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AASP NEWSLETTER

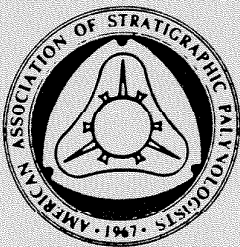
DEPT. GEOLOGY AND GEOGRAPHY

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Attn: F. Rich





AASP NEWSLETTER

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VOLUME 22:2 APRIL, 1989

ISSN 0732-6041 F. J. RICH, EDITOR

PRESIDENTIAL MESSAGE

In my first presidential message I listed four goals which I believe could revitalize palynology:

1. Increase technological innovation,
2. Strengthen the teaching of paleopalynology in our academic institutions,
3. Improve the infrastructure of our discipline so we can perform more effectively, and
4. Communicate more effectively to geoscientists the potential of palynology to solve geologic problems.

I also discussed in detail the actions taken to achieve the first goal. In this article, I will discuss some ideas and actions to implement the second goal.

The teaching of paleopalynology in the United States will be seriously diminished by the retirements and impending retirements of professors who have formed the backbone of academic palynological teaching since World War II. These include James Canright, Aureal Cross, William R. Evitt, G.O.W. Kremp, Helen Tappan Loeblich and L. R. Wilson. None are likely to be replaced by palynologists, and their teaching resource materials (reprint collections, lecture slides, samples, reference slide collections etc.) are threatened by disuse, fragmentation or destruction.

To assure academic stability and excellence in paleopalynology, a committee chaired by Norman Norton, has been formed to solicit funds to establish chairs-in-palynology. The committee's goal is to raise one million dollars to fund two chairs of \$500,000 each. It is expected that these funds would be at least partially matched by the receiving institution, or its state government. This center for paleopalynology thus established might be expected to serve the following useful functions (among others): a center of excellence for both graduate and post-graduate study; a locus of state-of-the-art research; a place where the pursuit of multidisciplinary studies will emphasize the incorporation of palynological, paleontological, sedimentological, tectonic and geochemical data in

solving geological problems; and a repository for teaching and research materials from discontinued programs and from retiring professionals.

Other programs have been initiated to support the teaching of paleopalynology. We have formed a committee chaired by Ken Piel to encourage formation of informal palynological chapters in localities with concentrations of palynologists in North America and overseas. One objective of this effort is for members to give lectures at local universities and act as outside examiners and/or thesis and dissertation advisors, if requested.

We also have applied for membership in the American Geological Institute to support more comprehensive programs which we as a society do not have the means to fund. One example is the AGI K through 12 program, which is attempting to elevate the quality and quantity of geologic courses in secondary schools by improving both the geoscience curricula and the available teaching resources, and by raising the qualifications of secondary school teachers. The goal is to alert the best young scientific minds to opportunities in the geosciences before those people make a commitment to other sciences.

Finally, the Publicity Committee has been re-activated, and is chaired by Loretta Satchell. Its initial goals are to update the AASP palynological career poster and pamphlet, and to interact with the AGI Communications Department on matters of mutual concern in education.

Each country perhaps has its own unique problems in the teaching of paleopalynology which may require separate solutions. I encourage all our members to consider appropriate action which might be initiated to assure the stability and quality of academic paleopalynology. Excellence in teaching is fundamental to our success as a discipline. I solicit any comments or ideas you may have for additional courses of action.

Harry Leffingwell

As many of you know, Charlie Upshaw passed away recently. Dick Hedlund will write an article in memory of Charlie which will appear in the July issue of the Newsletter.

MIDYEAR BOARD OF DIRECTORS MEETING

The 1989 AASP Midyear Board of Directors Meeting was held on March 18, 1989 at the Renaissance Ramada Inn in Plano, Texas. All Board members were present (President, Harry Leffingwell; President-Elect, Judith Lentini; Secretary-Treasurer, Gordon Wood; Managing-Editor, Dave Goodman; and Directors-at-Large, Owen Davis, Steve Hall, George Hart and Loretta Satchell). Also present were AASP Foundation Secretary-Treasurer, Bob Clarke, and L.N. Ford.

The meeting began with a remembrance of Charlie Upshaw. The president read a letter of condolence to Mrs. Upshaw, written by him on behalf of the AASP. A moment of silence was observed in Charlie's memory.

Membership and financial reports made by the Secretary-Treasurer, Gordon Wood, indicate the AASP continues in good health in spite of the economy. As of March 17th, AASP had 933 members (802 individual and 131 institutional). Typical for this time of year, many are in arrears (350 individual; 34 institutional). Since the Houston meeting, 36 new members have joined (27 individual; 9 institutions). The Treasurer's Report indicated a balance of \$18,895.29. Most of the decrease since the Annual Meeting is due to the payment for Palynology, Volume 12.

The Managing Editor's Report reviewed the contents of Palynology, Volume 12, distributed in late December, 1989. Eleven manuscripts have been received for Palynology, Volume 13; five have been accepted, four require further revision and 2 have been rejected. Additional manuscripts are being solicited.

Bob Clarke presented the AASP Foundation Report, and reported a total Foundation balance of \$29,436.44 as of December 31, 1988. Expenditures for the year were \$17,716.29 and income was \$29,581.53. Bob also announced that Bill Evitt donated his considerable library of books, reprints and theses to the AASP Foundation (see separate article, this Newsletter).

The Houston Annual Meeting Committee reported a profit of \$2,973.17, although some additional costs may accrue in publishing the Joint AASP/TSOP Symposium Volume. The Committee earned a hearty "well done"!

The Tulsa Meeting Committee presented its plans, financial summary and highlights of the October 1989 Annual Meeting. The meeting will feature a Symposium on Geological Applications of Palynology (see separate article in this volume); two days of open technical sessions; a special evening event at Tulsa University, including a buffet dinner and a public forum on "Dinosaurs and Palynology", featuring presentations by Jack Horner and Doug Nichols. There will also be a presentation by Martin Kaufman, Executive Director of AGI on AGI's K through 12 Program. The meeting will conclude with a field trip on Saturday, October 21 to Carboniferous localities in southeastern Oklahoma. This is likely to be one of the least expensive meetings of recent years, with single room rates at \$54.00. It also looks like one of the best!

Plans are going well with the 1990 Annual Meeting, which will be held at the Banff Springs Hotel.

The Southern California Committee presented a proposal to hold the 1991 Annual Meeting in San Diego, concurrently with the GSA Annual Meeting (see separate article, this Newsletter). The Board voted unanimously to accept the proposal.

Owen Davis discussed plans and showed slides of the 1992 Annual Meeting site in Aix-en-Provence, France, which will be held in conjunction with the IPC meeting.

Barbara Whitney, Chair of the Awards Committee, reported that Kristen Sobolik received the L.R. Wilson Award for best student paper at the 21st Annual Meeting in Houston. She also announced the two winners of the 1989 AASP Scholarship competition are Jeffrey M. Osborne, Ohio State University, and Philip H. Benham, Memorial University, Newfoundland (see separate article in this Newsletter about both awards).

Dick Curry, Chair of the Nominating Committee, presented the slate of nominees for the 1989-1990 term (see separate article in this Newsletter); the slate was approved unanimously by the Board.

Doug Nicols and Harold Kaska, Co-Chairs of the IFPS Committee, reported the mailing of Palynology was becoming financially difficult because a needed increase in dues was not acted upon by IFPS.

Council in Brisbane. The Board voted to pay AASP dues to IFPS early to alleviate the problem, and it also will distribute Palynos copies to their North American members and to AASP overseas members not affiliated with other IFPS member societies.

The ANAPS Committee, chaired by Harry Leffingwell, reported the formation of a committee, headed by Steve Jacobson, to suggest symposia topics for NAPC-V, to be held in Chicago in June of 1992 (see separate article on new committee appointments in this Newsletter).

"Rip" Ford, Chair of the Palynological Cataloging System Development Committee, reported on the second meeting of the Committee held at the ARCO Research Center on March 17th (see separate article in this Newsletter).

Loretta Satchell, Chair of the recently reactivated Public Relations Committee, reported her Committee will establish three working groups to: advertise career opportunities in palynology; publish review articles in journals having a broad audience; and promote a public speakers resource list. The concept of the working groups is to divide tasks into more manageable units so members won't feel overcommitted. Sign-up questionnaires will be sent to the membership. (See separate article, this Newsletter).

Harry Leffingwell reported that he will soon complete an initiative begun by Norm Frederiksen to seek representation on the US National Committee of INQUA.

Harry Leffingwell announced the formation of four new committees to: 1) encourage the organization of local palynology groups; 2) recommend symposia topics for NAPC-V; 3) investigate a central palynological slide repository; and, 4) investigate concurrent or joint meeting possibilities for the 1993 and later annual meetings (see separate article, this Newsletter).

Steve Hall presented the Chair-in-Palynology report. The goal of the Committee is to raise \$1,000,000 to fund a chair(s) in palynology. Three possible scenarios are to: fund one 1 million dollar chair at one university; fund two \$500,000 chairs at one university; or fund four \$250,000 professorships at two universities. The board favored option 2 because two chairs would provide a more diversified program and carry more departmental influence. Twelve suggested requirements for a Paleopalynology Professorship were discussed and expanded, and the report presented a survey of possible recipient institutions. The Board urged that the process of selecting a university proceed quickly so that fund

raising can begin prior to year-end. Early action is desired because of the potential impact the chair(s) would have on a central type slide location, reprint collections accepted by AASP, and activities of the Publicity and other committees.

The By-Laws Committee, chaired by Norm Frederiksen, suggested changes to the By-laws which would enable (but not require) our meetings to be held earlier, to enhance possibilities of concurrent or joint meetings with other geological or paleontological societies. The Board approved the suggested changes, and a formal amendment to the By-laws will be drafted and submitted to the Board for final approval. Ratification will then be sought via a mail vote to the membership.

The Chair of the AGI Committee, Harry Leffingwell, discussed the need for a strong representative on AGI Council. Unlike other professional umbrella organizations, AGI society representatives are policy-makers.

