



NEWSLETTER

American Association of Stratigraphic Palynologists, Inc.

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NUMBER 2

Vaughn M. Bryant, Jr., Editor

Texas A&M University, College Station, TX 77843

Raymond A. Christopher, Asst. Editor

U.S. Geological Survey, Reston, VA 22092

ELEVENTH ANNUAL AASP MEETING

DEL WEBB TOWNHOUSE

PHOENIX, ARIZONA

OCTOBER 24-28, 1978

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SYMPOSIUM ANYONE?

Jim Carright has indicated that there is still an opening for another symposium 8-12 noon, Wednesday, October 25th at the annual AASP Meeting in Phoenix, Arizona. If you have any suggestions call Jim as soon as possible.

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NOTICE OF MID-YEAR MEETING, AASP BOARD OF DIRECTORS

The mid-year meeting will be held Thursday-Saturday, April 13-15, 1978, in the El Matador Room of the Ramada Inn, 333 NW Loop 410, San Antonio, Texas. The meeting is open to all members. Make reservations (telephone is 512-344-4581) early if you plan to attend as Fiesta Week starts April 17 and the place will be filling up.

Official Board business will begin Friday, April 14, at 8 a.m. Thursday, April 13, beginning at 1 p.m. the By-Laws Revision Committee will meet, Norman Norton, Chairman. Norm welcomes suggestions from the members. Whoever shows up that Thursday afternoon will be drafted for this important work.

The following represents a tentative agenda:

1. Approval of Board of Directors' Meeting minutes, Tulsa, Oklahoma.
2. Secretary's Membership Report
3. Treasurer's Report
4. Editor's Report
5. Annual Meeting Discussion
 - a. 1978 Phoenix, Arizona
 - b. 1979 Dallas, Texas
 - c. 1980 Denver, Colorado
 - d. Future Meeting site proposals
6. Old Business
 - a. AASP Foundation Report
 - b. Revision of AASP By-Laws
 - c. Discussion of ICP funding
 - d. Nomination Committee's Report
7. New Business
 - a. Appointment procedures for committee members
 - b. Budget Review Committee

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PRES-PRAETILE

From the outset of AASP history we have grasped beyond our means. In the words of Rick Pierce (AASP Newsletter March 1977) "We never have been able to finance all of our activities." But we have persevered, and maintained from the very first, a contributions volume of the highest quality. Members have accomplished other functions of the Association with the means at hand. And the membership has steadily grown.

At the Mid-Year Meeting in San Antonio one of the topics for discussion concerns the premise "Could any one Board of Directors in any one year extend AASP into bankruptcy?" Your comments directed to any board member or your presence at the meeting is welcomed. Other topics to be covered that are of direct concern to the membership are the issues of ICP "dues", By-Laws revision and the annual meeting date.

We are proud of our journal (and before that the contributions volume). The quality reflects the labor involved. There are still goals to attain, however. The major remaining detractors are not solvable in the editorial process, but in the process of review. Until we have a journal editor of quasi permanent appointment (if that's the solution), the burden of accuracy of our technical articles falls upon the author and the reviewer.

The first hurdle is cleared when the paper is submitted. From there it's up to the reviewer. To our reviewers we say well done. To our critics we say great, throw stones, then help us pick them up and build. Instead of a critic, be a full-blown, useful reviewer. Hind-sight helps but foresight is much more rewarding.

Please.

Bill Elsik

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AASP FOUNDATION

First, it is my pleasure to thank the 20 persons who have thus far supported the AASP Foundation by becoming members of the Century Club. We are, however, far short of our goal of 100 members and, more importantly, we have not yet achieved the broad based level of support necessary to qualify as a public foundation. We must do this by the end of 1978, or revert to private foundation status, a status we do not want. Your donation of \$100 to the AASP Foundation is tax deductible, promotes the science of palynology and entitles you to membership in the AASP Foundation Century Club. Be generous in your support of the AASP Foundation.

Bob Clarke

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EMPLOYMENT OPPORTUNITY

The Institute of Applied Geology, Jeddah, Kingdom of Saudi Arabia has an opening for a palynologist-micropaleontologist at the Associate Professor rank.

The I.A.G., is part of King Abdulaziz University and is an established and rapidly expanding teaching and research organization. It offers B.Sc., Diploma, M.Sc., and Ph.D., degrees in applied geology in Mineral Resources, Petroleum Geology, Engineering Geology and Hydrogeology. The teaching medium is English. Duties include participation in the teaching and research programs of the Institute.

