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AASP NEWSLETTER

DEPT. GEOLOGY AND GEOGRAPHY
L.B. 8149
GEORGIA SOUTHERN UNIVERSITY
STATESBORO, GA. 30460
Attn: F. Rich





AASP NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists, Inc.

VOLUME 24:1 JANUARY, 1991
ISSN 0732-6041 F.J. RICH, EDITOR

PRESIDENT'S FORUM

There are a few items of business/general interest I'd like to bring to your attention in their issue of the Newsletter:

1. As you may have noticed, the election of AASP Board members for 1991-92 is occurring earlier this year than in the past. This new schedule owes its genesis to the recent change in by-laws permitting AASP to meet earlier in the year in conjunction with the annual meeting of another geoscience organization. If such a meeting is to happen, our election would have to take place earlier in the year. Rather than having election time "floating" back and forth, according to the time of the annual meeting, the election schedule has been moved earlier in the year on a permanent basis. Thus, a separate mailing should have already informed you of this year's slate of candidates. The ballot will be mailed to you in mid-March and must be returned to the Ballot Committee Chairman, Len Eames (Amoco Production, Houston), by May 1. **PLEASE VOTE!**

This year's Nominating Committee did a fine job of producing their slate of candidates in accordance with the new schedule, with its earlier deadlines. The members of that committee are Owen K. Davis (Chairman), Wayne Brideaux, Ray Christopher, Lucy Edwards, and Pat Gensel.

2. The current Board of Directors will have its mid-year meeting on April 12 and 13 (Friday evening and Saturday) in the Dallas, Texas, area; this is right after the AAPG meeting in Dallas. We will meet at the Harvey House, 1500 N. Central Expressway, in Plano. All interested AASP members are welcome to attend the meeting.

3. Vaughn Bryant has reported on some recent events concerning palynology and the popular media. He has been working with NATIONAL GEOGRAPHIC on a featured article on archaeology. Part of the article deals with the importance of pollen as an investigative tool in understanding the archaeology of

FLASH!

Late in February Amoco announced its decision to give \$100,000 to the AASP Center for Excellence in Palynology! See related story elsewhere in this issue.

past cultures. The article will appear in one of the summer issues of NATIONAL GEOGRAPHIC WORLD, a children's magazine with over 4 million readers.

A 30 minute film on forensic palynology has just been made on the Texas A&M University campus for a series entitled THE CRIME SCENE. This series, which has a subscription base of 2,200 law enforcement agencies all over North America, is used primarily as a training program. Occasionally, some of the films are also shown on cable TV. The film will provide an opportunity to publicize the usefulness of pollen in criminal investigations, which should promote demand for this type of palynological application.

Barbara L. Whitnoy
President

CANDIDATES FOR OFFICE

The Nominating Committee has performed its annual task of assembling nominees for our various elected positions. You should all have received a letter from Owen Davis, Chairman of the committee, wherein the nominees are listed. Below you will find brief vitae and photos of the nominees. I want to

extend my thanks to the committee for having presented us with a fine slate of candidates!



Dr. Robert L. Ravn - President Elect

Rob is presently senior biostratigrapher for BP Exploration (Alaska), Inc., Anchorage, Alaska. He has been an AASP member since 1981 and served as Newsletter Editor, 1984-1987 and as Director-at-Large, 1987-1988. He also holds active membership with AAPG, the Paleontological Society and the British Micropaleontological Society. Ongoing research interests are in the biostratigraphy of non-marine palynomorphs, especially from Carboniferous and Cretaceous strata. Rob is interested in the development and application of computerized databases in palynology.



Dr. William C. Cornell - President Elect

Bill received his B.S. (1963) and M.S. (1965) from the University of Rhode Island. He earned his Ph. D. from UCLA in 1972. He has been at the University of Texas, El Paso, since 1971 where he is now Associate Professor of Geology and Assistant Dean of the College of Science. He is a member of the American Association for the Advancement of

Science, AASP, the Paleontological Society, and other scientific organizations. He served on the AASP Nominating Committee (1979), the Constitution and By-Laws Revision Committee (1984-85), was an At-Large member of the Board of Directors from 1985-1987, and was Chair of the Annual Meeting Committee for the El Paso meeting in 1985.

Bill's interests are in the palynology and micropaleontology of the Late Paleozoic; Cretaceous palynostratigraphy and thermal maturation; Plio-Pleistocene lacustrine diatom biostratigraphy and paleoecology; and palynology of Folsom archaeological sites.



Dr. Sarah Pierce Damassa - Director-At-Large

Sarah is a consulting palynologist in Winchester, Massachusetts. She received her B.S. and M.S. degrees in geology from Stanford University (1975), and her Ph.D. from UCLA (1979). She did postdoctoral work at the Bunting Institute, Radcliffe College (1984-86). Her research interests include the morphology, systematics, biostratigraphy and paleogeography of fossil dinoflagellates.

She has served AASP as Director-At-Large (1979-81), as chairman and/or member of the Nominating Committee (1983, 1986, and 1989), Awards Committee (1980-81), and as a reviewer for *Palynology* and the *Contribution Series*.

Sarah was a member of the Organizing Committee for the Fourth International Conference on Modern and Fossil Dinoflagellates (1989), and was a symposium chairman for NAPC-III (1982).

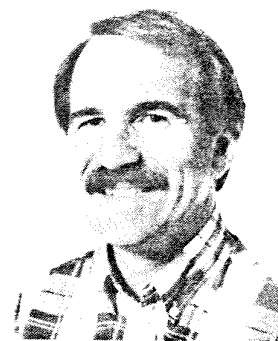


Dr. Bert G. van Helden - Director-At-Large

Dr. van Helden graduated from the University of Amsterdam with a M.Sc. in Geology (stratigraphy and paleontology) in 1967. He has been employed with Chevron in Calgary since 1968 where he has worked on Mesozoic and Cenozoic palynological projects since 1972. Bert joined the AASP in 1972 and has served the organization as student-paper judge (1977), member of the Nominating Committee (1987), member of the Organizing Committee for the Annual Meeting in Banff (1990) and as business manager for the Silver Jubilee textbook "Palynology and Stratigraphy".