Owen Davis, Chair of the Data Committee, reported on a plan to exchange data on tapes. The Board created a numbered series of datafiles, called Palydisc, which will be curated by Owen Davis. Owen will publish a list of available datasets in the Newsletter. Tapes will be exchanged free of charge with members contributing additional tapes, but may be purchased by members who have no data to exchange.

Harry Leffingwell reported on the progress of the Palynological Consortium Project. The Upper Cretaceous sequence in the San Juan Basin has been examined as one possible area for the sequence stratigraphy study, and a project plan has been submitted by Professor Dag Nummendaal of LSU. Other areas are also under consideration, especially those with lower sedimentation rates where the biostratigraphic record is enhanced. Discussions have been held with Exxon and ARCO about areas which best fulfill the objectives of the study.

Owen Davis asked about the possibility of AASP supporting publication of a Pollen Identification textbook, and it was the consensus of the Board that the concept and text should be submitted to the Editor of the Contribution Series for consideration.

Harry Leffingwell reviewed correspondence received from John Pojeta, President of the Paleontological Society, regarding a workshop held in October, 1988 by the Association of Systematics Collections, which was funded by the NSF. The objectives of the workshop were to

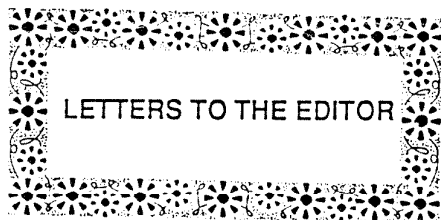
assess natural history collections, resources and management, with the outlook of creating additional support for maintaining collections. The PS Society wished to hold a similar workshop for paleontological collections in about a year. Additional information will be published in the June Newsletter.

The President noted receiving a letter from the North American Micropaleontology Section of SEPM urging closer interaction between NAMS and AASP (see article this Newsletter).

Harry Leffingwell announced that UNOCAL will support a travel grant of \$500 to the author of the best geological applications paper given at the Annual Meeting so that the paper also can be presented at a major geological meeting.

A memorandum was received from the National Research Council regarding a Committee which has been formed to make a critical assessment of the solid-earth sciences. The letter has been referred to the Publicity Committee for appropriate action, which will be reported in the next Newsletter.

Harry Leffingwell



Dear Editor:

A letter was published in the AASP Newsletter of July, 1988 (Volume 21, No. 3) wherein we attempted to "generate some discussion, and perhaps some action, on a number of topics we feel worthy of consideration by the general membership of AASP." Four action areas were specifically addressed:

- o promotion of a central palynological type collection,
- o promotion of a computer-based cataloging system,
- o renewing the public relations effort, and
- o maintaining reprint collections.

In the eight months that have passed since then, it has been exciting to witness a certain amount of action on all four of these fronts. We understand that Roger Litwin has been investigating the possibility of maintaining type collections at the National Museum. Considerable interest in

computer-based cataloging led to the creation of a committee to promote such a system (Leonard Ford: Chairman). The Public Relations Committee has been resurrected (Loretta Satchell: Chairman). Finally, a significant collection of reprints is to be donated to the AASP Foundation.

Of course, we do not mean to imply that one obscure letter was responsible for the observed increase in activism. Credit should certainly be given to the dynamic leadership of our current President, Harry Leffingwell, and to those who have stepped forward to implement this work. Much credit should also be given to the reason we wrote the letter in the first place: the growing sense that the time for complacency in paleontology (in general) and palynology (in particular) has come to an end.

Conversely, we should not forget that Committees don't really do anything: **people do**. Although AASP members are beginning to work on type collections, computer-based cataloging systems, and public relations, the hardest work remains to be done. We have yet to establish a central palynological type collection, produce a cataloging system, or convince a single department chairman that a program in palynology should be initiated at that institution.

The completion of these endeavors will require a sustained effort over a considerable period of time; therefore, it is essential that more AASP members become involved in maintaining the current momentum.

Leonard N. Ford, Jr.
V. Eileen Williams

Dear Editor:

In view of the current debate over the organization of palynological data, its consolidation in data bases and the possible role of A.A.S.P. in promoting these endeavours, it is timely to update fellow A.A.S.P. members on activities at the Atlantic Geoscience Centre and also to express some of our own thoughts on these matters (the printable ones, that is).

The paleopalynology group at the Atlantic Geoscience Centre of the Geological Survey of Canada are currently involved in a number of projects of a taxonomic bent. The new edition of the Lentin and Williams Index of Fossil Dinoflagellate Genera and Species is essentially completed and should be available for DINO 4. A sequel, an Index to Genera, Species and Subspecies of Acritarchs and Fossil Prasinophyceans is

currently in an advanced stage of preparation and should be submitted to press in 1989. This will be comprehensive treatment of acritarch nomenclature; it is already bigger than the Lentin and Williams index and is growing by the day, thanks to the efforts of Sedley Barss and others as well as ourselves. (Some of the nomenclature and taxonomic tangles exposed in this gripping tome will curl your toe-nails.)

A suprageneric classification of dinoflagellates, both living and fossil, has been in progress for some years now. The authors are R.A. Fensome, F.J.R. Taylor, W.A.S. Sarjeant, D.I. Wharton, G.L. Williams and G. Norris. The aim is to propose a phyletic classification with to-the-point diagnoses that allow for clear discrimination of suprageneric taxa (where possible!). This work, which has been provisionally accepted for publication as a Special Paper in Micropaleontology, contains numerous drawings devised and selected so as to illustrate the taxonomic concepts of the classification. Again, this work should be finished in 1989.

A fourth project involves the publication of a new series of volumes in the Eisenack Catalog Series. The publishers E. Schweitzerbart'sche of Stuttgart are to publish this work, of which the editors are R.A. Fensome, H. Gocht, L.E. Stover and G.L. Williams. The new series, which will be somewhat differently organized than the original volumes, will be in English, with original diagnoses and descriptions given in the original language as well as in English translation. In addition, for each taxon there will be an illustration (preferably a photomicrograph) of the holotype, as well as of other representative specimens where possible.

To these projects can be added involvement in the dinoflagellate volume of the Treatise on Invertebrate Paleontology (with Bill Sarjeant as principle author) and Palylit, a database of palynological literature sponsored by the G.S.C. and several oil companies, which is now in the public domain.

These works will augment a fairly sparse list of publications whose prime aim is to organize and stabilize our knowledge on palynomorph groups, especially outside the dinoflagellates. (It is a thought here that dinoflagellates may be a current "pop" palynological group, perhaps in large part because their taxonomy and nomenclature are well organized relative to other palynomorph groups.) Apart from the Eisenack Catalog acritarch volumes, few recent comprehensive treatments of acritarchs come to mind. In the field of spores and pollen the Penn. State species catalogue and the Jansonius and Hills catalogue of spore and pollen genera are highly useful as sources of basic

information but, because of the magnitude of the problem, few workers have seriously attempted to sort out the nomenclature and taxonomy of spores and pollen (Ed Davies' index of schizaeacean spores being an exception).

A long wish-list of potential projects comes to mind. "Stover and Evitt/Stover and Williams" style compendia of acritarch or trilete spore genera, for example, or an index to the form-genera and form-species of angiosperm pollen. Yes, such projects are a lot of work and not up everyone's alley. But in our view they do a tremendous service to the science and they stimulate and encourage (some would say they are vital to) "good science". A.A.S.P. should perhaps take a leading role in encouraging, supporting and possibly even overseeing such projects.

How many individual palynologists have set up their own card file system or data base of species of their particular group of interest? How many others have started to do so, but have thrown their hands up in despair of the magnitude of the task? Wouldn't it be great if A.A.S.P. could play a part in co-ordinating and channelling some of this energy and expertise towards the production of some incisive indexes of catalogs; A.A.S.P. could then play a further role in publishing these works. If the market were available, A.A.S.P. could even consider publishing such works as data bases. This mode of information exchange is certainly the way of the future. However, in our experience, incisive catalogs and indices should be largely in place before data bases can be effectively designed for them. It must also be borne in mind that in the short and medium term, high-priced, sophisticated software will be out of range for the average palynologist. Whatever the mode of publication, data are beginning to submerge palynologists. It may be a case of organize or drown!

Yours sincerely,
Robert A. Fensome and Graham L. Williams
Eastern Petroeum Geology Subdivision

Dear Editor:

I am happy to communicate to you that we organised a 3 day symposium on "Vistas in Indian Palaeobotany" during November 14-16, 1988. It was attended by all the major palaeobotanical research groups in the country. We held a panel discussion on improving university curricula at graduate and post-graduate levels: Recommendations are being forwarded to universities for implementation. We took this opportunity to discuss closer interaction with palaeobotanists/palynologists working in

universities and other research centres with the Sahni Institute. We are presently working out modalities to provide facilities to researchers in the universities and colleges where advanced research facilities are lacking. I am hopeful that this will encourage better quality of work. I am sure you will share my concern because facilities for palaeobotanists are diminishing fast round the world. I earnestly hope I can do something within the country to help the situation. We will also be happy to provide working facilities to visiting scientists from overseas.

Dr. Caratini presently working at Pondicherry and ourselves have started an ambitious programme to select and catalogue important tropical Tertiary pollen. Similarly Dr. G. Corvinus, Institut für Ur- und Frühgeschichte, Erlangen and our Tertiary group have started work on an interdisciplinary programme on the Nepal Siwalik wherein sedimentologists, palaeobotanists, palynologists and magnetostratigraphers are involved. I am sure you are also aware of our programme on "Origin and early evolution of Life" wherein we are searching evidences of early life in the Archaean and Proterozoic. This is a national programme involving several research centres in the country. With all these and several other activities, I am hopeful of building up research tempo in palaeobotany in the country.

We have just published the proceedings of the workshop on "**Concepts, limits and extension of the Indian Gondwana**" held last year in November, 1987.