Qualifications include a Ph.D. (preferably in Palynology) and publications on Mesozoic and Tertiary microfossils. Experience in petroleum exploration will be considered an asset. Benefits will include: Excellent salary untaxed at source, furnished accommodations provided free and two months annual leave with return tickets to place of origin.

Applications (including curriculum vitae and names of two referees) should be sent to:

Dr. A.M.S. Al-Shanti, Dean
Institute of Applied Geology
P.O. Box 1744
JEDDAH.
Kingdom of Saudi Arabia.

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NEWSLETTER PALYNOMORPH

The winning palynomorph suggestion for the March Newsletter was submitted by Don Benson. The palynomorph is Cyclapophysis monmouthensis recovered from Maestrichtian deposits in the Monmouth Formation in Round Bay, Maryland. The palynomorph was drawn by Ms. Edie Schaffer. Other palynomorph suggestions are always welcomed.

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AASP MEMBERSHIP DIRECTORY

The 1977-1978 AASP Membership Directory is the best one we have ever produced. The responsibility of keeping track of our fluid membership and for compiling the directory was the task of Dave R. Mishell. We all owe him a great deal of thanks. Thanks is also given to Geochem Laboratories, Inc., who graciously offered to underwrite the printing and binding cost of the directory and to the Amoco Production Company who paid for the expense to compile and type the final copy.

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PALYNOLOGY, VOLUME 2

The second volume of Palynology is at the printers and is being set in type. The completed volume should be ready for mailing in late summer. Hopefully, you will receive your copy prior to the 1978 annual AASP meeting.

PALYNOLOGY, VOLUME 3

Ray Christopher, the Assistant Editor, is concerned that so few of you have sent him manuscripts for publication consideration in volume 3. I realize that the deadline for manuscripts is still a month away, however, it will make our review and revision process easier if you send us your manuscripts early. Again, let me encourage all members to consider sending your manuscripts to Palynology for publication consideration. If response is great enough, perhaps the Board of Directors can recommend expanding the size, format or number of issues of Palynology published each year.

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EMPLOYMENT OPPORTUNITIES

Robertson Research (NA) Ltd., has an opening for a qualified palynologist. Applicants should have experience in Mesozoic palynology. Experience in the area of dinoflagellates also would be considered an added asset. Interested candidates should contact: Dr. D.J. Evans, Robertson Research (NA) Ltd., 501 Cleveland Crescent S.E., Calgary, Alberta, Canada, T2G 4R8.

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CORRECTION NOTED

The excellent book review in the December, 1977 AASP Newsletter by K.C. Allen first appeared in the IOP Newsletter No. 4 (International Organization of Paleobotany). Due to an oversight on my part, credit was not properly given to IOP for the use of that review in our Newsletter. I hope that continued cooperation between IOP and AASP will provide useful "cross-pollination" of information and research ideas.

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COSUNA

The Correlation of Stratigraphic Units of North America (COSUNA) has established sixteen regions for the United States, each headed by a coordinator who is responsible for compiling the chart for that region. Eight of these coordinators have now been appointed. Coordinators are as follows:

Coordinator

A - V.S. Mallory
B - Donald Weaver
C - Lehi Hintze
D - James Steidtmann
E - J.P.D. Hull

Approximate Area

Northwest Coast and northern Washington State
California
Great Basin and southern Washington State
North central U.S., Id., Wy., Montana
Southwest, Colo., northern Ariz. & N. Mex.

Coordinator

F - Frank Kottowski
 C - John Hills
 H - Charles Mankin

Approximate Area

Southwest, southern N. Mex., Ariz. & sw Texas
 South Plains, west Tex., w. Okla., & w. Kansas
 Central Texas, eastern Okla., & Arkansas

The purpose of this list is to enable members of AASP and others to ask the coordinators for information if they are interested in contributing to the COSUNA project.

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INTERNATIONAL PALYNOLOGICAL COLLOQUIUM, SPAIN

As a part of the International Palynological Colloquium held in Leon, Spain from the 5th-10th of September 1977, the Norsk Kontinentalsokkelkontor of Trondheim, Norway with the Instituto Investigaciones Palinologicas of Leon, Spain organized a symposium to discuss Mesozoic and Cenozoic dinoflagellate cysts from onshore and offshore northwest Europe. This meeting was held on Thursday 8th September 1977 and was convened and introduced by Dr. Bindra Thusu of I.K.U.