Bert has been active in the Canadian Association of Palynologists as Newsletter editor (1982-1986), President-Elect (1986-1988), and as President (1988-1990). He served as a member of the organizing committee of the IVth IPC in Calgary (1984). He was Chairman of the Paleontology Division of the Canadian Society of Petroleum Geologists (1984-1986), and is a committee member (1986-present).

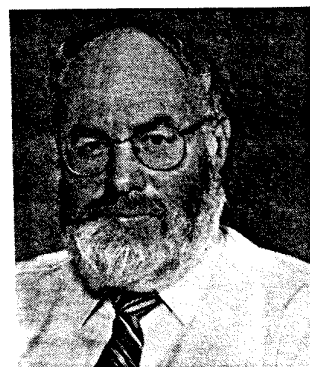
Bert likes to be involved in the organization of professional and social events. He is an avid fisherman and enjoys emptying bottles in which to build model ships.



Dr. Roger J. Whitmer - Director-At-Large

Dr. Whitmer is a Senior Research Geologist at the UNOCAL Science and Technology Center in Brea, California. He received M.S. and Ph.D. degrees from Virginia Polytechnic Institute and State University. His studies and research interests include Tertiary, Cretaceous, and Paleozoic palynomorph biostratigraphy and ecostratigraphy, palynofacies (kerogen) distributions within a sequence stratigraphic context, and computerized image analysis.

Roger is currently serving as Chairman of the Organizing Committee for the 1991 AASP Annual Meeting in San Diego. Roger is also Secretary-Treasurer of a very active local AASP group, the Southern California Palynological Society, and a member of the Society for Organic Petrology and the Paleontology Society.



Dr. Arthur R. Sweet - Director-At-Large

Art has been a member of AASP since about 1970. He has acted as a reviewer for Geoscience and Man, Palynology and the AASP Contribution Series; was chairman of the L.R. Wilson Outstanding Student Paper Award Committee in 1987; was on the organizing committee for the 6th International Palynological Conference held in Calgary as a field trip coordinator

and leader; and most recently jointly organized and chaired the pre-conference symposium on event stratigraphy and was a field trip leader for the Annual Meeting of AASP in Banff.

Art has been with the Geological Survey of Canada since receiving his Ph.D. from the University of Calgary in 1972. His research interests include Cretaceous and Paleogene biostratigraphy based on terrestrial floras. His initial interest in megaspores has been superseded by a desire to develop the high resolution potential of angiosperm pollen in support of coal basin inventory studies. He has a strong bias towards collaborative research with sedimentologists, magnetostratigraphers, coal geologists and other lithostratigraphers as a way of increasing the precision of palynology and its application to biostratigraphic and paleoenvironmental studies.

David K. Goodman - Managing Editor

Dave is a stratigrapher at the Arco research center in Dallas, Texas. His B.S. and M.S. are from Virginia Polytechnic Institute and State University, and his Ph.D. is from Stanford University. His research interests include dinoflagellate stratigraphy, the ecostratigraphy of depositional sequences, and computer applications in paleontology.

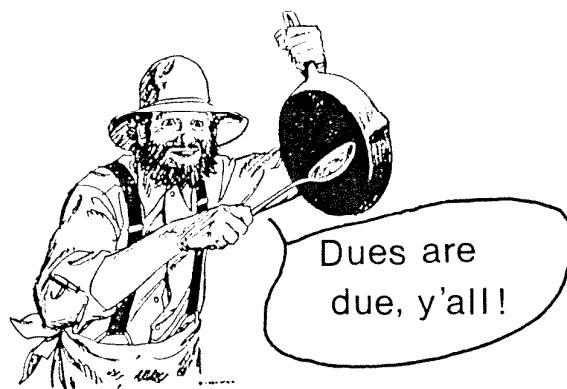
He has served as Assistant Editor (1985-86) and Journal Editor (1986-90) for *Palynology*, Director-at-Large (1986-87), and Managing Editor (1987-90). He is currently a member of the Paleontological Catalog System Development Committee.

Dave was chairman of the Fourth International Conference on Modern and Fossil Dinoflagellates at Woods Hole. He serves on the Editorial Board for *Marine Micropaleontology*, the Technical Advisory Committee for Micropress Paleontological Catalog Project, and the Technical Advisory Board for the *Treatise on Invertebrate Paleontology*.

Gordon Wood - Secretary-Treasurer

Gordon Wood is a familiar name in AASP circles. He has been a member since 1976 and is in his fifth year as our Secretary-Treasurer. He received a B.S. in geology from the University of Michigan, and a Ph.D. from Michigan State University.

His interests include Paleozoic spores, acritarchs, and chitinozoans, and he is currently employed as a Paleontological Associate with Amoco in Houston.



Palynology of Ore Deposits?

That's right, palynology of ore deposits has finally become a genuine pursuit, and Nori Robbins has succeeded in getting what is bound to be an interesting series of papers printed in a special issue of *Ore Geology Reviews* (v. 5, no. 5/6), 1990. Entitled *Palynology of Ore Deposits*, the volume is edited by Eleanor Robbins, and contains a great diversity of topics. These range from "Palynological assessment of organic tissues and metallic minerals in the Jerritt Canyon gold deposit, Nevada, U.S.A." by Robbins *et al.*, to "Palynological studies on manganese ore layers in Urkut (Transdanubia), Hungary" by Kedves. Twelve papers constitute this special issue.

Steve Hall sends the following news item, rewritten here from the *Austin American-Statesman*, January 17, 1991.

Pollen pounds Austin sinuses

For two weeks, the opportunistic pollen just sat on the trees getting rained on and waiting. Waiting for a day like Tuesday--a toss-your-toupe kind of day.

That's when an Austin record was set, when mountain cedar pollen rode the wind with a vengeance, bringing on wheezing and sneezing and vows to chop down every juniper from here to San Angelo.

Wednesday's pollen count was a bit better, but it was no tonic to Tuesday's 32,000 particles per cubic meter of air. That 32,000 count was the highest recorded since local researchers started keeping statistics in December 1986.

It was almost three times as high as the previous record of 11,785 registered in January 1987.

Wednesday rated a 5,520 count, still in the very high category.

"The counts are the worst I've ever seen," said Dr. Jay Van Bavel with Allergy Associates of Austin Diagnostic Clinic. "We're getting lots of calls from people needing help desperately."