I am enclosing with this letter a short news report on some of these activities for publication in the AASP news letter, as follows:

1. The proceedings of the workshop on "**Concepts, limits and extension of the Indian Gondwana**" have been published as a book in THE PALAEOBOTANIST, Volume 36. A summary of the proceedings appeared in AASP Newsletter in January 1988 Vol.21(1):4-6/IOP Newsletter 35:2-4 April, 1988. The volume comprises 42 articles covering the whole gamut of the Indian Gondwana in 377 pages. Priced at US \$150.00 (US\$160.00 Hard bound) or £85.00 (airmail delivery), it is available from Registrat, Birbal Sahni Institute of Palaeobotany, P.O. Box 160, Lucknow GPO 226 001, India.

2. A symposium "**Vistas in Indian Palaeobotany**" was held at Birbal Sahni Institute of Palaeobotany, Lucknow during November 14-16, 1988. The seventy-three papers that were presented covered a wide spectrum, such as **origin and antiquity of life, palaeobotany of fossil fuels, evolutionary trends,**

palaeoclimates, palaeoenvironments and taxonomy through artificial intelligence.

Palaeobotanists from 17 Indian universities and all the research organizations pursuing palaeobotanical research in India participated. Besides, 2 delegates from France and 1 delegate from West Germany also contributed. Most of the papers are expected to be published in Volume 38 of THE PALAEOBOTANIST.

One of the main activities of the symposium was a panel discussion to work out modalities and to frame an action plan for promotion of palaeobotany and palynology at the graduate level. It was decided that the Birbal Sahni Institute with the help of the universities will revise and update the curriculum and develop excellent teaching material.

Wish best wishes
Yours Sincerely
B.S. Venkatachala



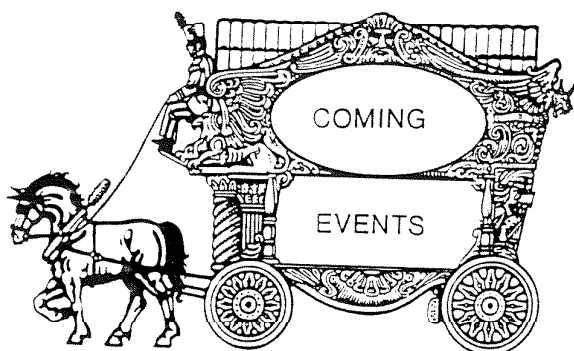
Airborne Pollen May Lead To Super Weeds

This alarming tid-bit comes to us courtesy of John Wrenn, who found it in National Wildlife Magazine - an interesting expression of wildlife among plants, I should think....

"Hanky-panky between genetically engineered domestic plants and their wild cousins could create new breeds of super weeds, says a California biologist.

Scientists have long known that such cultivated plants as oats, sunflowers and radishes breed with nearby wild relatives. Now, Norman C. Ellstrand of the University of California at Riverside has found that pollen can travel up to 3,000 feet - 10 times farther than previously thought. If such distant pollination occurs between wild and domestic plants, altered genes that make crop plants more resistant to insects and herbicides could end up in weeds.

"In the past, the flow of genes from weeds to crops had helped maintain genetic diversity," Ellstrand notes, "but the sort of genes biotech engineers are working with now could confer unwanted advantages to weeds."



International Symposium on North Sea Basin Palynology

The Biostratigraphy Research Group of the British Geological Survey and the Commission International de Microflore du Paléozoïque invite you to participate in North Sea 90', an international symposium to celebrate the contribution made by palynology to the first 25 years of exploration and development of the hydrocarbon resources of the North Sea Basin.

1990 marks the 25th anniversary of the commencement of exploration drilling in the North Sea Basin. It is appropriate that this occasion should be marked by a major symposium which will highlight the contribution that palynology has made to that exploration and development programme. From initial work on Carboniferous miospores in the southern North Sea Gas Fields to the more recent studies of Jurassic and Tertiary palynomorphs in the oil fields of the British and Norwegian sectors of the northern North Sea, palynology has become the most extensively used biostratigraphical tool in this major exploration area.

The symposium is aimed at the presentation of contributions which will demonstrate the potential of Palaeozoic, Mesozoic and Cenozoic palynological studies to biostratigraphical correlation in the North Sea Basin and adjacent areas. It is anticipated that the programme will include contributions relevant to stratigraphical palynology, palaeoecology, palaeoclimatology and palynofacies studies from both the academic and commercial sectors.



Venue and accommodation The symposium will be held in the De La Beche Conference Centre at the headquarters of the British Geological Survey, Keyworth, on the southern outskirts of Nottingham. Rooms will be available for demonstrations, poster sessions and workshop meetings of specialist groups.

A **second circular** will be issued in June 1989 to all palynologists who indicate their interest. Please send inquiries to:

Symposium Secretariat, North Sea '90
Biostratigraphy Research Group
British Geological Survey
Keyworth, Nottingham NG12 5GG
ENGLAND

Geological Applications of Palynology

The Symposium on Geological Applications of Palynology will be an all day session held in cooperation with the annual meeting in Tulsa, which as its title suggests, will seek to show how geological problems can be solved by use of the--often unique--capabilities of palynology. It is another facet of AASP's current effort to establish closer contact with the geological fraternity, to clearly portray the contribution which palynological studies can make, and to launch a renewed effort which will see palynological studies playing an increasingly prominent role in geological problem solving. In aid of these objectives, the Local Committee is making every effort to secure the largest possible attendance of geologists, particularly industry geologists working in exploration and production.

Papers in the Symposium will each be of 40 minutes duration, followed by a 5 minute question and answer period. Each speaker has been asked to include three elements in the presentation: a conceptual segment which succinctly describes the palynological capabilities employed, and how and why they should be useful; a short description of the type(s) of problems to which this method might contribute solutions; and a clear description of how the application of this technique was used to solve a real problem. Specifically, I have asked the speakers to present an instance of how the technique provided solutions which were otherwise unobtainable.

The papers in the Symposium will showcase application of the following palynological techniques to solve real geological problems:

1. Palynofacies Studies in sediments of deltaic, nearshore and shallow marine environments;

2. The usefulness of high resolution chrono-stratigraphy in solving exploration problems;
3. Application of multiple quantitative techniques to single problems;
4. Correlation of pollen/spore abundance shifts and regional climatic cycles with coastal on-lap events and sequence stratigraphy;
5. Use of Quantitative Techniques and Graphic Correlation in multidisciplinary studies;
6. Integration of biostratigraphic data into sequence stratigraphic studies to solve exploration problems; and
7. Palynological and collateral studies as a key to solving exploration problems in the over-thrust belt.

Kenneth Piel
Symposium Convenor

BOARD OF DIRECTORS APPROVES SAN DIEGO AS 1991 MEETING SITE

The Board of Directors approved plans to hold the AASP 1991 Annual Meeting in San Diego concurrently with the GSA Annual Meeting. The AASP will hold its technical meetings from Monday, October 21st through Wednesday, October 23rd at the Holiday Inn Embarcadero Hotel, which is located on the waterfront. The GSA will hold its technical sessions from Monday, October 21st through Thursday, October 24th in the new San Diego Convention Center.

This concurrent scheduling will allow AASP members to take advantage of a wide variety of GSA Workshops, Seminars and Short Courses on the weekend preceeding the technical sessions. We will also be able to attend the GSA field trips, which will offer us excellent variety and quality of field opportunities.

We have received an encouraging response from the Paleontological Society concerning our proposal to hold a joint symposium with them, which presents us with an opportunity to attract GSA members. We will also make every effort to have GSA members attend our technical sessions, to which they will be permitted access by showing their GSA registration badge. Our hotel is also being used by the GSA, so shuttle service will be available between meeting sites. Our hotel is located approximately 1.25 miles from the Convention Center.

San Diego is beautifully sited on the Pacific, and offers such attractions as the famous San Diego Zoo; the Flight and Space Museum; Sea World; Old Town, the original restored historic town site; an excellent Repertory Theater, and other cultural and recreational activities.

NEW AASP COMMITTEES FORMED

Several new AASP ad hoc committees have been formed since the last Newsletter, and anyone interested in serving should contact the appropriate chairmen.

Local Society Committee-Chairman: Ken Piel, Unocal

The purpose of this committee is to encourage the formation of informal local palynological groups in localities having concentrations of palynologists. These groups could form an effective network between AASP members and the Board of Directors and/or Committee Chairs. Many issues are raised during the year which such groups could debate, brainstorm, or investigate, and thus provide useful feedback to the Board or to AASP committee chairs. Local groups could also initiate suggestions to the Board or to committee chairmen. They could hold field trips; become active in local secondary school presentations to stimulate interest in earth science; offer assistance to college or university micropaleontological programs; publish local newsletters; contribute papers, field trip assistance, etc. to local geological societies in order to demonstrate the value of palynology; and hold informal technical discussions. They could establish their own rules and agenda, but we would hope that they all will provide a means for members to better communicate with each other and with the AASP Executive.

The local group formed in southern California in March, and its organization and program are one format that might also work elsewhere (see article in this issue).

NAPC-V Symposia Committee-Chairman: Steve Jacobson, Chevron

The purpose of this committee is to suggest topics which form the basis for multidisciplinary symposia at the forthcoming NAPC-V meeting in Chicago in June, 1992. This initiative was taken to assure a strong representation for palynology within applied micropaleontology.

Joint Meeting Committee-Chairman: Martin Farley, Smithsonian Institution.

This committee was formed to further investigate possible sites to hold meetings concurrently or jointly with other national or regional geological, palynological, or paleontological societies in North

America or elsewhere. The first meeting of AASP to be held concurrently with a geological society will be in 1991 when we meet at the same time and site as the Geological Society of America. AASP will also meet jointly with the IFPS in Aix-en-Provence in 1992. This committee is charged with making recommendations as to the feasibility of concurrent or joint meetings after 1992.

Type Slide Committee-Chairman: Ron Litwin, U.S. Geological Survey

This committee has been asked to investigate possible sites for housing palynological type slide collections and topotype residues. Many collections are held by individuals or commercial firms and thus are not easily accessible to the scientific community. It would be most desirable to encourage the deposit of the maximum number of these collections at a single site where curation and preservation could be maintained.