Session 1 was chaired by Geoff Norris (Univ. Toronto) and consisted of the following speakers; the asterisk indicates the speaker in the case of multi-authored papers.

- A.M. Evans (Shell) - "Late Oxfordian (Jurassic) dinoflagellate assemblages from the northern North Sea (U.K. Sector)."
- J.P.G. Fenton (Univ. Sheffield) and M.J. Fisher* (B.N.O.C.) - "Regional distribution of marine microplankton in the Bajocian and Bathonian of northwestern Europe."
- G.W.F. Herngreen* and K.F. De Boer (Rijks Geologische Dienst) - "Dinoflagellate zonation of Upper Dogger strata in the Netherlands."
- G. Norris*, G.G. Dorhofer and E.H. Davies (Univ. Toronto) - "Phylogeny and supra-generic classification of dinoflagellate cysts."

Session 2, following the much appreciated coffee break, was co-chaired by Tony Evans (Shell) and Bob Dunay (Mobil) and consisted of the following papers:

- J.F. Raynaud (S.N.E.A.(P.)). "Principaux dinoflagelles caractéristiques du Jurassique supérieur d'Europe du Nord."
- B. Thusu (Norsk Kontinentalsokkelkontor) - "Observations on the morphology of the dinoflagellate cyst *Imbatodinium villosum* Vozzhennikova from the Lower Cretaceous of Spitsbergen."
- T. Bjaerke (Univ. Oslo) - "Dinoflagellates from the Lower Cretaceous of Spitsbergen."
- D. Habib (Queen's College, N.Y.) - "Palynostratigraphy of North Atlantic Lower Cretaceous and its bearing on the origin of carbonaceous facies."

After lunch and the obligatory siesta, Session 3, chaired by Dan Habib (Queen's College, N.Y.), got under way with the following speakers:

- J. De Coninck (Univ. Ghent) - "Energy supply, Petroleum and Natural Gas prospection: a matter of conscience for micropaleontologists?"
- G.W.F. Herngreen (Rijks Geologische Dienst) - "A preliminary dinoflagellate zonation of Aptian-Cenomanian strata in the Netherlands."
- J-P. Verdier (Esso) - "The ranges of some Upper Cretaceous dinocysts."
- R. Harland (I.G.S.) - "A new species of *Eisenackia*, and its stratigraphical significance (Palaeocene, northwestern Europe)."
- Y. Caro (C.F.P.) - "About the stratigraphic distribution of some dinoflagellate species in northern Europe within the Paleogene."
- L.I. Costa* and C. Downie (Univ. Sheffield) - "Dinocyst succession on the Rockall Bank and its relationship to Tertiary zonal schemes."

The final session, co-chaired by myself and Barrie Dale, was dubbed the survivors' session. The following speakers made it for this session, and are, together with the audience, to be congratulated on their stamina.

- S.J. Morbey (Paleoservices) - "Upper Triassic and Lower Jurassic dinoflagellates from western Europe: their stratigraphic potential."
- S. Mebradu (Nigerian Steel Development Authority) - "Stratigraphic palynology of the Upper Jurassic of the Dorset Coast (England)."

G. Dorhofer (Univ. Toronto) - "Principles of dinoflagellate cyst provincialism."

G.L. Williams and J.P. Bujak* (G.S.C.) - "Mesozoic-Cenozoic dinocysts: North Atlantic distribution."

B. Dale (Inst. Marin Biology, Oslo) - "Ecology of some Upper Cenozoic dinocysts."

The session was brought to an end by myself and the symposium was closed by Dr. Bindra Thusu. Despite the hazards of the previous night, the symposium was a resounding success. The talks were most stimulating and clearly demonstrated the exciting research which is being undertaken at the present moment by many dinoflagellate workers. In addition to the formal meeting, plenty of time was available for friendly discussion and certainly many problems of taxonomy, classification, stratigraphy, ecology, provincialism etc. were given a good airing. The Norsk Kontinentalsokkelkontor and the Institut de Investigaciones Palinologicas deserve our sincere thanks in providing such a meeting and a special thanks must go to Bindra Thusu for the splendid way the symposium was organised and for the concept of getting dinoflagellate workers, who are interested in northwest Europe, together in such a convivial manner.