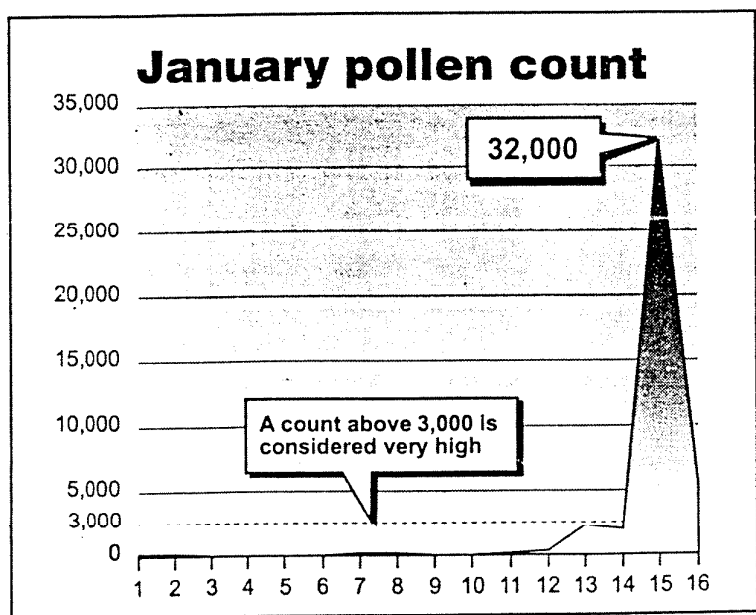
Van Bavel said cedar fever struck early this year, antagonizing its first victims before Christmas. But the long rainy spell also kept the pollen to a minimum, until Tuesday when the skies cleared and the wind arrived.

"Now," said Van Bavel, "there is nice weather for all of us, but unfortunately, there is nice weather as well for the pollen."

Most of the season's crop, which forms in pods on male juniper trees (or cedars, as they are commonly called), probably accumulated, just waiting for a good wind, the doctor said.

He said cedar fever is a bit of a misnomer since cedars aren't the culprits and fever is rare.

The real hope for relief can start with over-the-counter antihistamines and decongestants. For more severe cases, physicians can offer allergy medications and even preventative treatments.



Staff graphics

The following announcement/plea came to the Editor from L.N. (Rip) Ford.

Concerning DINO4 Proceedings:

The editorial board has nearly completed editing the proceedings on Modern and Fossil Dinoflagellates (DINO4). We plan to publish these papers and abstracts as a volume in the AASP Contributions Series. The first-draft camera-ready copy should be sent to Dick Hedlund in February.

Concerning "Rip", he has moved and can be reached at Biospectrum Research. His new address is: 4508 Mercil Terrace, Glen Allen, Virginia 23060-6449.

Since leaving Unocal (January, 1990) and moving to Virginia, he has encountered considerable difficulties in keeping up with the palynological literature: the nearest adequate earth science library (University of Virginia) is an hour from him. Fearing that he may have missed some palynological publications, he would like to publicly beg reprints from anyone that has published anything since December, 1989. Any and all contributions will be appreciated.

AWARDS COMMITTEE ANNOUNCEMENT

The application form for the American Association of Stratigraphic Palynologists, Inc., Student Scholarships is included in this newsletter. Up to two scholarships of \$300 (U.S.) each may be awarded. Applications **must be received by April 19, 1991**. Please note that this date is later than previous years and comes four days after the federal income tax filing date. Awards will be announced by May 15, 1991. Previous winners of this award are eligible *only if* they are pursuing a different degree from the one which they were pursuing for the previous award.

The Center for Excellence in Palynology at Louisiana State University: Report on the Progress of the Search Committee

A search is underway for the palynologist to fill the first two anticipated Endowed Chairs in the planned **Center for Excellence in Palynology** at LSU. We are seeking an individual with extensive academic and/or industry experience who can establish the **Center** and develop a strong program of teaching and research. The Search Committee is composed of 7 members. Four are from the Department of Geology and Geophysics at LSU. They are Chad McCabe (chair), Barun Sen Gupta, George Hart, and Joseph Hazel. Kam-Biu-Lui, a Quaternary palynologist in the Department of Geography and Anthropology, also

serves on the Committee. In addition, there are two outside members who were nominated by AASP. They are Aureal Cross (Michigan State University) and Vaughn Bryant (Texas A&M University). The Search Committee is a diverse group with experience in both academia and industry. Several different earth science disciplines are represented. The Committee is dedicated to a selection process that is fair, and open to all qualified persons.

The main task of the Committee, the screening of applicants, has not yet begun formally since applications and supporting materials are still being received. Last fall, the Committee sent a notice to AASP members that applications were being accepted for the first two Endowed Chairs in the **Center**. Advertisements were also placed in journals. In addition, the Committee has received 10 nominations for the position. The Committee has sent letters to all nominated individuals (save one who did not have a PhD degree and could not therefore be considered) and invited their applications. However, the Committee will accord these individuals no special consideration in the selection process, should they choose to apply.

As of this date (February 1, 1991), nine applications have been received and several others that we know of are expected to be submitted in the near future. Applications will be accepted until March 15, 1991. The full committee will meet in Baton Rouge in March to review the application files, and to choose the top two or three candidates for the position. We expect that these candidates will be invited to the University this spring to meet the Geology and Geophysics faculty, and to give a public presentation. The decision to offer the position to one of the candidates will be made only after a majority vote to do so by the full faculty of the Department.

Chad McCabe
Chairman of the Search Committee



LOUISIANA STATE UNIVERSITY
BATON ROUGE • LOUISIANA • 70803-4101

Report from the Finance Committee of the AASP Center for Excellence in Palynology

In November, 1990, U.S. members of AASP received a letter soliciting financial support for the **AASP Center for Excellence in Palynology** at Louisiana State University. I am happy to report that, as of February 1, eleven (11) individuals have made pledges and/or contributions toward our goal of \$1,200,000 to endow two chairs at the **Center**. The contributors are:

Eugene W. Borden	Bronze Club
Barbara W. de Leon	Bronze Club
Lucy E. Edwards	
Jacob E. Gerhard	Bronze Club
Raphael Guillory	Bronze Club
Harry A. Leffingwell	Gold Club
Dennis R. Logan	
Peter J. Mehringer	Bronze Club
James M. Ogg	
Kenneth M. Piel	Gold Club
Gerald Waanders	Bronze Club

The CENEX Finance Committee (Aureal Cross, Kenneth Piel, Herbert Sullivan and Logan Urban) extends its sincerest thanks to these individuals for their support of this initiative.

