

## SOCIETY RECORDS AND ACTIVITIES

### SEPM 1995 ANNUAL MEETING



Robert J. Weimer, right, accepts the Twenhofel Medal from President Noel P. James.



Ian Nicholas McCave, right, accepts the Shepard Medal from President Noel P. James.



Peter A. Scholle, right, accepts Honorary Membership from President Noel P. James.



N. Gary Lane, right, accepts the Moore Medal from President Noel P. James.



Roderick W. Tillman, right, accepts Honorary Membership from President Noel P. James.



Earle F. McBride, right, accepts the Pettijohn Medal from President Noel P. James.



Paul A. Dunn, left, Robert K. Goldhammer, second from right, and Patrick J. Lehmann, right, accept the *Journal of Sedimentary Petrology* Outstanding Paper Award (published in 1993) from President Noel P. James.



SEPM Council, 1995-96. *Seated, left to right:* Michael A. Arthur, Councilor for Research Activities; Léo F. Laporte, President; John Armentrout, President-Elect; Steven G. Driese, Secretary-Treasurer. *Standing, left to right:* Peter A. Scholle, Editor, Special Publications; David J. Bottjer, Editor, *PALAIOS*; Raymond L. Ethington, President, SEPM Foundation, Inc.; John B. Southard, Editor, *Journal of Sedimentary Research*; and Brian J. O'Neill, Paleontology Council. *Not pictured:* Dale A. Leckie, Sedimentology Councilor.

## REPORT AND MINUTES OF THE SIXTY-NINTH ANNUAL MEETING OF THE SEPM SOCIETY FOR SEDIMENTARY GEOLOGY

The Sixty-Ninth Annual Meeting of the SEPM (Society for Sedimentary Geology) was held in Houston, Texas, 5-8 March, 1995, in conjunction with the Annual Convention of the American Association of Petroleum Geologists. The SEPM Research Symposium was titled "Stratal Architecture, Relative Sea Level, and Exploration/Exploitation Significance," and was organized by H.W. Posamentier and G.P. Allen. SEPM conducted 8 oral and 7 poster sessions at the meeting. In addition, 7 oral and 10 poster sessions were organized as joint AAPG/SEPM sessions.

At the President's Reception and Awards Presentation Tuesday night, the Society recognized the following individuals: Robert Jay Weimer, William Twenhofel Medal; Peter A. Scholle, Honorary Membership; Roderick W. Tillman, Honorary Membership; John L. Wray, Honorary Membership; Ian Nicholas McCave, Francis P. Shepard Medal; N. Gary Lane, Raymond C. Moore Medal; Earle F. McBride, Francis J. Pettijohn Medal; Andrew H. Knoll, Ian J. Fairchild, and Keene Swett, Outstanding Paper Published in 1993 *PALAIOS*; R.K. Goldhammer, Patrick J. Lehmann, and Paul A. Dunn, Outstanding Paper Published in 1993 *Journal of Sedimentary Petrology*. Honorable mention was made of David A. Budd and Eric E. Hiatt for their paper in 1993 *Journal of Sedimentary Petrology*, and of R.E. Plotnick and M.L. McKinney for their paper in 1993 *PALAIOS*. Excellence of Oral Presentation at the 1994 Annual Meeting was presented to Wolfgang Schlager. Excellence of Poster Presentation was presented to William S. Clarendon, David R. Pevear, Christopher R. Tapscott, William R. James, and Chul-Sung Kim; David Hunt, Kent C. Kirby, J.A. Simo, and T.C.V. Van Den Bergh; and D. Bradford Macurda, Jr., Gary L. Jones, and H. Roice Nelson, Jr. Honorable mention for oral presentation was made of Timothy D. Herbert (co-authors S.L. D'Hondt and James Park), Dale A. Leckie (co-author Lee F. Krystinik), Michael D. Lewan, and Keith W. Shanley (co-author Peter J. McCabe). Honorable mention for poster presentation was made of Jeff C. Quick and David A. Wavrek; Pan Reid and Ian G. Macintyre; Jonathan Kaufman; Lee F. Krystinik, Beverly B. DeJarnett, and Dale A. Leckie.

