is a list of suggestions that future ballot committees may wish to consider to make the job easier.

Ballot Committee (1988): Harold V. Kaska, Chm
W.R. Evitt and T.A. Edison

Editors note: I (FJR) have included the following addenda to Harold Kaska's report so that all of you, especially the non-voting members can see what is being done by the voting members. Please read the following and feel good about your efforts, or embarrassed by the lack of effort, whichever is appropriate.

Addendum 1 - Membership/Ballot Analysis

I examined the election results in terms of membership and made the following analysis:

Ballot Distribution by Destination	Returned ballots	% of returned ballots
United States	385	164
Canada	67	35
Other foreign	<u>400</u>	<u>76</u>
Totals	852	275

From this it can be seen that the United States membership in the AASP is less than the foreign membership (385 to 467). It can also be seen that the Canadian members compiled the best record on ballot returns (52%). "North American" (includes Canada) ballot returns totaled 199, while "other foreign" totaled 76. It appears that AASP is much more of an international organization than its name would suggest. Put in another way, its implications for financing AASP are considerable. Another figure for speculation is the number of institutional members compared to individual memberships.

Type	Number	% of total
Individual	852	87
Institutional	<u>126*</u>	<u>13</u>
Totals	978	100

*U.S. 63, foreign 63

Thus we have one institutional member for each 6.8 individual members. This is an exceptional ratio which provides excellent funding without representation or cost, other than sending *Palynology* and the postage. AASP can be grateful for the heroic efforts of John Clendening during his '78-'82 term as Secretary-Treasurer to sign up many of these institutional members.

There were 14 ballots returned as undeliverable, forwarding address expired. Seven were United States addresses and seven were foreign (including Canada). The count by countries was as follows:

U.S.	164	Denmark	4
Canada	35	Japan	4
England	16	Holland	3
France	11	India	2
Germany	10 (1 late)	Scotland	2
Australia	7	Switzerland	2
Norway	6		
1 each from: Argentina, Belgium, China, Hungary, Ireland, Israel, Mexico, Oman, Sweden, Venezuela			

The figures above concerning memberships lead directly to speculations on present and future financing of AASP. When these are related to a revised membership in AASP (members 2 years in arrears to be terminated at Houston Annual Meeting, probably cutting total membership by between 10-20%) a better understanding of the real membership situation will emerge.

Addendum 2 - Suggestions to Ballot Committee regarding Ballot Mailings

Anyone taking the job of Chairman of the Ballot Committee without having company or university resources may find the following suggestions helpful in organizing the mailing of ballots:

1. Get the ballots printed and in your hands as soon as the candidates are known.
2. Make sure the ballots are pre-folded for envelope stuffing.
3. Use self-sticking envelopes - messing around with glued ones is a pain.
4. Be sure to get self-sticking return addresses, along with the self-sticking membership address labels.
5. Keep the ballots in some kind of known order (?alphabetical, by destination--domestic/foreign) so that if the ballots must be split up into more than one package for mailing by someone else and one of them gets lost, you won't be wondering what to do next.

6. It might be a good idea to have the ballots numbered sequentially so that only the proper number of ballots would be available for mailing.

**AASP FOUNDATION ANNUAL MEETING
FINANCIAL SUMMARY JANUARY 1, 1988 -
NOVEMBER 8, 1988**

BALANCE as of January 1, 1988 \$18,277.95

INCOME

Sale of publications	\$24,214.60	
Contributions	\$ 1,350.00	
Page charges & reprints	\$ 1,005.00	
Interest	<u>\$ 491.56</u>	
TOTAL INCOME	\$27,061.16	\$27,061.16

EXPENDITURES

Cost of publications	\$ 9,777.01	
Postage	\$ 3,961.47	
Refunds for publications	\$ 590.00	
Miscellaneous	\$ 386.28	
Stationery & supplies	\$ 218.36	
AASP dues sent w/ publication orders	<u>\$ 100.00</u>	
TOTAL EXPENDITURES	\$15,033.12	\$15,033.12

Balance as of November 8, 1988 **\$30,305.99**

COMMENTS: Miscellaneous expenditures include mail-out expenses for *Palynology* vol. 11, *Contribution Series* no. 18 & 19, the 1988 *Membership Directory*, and the "front-end" cost for the meeting pens. The cost of the pens will be reimbursed from the meeting proceeds.

Outstanding debts: None.

\$15,080.99 in checking account. \$15,225.00 in special account, for a total of \$30,305.99.

The AASP Foundation has about \$1,000 due from persons who have ordered publications, but have not yet paid the invoices which were sent with the books. \$330 has been invoiced within the last 3 months; \$230 invoiced between 3-6 months ago; \$160 invoiced in Jan. and Feb., 1988, and \$293 invoiced in 1987 and before. I estimate I'll collect about \$800-\$850 of this total. A major group of due notices will go out later in November to invoices sent out 100 days or more ago.

Robert T. Clarke, Treas. AASP Foundation
November 8, 1988

**LEW STOVER GIVEN AASP MEDAL OF
SCIENTIFIC EXCELLENCE**

The following text is excerpted from a memo written by Loretta Satchell and Harry Leffingwell. These kind and glowing words should give all of us something to aspire to.

We recommend that Dr. Lewis E. Stover be awarded the AASP Medal for Scientific Excellence for his exceptional publication record, which is distinguished by the number of comprehensive contributions, their diversity and breadth in regard to microfossil group and geologic age, and their consistently high quality of technical content, writing style and illustration.