The Committee has been soliciting, and will continue to solicit, contributions from industry. These overtures, properly conceived and carried out, are a rather time consuming proposition; but we hope to have news in the near future regarding this endeavor. To the extent that individual members are seen to be supporting the **Center**, it provides the Committee with a more solid basis for seeking funds from outside organizations. Such organizations are more likely to support a palynological cause to which palynologists themselves subscribe.

We are also continually seeking to build our lists of potential donors. If you are aware of either individuals or organizations which you feel might be interested in supporting the **Center** please do not hesitate to inform me.

If you are considering a gift in support of the **Center**, why not make it out sooner rather than later. The funds so deposited will earn interest which will further build toward the endowment. As soon as we have raised \$600,000 we will be able to approach the State of Louisiana for their matching funds of \$400,000 and the first Chair will become a reality.

Kenneth M. Piel, Chairman
CENEX Finance Committee

The **Saudi Arabian Oil Company (SAUDI ARAMCO)** the free world's largest producer and exporter of oil and gas, has the following opportunities available in Saudi Arabia:

PALYNOLOGIST

Master's degree in Geology and ten years' experience in the petroleum industry or related fields required. Candidates must have experience in palynostratigraphy and palynofacies analysis. Knowledge of S.E.M. operations helpful and a background in the Paleozoic section an asset.

MICROPALAEONTOLOGIST

Master's degree in Geology and ten years' experience in the petroleum industry or related fields required. Candidates must have experience in Mesozoic and Cenozoic microfaunal age and environmental interpretation, with foraminifers and ostracods, nannofossil, macrofossils and microfossils experience an asset.

Employment with Saudi Aramco will provide you with an interesting lifestyle in a multicultural environment, including comfortable family living arrangements, free medical care while in Saudi Arabia, fine schools and a broad spectrum of recreational opportunities, plus 36 calendar days of vacation annually, allowing for extensive travel. We provide an attractive compensation package which includes an expatriate premium.

For immediate consideration, please send your resume/salary history in confidence to:

ASC
Employment Department 06S-006-0
P.O. Box 4530
Houston, Texas 77210-4530

STRATIGRAPHIC PALYNOLOGIST

Amoco Production Company, the exploration and production subsidiary of Amoco Corporation, is currently seeking a stratigraphic palynologist for a position in its Houston-based Exploration Applications group.

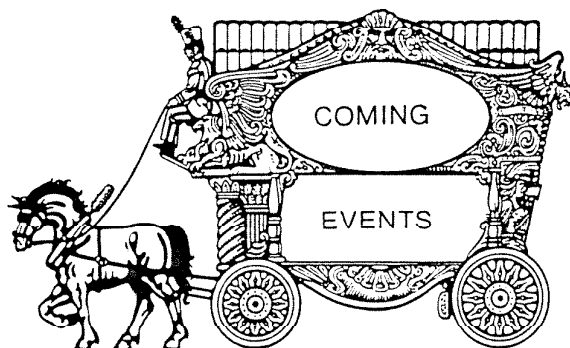
The successful candidate should have expertise in Tertiary pollen and spores; however, qualified candidates with experience in other palynological areas will be considered. Knowledge of sequence stratigraphy, computer data management and kerogen analysis (e.g., TAI, etc.) is desirable.

Responsibilities include integrated regional and field studies, age and depositional environment analyses, kerogen analysis and direct interaction with exploration teams.

Amoco offers a competitive salary and an excellent benefits package. For consideration, please send a resume and salary requirements no later than March 17, 1991 to:

Amoco Production Company
Employment Office, Reply #002
P.O. Box 3092,
Houston, TX 77253.

Principals Only. No phone calls please. An Equal Opportunity Employer, M/F/H/V.



C.I.M.P. Symposium on Acritarchs and Chitinozoa

British Geological Survey, Nottingham
September 3 - 6, 1991

For further information please contact:
Dr. S. G. Molyneux
British Geological Survey
Keyworth, Nottingham NG12 5GG, United Kingdom.

First Notice: Open Workshop on Organic Matter Classification

During the "International Symposium on Organic Petrology" held at Zeist, The Netherlands, on January 8th and 9th, 1990, a discussion was raised on the problem of terminology in palynology related with organic matter classification. The necessity of a standard classification of organic material in palynological slides is a need and everybody agreed upon that.

As a contribution to solve that problem, a workshop is being organized ("Open Workshop on Organic Matter Classification"), to be held the 27th and 28th of June 1991, at the University of Amsterdam, in the hope that as many palynologists as possible will convene there so as to discuss the matter and, if possible, reach a general classification.

The workshop will have four main sessions. An "Opening Session" with talks from invited speakers giving a complete overview of the more common classifications, the philosophies behind them, the approaches, the limitations, and their view of the classified problem.

Two "Round Table" sessions with open discussions about the most convenient structure of a really flexible and useful classification. As a result of these working sessions, a group of basic principles and a workable scheme for the general classification should be drafted.

Finally, at the "Closing Session" the presentation of all conclusions reached from the previous sessions will be made. The election of a "Palynological Organic Matter Classification Working Committee" will take place. This committee will coordinate the working groups, based on the agreements reached by the participants at the workshop. It will also organize future meetings, until a satisfactory classification system is reached.

Related with the workshop other activities are being organized to make this an outstanding meeting: exhibitions and demonstrations of "state of the art" equipment, as well as social activities. Registration is free of charge, but only those who show interest will receive the next circular.

We hope to evoke for this meeting an enthusiastic response from palynologists and other workers in organic matter all around the world. For information, contact:

Dr. M. A. Lorente
Hugo de Vries Laboratorium
Kruislaan 318, 1098 SM
Amsterdam, THE NETHERLANDS

MEETING CALENDAR

1991

April 7-10: American Association of Petroleum Geologists and SEPM Annual Meeting, Dallas, Texas, USA, Convention Department, AAPG, Box 979, Tulsa, OK 74101, USA.

May 27-29: Geological Association of Canada/Mineralogical Association of Canada (Joint Annual Meeting), Toronto, Canada. J. Fawcett, Department of Geology, University of Toronto, Toronto, Ontario M5S 1A6, Canada.