### ANNUAL BUSINESS MEETING Tuesday, 7 March 1995 George R. Brown Convention Center Houston, Texas

Approximately 80 members attended the Annual Business Meeting of SEPM, which was called to order by President Noel P. James at 12:30 p.m. in the George R. Brown Convention Center in Houston, Texas. The current Officers and Staff were introduced by the President, who thanked the Officers, new Executive Director Cathleen Williams, and Staff Members. Secretary-Treasurer Steven G. Driese submitted the minutes of the previous meeting in Denver and they were approved as presented. President James gave a brief report on the status of the Society, noting that the budget continues to be an overriding concern. He noted that the Society has experienced positive changes in terms of growth in international and student membership. He expressed the need for an International Councilor to address the concerns of this constituency. He informed those present of the addition of a Young Scientist Award (the James Lee Wilson Award); and he described his efforts to bring the Society on-line on the Internet, and pledged the use of his new Frontiers Fund to accomplish this goal. Secretary-Treasurer Driese reported on the Society's financial position. The Distinguished Lecture was given by President James. After the lecture, President James introduced a proposed revision to the SEPM Bylaws adding an International Councilor. This was introduced as a motion by Léo Laporte and was seconded by David Budd; the motion carried. President James introduced the new officers of the Society and then presented the gavel to the incoming President, Léo Laporte. President Laporte made brief remarks in which he stated his commitment to continue several new initiatives begun by James, especially with regard to bringing SEPM on-line on the Internet. He then asked for a motion for adjournment, which was made, seconded, and approved. The meeting was adjourned at 1:30 pm.

### REPORT OF THE PRESIDENT

The Society continues to remain strong in these uncertain times for geoscience. Membership continues to become more international. Our publications continue to diversify and remain at the frontiers of sedimentary geology. Our research conferences and meetings continue to be a popular and needed forum for scientific exchange. In response to the changing climate of the earth sciences, the Society also convened an extraordinary international conference in Snowbird, Utah, focused on the "Future of Sedimentary Geology."

Council voted to create a new position, Councilor for International Affairs, to oversee Society activities outside North America. The SEPM membership approved this action at the Annual Business Meeting held in Houston on Tuesday, 7 March

1995. Council also voted to establish a new award to recognize excellence in research by a young scientist. This award, named in honor of one of the Society's most outstanding members, will be called the James Lee Wilson Award.

The Society remains in good health because of the commitment of its many members who tirelessly serve on committees that oversee a wide spectrum of activities and that advise Council. Summaries of these activities have been submitted by their chairpersons, and are given below.

*Membership Committee (David Budd).* In 1994, the following items were discussed and acted upon by the Membership Committee. The committee's recommended changes to the SEPM Bylaws were approved, thereby converting Emeritus membership to election by the eligible member (i.e., conversion is no longer automatic). Also, Emeritus members can now request a dues waiver even if they still choose to take one or more of the Society's journals.

The committee evaluated the trial plan of giving first-year membership without charge to any qualified scientist who paid nonmember registration fees for an SEPM meeting or short course, and found the plan successful.

The SED Awards program, which gives 1 year of free membership to promising young students, was expanded so that up to 45 awards could be made to graduate students and 15 to undergraduates. Further, the search for outstanding graduate students was extended to universities outside North America.

The committee recommended that the limit on the number of Honorary Members be left at 1% of the total number of members, but that the specific number of possible Honorary Members be determined using a 3-year moving average.

The committee discussed a new membership category for scientists who already belong to affiliated societies and who want the benefits of SEPM membership but do not want to subscribe to a journal. The committee's recommendation was to table this idea due to the potential financial impacts, but to revisit the issue in the future.

After studying membership retention rates, which are decreasing slightly, the committee recommended to Council that the Editors of *JSR* and *PALAIOS* be encouraged to accelerate the shift to environment-related sedimentary geology in our journals, that SEPM consider offering more professional reasons for retaining membership, such as electronic Bulletin Boards for networking purposes, and that the newsletter be revised to include more information that the professional can use.

The committee suggested that SEPM more aggressively target specific groups of sedimentary geologists in particular global regions (e.g., environmental geologist in the USA, petroleum geologist in Southeast Asia or Latin America, academics and students in the Pacific Rim, and so on). To implement this strategy, the committee recommended a call in the SEPM newsletter for assistance in finding appropriate mailing lists, and then a targeted mailing of invitations to join SEPM designed to appeal to the specific interests of the recipient.