QUARTERLY REPORT: PUBLIC RELATIONS COMMITTEE

Loretta Satchell was appointed to the position of Chairman, and agreed to serve in that capacity.

Leonard "Rip" Ford and Eileen Williams developed a program for action to be implemented upon approval of the Chairman. The initial program involves the creation of three working groups:

Advertising Working Group

The principal goals of the Advertising Working Group are to produce 1) an "eye-catching" poster about palynology and 2) a pamphlet explaining what palynology is, how it can be applied and why it is an important field of study. These materials will be distributed to geology departments at universities and at professional society meetings. We hope that our "advertising" campaign will induce geology departments to consider palynology as part of their curriculum as new positions arise, as well as attract good students to our discipline. Additional functions of this working group are to compose letters to department chairmen explaining the purpose of the accompanying materials, and to follow these letters with a telephone campaign.

Review Article Working Group

The purpose of this working group is to publish review articles on various aspects of palynology in journals having a relatively broad audience (e.g., *Geotimes*, *The AAPG Explorer* and *Episodes*). John Wrenn has already written

such an article for *Geotimes*. A recently published article in the *National Geographic*, which was concerned with palynology in general, was well-received, and certainly reached a wide and varied audience. A follow-up article emphasizing dinoflagellates (modern and fossil) would be timely. Publication of general articles on palynology will provide a greater awareness of palynology among geoscientists and other potentially interested individuals. Members of this working group will be requested to make written, editorial, photographic and graphic contributions.

Public Speakers Working Group

The purpose of this working group is to promote public speaking on behalf of palynology. The group will focus on identifying AASP members willing to give oral presentations to non-palynological groups. An ad hoc AASP committee has been organized to promote the creation and maintenance of regional palynological associations (e.g., "Southern California Palynological Society"), within which pools of speakers could be organized. Speakers would be available within their local area to give lectures or talks on palynology to professional societies (e.g., Los Angeles Basin Geological Society), university geology departments and public school earth science classes. Members of the Public Speakers Working Group would write letters and serve as liaison between the Public Relations Committee and local/regional palynology committees.

The Committee will soon be mailing to all AASP members a "Call for Assistance" to implement the specific tasks outlined for each working group. We strongly urge your participation for the success of this program.

QUARTERLY REPORT: LOCAL SOCIETIES COMMITTEE

The first organizational meeting of the **Southern California Palynological Society (SCAPS)** was held on Friday, March 10th, at the UNOCAL research center, Brea, California. The meeting was attended by 15 palynologists. Twelve others had expressed an interest, but were unable to attend.

The meeting was characterized by a considerable degree of excitement and enthusiasm. Certainly, some of this enthusiasm arose from the

opportunity to meet people having different perspectives on the contribution of palynology to geology, archeology, and medicine.

A number of significant actions were taken at the meeting:

- o The Southern California Palynological Society has been founded as an independent society of palynologists.
- o Whereas the society has elected to remain an independent organization, it may establish and maintain liaisons with other professional organizations.
- o Leonard "Rip" Ford shall serve as liaison to AASP via the AASP Local Societies Committee.
- o Ed Marks volunteered to edit the first edition of the newsletter.
- o Gerry Waanders and Ken Piel are to develop By-Laws.
- o Sharma Gaponoff shall organize our first field trip
- o Barbara Whitney is to update and distribute the local directory.
- o Most members were of the opinion that meetings should provide more than the opportunity for socializing; therefore, future meetings are to be structured around short technical presentations and/or discussions.
- o The Unocal group volunteered to organize a second meeting (early May).

Leonard N. Ford, Jr.

QUARTERLY REPORT:
PALEONTOLOGICAL CATALOGING SYSTEM
DEVELOPMENT COMMITTEE

The second meeting of the PACSYD Committee was held on Friday, March 17, at the ARCO research center in Plano, Texas. The daylong conference was comprised of four sessions: an initial overview, a demonstration of the ARCO microfossil cataloging system, a demonstration of digital and analog imaging (courtesy of Electro Communications Systems, Inc.), and a summary discussion.

The principal purpose of the Committee is to **promote the development of a PC-based system for building palynological catalogs**. Conversely, the Committee is not explicitly concerned with either producing or maintaining palynological databases. In fact, early discussions indicated a desire for a system that would enable the user to develop and maintain an in-house database. The concept of access to external databases only serves to enhance the desire for such a system.

By the end of the day, a rough outline for external design specifications had evolved:

- o The system should be designed for the IBM PC (XT/AT/PS2).
- o Two user groups are to be accommodated: builders and browsers.
- o A **complete** builder system includes the following capabilities: digital image capture via camera and flatbed scanner, digital image enhancement, analog image capture via camera without enhancement, analog image storage (laser disc), digital text storage (taxon header information, image specific information, original taxon descriptions, enhanced taxon descriptions). Hardware cost: \$50,000 to \$60,000.
- o A complete browser system includes the following capabilities: recall of analog images, recall of digital text. Hardware costs: \$3,000 to \$10,000 (variation depends upon type of laser disc player, quality of video monitor, optional use of optical disc drive).

At this point, the cost of software development cannot be estimated. Dave Goodman and "Rip" Ford have agreed to produce a rough specifications document in time for discussion at our next meeting, which is to be held in April at Woods Hole during the Fourth International Conference on Modern and Fossil Dinoflagellates.

The Chairman wishes to extend his appreciation to David Goodman (ARCO), for hosting the meeting, and to Joe Dempsey (Electro Communications), for providing us with an excellent overview of analog and digital capabilities.

PACSYD Committee members are:

Nairn Albert -*
Connie S. Cigler
Tom Davies
Lucy Edwards
Rob A. Fensome
Leonard N. Ford, Jr. -*
David K. Goodman -*
Peter Griggs -*
Judith Lentini -*
Loretta Satchell -*

*- present at the Plano meeting.

Leonard N. Ford, Jr. Chairman



Nominees for AASP Offices 1989

AASP Nominating Committee chairman, Richard Curry presented the 1989 slate of candidates to the AASP Board of Directors at their Midyear Meeting in Richardson, Texas. Dick and committee members Richard Holloway, Ronald Litwin, Jeff Stein, and Gerald Waanders selected the following nominees, whose faces you'll have to imagine for yourself because there are no photos!

President-Elect: Reed Wicander, Barbara Whitney
Secretary-Treasurer: Gordon D. Wood (unopposed)
Managing Editor: David K. Goodman (unopposed)
Director-at-Large: Leonard Eames
Javier Helenes- Escamilla
Leonard Ford
Eleanor Robbins

The biographies of all candidates are presented below, in alphabetical order:

Leonard E. Eames (Director-at-Large)

Leonard has been a member of AASP since 1969. He is one of the familiar faces at Amoco Production Research center in Tulsa, where he specializes in Paleozoic biostratigraphy and spore taxonomy. He received both B.A. and M.A. degrees in biology/geology at Kent State University, and a Ph.D. in geology/biology from Michigan State University. He has not held an AASP office, though he served on the Logo Committee, was co-chairman for the 1977 annual meeting and field

trip, and is co-leader for the 1989 annual meeting field trip.

Leonard N. "Rip" Ford (Director-at-large)

Rip Ford joined AASP in 1978, or so (his uncertainty, not the editor's!). He works for Union Oil Company of California where he specializes in dinoflagellate biostratigraphy, sequence stratigraphy, and quantitative analysis of paleontological census data. Mr. Ford received both a B.S. and M.S. degrees from Virginia Polytechnic Institute and State University and earned a Ph.D. at UCLA. Though he has not held an AASP office, he is a member of both the newly formed PC-Based Palynological Cataloguing System Committee and the newly reconstituted Public Relations Committee.

David K. Goodman (Managing Editor)

Dave Goodman has been a member of AASP since 1975. He received both the B.S. and M.S. degrees in geology at Virginia Polytechnic Institute and State University, and was granted a Ph.D. in geology at Stanford University. He works for ARCO in Plano, Texas, where his work/interests include Mesozoic and Cenozoic dinoflagellate stratigraphy. He is also interested in biologic responses in depositional sequence stratigraphy, paleoecology and ecostratigraphy, integrated data and image retrieval systems for personal computers, the organic geochemistry of depositional sequences, and the role of chaos in career development (whew!). With all of that, one wonders how he finds time to manage other editors, but believe me, he does. Dave was Assistant Journal Editor (1985-86), Journal Editor (1987-present) and Managing Editor (1987-present). He also served on the L.R. Wilson Best Student Paper Committee in 1981 and 1987. Dave runs unopposed.

Javier Helenes - Escamilla (Director-at-large)

Javier joined AASP in 1981. He works for the Bujak-Davies Group in Calgary and is interested primarily in the morphology and taxonomy of dinoflagellates. He has a degree as a geological engineer from the Instituto Politecnico Nacional in Mexico, and earned both M.S. and Ph.D. degrees from Stanford University. Though he has never held AASP office, he has reviewed manuscripts sent for publication in Palynology.

Eleanor Robbins (Director-at-large)

Eleanor "Nori" Robbins has been a member of AASP since 1974. She received a BS from Ohio State University, an M.S. from the University of

Arizona, and Ph.D. from Penn State. She works for the U.S. Geological Survey in Reston, Virginia, where she pursues interests in Mesozoic palynology and, as she puts it, marginal palynology (including microbial minerals and fecal pellets). Nori has not held an AASP office but has judged student papers and was on the Organizing Committee of the AASP Annual Meeting which met in Arlington, Virginia, in 1984.

Barbara Whitney (President-Elect)

Barb Whitney has been a member of AASP since 1971, and currently works for Union Oil Company of California. She received an A.B. degree from Vassar College, an M.S. from the University of

Colorado, and a Ph.D. from Virginia Polytechnic Institute and State University. Her interests lie with Cretaceous dinoflagellates, their taxonomy, biostratigraphy, and paleoecology. Barb has been a busy AASP member, being on the COSUNA steering committee as AASP's delegate. She once served as Chair of the Nominating Committee, the Ballot Committee, and the L.R. Wilson Best Student Paper Award Committee. She currently serves on the Awards Committee as its Chair.