June 3-7: CANQUA 1991. Fredericton, New Brunswick. Theme: "Late Glacial and Post-Glacial Events in Coastal Environments". Details: A.G. Pronk, Geol. Survey Branch, Dept. of Natural Resources and Energy, Box 6000, Fredericton, New Brunswick, E3B 5H1. Tel: (506) 453-2206. FAX: (506) 453-3322.

June 10-21: Course in Dinoflagellate Cyst Morphology. Utrecht, The Netherlands. See October, 1990, Newsletter. Details: H. Leereveld, Lab. of Palaeobotany and Palynology, Heidelberglaan 2, 3584 CS UTRECHT, The Netherlands. Tel: (31) (0)30-532630, FAX: (31) (0) 30-531357.

June 27-28: Open Workshop on Organic Matter Classification. University of Amsterdam, The Netherlands. Registration free. See announcement in this Newsletter. Details: M.A. Lorente, Hugo de Vries Lab., Kruislaan 318, 1098 SM Amsterdam, The Netherlands. Tel: 31.20.5257950 FAX: 31.20.5257715.

August 2-9: XIII INQUA Congress. Beijing, PRC. Details: Secretariat, XIII INQUA Congress, Chinese Academy of Sciences, 52 Sanlihe, Beijing 100864, People's Republic of China.

August 24-25: Canadian Palaeontology and Biostratigraphy Seminar and Pander Society Joint Meeting. Vancouver, B.C. Details: M.J. Orchard, Geological Survey of Canada, 100 west Pender St., Vancouver, B.C., V6B 1R8. Tel: (604) 666-0409.

September 22-27: Carboniferous-Permian Stratigraphy and Geology (12th International Congress), Buenos Aires, Argentina. Language: English. Dr. S. Archangelsky, Museo Argentino de Ciencias Naturales, Av. A. Gallardo 470, Buenos Aires 1405, Argentina.

October 20-23: 24th Annual AASP Meeting. San Diego, California. Held in conjunction with GSA Meeting. Details: Roger Whitmer, UNOCAL Research Centre, P.O. Box 76, Brea, California 92621, U.S.A. Tel: (714) 528-7201.

October 21-24: Geological Society of America Annual Meeting. San Diego, California. Details: GSA HQ, Box 9140, 3300 Penrose Place, Boulder, Colorado 80301, U.S.A. Tel: (303) 447-2020.

Book Reviews

Trends in Vertebrate Morphology:
Fortschritte der Zoology/Progress in
Zoology. 1989, Gustav Fischer Verlag. H.
 Splechtna and H. Hilgers, Stuttgart - New York.
 XXXII, Vol. 35, 647 pages.

I still remember the vivid atmosphere which reigned during the days of the 2nd International Vertebrate Symposium on Vertebrate Morphology held in Vienna in 1986. Nevertheless, it has taken some three years to see the publication of the proceedings, which coincided with the 3rd symposium held in Antwerpen, Belgium, in 1989.

The impressive volume is number 35 of the series "Progress in Zoology" published by Gustav Fischer Verlag. The list of authors of the 139 individual contributions represent an impressive international agenda of 1986's vertebrate morphologists. The book itself covers various aspects of research in the field and is divided into the following sections: integrations of organ systems, feeding and feeding-mechanics, development and evolution, nervous system, comparative craniogenesis, supporting tissues and teeth - genesis and function, ecomorphology, and locomotion, as well as two final chapters on the significance of morphology in the biological sciences and on the future of morphological studies.

The papers contained in this volume illustrate the various methods and techniques used in vertebrate morphology today. There are papers on theoretical issues as well as case studies; the techniques range from simple formal descriptions to complex experimental studies. The more hotly debated topics include morphogenesis and pattern formation. These issues are the center of current interest and will hopefully help to bridge the gap between genotype and morphotype.

The shortcomings of the book are actually also its strengths. For professionals it just adds new references, but for newcomers to the field or for students of other disciplines it represents a large part of the vast spectrum of comparative and functional vertebrate morphology. A number of more deeply probing invited papers give an especially good glimpse at the state of the art - albeit some four years old.

It must have been a great deal of work for the editors, Heinz Splechtna and Helge Hilgers from Vienna University, to compile all these papers and to bring them into a readable form. They have produced an impressive international overview of the field of vertebrate morphology. In regard to the future of the field it is worthwhile to read two short quotes from Carl Gans offered during his final lecture: "...a field in biology is justified only as long as it provides unique answers that aid the understanding of organisms" and, on the role of morphology, "...[it] provides a framework that places findings from other disciplines into perspective". That is what it is all about, and we all hope to fulfill these ambitious tasks.

Toni Burgin
 Palaontologisches Institut und Museum
 Kunstlergasse 16
 CH-8006 Zurich, SWITZERLAND

Encyclopedia of Paleoherpetology, Part 17
B/1, Theriodonta I. 1989, D. Sigoneau-Russell.
 Gustav Fischer Verlag, Stuttgart & New York, 127
 pages. \$94.00, paperback. Distributed in the USA by
 VCH Publishers, Suite 909, 220 East 23rd Street,
 New York, NY 10010-4606.

After 20 years of publication, about two-thirds of the 19 parts of the Encyclopedia of Paleoherpetology have been published. Most of these have fulfilled the expectations of vertebrate paleontologists and zoologists in serving as invaluable sources of first-hand information about particular genera and species, much like the Treatise of Invertebrate Paleontology has done for invertebrate paleontologists and stratigraphers. The aim of the Encyclopedia is to provide authoritative accounts of particular groups of fossil reptiles and amphibians, and each volume is intended to serve as the standard reference for years to come. Some volumes, such as the two on dinosaurs published in 1969 and 1970, are very much outdated today because of our greatly expanded knowledge. Others of almost the same vintage are still very useful. The current volume, part 17 B/1 on the lower Theriodonta, probably will serve its intended purpose well. However, this may largely be due to the fact that relatively little current research on this group can be observed.

Dr. Denise Sigoneau-Russell, one of the leading experts on mammal-like reptiles and the earliest mammals, is certainly well qualified to author Part 17 B/1. She seems to have had a relatively easy

task in compiling this volume since much of the text and drawings are based on her own work, particularly on her 1970 monograph on the Gorgonopsia. This work was published in French and was not widely available, a shortcoming that is somewhat remedied by the current volume. Unfortunately, the distribution of the Encyclopedia of Paleoherpertology is also limited because of the considerable price tag of the individual volumes, in this instance US \$94.00 for a scant 127 pages with paperback binding.