In addition, Lew taught several courses for the palynological community, including short courses at LSU on Tertiary dinoflagellates (with Graham Williams) in 1977 and on dinoflagellate biostratigraphy (with Graham Williams, Evan Kidson and Robin Helby) in 1984; and a short course on Australian dinoflagellates (with Alan Partridge and Robin Helby) in Sydney in 1979.

Lew has published 33 articles to date, 14 as sole author and 11 as senior author. Although many of his publications have focused on fossil dinoflagellates, he has also published significant papers on the ostracodes of Western New York; on nannofossils from England and France; and on spores and pollen from the United States, Europe, West Africa, Venezuela and Australia.

The published version of his PhD dissertation on Devonian ostracodes was a major contribution to that field, and is still being cited in current papers. Lew's 1964 comparison of Cretaceous spore and pollen assemblages from Maryland and England demonstrated floral similarities which suggested close relationships of the two provinces. This timely contribution was published very shortly after the discovery of the magnetic anomalies associated with mid-oceanic rifts by Vine and Matthews (1963), but prior to the plate tectonic theory of Le Pinchon (1968) and others. His study of tropical mid-Cretaceous palynomorphs from western Africa was a pioneering step in the interpretation of novel morphologies, prior to the advent of the SEM! His study of calcareous nannoplankton set an early standard for the many papers which were to follow in that discipline. His study of Australian Late Cretaceous and Early Tertiary pollen are classics, combining sound and thorough taxonomic study with stratigraphic analysis of complex assemblages in a frontier area of our science at the time.

Lew's greatest contributions, however, have been in his study of the morphology, geographic and stratigraphic distribution, and nomenclatural and taxonomic problems relating to the fossil dinoflagellates. His efforts here are marked by comprehensive studies which served as standard references by subsequent workers. These include: (1975) "Stratigraphic Range Charts of Cenozoic Dinoflagellates" (with W. Drugg); (1977) "Dinoflagellate Cyst Terminology" (with W. R. Evitt, J. K. Lentin, M. Millioud and G. L. Williams); (1978) "Analyses of Pre-Pleistocene Organic-Walled Dinoflagellates" (with W. R. Evitt); and, (1987) "Analysis of Mesozoic and Cenozoic Organic-Walled Dinoflagellates, 1977-1985".

Some of Lew's other major dinoflagellate contributions include his three papers on Paleocene and Eocene dinoflagellates from Australia (1973, 1975); his study of Oligocene and early Miocene dinoflagellates from a corehole on the Blake Plateau (1977), and his three publications with Robin Helby on Mesozoic dinoflagellates from Australia.

Finally, his latest contribution, the integration of dinoflagellate biostratigraphy with the global cycle chart and time scale, showcases the potential contribution palynology can make to this new, exciting approach to stratigraphic analysis.

The papers mentioned above are only some of the highlights of Lew's publication record. Each publication, whether cited herein or not, is characterized by his meticulous approach, scrupulous objectivity, clarity of exposition, and excellence of illustration.

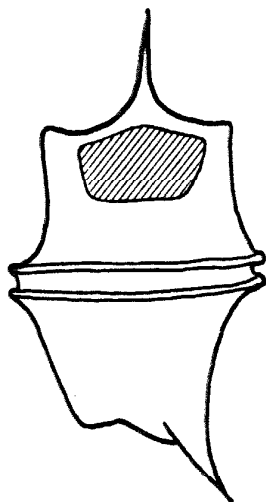
The example he has set certainly is the kind we wish to extol and to hold up for emulation in our profession. We believe he is the most deserving candidate for the AASP Award of Scientific Excellence.



The citation which accompanies Lew's award is as follows:

AASP MEDAL FOR SCIENTIFIC EXCELLENCE, 1988

THE AASP Medal for Scientific Excellence is presented to Lewis E. Stover To honour his extensive contributions to the study of diverse groups of palynomorphs over four decades. His power of meticulous observation, insightful analysis, and clear discourse have set a high standard for research and applied palynological studies in evolution, morphology, systematics, and biostratigraphy.



THE
CANADIAN PALEONTOLOGY
AND
BIOSTRATIGRAPHY SEMINAR
1989

Dartmouth, Nova Scotia, 29 September - 1 October

The 1989 Canadian Paleontology and Biostratigraphy Seminar (under the sponsorship of the Paleontology Division, Geological Association of Canada) will be held at Bedford Institute of Oceanography, Dartmouth, Nova Scotia. The program is as follows:

Friday, 29 September

8 a.m. - 6 p.m.

Field trip to Arisaig Section, Antigonish County, to examine rocks of the Arisaig Group. Leader Ron Pickerill, University of New Brunswick.

8 p.m.

Registration and Reception.

Saturday, 30 September

8 30 a.m. - 5 p.m.

Technical Session, Bedford Institute

7 p.m.

Dinner

Sunday, 1 October

8.30 a.m. - 12 noon

Technical Session, Bedford Institute

We plan to invite a keynote speaker to discuss the Triassic-Jurassic vertebrate finds in Nova Scotia.

Papers are invited on any aspect of paleontology and biostratigraphy. Graduate students are encouraged to participate - there will be a cash award for the best student paper.

If you are interested in attending the seminar, please mail the completed form below to Graham Williams, Atlantic Geoscience Centre, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2.

I plan (definitely / probably / possibly) to attend the 1989 CPBS

Name: _____

Address: _____

I shall / may give a paper

Please indicate if student: YES / NO