Reed Wicander (President-Elect)

Reed joined AASP in 1978. He is on the faculty of the Department of Geology of Central Michigan University where he works on Paleozoic palynomorphs, particularly acritarchs. He received a B.S. from San Diego State University, and earned a Ph.D. at UCLA. He has held a number of positions in AASP, having served on the Publicity Committee in 1981-82, 1983-1986, and was its Chair in 1985-86. He served on the Best Student Paper Award Committees in 1980, 1983, and 1985, and was chairman of the Ballot Committee in 1985. He co-chaired the Symposium on Paleozoic Palynology in 1986, was a Director-at-large from 1984-86, and has been the Book Review Editor since 1985. In all this activity, Reed still has found time to co-author two books, including a just-released historical Geology text entitled *Historical Geology, Evolution of the Earth and Life Through Time*.

Gordon Wood (Secretary-Treasurer)

Gordon Wood is a familiar name in AASP circles. He has been a member since 1976 and is our current Secretary Treasurer. His distinctive wit and signature can be found on the proliferating correspondence that accumulates in any other officer's office. He received a B.S. in geology from the University of Miami, M.S. from the University of Michigan, and a Ph.D. from Michigan State University. His peculiar interests include conducting steroid tests on individuals competing for the L.R. Wilson Best Student Paper Award at our annual meeting, conducting research on Lower Paleozoic spores, acritarchs, and chitinozoans, and trying to figure out if Dave Goodman shaves his legs (ahem). [In spite of all that he has done very well as Secretary Treasurer, and asks for your vote again. The boy needs a job, so please give it to him. - ed.]

One more time.....Microscope for sale. Please note that the following equipment is available for \$2500.00 (US) plus postage:

Zeiss Standard Compound Microscope
1970 Vintage
8.5X and 12.5X eyepieces
Microscale
Optovar 1.0X, 1.6X, 2.5X, PH
Zeiss 34 mm Camera with attachments
Objectives 2.5X, 10X, 40X, 130x Oil
Packing Cases

Interested parties should contact:

Jim O'Hara
P.O. Box 439
PYOTE, TX 79777
(Telephone: 915-389-5544)

PROFESSOR W.R. EVITT DONATES REPRINT COLLECTION TO AASP

Professor William R. Evitt has donated to the AASP Foundation his considerable library of books, reprints and theses, collected over the past 30 years in conjunction with his palynological research. The emphasis of the collection is on fossil dinoflagellates, although reprints on acritarchs, chitinozoans, siliceous and calcareous nannoplankton, spores and pollen are also represented. All items in the collection are represented in an index of author cards. In addition, most of the items containing systematic descriptions of dinoflagellates are indexed on a second author card file which lists described species. These indexes to the reprint collection were also given to AASP. Most of the items in the collection are originals, and cover a period dating from 1854 (a copy-- not an original of Ehrenberg's *Microgeologie*) to the present. The collection includes the papers in which all but a very few of the several thousand known species of dinoflagellates were originally described.

Bill requests that the collection remain available to teachers and students in a site of active instruction and research in various aspects of paleopalynology.

Bill has placed great trust in the AASP Foundation to be a responsible custodian of this collection. We will make every effort to assure this invaluable research resource is maintained and used productively by current and future researchers.

Harry Leffingwell

Exxon Production Research Company

Palynostratigraphers

Exxon Production Research Company is currently seeking Palynologists for two position openings.

The first opening is an entry level position for an individual with primary interests in the utilization of palynomorphs to assist in resolving stratigraphic exploration problems. Applicants for this position should have expertise in Mesozoic palynomorphs together with a general knowledge of Paleozoic assemblages. A strong background in geology and stratigraphy is required and a Ph.D. is preferred.

The second opening is a senior level position for an individual, preferably with a Ph.D., and at least 8 years experience in palynology. Applicants for this position should have extensive knowledge and expertise in Phanerozoic marine and terrestrial palynomorphs. In addition, a thorough understanding of seismic and sequence stratigraphy is desired.

Interested candidates should please send cover letters and resumes to: **Professional Employment, Exxon Production Research Company, P.O. Box 2189, Department E100, Houston, Texas 77252-2189. No phone calls please.** Exxon Production Research Company is an Equal Opportunity Employer.

EXXON

POSITIONS AVAILABLE



DESERT RESEARCH INSTITUTE
University of Nevada System

**EXECUTIVE DIRECTOR
QUATERNARY SCIENCE CENTER,
DESERT RESEARCH INSTITUTE
UNIVERSITY OF NEVADA SYSTEM**

The Quaternary Sciences Center of the Desert Research Institute is seeking an Executive Director of national reputation to provide administrative and scholarly leadership for its expanding basic and applied research programs in Anthropology, Archaeology, History, Paleobotany, Paleozoology and Quaternary Geology. The Center has an agenda to expand its research into improving understanding of global environmental change in arid environments. The successful applicant must have demonstrated the administrative and

interpersonal skills required to foster the productivity and creativity of a small group of research scientists and to be an effective advocate for the Center. Applicants should have significant research achievements in the Quaternary sciences. Experience in archaeology is desired and a Ph.D. is preferred. Salary is state-funded in the \$75,000 to \$80,000 range, negotiable, commensurate with applicant's qualifications and experience.

The Desert Research Institute is the statewide research division of the University of Nevada System. Research is managed in five centers: Atmospheric Sciences, Biological Sciences, Energy and Environmental Engineering, Water Resources and Quaternary Sciences. DRI's annual budget now exceeds \$16 million and is growing at 15% annually. The Quaternary Sciences Center (formerly the Social Sciences Center) has an annual budget of over a million dollars in grants and contracts and a full-time staff of 21

professionals and technicians. Center research is concentrated on arid and semi-arid lands of the world with particular emphasis on the Intermountain West; opportunities exist for developing additional programs in Quaternary studies. Applications should include a resume and statement of interest. Initial screening of applications will begin by May 1, 1989. Placement is desired by July 1, 1989 although a later date is negotiable. Applications should be addressed to Dr. Peter Wingand, Chairman, Quaternary Sciences Center Executive Director Search Committee, Desert Research Institute, University of Nevada System, P.O. Box 60220, Reno, NV. 89506. For further information call Dr. Peter Wigand at (702) 673-7387. The Desert Research Institute is an affirmative action equal opportunity employer.



THE CARNEGIE
MUSEUM OF
NATURAL HISTORY

**UNIVERSITY OF PITTSBURGH
CARNEGIE MUSEUM OF NATURAL HISTORY
GRADUATE RESEARCH ASSISTANT**

A three-year research assistantship for graduate study leading to a PhD degree is available through the Department of Geology and Planetary Sciences beginning September 1989. The student will participate in a project to study the Quaternary vegetation and climate history of the western U.S. by utilizing pollen data, modern vegetation/climate relations, and GCM simulations of paleoclimate. Experience in pollen and macrofossil analysis, forest/grassland ecology, computer modeling, or climatology is desired.

Send vitae with references to:

Dr. Cathy W. Barnosky
Department of Geology and Planetary Sciences
321 Old Engineering Hall
University of Pittsburgh
Pittsburgh PA 15260

The State of Texas no longer
accepts French Postal
Money Orders.

AASP AND INQUA: Eye-to-Eye?

It's a curious anomaly that palynologists in AASP and those in INQUA [or one of a variety of other QUA's (Unions for Quaternary Research); I'll give you the meaning of one acronym below, you figure out the others] do not always work/publish together, yet many of us are involved in very similar types of research. This seems to be one manifestation of a phenomenon which we are trying to break down: we scientists, and the organization we belong to tend to occupy separate but parallel tracks, and communication oftentimes fails to cross from one track to the other. If you'll look at the goals listed on page 3 of the January, 1989, Newsletter you'll see that the problem has at least been identified and we are trying to alleviate it. Cooperation and communication are the keys to success.

The following item was submitted by Owen Davis at Harry Leffingwell's request. Owen's information came from Lou Maher, who attended an INQUA meeting at Norm Frederiksen's request, per a suggestion from Vaughn Bryant. All this does show that we at least talk to each other individually, and now we must approach our organizations to do likewise!

The following is a portion of the report by Dr. L.J. Maher, who represented AASP at the November 2, 1988 meeting of the U.S. National Committee of INQUA (The International Union for Quaternary Research) held in Boulder, Colorado. In it he mentions upcoming meetings and topics that will be of particular interest to the members of AASP working in the Pleistocene and Holocene. The Board voted to recommend Dr. Steven Hall (Director-at-Large) as a member of the INQUA National Committee who would represent the interests of AASP.

....The National Committee meets when needed, but generally once a year at the time of the GSA meetings; the next will be in St. Louis. Alan V. Morgan, University of Waterloo, was present to report on the last INQUA at Ottawa. There were over 1000 people at the Ottawa meeting including 278 from the U.S.

The next meeting of AMQUA will be held jointly with CANQUA June 1-9, 1990 in Waterloo, Ontario, Canada; its theme will be "Rapid Change in the Quaternary Record."

The U.S. National Committee regrets that we are in the second INQUA 4-year committee cycle with no U.S. member on the INQUA executive committee. There was some discussion of new commissions

dealing with Global Change and Applied Quaternary Studies. The first circular for the next INQUA in China was due out in fall. The China INQUA will deal with Global Environmental Change and its relation to Man at its meeting August 2-9 in 1991. There is talk of some 30 pre-and post conference field trips. The U.S. Committee selected several of its members to coordinate getting exhibits and books to China; others will write travel grants, publicize availability to various U.S. societies (Bill Farrand is to notify AGI, AMQUA, [? AASP ?], etc.) and coordinate the awarding of travel grants.