Theriodonts were a carnivorous branch of mammal-like reptiles that descended from the sphenacodontid pelycosaurs. The lower theriodonts flourished during the Late Permian. Their record is particularly good in southern Africa but some material has been described from Russia and North America as well. The lower Theriodonta, as conceived in this volume, consists of four infraorders, the Phtinosuchia, Biarmosuchia, Eotitanosuchia, and Gorgonopsia, of which the Biarmosuchia is newly erected. The Gorgonopsia are expanded by the new family Watongiidae and the new subfamily Inostranceviinae of the family Gorgonopsidae. The new infraorder Biarmosuchia is established to take up the Biarmosuchidae, Hipposauridae, Ictidorhinidae, and Burnetiidae. The Watongiidae contains only the poorly known genus Watongia from the Late Permian of Oklahoma while the Inostranceviinae contains two gorgonopsian genera from Russia. No justification is given in either case for erecting the new taxa.

Even though the Phtinosuchia, Biarmosuchia, Eotitanosuchia, and Gorgonopsia seem to be covered comprehensively by Sigogneau-Russell, the depth of treatment seems to be only slightly increased over her 1970 monograph and the few, more recent short papers. Compared to the descriptive and systematic treatment of the four infraorders, their comparative anatomy, interrelationships, and occurrence in time and space are rather cursorily discussed, taking up only seven pages. Even though it is true that few new fossils pertaining to these infraorders have been discovered in the last 20 years, a great opportunity was missed to bring these areas of knowledge up to the level of understanding of the late 1980's. Much has certainly happened in the fields of synapsid systematics and paleobiology during this decade and great advances have been made in our understanding of some of the other suborders, the Anomodontia and Cynodontia.

The text was apparently translated from French as is evident in the frequently complicated sentence structure and unusual terminology, which do not make for easy reading. On the positive side, typographical errors are few and far between. The

quality of the figures is generally adequate even though some still retain lettering of the French originals.

To summarize, the Encyclopedia of Paleoherpertology. Part 17 B/1. Theriodonta I is a solid systematic treatment of the lower theriodonts but could have been published in almost the same form 20 years ago. Especially considering its price, the book will only be of interest to specialists and paleontological libraries. Part 17 B/1 is an example of the pigeon-hole paleontology of the past and lacks the spirit of the exciting vertebrate paleozoology of today.

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The Arctic Seas: Climatology, Oceanography, Geology, and Biology. 1989, edited by Yvonne Herman. Van Nostrand Reinhold, 115 Fifth Avenue, New York, New York 10003. \$92.95. 904 pages.

This book provides a current synthesis of the research in the Arctic Sea region. It is divided into 30 chapters, each of which is written by one or more researchers from the Soviet Union, Europe, or the United States. A total of 44 authors have contributed to this volume. Topics included cover such varied fields as: Ice Ocean Dynamics, Neogene Arctic Ecosystem Evolution, Late Neogene Paleoclimatic Evolution of the Arctic, Physiography and Bathymetry of the Arctic Ocean Seafloor, Tectonic History of the Arctic Region from Ordovician Through the Cretaceous, and individual chapters on the fauna, microflora, and phytoplankton of the Arctic Sea region.

This book contains 268 illustrations, all of which are of generally high quality. In addition, each chapter has an extensive and current bibliography. It is the intention of the editor and contributors that this book will provide an insight into the current status of Arctic research. It certainly has achieved this goal and is an excellent resource for anyone interested in or conducting research in the Arctic Sea Region.

Reed Wicander
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Paleobiology of the Dinosaurs. 1989, edited by James O. Farlow. Geological Society of America Special Paper 238. \$22.00. 106 pages.

Paleobiology of the Dinosaurs contains seven papers covering different aspects of the biology of dinosaurs. Topics covered include: life-history variation in dinosaurs; modern analogs for dinosaur nesting and parental behavior; paleoecology and hypsilophodontid behavior at the Proctor Lake dinosaur locality (Early Cretaceous), Texas; temperature-dependent sex determination in dinosaurs?; functional morphology of the hindfoot of *Pleurocoelus*; *Alamosaurus* and the sauropod hiatus; and vertebrate herbivory in the Mesozoic.

This Special Paper evolved, in part, from a session held at the 21st annual meeting of the South-Central Section of the Geological Society of America in 1987 to discuss the paleobiology of dinosaurs and other Mesozoic reptiles. Several of the papers from that meeting are in this volume.

As might be expected from the title of this volume, some of the papers are controversial and will generate much discussion and further research. This is a fine volume for anyone who is interested in current research into the field of dinosaur paleobiology, and who has more than a cursory knowledge of biology and dinosaurs.

Reed Wicander

Establishment of Geologic Framework for Paleoanthropology. 1990, edited by Leo F. Laporte. Geological Society of America Special Paper 242. \$22.50. 82 pages.

Establishment of a Geologic Framework for Paleoanthropology contains six papers dealing with various geologic aspects of early human evolution. This volume is a contribution of the History of Geology Division of the Geological Society of America to its centennial celebration. As stated in the preface "it seemed fitting to pause and reflect on a few of [the] critical steps in our understanding of the geological framework of early human origins." The first paper traces the history of the concept that there was a "deep human antiquity," contrary to both Buffon and Cuvier, who claimed that humans did not appear until the "modern" world existed. The second paper covers the origins of Quaternary-Pleistocene-Holocene stratigraphic terminology, that interval of time during which our human ancestors first appeared and evolved. The third paper presents a case history of the geological interpretation of hominid sites in Olduvai Gorge, East Africa. The fourth paper is a historical survey of the efforts to

determine the age of "Java Man," the first hominid to be accepted as evidence for human evolution (for those interested in "Java Man" recall the review of Eugene Dubois and the Ape-Man from Java in the January, 1990 AASP Newsletter). The fifth paper covers the Antevs-Bryan years and the legacy for Paleoindian geochronology. The final paper discusses the history of the dating of *Homo erectus* at Zhoukoudian, China.

This volume will appeal to those people interested in a historical overview of some of the most famous hominid sites. Because of the current information it provides it will also be of interest to those who teach human evolution.