*Publications Policy Committee (S. Duncan Heron).* The committee discussed in some detail the problem of releasing Course Notes prematurely with a resulting impact on short-course registration. We recommended to Council that Course Notes not be sold until determined by the Chair of PPC in consultation with headquarters.

The committee discussed changing the page charge policy so that the non-mandatory charge of \$150 per page be changed to mandatory when the manuscript exceeds 12 pages. The recommendation to Council was simply to consider changing the page charge pricing.

The committee discussed a proposal regarding the central tracking of manuscripts for all SEPM publications. Under the proposal, manuscripts would be submitted to Tulsa and forwarded electronically to the various editors, who would decide on reviewers and notify Tulsa of where to send the manuscript. The hope is that this practice would save time and especially money. However, there are many things to consider, including the impact on editors, and quality control of the accepted manuscripts. Questions include how the editors could influence layout, the editors' personal treatment of authors, and whether there would really be any cost savings.

During the year we approved discarding previously written-off books and journal inventory on which we were paying storage charges. To further reduce freight and storage charges, we approved moving a significant amount of inventory to a Tulsa warehouse.

*Publications Committee (Peter A. Scholle).* The committee reviewed a number of proposals for publication, and approved establishment of an SEPM Publications Home Page on the Internet. Forthcoming publications resulting from the committee's deliberations are listed on the Home Page, and members can review the information at [http://dc.smu.edu/SEPM\\_LSP/home.html](http://dc.smu.edu/SEPM_LSP/home.html).

*Research Committee (Michael A. Arthur).* The SEPM Research Committee took the following actions during the period 1 January 1994 through 4 March 1995.

We approved the creation of two new research groups: Cyclostratigraphy (M. Perlmuter and B.B. Sageman, co-chairs); and Quantitative Stratigraphy (R.W. Scott



and H.R. Lane, co-chairs). Both groups met at the 1995 AAPG-SEPM Annual Meeting in Houston, Texas. We also abolished the Cenozoic Reefs Research Group because of prolonged inactivity.

The committee solicited, discussed, and approved topics for SEPM Research Symposia at the 1996 AAPG-SEPM Annual Meeting, San Diego, California. They are Sequence Stratigraphy of Tectonically Active Basins (R. Dorsey, J. May, and S. Graham), and Fluid Flow in Accretionary Complexes (J.C. Moore and M. Kastner). We also approved the following Research Conferences: Ridges, Wedges, and Tongues: Highstand vs. Lowstand Architecture in Marine Basins (D. Swift, J. Snedden, and R. Fitzsimmons), to be held in June 1995; Carbonates and Past Global Change (M. Mutti et al.), to be held in June 1996; and a Cyclostratigraphy Research Conference (tentative proposal by M. Perlmutter and B. Sageman), tentatively scheduled for late summer/early fall 1996.

The committee created the concept for a Sedimentary Geology Distinguished Lecture Program, which was proposed to and approved by SEPM Council in October 1994. The program is being set up for the 1996 calendar year. Its purpose is to promote and increase the visibility of our research and educational efforts in sedimentary geology. The program will consist of about 12 to 15 speakers on an annual basis.

Finally, we discussed implications of the SEPM/IAS Workshop on Applications of Sedimentary Geology and Paleontology into the 21st Century, and decided to embrace the report, in principle, as an expression of the frontiers of sedimentary geology.

*Meetings Policy Committee (Brian J. O'Neill).* During the 1994-95 year, the Meetings Policy Committee met only once, at the Annual Meeting in Houston, 5 March 1995. Most business was transacted by e-mail and letter. During the year, Calgary, Alberta, was selected as the site for the 1997 Congress on Sedimentary Geology. Tentative dates for the congress are 26-31 July 1997. Christian Viau of Shell Canada Ltd. will be the General Chairman for the meeting. The Calgary Congress will be co-sponsored by the Canadian Society of Petroleum Geologists (CSPG).

The budget for the 1995 SEPM Congress was presented to Council and approved. This meeting, the First SEPM Congress on Sedimentary Geology, was held in St. Petersburg, Florida, 13-16 August 1995.