There was considerable discussion of the various international and national programs dealing with global change. As would be expected, a number of organizations and disciplines are trying to gain control of the field in the expectation that abundant research funds will materialize. Those who work with Quaternary topics feel uniquely qualified to provide evidence of past global conditions and provide a reference against which change can be assessed

Owen Davis, for L. J. Maher, Jr.

NORTH AMERICAN MICROPALAEONTOLOGY SECTION (NAMS) OF THE SEPM

AASP members have received an invitation from NAMS to become part of their multidisciplinary section. Ken Finger, President-Elect, (Chevron Oil Field Research Company, La Habra, CA) stated a desire of NAMS to reach out to palynologists for their involvement in more interdisciplinary activities. We have requested a similar announcement be made in the NAMS Newsletter for NAMS members to join AASP and/or participate in our functions.

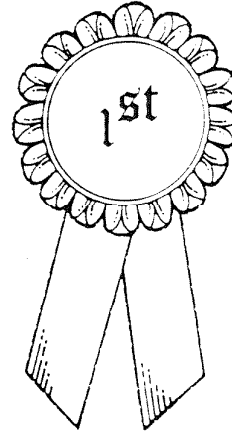
NAMS membership is \$4.00 annually, and a form is enclosed for interested members.

Harry Leffingwell

POSITION WANTED

A palynologist with 18 years research and work experience in a variety of palynological fields is seeking a job. Major areas of professional experience include palynostratigraphy and palynofacies and paleoenvironmental analyses of Quaternary sediments from the area of the Java Sea and Sumatra. Organic petrography and kerogen analysis are also held to be strong points, with emphasis on kerogen type, spore color index,

TOC, and vitrinite reflectance. Please contact the editor if you are looking for such a person.



WINNERS NAMED IN THE 1989 AASP SCHOLARSHIP COMPETITION

The Awards Committee has selected two students to receive the 1989 AASP scholarship of \$250.

Jeffrey M. Osborn, a student of Tom Taylor in the Department of Botany, The Ohio State University, Columbus. The title of Jeffrey's research proposal is "Comparative ultrastructural investigations of Mesozoic pollen from Gondwana."

Philip H. Benham, a student of Dr. Elliott Burden in the Department of Earth Sciences, Memorial University of Newfoundland, St. John's. Philip's proposal is entitled "Stratigraphy and palynology of Cretaceous and Tertiary strata of North Bylot Basin, Bylot Island, Northwest Territories, Canada."

In the next issue of the Newsletter the Awards Committee will feature biographical sketches of Jeffrey and Philip and more information on their research projects.

Barbara Whitney

KRISTIN D. SOBOLIK RECEIVES L. R. WILSON AWARD AT HOUSTON MEETING

The AASP Awards Committee, consisting of Barbara Whitney (Chairman), Lucy Edwards, and Merrell Miller, reports that Kristin D. Sobolik was chosen to receive the L.R. Wilson Award for the outstanding student paper presented at the 21st annual meeting of AASP in Houston last November. At the Houston meeting, Kristin, a student of Vaughn Bryant in the Department of Anthropology at Texas A&M University, discussed aspects of

her masters research in her paper "The identification and quantification of pollen recovered from coprolites." The award carries a stipend of \$300.

After completing a B.S. degree in Biology at the University of Iowa in 1986, Kristin began graduate study at Texas A&M, adding palynology to her research interests in anthropology, biology and botany. She recently completed her Masters degree on the diet of prehistoric hunter-gatherers and is continuing her anthropology research at A&M in a doctoral program.

In 1988 Kristin received the W. Frank Blair Award from the Chihuahuan Desert Institute, a privately-funded research center in Alpine, Texas. The award was in recognition of the best published research paper on the Chihuahuan Desert for 1988; her paper will appear in the Journal of Ethnobiology. This year, as an Anthropology research assistant at A&M, Kristin is serving as the coordinator for a large conference to be held at Big Bend National Park in the fall. The conference, which will be attended by scientists from all over North America, will focus on the origin, development, and spread of hunting/gathering in the desert areas of northern Mexico, southwest Texas, and southern Arizona and New Mexico.

UNOCAL PROVIDES YEARLY TRAVEL GRANT TO THE BEST GEOLOGIC APPLICATIONS PAPER PRESENTED AT AASP ANNUAL MEETINGS

Unocal announced that it will provide a \$500 travel grant to the best geologic applications paper presented at AASP annual meetings. The purpose of the grant is to provide travel funds for the author to present the paper at a major geological meeting, such as the national AAPG Convention, or appropriate international or regional geologic meetings. It is Unocal's desire that this grant help publicize the applications of palynology in solving geological problems, thereby increasing the awareness of the geological community to the potential of this discipline.

If the award is not granted in a particular year, the money will be held by AASP for the succeeding year, and awarded as a single, large grant; or as two separate grants, at the discretion of the Awards Committee.

Harry Leffingwell

Book Reviews

Paleopalynology, by Alfred Traverse, 1988, Unwin Hyman, 8 Winchester Place, Winchester, MA 01890, 600 pages, 193 illustrations (photographs and line drawings), 15 tables, \$34.95 paperbound, ISBN 0-04-561002-9; \$75.00 hardbound, ISBN 0-04561001-0.

The long-awaited textbook on palynology, Paleopalynology by Alfred Traverse, is finally available. Rumors had been circulating for some years that one or more books were in preparation that would fill the widely recognized need for a text, especially in stratigraphic palynology ("paleopalynology"). In fact, Traverse's book was so long in preparation that even the publishing company underwent nomenclatural revision, from Allen & Unwin to Unwin Hyman! But it is here at last, and this is a book that is required reading for every student and professional palynologist.

Paleopalynology is an intensely personal book. Al Traverse's students (past and present) and close colleagues will hear him speaking from every page. The anecdotes and personal views alone are worth the price of the book (in paper cover, at least). Stylistically it is probably unlike any other textbook you have ever read. Those who know Al well are familiar with his affection for the first person singular and would have anticipated it in his writing. All readers should find his writing style entertaining and refreshing, however. He writes in an informal, almost breezy way that is sometimes deceptive in that every paragraph is packed with information and so defies quick reading.

These days it is unusual to find a book attempting to cover a broad and complex field that is written by a single author, and Traverse deserves great credit for having accomplished such a difficult project. (Perhaps it is understandable that his next book will be an edited collection of papers by others!) Given the wide range of specialty subject matter covered in this book, it is inevitable that some may perceive that their favorite topic has been given short shift, but the full breadth of paleopalynology, from meiosis to carbonization, from Precambrian to Holocene, from laboratory techniques to data management, is introduced. All palynomorphs including dinoflagellate cysts and acritarchs are discussed, although the emphasis of

the book is on spores and pollen. (These are referred to in the text as "spores/pollen" because Traverse asserts that no other single term adequately encompasses all the objects called spores and pollen. I find no improvement in the new term, and am even at a loss as to how it is to be said aloud: is it "spores-slash-pollen"?)

Thus Paleopalynology is a comprehensive overview of our science and it is crammed with valuable summaries and sources. The first two chapters cover the definition and history of palynology, why it works, what it is good for, and what its limitations are. The next three chapters concentrate on, in succession, the chemistry of sporopollenin, life cycles of plants that produce spores and pollen, and the morphology of spores and pollen. Then begins the series of chapters on palynomorphs through geologic time. The first four chapters are: Precambrian through Ordovician, Silurian, Devonian, and Carboniferous and Permian. The sequence tends to be a bit repetitive toward the middle of the Phanerozoic: Permo-Triassic, Triassic and Jurassic, and Jurassic and Cretaceous. Order returns with chapters on the Paleogene, Neogene, and Holocene. Dinoflagellates and acritarchs are slipped in between the Triassic-Jurassic and Jurassic-Cretaceous chapters, but the Jurassic itself seems to have slipped away. Closing chapters covers palynomorph sedimentation and factors affecting geologic applications. Then follow an appendix on lab techniques, a 31-page glossary, and a 43-page bibliography. This bibliography compiles references cited in all preceding chapters--a useful innovation--and supplements an annotated general bibliography of books and journals that is presented at the end of the first chapter.

Although Paleopalynology is unquestionably Alfred Traverse's own book, based on nearly 40 years of personal experience, it was not written without help, as the acknowledgements and the list of figure and table credits show (credits are listed together at the beginning of the book, not with each figure, which can be inconvenient). Figures and tables have been reprinted from a wide variety of published work, and many people contributed the photomicrographs assembled into halftone assemblage plates (also called figures). It is unfortunate, however, that the publisher chose to print the book in a small format (ca 15 x 23 cm). As a consequence, most palynomorph specimen photos are reproduced at considerably less than optimum magnification. (The best reproduced photo is the SEM of a chitinozoan that was inexplicably chosen to adorn the cover--the choice of someone in the art department at Urwin Hyman, no doubt). These problems aside, the book is well illustrated throughout; there is even a color plate showing the

darkening of sporopollenin in response to thermal maturation.

For some reason it always seems appropriate to try to find typographical errors in new books; when the author is one's meticulous former (tor)mentor, the challenge is even greater. Paleopalynology was painstakingly prepared and quite carefully edited, however, and is unusually free of nitpicking errors. In view of this, I was delighted to read on page 188 that "Densosporities is the microscope of certain lycopods...."

The book is intended as text for a course in palynology, and this review was delayed while I put it to the test in my own course at the University of Colorado this past semester. My approach to teaching the subject is, not surprisingly, a lot like Traverse's, and I found the book to be fully satisfactory. On the other hand, I tend to disagree with the statement in the preface that "...this book alone will enable even college teachers with little previous experience in the subject to present an adequate course in paleopalynology." It is much preferable to a series of assigned readings in reserve-shelf books and journals and piles of classroom handouts, but for most topics it is a starting point or summary rather than the full story. This comment on the brevity of treatment of subject matter is not a criticism but an observation. There is more material contained within the 600 pages of this book than can be fully addressed in a one semester course, and more extensive treatment would easily have doubled the length of it. It served as a starting point for expansion of aspects I chose to emphasize, while remaining a source for further study by motivated students.