Reed Wicander

Volcanism and Fossil Biotas. 1990, edited by Martin G. Lockley and Alan Rice. Geological Society of America Special Paper 244. \$27.50. 136 pages.

Volcanism and Fossil Biotas is an excellent volume concerning the role of volcanism and the preservation of fossil biotas. This Special Paper is an outgrowth of a special symposium of the same title presented at the 1987 meeting of the Geological Society of America Rocky Mountain Section Meeting. Several of the papers presented at that meeting are incorporated into this volume of seven papers.

The first paper provides a very good overview of how volcanism affects the biostratigraphic record. The following six papers deal with various aspects of preservation, successions, and extinction of particular biotas from a variety of ages and locations. Of particular interest to palynologists is a paper by Andrew C. Scott concerning the "preservation, evolution, and extinction of plants in Lower Carboniferous volcanic sequences in Scotland." Scott discusses the well preserved plant assemblage recovered from the different volcanic sequences; he also speculates on the role that volcanism played in stimulating diversification in early plant evolution as well as causing ecological disturbances and changes in vegetation. Two AASP members, Ralph E. Taggart and Aureal T. Cross contributed a paper titled: "Plant Successions and Interruptions in Miocene Volcanic Deposits, Pacific Northwest." They integrate both palynologic and megafossil data from various Neogene stratigraphic sequences in the Pacific northwest region. These are used to interpret the fossil-plant assemblages and the role volcanism played in the ecological dynamic of the biota. The last paper deals with the flora and fauna

preserved by the 79 A.D. eruption of Vesuvius in the villas and lands surrounding the cities of Pompeii and Herculaneum.

Reed Wicander

The Appalachian-Ouachita Orogen in the United States. 1990, edited by Robert D. Hatcher, Jr., William A. Thomas, and George W. Viele. Geological Society of America Decade of North American Geology series Volume F-2. \$75.00. 781 pages.

The Appalachian-Ouachita Orogen in the United States is part of the Decade of North America Geology series published by the Geological Society of America. This particular volume, F-2, concerns the tectonic history of the Appalachian-Ouachita region of the United States. It includes 30 contributions and presents the current state of knowledge of this region. Among the topics covered are: the pre-orogenic terranes of the Appalachians; the Taconic, Acadian, and Alleghanian orogens and post-Paleozoic activity of the region; the paleontological contributions to Paleozoic paleogeographic reconstructions of the Appalachians; the geomorphology, mineral deposits, and energy resources of the Appalachians; the Ouachita orogenic belt; and stratigraphy, sedimentology, orogenic history, mineral deposits and hydrocarbons of the Ouachita region.

In addition to the bound text, there is an accompanying slipcase containing geological and geophysical maps, correlation charts, and cross-sections of the Appalachian and Ouachita regions.

This volume is certainly a must for anyone working in the region or teaching the geology of the area. It contains the latest geological information on the area and each chapter has an up-to-date and extensive bibliography.

Reed Wicander

All these GSA publications can be ordered from: Geological Society of America Publication Sales, P.O. Box 9140, Boulder, Colorado 80301

Roadside Geology of Pennsylvania. 1990, Bradford B. Van Diver. Mountain Press, Missoula, Montana. \$12.95. 352 pages.

Roadside Geology of Pennsylvania is the sixteenth in a series of roadside geology books published by Mountain Press, many of which have been reviewed in earlier issues of this newsletter. This volume describes the geologic history of the Appalachians and covers the usual topics of plate tectonics, glaciation, and mineral resources in terms suited to those who are not familiar with geology. The book is divided into three sections: the Allegheny Plateau, the Valley and Ridge Province, and Southeastern Pennsylvania. As with the other volumes, this book takes the approach of describing what the reader will see on the major highways that cross the state. The discussions are illustrated with maps, cross-sections, and photographs to aid the reader in understanding the geology of the state.

Reed Wicander

Agents of Chaos. 1990, Stephen L. Harris. Mountain Press, Missoula, Montana. \$12.95. 270 pages.

Agents of Chaos is not about the adventures of Maxwell T. Smart, but is a well written and illustrated book about earthquakes, volcanoes, and other natural disasters. The book is divided into three parts. Part I covers Earthquake Hazards in the United States and contains 12 chapters. Among the topics covered are a primer on earthquakes and plate tectonics, individual case studies of earthquakes, (primarily in California, including the 1989 Loma Prieta earthquake), intraplate earthquakes, and a chapter on earthquake prediction. Part II covers Volcanic Hazards in the West in 12 Chapters and contains much of the same material covered in the author's previous book Fire Mountains of the West, reviewed in the January, 1990 AASP newsletter. Part III covers Ice and Fire, Myth and Reality in 6 chapters. Among the topics covered are Glacial Lake Missoula, the Stream Caves at Mount Rainier National Park, and a chapter on Cosmic and Geologic Violence: Learning to Cope with Chaos.

This is an excellent book for anyone interested in geologic hazards or who needs background material for teaching. In addition to the easy-to-read writing style, there is a very good bibliography at the end of the book.

Reed Wicander

AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS STUDENT SCHOLARSHIP

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

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

To Apply. **Part A** of this form is to be filled out by the student and **Part B** by the student's faculty supervisor. The *faculty supervisor* will send both forms together to the address given at the end of Part B. Scholarship applications must be received no later than ★★ April 19, 1991 ★★. Awards will be announced by May 15, 1991.

PART A Application for AASP Student Scholarship

Student's name:

Address:

Phone number after April 19, 1991: ()

Universities or other institutions attended (earliest listed first). Include the institution that you will be attending during the tenure of the scholarship, the degree you will be seeking, and the anticipated completion date:

Institution	Degree	Beginning Date	Completion Date
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What is your background in palynology?

Professional experience:

Previous awards or honors:

Summary of institutional or other support for your project (please specify whether granted or applied for):

Title of proposed investigation:

Project supervisor:

Summary of the investigation (**250 words** or fewer, on an attached sheet); please include objectives, why you selected this problem and its significance, and how you plan to approach and carry out the investigation.