*Headquarters and Business Committee (Daniel F. Merriam).* The Headquarters and Business Committee (HBC) had another busy year. After an extensive search, Cathleen Williams was named the new Executive Director and she assumed her duties in September. She comes to SEPM with a background in geology and experience as publications manager at AAPG. Her instructions were to outline a plan on how to as soon as possible (1) reduce and stabilize the budget, (2) improve staff efficiency, and (3) enhance the image of the Society and increase membership.

During the first few months as Executive Director, Cathleen was able to suggest reductions for 1995 Headquarters expenses by about \$138,000; this included reducing the staff by one position. Staff assignments were reviewed and appropriate job descriptions prepared. The office then was reorganized to improve efficiency. Society Headquarters moved to a new, better, and cheaper location at 1731 E. 71st Street, Tulsa, Oklahoma 74136. In addition, the inhouse computer system—both hardware and software—were replaced or upgraded at a cost much less than had been projected by the Committee. A new phone system was installed to allow quicker and easier access to staff by the members. We are exploring the implementation of a bulletin board to better disseminate SEPM information and have negotiated a contract with The Geological Society of London to distribute SEPM products in the European market.

The HBC has put in place a document for evaluation of the Executive Director, and used it for the first time in 1994. We also reviewed the procedures for the HBC and suggested slight changes and rewording of certain entries. Because some activities involving the Society, and Headquarters in particular, have legal implications, our lawyer now is consulted on issues of sensitivity.

Our continued concern is the financial status of the organization. We continue to experience problems with expenses and staying within the Council-approved budget. Although the short-term problems are of concern, the long-term financial conditions of the Society are strong. Special attention needs to be paid to generating an ongoing, successful fund-raising campaign through the Foundation. To this end, our Executive Director is working closely with Ray Ethington and his committee.

We would like to acknowledge Frank Wantland for his excellent job as interim Executive Director, and thank him for his efforts on behalf of SEPM.

*Procedures Committee (Ray Ethington).* The Committee continued its ongoing scrutiny of the various SEPM procedures. Because most of the existing procedures have been approved quite recently, few changes were needed to bring them into accordance with current practices. Revisions were drafted to the procedures of the committees that supervise the publication programs of the Society in order to incorporate in their charges responsibilities formerly delegated to the now-dissolved Audio-Visual Aids Committee. At the request of then President-elect Leo Laporte, the Procedures Committee drafted new procedures to establish the mechanism for negotiating liaisons between SEPM and other professional organizations. The major

task remaining to be accomplished is to finish writing the procedures for the SEPM Foundation, Inc.

*Friendship Programs Committee (Abhijit Basu).* During this year the Friendship Programs Committee formally replaced the Developing Countries Libraries Committee with expanded responsibilities. The committee will now oversee and arrange to send gifts of books and subscriptions to individuals in countries with foreign-exchange problems. Donated funds, earmarked for such purposes, will be used at the discretion of the committee. The committee seeks nominations for recipients from the membership. Any member may also subscribe to one or more SEPM journals at a much reduced cost for individuals of his/her choice in such countries. A line item will be available to the membership in the dues statement to include gift subscriptions. Recipients of journal subscriptions, however, will not be members of SEPM.

Several members and their employers mailed gifts of books and journals at their own cost to libraries in countries with foreign-exchange problems. Some are routinely sending their copies of current journals on a half-yearly basis to libraries. This committee strongly urges members to do so if possible. Old journals are not as useful as contemporary issues, and surface mail takes months to reach the destination.

I thank all committee members and Dr. A.J. Simo of the University of Wisconsin (Madison) for taking over the chairmanship of this committee at the 1995 annual meeting. I wish him great success.

*Investment Committee (Anthony Reso).* The SEPM Investment Committee administers, supervises and evaluates invested assets of the Contingency Reserve Fund and the New Frontiers Fund for Science and Education.

The Contingency Reserve Fund was created by Council in 1989 to accumulate a value equal to six months of SEPM operating expenses. The Society's annual budget is approximately \$1.4 million, so that the Contingency Reserve goal is \$700,000. The balance of the Reserve at the end of 1994 was \$368,661, which is 52.5% of the goal. It is not anticipated that additional money will be deposited in this fund. Instead, it is expected to grow from accumulations of dividends, interest, and increase in value of holdings. The year-end balance is less than the \$397,661 reported to the Council at the Denver meeting in June 1994. The \$29,000 difference is partly due to poor financial market conditions during 1994, but mostly due to a \$31,307 withdrawal from the fund to support operating expenses incurred by the Society.