My students were somewhat less sanguine about the book. Responding to questions presented on the CU Faculty Course Questionnaire, several gave the book a grade "C" in the category "well written" (although some gave it an "A"). Presumably this means that some found it a bit difficult. Almost all agreed that it is well illustrated. One written comment on a questionnaire stated that the book was "very detailed," which made it "hard to pick out salient points." This observation confirmed my own conclusion that Paleopalynology is packed with information, more than can be readily absorbed on one reading.

To reiterate a point made at the beginning, Paleopalynology is a book that should be read, perhaps more than once, and probably will be consulted frequently by every serious "student" of pre-Quaternary and Quaternary palynology, whether they are enrolled in a university course or are pursuing a career in the diverse,

fascinating, and utilitarian field of stratigraphic palynology. There is nothing more comprehensive and up to date available, nor is there likely to be for years to come.

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Microfungi on Miscellaneous Substrates.

An Identification Handbook by Martin B. Ellis and J. Pamela Ellis, 1988, 244 p., 556 line drawings in 56 plates, 6 1/2 x 9 1/2" hardbound, from Timber Press, 9999 S.W. Wilshire, Portland, OR 97225, U.S.A.; \$46.95 U.S. plus \$3.00 shipping and handling for the first copy, \$2.00 handling for additional copies.

This "big" little book was designed for the amateur mycologist. Its impact can be quite strong for the paleopalynologist studying fossil fungal palynomorphs. The illustrations are by line drawing, and include sufficient detail for comparisons to dispersed fungal palynomorphs.

This is a very useful handbook for many investigators, from neopalynologist to paleomycologist. Archeopalynologists (and others, paleo - or not) will benefit because the descriptive text is organized according to where the fungi grow: on bryophytes (mossipalynologists); on other fungi (paleomycopalynologists); on myxomycetes (intergrapalynologists); on burnt ground and charcoal (paleopyropalynologists); on soil (pigpenpalynologists); on dung (copropalynologists), on bones (paleosteopalynologists), on feathers (aztecatlpalynologists, on paper (papyruspalynologists), and on cloth (turinopalynologists). Neoale (hopfo) palynologists will appreciate the fact that at least two species of fungi are found "on ground with spent hops."

All palynologists will like the easily flipped through plates of line drawings in one place at the back of the book, the index to genera and species for quick search to suspected identities, and the descriptive text which includes numerous differentiations between species based upon the morphologic character of the spores/ascospores. There are short, concise, descriptive entries for each illustrated species and others that are not illustrated. Several of those not illustrated can probably be differentiated on the ascospore descriptors; i. e., size, number of septa, etc.

The book was written to help mycologists key out fungi to small habitat groups. Each plate of illustrations is labeled with the habitat type. Use of the book is further facilitated by the species

descriptions being placed in order in the text following the consecutive numbering of illustrations from plate to plate.

The groupings of the text and illustrations by habitat reveal the most interesting information. For example, all of the species of *Delitschia* (eleven in this "big" little book) are found on dung! *Delitschia* has a very distinctive spore type and can be found in many Cenozoic strata.

The only glaring error is the lack of figure labels in the legend for Plate 46: the legend from Plate 56 was repeated there. That is no great detractant, because the text is ordered on figure number, and the figure numbers for Plate 46 are correct. There is an erratum insert by gummed label on a blank part of page 180 just before Plate 1. That correction would have been more noticeable inside the front cover. A narrower label could have been placed directly over the incorrect legend of Plate 46.

The beauty of this book is its potential two step use by the palynologist: find the illustration and the habitat and spore descriptors are readily at hand.

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Late Quaternary Climate, Tectonism, and Sedimentation in Clear Lake, Northern California Coast Ranges.

John D. Sims (Editor), Geological Society of America Special Paper 214, 1988, i-v + 225 pages with three pocket plates, Softbound, 8-1/2" x 11" format, illustrated, the Geological Society of America, Inc., 3300 Penrose Place, P.O. Box 9140, Boulder, Colorado 80301. ISBN 0-8137-2214-4. Price \$34.00.

Clear Lake is located in an ecotone in a tectonically active volcanic region in northern California. The Clear Lake sediments record an almost continuous 450,000 years of deposition with a complex geologic history. Sims' interest in seismic sedimentary structures led to core drilling in Clear Lake in 1973 and 1980. Several specialists participated in a multidisciplinary analysis of the cores to interpret the paleoenvironmental history of the lake. The preliminary results were presented at the Clear Lake Symposium of the 1982 annual Geological Society of America's Cordilleran Section meeting in Salt Lake City. The final results are presented in the 15 papers of this volume.

In the first paper, Sims sets this study in perspective by introducing the project, providing the Clear Lake region physiography and geology, and summarizing the salient results of the analyses. The other 14 papers fall into the broad categories of local and regional geology, physical stratigraphy, correlation and chronology, and biologic limnology and paleoclimatology.

Hearn and others found that the shear and tensional stresses within the San Andreas fault system formed the actively deforming Clear Lake basin, whereas the eruption, subsidence, and depositional processes modified it. The local 1975-1983 seismic data examined by Eberhart Phillips disclosed that normal fault-plane solutions are compatible with the San Andreas right-lateral movement, and that the shallowness of seismicity may be related to the proximity to the surface of the inferred nearby magma. Urban and Diment concluded that the heat-flow rates of the shallow sediments of Clear Lake and Highlands Arm are lower than the rates of the nearby Geysers geothermal field and may be due to the refraction effects and water movement along faults and aquifers beneath the lake.

Sims and others produced a series of paleogeographic reconstructions for different stages of development of the lake basin by integrating the data from physical stratigraphy, properties of sediments, sedimentation rates, and the overall chronology for Clear Lake.

The refined chronology of a core enabled Robinson and others to correlate interstadial events in the Clear Lake pollen record with prominent radiocarbon-dated interstadials in other areas. Sarna-Wojcicki and others identified ash beds in the Clear Lake sediments, correlated them with those from extrabasinal areas, and recognized a hiatus in a Clear Lake core. Blunt and Kvenvolden deduced that the unsystematic decrease in the total amino-acid concentrations with depth may be due to inconsistent sedimentary and postdepositional processes.

Clear Lake is presently within oak woodland with mixed conifer forests at higher elevations in the surrounding mountains. The ecotone shifts that occurred in response to paleoclimatic changes and which are reflected in pollen records of the Clear Lake sediments are translated by Adam into thermomeres and cryomeres of 21 pollen zones.

Other pollen and algae are used to interpret local conditions. In another paper, Adam correlated Clear Lake pollen sequences with those of Grande Pile in France and Tenaghi Phillipon in Macedonia, northern Greece. Gardner and others compared

concurrent marine and adjacent continental responses to global climatic changes by correlating the 20,000 year pollen stratigraphy of a deep-sea core off the northern California coast with that of a Clear Lake core. Pollen sequences indicate local continental paleoclimates whereas marine microfossils reflect the local marine environment. Bradbury's diatom study showed that a fresh, moderately deep, nutrient-rich lacustrine environment prevailed throughout much of the Clear Lake sedimentary history. This finding is supported by Forester's interpretation of ostracode rarity in the Clear Lake sediments. Rymer and others interpreted the depositional environments of the Late Cenozoic deposits surrounding Clear Lake on the basis of the recovered mollusks, ostracodes, and diatoms. Hopkirk determined that the subfossil fish population of Clear Lake is derived from lowland stream-adapted forms. He observed that while the density of subfossil tuleperch scales increased during warm periods, the maximum scale-growth occurred during cool periods in the closed basin due to an increase in nutrients.

This volume meets the objective of becoming a reference source for future studies on marine and continental late Quaternary deposits of the western United States. It is edited carefully and is practically without printing errors. It is a very useful volume for geologists, micropaleontologists, and palynologists alike particularly at such a reasonable price.

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Triassic-Jurassic Rift Basin

Sedimentology, by John C. Lorenz (315 p., \$42.95, Van Nostrand Reinhold Pubs., 1988)

Triassic-Jurassic Rift Basin Sedimentology, by John C. Lorenz is in two parts. The first part is an eye-opening history of sedimentological ideas applied to some of the first rocks studied in the United States, particularly those in the Hartford basin of Massachusetts and Connecticut. The second part describes the types of environments recognized by modern sedimentologists in the Triassic and Jurassic rift valleys of North America, Greenland, England, France, Spain, and Morocco--namely, alluvial fan, fluvial, paludal, lacustrine, playa, marine influenced, and eolian.

Interpretations developed in the 1800's are still being debated 188 years later! Sedimentologists continue to discuss the origin of Triassic-Jurassic redbeds and the broad-terrane hypothesis. In 1856,

the Redfield father-son team determined that the Hartford basin was Late Triassic to Early Jurassic in age on the basis of fish fossils. Following their work, the age of the basin was debated until 1977, when Bruce Cornet's palynological data reconfirmed the earlier findings. Despite the amount of work that has been done to develop criteria for recognizing lacustrine as opposed to marine deposits, sedimentologists cannot agree whether the rocks in the Triassic-Jurassic salt basins of Morocco, England, and France were deposited in a marine, estuarine, lacustrine, or playa setting.

The section on modern sedimentological interpretations describes environments that have not been compiled before in rift basin studies, especially those associated with paludal sedimentation and marine incursions into rifts.

Lorenz's discussion of paludal sedimentology clearly specifies that not much work from modern swamps and marshes has been applied to Triassic coal sequences in the rifts. His discussion of marine sedimentology shows how difficult it is to use sedimentological criteria to identify periodic marine conditions within otherwise terrestrial rift sequences. There may be a slight antifossil bias to this problem, because he states that there are a "few" marine fossils in the Moroccan basins, "some" bivalves in the Central East Greenland basin, and a "few" acritarchs in the Mercia Mudstone within an English rift basin. It seems to me that dinoflagellate studies might come to the aid of such sedimentologists. Pollen is another fossil group that Lorenz considers to be less than useful. He states that because pollen grains float with the wind, they cannot aid in identifying specific environments. Perhaps we palynologists ought to publish some of our environmental reconstructions in the sedimentological literature.