I agree that the recommendation I am requesting from my faculty supervisor will be held in confidence by officials of my institution, and I hereby waive any rights I may have to examine it.

yes ____ no ____

Applicant's signature: _____ Date: _____

PART B Endorsement by Faculty Supervisor

1. Ranking of the applicant versus other students you have known who are pursuing the same degree:

lower 50% ____ upper 50% ____ upper 25% ____ upper 10% ____ upper 5% ____

2. Did the idea for the project originate from the student? yes ____ no ____

3. Can you verify the student's statements as to other awards, honors, or financial aid received or applied for?

yes ____ no ____ Comments:

4. Please provide a brief summary (**100 words** or fewer, on an attached sheet) of your assessment of the applicant's project and his or her potential to attain the objectives. Among other traits, please comment on the student's native intellectual ability, ability to express himself or herself, perseverance, imagination, and the probable creativity and the value of the project:

Faculty supervisor's name (please print):

Signature: _____ Date: _____

Position: _____ Institution: _____

Address:

Please return **Part A** and **Part B** to
no later than ★★ April 19, 1991 ★★

Dr. Lucy E. Edwards
U.S. Geological Survey
970 National Center
Reston, VA 22092 U.S.A.

AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS

24TH ANNUAL MEETING

SAN DIEGO, CALIFORNIA



The 24th Annual Meeting of the American Association of Stratigraphic Palynologists will be held at the Holiday Inn On-the-Bay in San Diego, California, on October 21-23, 1991. Please mark your calendar now and plan to attend to help us make this a most interesting, successful, and memorable meeting!

CALL FOR PAPERS

All AASP members are invited to contribute papers on any aspect of palynology for the general technical sessions. Oral presentations are limited to 20 minutes, including 5 minutes for questions; one or two 35mm slide projectors may be used. Posters should be formatted for a 4 ft. x 8 ft. wall area. Please use the attached form for submission of your abstract, and follow the detailed instructions carefully. Titles for both papers and posters are due by **JUNE 14, 1991**. The deadline for receipt of abstracts is **JULY 31, 1991**. Send all titles and abstracts to the Program and Abstracts Coordinator, Eileen Williams, at the Unocal Science and Technology Center in Brea, CA.

PROGRAM

Symposia. Two half-day symposia are being scheduled as part of the AASP meeting. One is entitled "Global Climate Change: A Palynological Perspective," and is being organized and chaired by Owen Davis (Univ. of Arizona), David Adam (USGS), and Scott Anderson (N. Arizona Univ.). Climate modeler Eric Barron of Penn State Univ. will be the keynote speaker. The other, entitled "Palynology and Sequence Stratigraphy: A Reconstruction of Depositional Systems," will be co-chaired by Steve Jacobson (Chevron) and Roger Witmer (Unocal). In addition, a full-day joint symposium with the Paleontology Society is tentatively planned to be held at the nearby Geological Society of America (GSA) Annual Meeting. This joint AASP-PS theme session is entitled "Devonian Nonmarine to Marine Correlation," and will be organized and co-chaired by Colin McGregor (Geol. Surv. of Canada) and Norman Savage (Univ. of Oregon). Invited papers will be presented at the symposia.

Technical Sessions. The organization of the technical sessions will depend on the palynological topics in the papers submitted. All presentations are eligible for the Unocal Best Applications Paper Award. Students are invited to present their papers for judging for the L. R. Wilson Outstanding Student Paper Award.

Poster Session. Posters can be a very effective mode in which to present information, photographs, and data, particularly for topics that do not lend themselves to oral presentations due to time constraints or other logistical difficulties. The poster session will run for the duration of the meeting in an adjoining room. All posters are eligible for the Best Poster Award.

Field Trips. No AASP field trip has been planned for the meeting. Instead, we strongly encourage you to consider one of the many fine pre- and post-meeting field trips or short courses being offered

at the GSA Annual Meeting. A list of available GSA trips and short courses will be sent to you with the AASP registration packet. Under agreement with GSA, you will be able to sign up and pay for these trips/courses *without* paying their meeting registration fee.

OTHER DETAILS

Registration. Registration forms and other important meeting information will be sent to all AASP members in late summer. The registration fee is \$85 (US). Student registration is \$65. We are offering a maximum of 10 registration-fee scholarships to students who are making a technical presentation (paper or poster). Details for application will be provided on the registration form. Any person requiring a special invitation in order to attend the San Diego meeting should request this of the Organizing Committee Chairman as soon as possible.

Hotel. The Holiday Inn On-the-Bay is located on beautiful San Diego Bay. Special rates are \$92 (US) single and \$102 double occupancy.

Travel. Most airlines have numerous flights into San Diego International Airport. Should we decide to designate an official airline for this meeting, we will supply you with details at a later date. The Holiday Inn On-the-Bay provides complimentary transportation between the airport and the hotel. All major car rental companies have counters at the airport.

Icebreaker. We are going to break with tradition this year and hold our Icebreaker on Sunday evening, the night before the meeting begins. We feel that this will allow everyone to get acquainted and catch up on the year's news before the symposia and technical sessions start. We plan to use the Icebreaker as an opportunity to informally introduce our new members and students.

Special Evening Event. A relaxing, scenic cruise is planned for Tuesday evening, October 22. We will board the tri-level Victorian paddlewheeler *Monterey* across the street from the hotel. A two-hour cruise on the bay will present a picturesque San Diego skyline, and take us through a rich historical past, all of which will be highlighted by a tour guide. Hors d'oeuvres and live entertainment should add to a fun-filled evening. The cost of the cruise is included in the registration.

San Diego Weather. The weather promises to be delightful for the San Diego meeting. Travel brochures list the average high and low temperatures for October at 73.8° F and 58.4° F. Evenings are almost always cool, so be sure to bring a sweater or jacket.

San Diego Activities. There is probably too much to do in the San Diego area! To the south is Mexico, to the west the Pacific Ocean, and to the east the mountains and Anza-Borrego Desert State Park-largest state park in the U.S. Ninety miles north is Disneyland, and the Los Angeles metropolitan area. While in San Diego, you can visit the world-famous San Diego Zoo, Sea World, Scripps Aquarium, and the Wild Animal Park. Explore Old Town where California began, or browse through dozens of museums at Balboa Park. Excellent shopping opportunities await you within easy walking distance at Seaport Village. Prepare your appetite for superb seafood and Mexican dishes!

Organizing Committee. The Organizing Committee Chairman is Roger J. Witmer. Committee coordinators include Rosemary Askin, Hideyo Haga, Harry Leffingwell, Ken Piel, Dave Vork, Jerry Waanders, Barbara Whitney, and Eileen Williams. Please address inquiries about the meeting to:

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