The object of the New Frontiers Fund for Science and Education is to preserve capital and to spend the value of interest, dividends, and capital gains accumulated during one calendar year on projects determined by the SEPM President in the following year. The balance of the New Frontiers Fund at the end of 1994 was \$372,267. This is an increase of \$17,960 from the balance reported to the Council at the Denver meeting in June 1994. The amount of interest dividends and capital gains to support scientific and educational programs in 1995 is \$16,334.

*K-12 Earth Science Education Committee (Don Woodrow).* The Committee met over the past year at GSA in Seattle and at AAPG in Houston, with the bigger turnout at Seattle. Two projects occupy us at present. We are developing, under the able direction of Doug Haywick and David Kopaska-Merkel, a Careers Pamphlet for high school students. Our intention is that the Society have, for distribution to high school students, a brief document spelling out sedimentary geology career paths, examples (with photos) of people who have chosen such a career, and why they did so. We talk also about preparation for careers, and we are frank but not discouraging about job prospects. We expect the pamphlet to be available for the start of the new school year.

At the same time, Al Melillo, national office personnel, and I have been working with the National Science Teachers Association to publish, for a broader audience, our popular publication, *On The Rocks*. This is slow business, but the SEPM Foundation has pledged support of the project, and we are working to bring it to a successful conclusion.

*Ad Hoc Committee on Hydrogeology and Environmental Geology.* The Committee was established to develop a program within the Society to focus on the application of sedimentary geology to hydrogeology and environmental geology.

A symposium was co-sponsored with the GSA Division of Hydrogeology at the 1994 National GSA Meeting in Seattle: "Relation of depositional environments to chemical and physical heterogeneity within sedimentary aquifers," Matthew Davis and George Breit, conveners.

Two sessions were sponsored at the 1995 SEPM/AAPG Annual Meeting: "Using depositional facies models to better define hydrogeologic systems," Mark Evans and Kathleen Farrell, conveners; and "Groundwater vulnerability predictive capabilities gained from geologic data," Davis Soller and Richard Berg, conveners.

A regular news column, "Notes from the Underground," edited by Erik Webb, is now featured in *SEPM NEWS*.

The first volume has been approved for the new SEPM environmental special publication series "Contributions to Hydrogeology and Environmental Geology." The volume, *Predicting aquifer heterogeneity—applications of sedimentary geology*, will be edited by Gordon Fraser and Matthew Davis.

Two sessions were sponsored at the 1995 Congress on Sedimentary Geology (Aug.

1995): "Characterization of confining units for hydrological systems and models," Mary Harris and Paul Thayer, conveners; and "Application of hydro- and sequence-stratigraphy to depositional facies models and hydrological systems," Rolf Aadland and Paul Thayer, conveners.

*1996 AAPG/SEPM Annual Meeting (John D. Cooper).* In July 1994, John Cooper, California State University, Fullerton, accepted the invitation from Noel James and Sherwood Wise to be Vice-Chair for SEPM for the 1996 Annual meeting in San Diego. During the next few months, Cooper selected A. Eugene Fritsche, California State University, Northridge, to be SEPM Technical Program Chair, Patrick L. Abbott, San Diego State University, to be Field Trip Chair, and William L. Bilodeau, California Lutheran University, to be SEPM Poster Chair. All these people have had extensive experience in meeting coordination and planning.

On 16 December 1994, the local planning committee met in Newport Beach to chart the course for the next 18 months of planning for the convention. At this meeting, decisions were finalized on the theme and logo, and language for the preliminary announcement was drafted. Strategies commenced to initiate the technical program and field trip planning. On 10 January 1995, Cooper and Abbott met to conceptualize a field trip list and review the proposal for field trips that had been submitted previously. A follow-up meeting of the local committee on 27 January 1995, at the San Diego Convention Center, the 1996 annual convention site, included a tour of the impressive facilities and an update on progress on the technical program and field trips, as well as the social program. On February 17, the coordinating committee met in Los Angeles to discuss the structure of the technical program, including number of oral sessions and posters, and specific theme and symposia topics, field trips, and international involvement.