Lorenz states that sedimentology is done by analogy to modern environments. I am curious to know why none of the sedimentologists cited in the book have ever spent a day in the Baikal, Dead Sea, East African, Rhine, or Rio Grande rifts. Instead, the analogous environments being used in these Triassic-Jurassic studies are alluvial fans in South America, dunes in the western deserts of the United States, rivers in Canada, and playas in the Basin and Range province. Cross beds, caliche, and ripple marks may be endlessly fascinating to study in rocks, but I, for one, would like to see some of the work being done on modern rifts applied to ancient rifts. For example, Tom Johnson has published on erosional features that may well include ripple marks at a water depth of 200 m in Lake Malawi. Dan Livingstone has published on

underwater valleys that imply underwater rivers in Lake Tanganyika; Lake Geneva has underwater rivers also. Brian Baker and Hans Eugster both published on modern caliche soils that form on flat-lying, older lakebeds upthrown along the northern end of Lake Magadi. Once these caliche soils are buried, unwary sedimentologists of the future undoubtedly are likely to interpret them as playa lakes. Another aspect of deposition that seems to be confused because of the lack of analog studies is the fact that the ancient rift lakes apparently were all anoxic (black shale). In the modern world, rift lakes contain not only sediments deposited in anoxic waters but also sediments deposited in oxygenated and suboxic waters. Anecdotal information available from Lakes Malawi and Baikal show that, when sediments are first brought up from the deep oxygenated parts of the lakes, they are reddish brown; those from the suboxic parts are green.

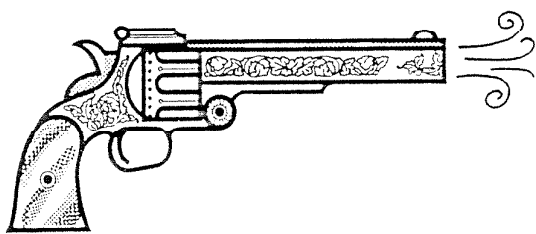
Triassic-Jurassic sedimentologists in this book continue to classify such red, brown, and green rocks as mud flats and overbank deposits. In my opinion, 7 km of lacustrine sediments in oxygenated Lake Baikal (water depth 1740 m) would not be recognized by modern sedimentologists who have been taught that black shale is deposited in deep lakes. I know this notion sounds like heresy, but, when sedimentologists trained in SCUBA start walking the bottoms of rift lakes, they may discover that some features identified in Triassic and Jurassic lakes as "dessication cracks" can form underwater.

I must admit that a biocentric bias colors my views of Lorenz's modern sedimentology discussion. There is not enough discussion of the role of organisms in shaping rift deposits, although I'm sure evolutionary biologists can go too far in the opposite direction. The references cited in the book had plants growing only on soils, mud flats, and overbank deposits; none grew in the water or on the talus slopes of the Triassic-Jurassic basins. The references had animals living only in the shallows of Triassic and Jurassic lakes; none frolicked in deep oxygenated water like the fish discussed by Gerry Smith from water depths of 800 m in Lake Baikal which are presumably eating the amphipods and worms on the bottom. In references that discussed the presence of gypsum in the Triassic and Jurassic Moroccan and Aquitaine salt basins, none discussed sulfate-reducing and sulfate-oxidizing bacteria, which had to have played a role in gypsum precipitation. Lastly, in these Triassic-Jurassic studies, the rocks in the watersheds rarely entered in as nutrients--only as clasts.

There are some good reasons for the ceaseless study of cross beds, caliche, and ripple marks. I can see that sedimentological studies of Triassic-Jurassic rift basins are hampered by several major problems. In the Newark rift system of eastern North America, many of the beds dip between 40° and 60° , and erosion has left few outcrops. These circumstances mean that lateral relationships cannot be traced. Outcrops must stand on their own, as they do in this book. As Lorenz states, the lack of core data reflects directly on the lack of petroleum in most of the basins. Until core data in ancient rift basins are available, it may be premature to complain about the lack of application of studies in modern rifts.

This book may prove useful to sedimentologists who need to know how past discussions color their perceptions of rocks. Lorenz is current in all his readings and has done an admirable job of presenting many sides of each issue. My mechanical complaints are only two: the presence of two separate bibliographies is unnecessary, and the photographs are so dark that many of them are useless. All in all, I would have liked to hear more of Lorenz's own opinions, but the information that he has compiled will be of use to modern sedimentologists and historians of science.

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PARTING SHOTS

With this issue, I am inaugurating a new feature of the Newsletter, PARTING SHOTS. This will be reserved for something light, interesting, whimsical, or whatever enters my mind. Contributions from readers are welcome. This month we have a selection of photos from the meeting in Brisbane, all provided by Gordon Wood. This "Brisbane Remembered" gallery will, I hope, bring back fine memories to all of those who were able to attend.



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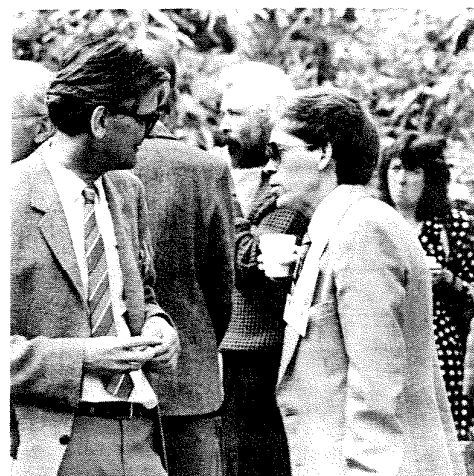
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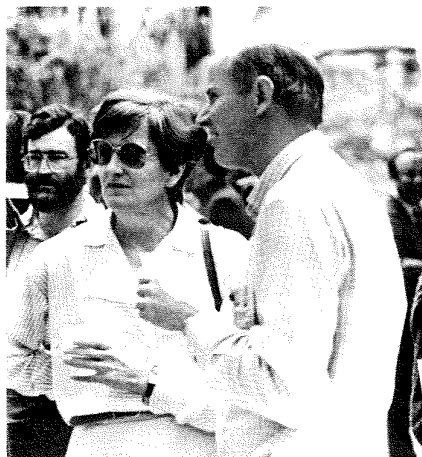
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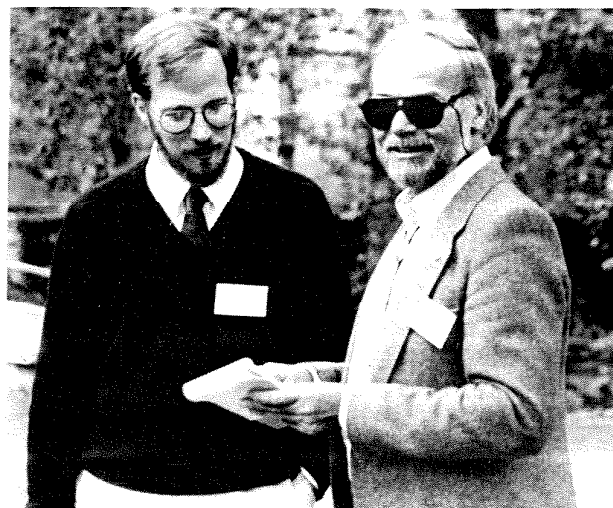
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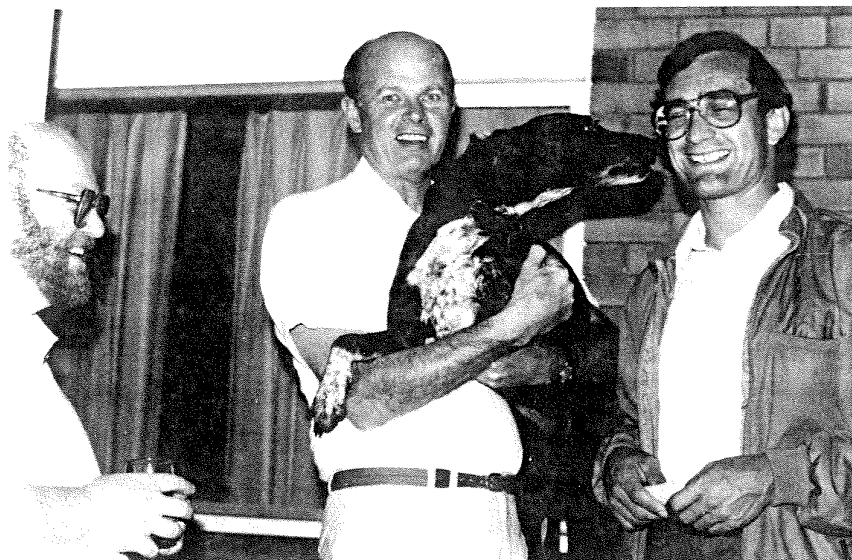
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LEGEND FOR THESE LEGENDARY FOLK APPEARS ON THE BACK



- A. Virgil Wiggins - USA
- B. Alfred Traverse - USA
- C. Noel De Jersey - Australia
- D. Hiroshi Kurita - Japan
- E. Dorothy Guy - Ohlson - Sweden
- F. Dennis Burger (L) and Alan Partridge-Australia
- G. Mary Dettman and Geoffrey Playford-Australia
- H. Jan Jansonius - Canada
- I. Loretta Satchell - USA
- J. David Jarzen (L) and Harold Kaska-Canada and
USA, respectively
- K. Barrie Dale - Norway
- L. Frances Parker and George Hart (R) - Australia
and USA, respectively
- M. Tweedle - dee and Tweedle - dum, er, rather,
Farley Flemming (L) and Doug Nichols - USA
- N. Merrell Miller, Geoff Playford, Kippy, and
Gordon Wood (far right) - USA, Australia,
and Texas (photo by Dave Pocknall)
- O. Norman Hughes - England
- P. Anne De Vernal - Canada
- Q. Bill Sarjeant - Canada
- R. Mike Farabee and Jim Canright - USA