REX HARLAND

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LETTERS TO THE EDITOR

Dear Editor,

It strikes me that it is proper to bring to the attention of your readers that lately the Canadian dollar has fallen to 90% of the U.S. dollar, which itself has fallen on the international markets.

This combines to make for a very favorable time to purchase a copy of the Genera File of Fossil Spores, even more so because the postal authorities have announced drastic increases per April, 1978.

The File, in self-contained boxes, has 3300 cards with names of spore genera. The first update (Supplement I) numbers a further 144 cards and is now sold automatically with the File; separately it is available at cost for CAN. \$7.00. This publication is non-profit; future income will subsidize later Supplements.

Sets can be ordered from Dr. L.V. Hills, Dept. of Geology, University of Calgary, Calgary, Alberta T2N 1N4, Canada. The price is CAN. \$67 for individuals, CAN. \$137 for institutions; add postage (\$3.75 in Canada; \$7.70 for USA; \$14.18 other countries). Institutions may enquire about special rates for repeat orders.

Jan Jansonius

Comment: I hope many of our members will take advantage of this excellent offer.

Dear Editor,

The AASP Board of Directors (BODs) agreed to support the International Committee for Palynology (ICP) and assessed one dollar on each AASP member to raise the fund annually (AASP Newsletter, 1977, vol. 11, no. 1, p. 3). The amount may seem trivial, but collectively it is a large sum for a small association which itself needs money for more useful purposes. Members of the association have a right to know the details before they can support their BODs and volunteer to spend their money.

The formation of the ICP and the selection of its president have remained controversial, if not obscure. It seems that the council members nominate and select a president. In case of more than one nomination, they give a democratic flavor and vote to decide for one of the nominees. In turn, the newly "elected" or selected president appoints his secretary and then both appoint members for the council. Past presidents, etc., become members automatically. Thus, the formation of the ICP council is far from satisfactory for international representation.

Al Traverse's ICP report and the request should have been made public to the AASP members, so that members could know the use for spending \$416. It is said that the funds are to meet the expenses of the ICP President's visit to Toronto (Canada) for discussions with his secretary, although correspondence or telephone conversation would have been cheaper.

(continued)

Alternative suggestions for raising funds for the ICP should be invited from the AASP members. The ICP could affiliate itself with various national societies such as AASP, and the society members may opt to contribute one or two dollars. It should be the responsibility of the ICP to make it attractive for members to join it. The International Organization of Paleobotany (IOP) is working on similar lines.

I hope the BODs will give some thought to this problem. I may add here that the AASP Newsletter (vol. 11, no. 1, 1977) has been proof-read poorly. For better or worse, we started getting a "Massage" from the President rather than a "Message."

Satish K. Srivastava

Comment: There were a few typographical mistakes in the last newsletter (vol. 11, no. 1), however, "massage" was not one of them. I always try to proof-read the final copy carefully. But, like other mortals, I am not perfect. Hopefully, the following letters will help answer your other comments.

Dear Editor,

Concerning the issue of ICP funding from AASP, I can only say that much goes into the discussion before action at the Board meetings. Your raising the issue underlines (1) the fact that there are issues in which members have more than a passing interest and (2) illustrates the fact that those issues need full airing beyond discussions of the Board and other attendees at business meetings.

The International Commission for Palynology is not a palynological society of individual members. It collects no membership dues from individuals. The ICP is the one organization available to us to spread its wings over palynological societies worldwide, including the AASP. In other words, within the ICP, the AASP is one of an association of palynological societies. And representation to the ICP is based on the number of individual members in each society. The larger the society, the better the representation.

It follows that, since appropriations are based on a membership pro rata basis, the larger society pays more than the smaller. Hence the \$416, or \$1.00 per member of the AASP. The ICP asks the member societies for funds, not the individual persons in those societies.

The AASP in the past has informally subsidized the ICP. But as of the Lucknow International Palynological Conference, where Constitution and By-Laws were ratified by the delegates, ICP became a formal organization to assume among other functions, formal responsibility for the International Palynological Conferences.

The 1978 AASP dues notice accompanying the December 1977 Newsletter incorrectly stated that dues payable were \$15 for AASP membership and \$1 for ICP. Original intent was to convey to AASP members that AASP had appropriated their fair share to the 1977 ICP budget and to recoup this money each AASP member was being asked to donate \$1.00 to AASP and send it in with the 1978 membership dues.