In early March, Cooper, Fritsche, and Bilodeau had an SEPM technical program committee meeting in Northridge to produce a short list of approximately 15 SEPM Oral and Poster Session topics to present to the Coordinating Committee in Los Angeles on 17 March, preparatory to the call for papers copy to be submitted to National AAPG on 31 March. Also in early March, Cooper selected Marjorie Levy and William Schweller, Chevron Petroleum Technology Company, La Habra, to be SEPM Awards Committee Best Poster co-Chairs, and Stanley C. Finney, California State University, Long Beach to be SEPM Awards Committee Best Paper Chair, thus completing the SEPM committee chair assignments.

Technical Program decisions were finalized at the 17 March meeting, and final call for papers copy was submitted in early April after a 5-way conference call to do final wordsmithing on some of the titles. At the San Francisco Pacific Section AAPG/SEPM in early May, the field trip committee comprised: Chair Pat Abbott, AAPG Co-Chair Charles F. Kluth, Chevron Overseas Petroleum, and SEPM Co-Chair John Cooper, who met to make final decisions on field trips. The Technical Program committee met to discuss convenors for theme sessions and symposia.

*1995 SEPM Congress on Sedimentary Geology (Albert C. Hine).* During this year final plans were made for SEPM's First Congress on Sedimentary Geology, including the First Call for Papers mailing of the final Announcement and Registration. By the time this is read in print, the Congress will have been concluded (13-16 August 1995), and hopefully will have been a great success. We had 370 abstracts submitted from scientists residing in 27 different countries indicating an increasing interest in the Society from overseas. The Technical Program Subcommittee of our Local Organizing Committee has done a superb job (as has everyone here in the Tampa/St. Petersburg, FL area), in developing the program tied to the general theme of "Linked Earth Systems". We have tried to "link" a number of components of the Congress together such as having field trips, plenary speakers, workshops, and oral/poster sessions all address the same topic. In addition, we have promoted certain themes such as "science and society," "government and science," "earth science education," "hydrogeology and environmental geology," and "sedimentology and technology." The Local Organizing Committee feels strongly that SEPM needs to head off into different directions and attract scientists from other fields and other parts of the world to membership in the Society. It is our hope that this First Congress will be a powerful first step down that road.

*1997 SEPM Congress (Christian Viau).* Ten people have been recruited so far to work on the organization of the meeting at the Calgary Convention Centre. Themes are being considered now, and the final selection will emphasize an academic and industry link. Tentative dates are 1-5 June 1997, a four-day rather than 3-day format to accommodate a full- or half-day core conference at the Alberta Energy Conservation Board Core Lab.

## EDITOR'S REPORT

### *Journal of Sedimentary Research* (John B. Southard)

The year 1994 saw a far-reaching change in the structure of SEPM journals: The *Journal of Sedimentary Petrology* changed its name to the *Journal of Sedimentary Research*, which is divided into two sections (Section A, Sedimentary Petrology and

Processes; and Section B, Stratigraphy and Global Studies). The two sections—four each per year, in alternation—were envisioned to be in about a two-to-one ratio in size, and that is about how matters have evolved during the first year of the restructured journal. In the 1994 volume of the *Journal of Sedimentary Research*, we published a total of 1558 pages (A, 950 pages; B, 608 pages), of which 195 pages are subject to the \$150 per page surcharge for all pages over 12 per paper (A, 78 pages, B, 117 pages). Of the 1558 pages, 1477 pages were articles, and the rest were the Editor's Page (5), book reviews (16), announcements (8), Society Records (29), and index (23). The average length of research papers (excluding research methods papers, discussions, and replies, but including perspectives) was 11.5. In calendar year 1994, 275 new manuscripts were submitted, a number not greatly different from 1993. We were able to continue to maintain an almost zero backlog of accepted manuscripts.

## EDITOR'S REPORT

### *PALAIOS*

(David J. Bottjer)

In the nine months between June 1994 and March 1995, *PALAIOS* published five issues spread over volumes 9 and 10. These included twenty-one Research Reports, eleven Research Letters, five Onlines, two Afterthoughts, and one Book Review, for a total of forty-one articles. During this time period fifty-five manuscripts were received and the acceptance rate was approximately 50%.

With the publication of the February 1995 issue, *PALAIOS* entered its tenth year of publication. To celebrate this milestone, a Tenth Anniversary Theme Issue will be published in December 1995. This will include invited articles on the major research areas of interest to *PALAIOS* readers, and will include reviews outlining major advances in these fields as well as summaries of currently "hot research" in many of these areas.