W.C. Elsik

Comment: Bill is correct, I incorrectly stated the reason we asked each AASP member to donate one dollar as part of their 1978 AASP dues. I apologize for the error. As stated in the report of the Tulsa Board of Director's Meeting (see page 3, item number 14 of the 1977 December Newsletter) AASP is asking members to donate one dollar to reimburse the Society for its pledged support of \$416 to ICP. Also, in that same paragraph I incorrectly stated that ICP was the "International Committee for Palynology." It is, of course, the International Commission for Palynology.

Dear Editor,

I am writing in response to the annual dues notice attached to the AASP Newsletter. There is a statement at the bottom that the President of the International "Committee" (should be "Commission") for Palynology has asked each member of a recognized palynological society to assist ICP by contributing \$1 per year.

This is unfortunately somewhat in error. The fact is that the ICP is a federation of all of the palynological societies of the world, established at the 4th International Palynological Conference in Lucknow, India, by the enactment of the Constitution and By-Laws for the Commission. (The Constitution and By-Laws had been earlier proposed and were really ratified in

their final form by the general assembly of the international conference. It is unfortunate that the word used is "Commission," as what we really have here is an international association. However, various people insisted on keeping the term commission in preference to some of the other possibilities. Also, the name had been used in our previous association with the International Union of Biological Sciences and the International Union of Geological Sciences.)

The Constitution and By-Laws of the ICP call for each of the federating societies to pay the ICP (for its operating expenses) \$1 per member of the society concerned per year. The local societies, of course, can collect this money any way they please, and the President and Council of the ICP are not asking individual palynologists to pay anything to ICP. We are simply asking the constituent societies, of which AASP is a large and important one, to shoulder the responsibility which by implication they took on when they allowed their representatives to vote in favor of adopting the Constitution and By-Laws of ICP.

This is not the place for a detailed presentation of the ICP budget, but in brief we need money for postage, printing and duplicating of our correspondence and the Newsletter which we will soon circulate, and also to organize occasional work sessions of the officers and other councillors.

I am sure that the other members of ICP Council join with me in expressing our deepest gratitude to the AASP for providing us with the funding for 1977 which we requested, and I mention this matter only to assure that the record is kept straight. I would appreciate a future AASP Newsletter publishing some form of this letter to make it clear that the claim which ICP feels that it has on the AASP is on the society, not on the individual members per se.

Lest it appear that the Council and I are ungrateful, I would like to make it clear that AASP is to date the only society which has seen fit to provide the full amount of the expected assessment. Indeed, the officers of palynological societies in Eastern countries have made it quite clear that it would be impossible for them to make the payment even if they wished to.

Perhaps I should also stress that ICP has been getting some financial support from the International Union of Biological Sciences (IUBS). This assistance is intended to get us started, and IUBS clearly intends that ICP should eventually cover its expenses through contributions from the palynological community.

Thanks very much for AASP's continued endorsement of the ideas of international cooperation and international association which has finally born fruit in the form of ICP. I do hope we can count on continued support and endorsement from AASP.

Alfred Traverse
President, ICP

Dear Editor,

Would you please include the following in the next issue of the Newsletter:

The Asociación de Palinólogos de Lengua Española (APLE) has been constituted in Madrid, Spain, on 14 January, 1978. Its officers are: Fritz H. Crámer, President; Nuria Solé de Porta, Vice-President, Concepción Sáenz de Rivas, Secretary-Treasurer; Eliseo Subiza Martín, Pilar Candau Fernández-Menseque, and Juan Roure, Councillors, Address: APLE, Jardín Botánico, Plaza Murillo 2, MADRID-14, Spain. A newsletter (Boletín de Noticias de APLE) will be distributed twice a year. Anyone interested, please contact the Secretary-Treasurer.

The mid-year meeting of the officers of APLE will be on 8 April, 1978 at 9 a.m. in the Jardín Botánico, Madrid. Interested palynologists are welcome to attend.

F.H. Crámer

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WELCOME NEW MEMBERS

AASP is happy to welcome the following new members:

de Di Giacomo, Estela Bradley, Maraven S.A., Edificio La Estancia Chuao, Caracas, Venezuela 829. Telephone # 91 25 55 Ext. 3306.

Gilbert, Deborah, Exxon Production Research, Box 2189, Room 5187, Houston, Texas 77001. Telephone # (713)-965-4079.

Finda, Pier Luigi, Institute of Applied Geology, P.O. Box 1744, Jeddah, Saudi Arabia. Telephone # 58-158.

Fenton, James Peter, Department of Geology, University of Sheffield, Sheffield, England S1 3JD. Telephone # Sheffield 78555.

Stolar, John, Rose Hill II, Apt. P-1, 1322 West Chester Pike, West Chester, Pennsylvania 19380. Telephone # (215)-431-3845.

Costa, Lucy J., Geology Department, Sheffield University, Mappin St., Sheffield, England S1 3JD. Telephone # 78555 ext. 255.

Dorning, Kenneth John, Department of Geology, University of Sheffield, Mappin St., Sheffield, England S1 3JD. Telephone # (0742) 78555.

Maher, Louis James, Jr., Department of Geology & Geophysics, University of Wisconsin, Madison, Wisconsin 53706. Telephone # (608)-262-9595.

Clayton, Geoffrey, Department of Geology, University College, Dublin 4, Republic of Ireland. Telephone # Dublin 693224 ext. 323.

Hill, Paul John, Division of Geology, Derby Lonsdale College of Higher Education, Redlestone Rd., Derby, England DE3 1GB. Telephone # Derby 47181.

Ward, Jerome, Department of Botany and Microbiology, Arizona State University, Tempe, Arizona 85281. Telephone # (602)-965-3414.

Lewis, Carol D., 5339 Inwood, Katy, Texas 77450. Telephone # (713)-371-2085.

Volkheimer, Wolfgang, Museo Argentino de Ciencias Naturales, B. Rivadavia, Av. A., Gallardo 470, Buenos Aires 1405. Telephone # 812-6595, Buenos Aires, Argentina.

Stapleton, Richard P., P.O. Box 1065, Tehran, Iran.

Ford, Leonard Neal, Jr., Dept. of Geological Sciences, VPI & SU, Blacksburg, Virginia 24061. Telephone # (703)-951-0959.

Jamcoossanagic, Abolfazl, Department of Geology, Michigan State University, East Lansing, Michigan 48824. Telephone # 355-8066.

Watkins, David Kibler, Dept. of Geological Sciences, Virginia Polytechnic Institute & State University, Blacksburg, Virginia 24060. Telephone # (703)-951-6700.

Vigran, Jorunn Os, IKU (Continental Shelf Institute) P.O. Box 1883, N-7001, Trondheim, Norway. Telephone # 075 15660.

Hassan, Mohammad Adnan, Department of Geology, King's College London, Strand WC2R 2LS, London, England. Telephone # 01-836 5454.

Love, Charles Francis, Robertson Research, 'Tyn-Y-Coed', Llandros, Llandudno, Gwynedd, N. Wales (U.K.). Telephone # 0492 81811.

Exploration Department, Arabian American Oil Company, P.O. Box 101-S, Gardiner, New York 12525.

Gulf Research & Development Company, Attn. Joan Kelly, Houston Technical Services Center, P.O. Box 36506, Houston, Texas 77036.

Kumar, Arun, Palynology Laboratory, Oil and Natural Gas Commission, Dehra Dun, U.P. India.

DIRECTORY CHANGES

The following AASP members have notified the editor that their addresses have been changed:

1. Jones, Richard E., telephone # (303)-820-4017.
2. Cornet, Bruce, Gulf Research & Development Company, Houston Technical Services Center, P.O. Box 36506, Houston, Texas 77036. Telephone # (713)-778-5366.
3. Ott, Henry L., 700 S. Colorado Blvd., Denver, Colorado 80222, or P.O. Box 599, Denver, Colorado 80201. Telephone # 759-7207.
4. Fletcher, M.R., 225 St, Cloud St., Rapid City, South Dakota 57701.
5. Burden, Elliott T., Department of Geology, University of Calgary, Calgary, Alberta, Canada T2N 0Z7. Telephone # (403)-284-5841.
6. Library, Institute of Geological Sciences, Ring Road, Halton, Leeds LS15 8TQ, England.
7. Bradford, Martin R., Westcoast Petroleum Ltd., 1100, 540 5th Avenue SW, Calgary, Alberta, Canada T2P 0M2.
8. Wingate, Frederick H., telephone # (303)-861-2464 ext. 284.
9. McGregor, D. Collin, telephone # (613)-995-4680.
10. Peolttl, Franz, Shell Centre 400-4th Avenue SW, Calgary, Alberta, Canada T2P 2H5. Telephone# (403)-232-3806.
11. Dunay, Robert E., telephone # 01-831-7171 ext. 4251.
12. Mishell, David, Amoco Canada Petroleum Company Ltd., 444 7th Avenue SW, Calgary, Alberta, Canada T2P 0Y2. Telephone # (403)-267-0879.
13. Zavada, Michael, Fairfield College Prep School, N. Benson Rd., Fairfield, Connecticut 06430.
14. Nichols, Douglas J., Chevron USA Inc., P.O.Box 599, Denver, Colorado 80201. Telephone # (303)-759-7251.
15. Kremer, Peter R., 509 Deike, University Park, Pennsylvania 16802.
16. Robbins, Eleanora I., U.S. Geological Survey, National Center MS 955, Reston, Virginia 22092.
17. de Leon, Barbara Wire, Gulf Research & Development Corporation, P.O. Box 36506, Houston, Texas 77036. Telephone (713)-778-5371.
18. McAndrews, J., Department of Botany, Royal Ontario Museum, 100 Queens Park, Toronto, Ontario, Canada M5S 2C6.
19. Holloway, Richard G., P.O. Box 3303, College Station, Texas 77840.
20. Rowley, John R., S-106 91 Stockholm, Sweden.
21. Jones, D.H., Exxon Company USA, P.O. Box 2189, Houston, Texas 77001.
22. Felix, Charles J., Sunmark Exploration Company, P.O. Box 30, Dallas, Texas 75221.
23. Schopf, James M., Orton Hall, 155 South Oval Drive, Ohio State University, Columbus, Ohio 43210. Telephone # (614)-422-2745.
24. Leisman, Gilbert A., Division of Biology, Emporia State University, Emporia, Kansas 66801.
25. Harper, Howard E., Jr., Atlantic Richfield Company, P.O. Box 2819, Dallas, Texas 75221.
26. Denison, Christopher N., Robertson Research International Ltd., Tyn-Y-Coed, Llanrhos, Llandudno, LL30 1SA. Gwynedd, N. Wales, U.K.
27. Lam, Kam, (Lam is her surname).
28. Archangelsky, Sergio, CIRGEO (Centro de Investigaciones en Recursos Geologicos), J.R. Velasco 847, 1414 Buenos Aires, Argentina.
30. Fisher, Thomas R., 9308 Garrison Dr., Broomfield, Colorado 80020. Telephone # 420-0293.

31. Delfel, Deborah Lynn, Room 434, Deike Bldg., University Park, Pennsylvania 16802.
Telephone # (814)-865-3321.
32. Benson, James M., School of Applied Geology, University of New South Wales, P.O. Box 1,
Kensington, N.S.W. 2033, Australia.
33. Potter, Delbert E., Atlantic Richfield Company, Geological Science Group, P.O. Box 2819
Dallas, Texas 75221.
34. McIntyre, D.J., Petro-Canada, 650 Guinness House, 727 - 7th Avenue SW, Calgary, Alberta,
Canada T2P 0Z6.
35. Jenkins, W.A.M., Petro-Canada, 650 Guinness House, 727 - 7th Avenue SW, Calgary, Alberta,
Canada T2P 0Z6.
36. Nygreen, Paul W., Aramco, Dhahran, Saudi Arabia.

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MEMBERSHIP APPLICATION FORM
AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS, INC.

Preferred title (circle): Prof., Dr., Mr., Mrs., Ms.

Name: _____ Date: _____
(First) (Middle) (Last)

Address: _____
_____ Postal Code _____

Telephone: _____

Employer: _____

Nature of work (graduate student, exploration stratigrapher, etc.). _____

Signatures of sponsors (must be 1) _____
members in good standing of AASP). 2) _____

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Purpose of AASP (adopted 8 December, 1967): "... to promote the science of palynology, especially as it relates to stratigraphic applications and biostratigraphy; to foster the spirit of scientific research among the members; to disseminate information relating to palynology."

* * * * *

Please note: Application must be accompanied by \$15.00 (USA) in order for the Executive Committee to elect applicants to membership.

Send to: Jack D. Burgess, Gulf Research and Development Corp.,
Exploration Division, Drawer 2038 Pittsburgh,
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