I will complete my term as Editor of *PALAIOS* in the summer of 1996. In anticipation of this turnover, SEPM has formed a committee to search for a candidate to run for election as the next Editor.

## REPORT OF THE SECRETARY-TREASURER

(Steven G. Driese)

The Society finished the year 1994 with an operating deficit of \$108,792. The net worth of the Society, as measured by its Total Fund balance, declined to \$928,032, down 6.2% from 1993. Cash and cash equivalents for 1994 decreased to \$202,424 from \$263,948 in 1993. Contingency Reserve investment funds grew from \$743,275 to \$771,456. This increase was due to interest generated from the investments. In 1994, the Society's operating revenue was \$1,265,692, down 2.5% from the 1993 revenue of \$1,298,605. Most of this decrease is due to decreased royalty payments from the Copyright Clearance Center (CCC). In 1993 royalties received were \$146,178, compared with \$42,267 received in 1994. Operating expenses increased 15% to \$1,374,484 from the 1993 expenses of \$1,197,970. This increase was due to publishing costs of the journals.

## SECTION REPORTS

*Report of the Great Lakes Section (Annabelle Foes).* This year's activities of the Great Lakes Section consisted of a fall field conference and a research symposium held at the North-Central GSA meeting. The field conference, titled "Geohydrology of Carboniferous Aquifers," was held in Lansing, Michigan. The general hydrogeologic theme was different from themes of previous GLS-SEPM field conferences—a shift in response to the section's goal to diversify membership by attracting more sedimentologists working in environmental fields. Field stops included outcrops of the Mississippian Marshall Sandstone and Bayport Limestone, the Pennsylvanian Parma Sandstone, Saginaw, and Bayport Formations, and the Pleistocene Blue Ridge esker. Noel James, President of SEPM, joined us and presented the keynote address on "Cool-water Analogues to Paleozoic Limestones."

The Great Lakes and Midcontinent sections jointly sponsored a research symposium on "Eolian Deposits of Midcontinent North America" given at the North-Central and South-Central GSA meeting in Lincoln, Nebraska. The symposium was well received, with 52 authors presenting 25 papers at 3 sessions.

*Report of the Midcontinent Section (Dennis R. Kerr).* The Midcontinent Section meets for its annual field conference in the fall months. Traditionally the conference is organized by the Section President. However, this last fall David Loope, Vice President, performed these duties because Dennis Kerr, President, was coordinating the 1995 conference with the AAPG Midcontinent sectional meeting in Tulsa, Oklahoma.

The 1994 conference (23-25 September) had the theme of "Paleoenvironments of the Nebraska Sand Hills." The trip was led by David Loope of the University of Nebraska and Jim Swinehart of the Nebraska Geological Survey. Although participation was light, the 3-day trip was a real success, leaving Lincoln, operating



**SEPM SOCIETY FOR SEDIMENTARY GEOLOGY AND SUBSIDIARY  
CONSOLIDATED BALANCE SHEETS**

	Year ended 31 December			Year ended 31 December	
	1994	1993		1994	1993
<b>ASSETS</b>			<b>LIABILITIES AND FUND BALANCE</b>		
<b>CURRENT:</b>			<b>CURRENT LIABILITIES—</b>		
Cash and cash equivalents	\$ 202,424	\$ 263,948	Accounts payable and accrued liabilities	\$ 77,760	\$ 75,272
Short-term investments	—	99,000	<b>DEFERRED INCOME</b>	443,654	461,944
Accounts receivable, less allowance of \$32 and \$1337 for possible losses	36,632	31,408	<b>COMMITMENT</b>	—	—
Inventory	264,407	199,755	<b>FUND BALANCES:</b>		
Prepaid expenses	41,835	46,312	General—unrestricted	512,210	636,158
Due from affiliate	—	3,568	New Frontiers—restricted (Note 6)	415,822	354,037
<b>TOTAL CURRENT ASSETS</b>	<u>545,298</u>	<u>643,991</u>	<b>TOTAL FUND BALANCES</b>	<u>928,032</u>	<u>990,195</u>
<b>FURNITURE AND EQUIPMENT</b>				<u>\$1,449,446</u>	<u>\$1,527,411</u>
less accumulated depreciation	64,925	72,378			
<b>OTHER:</b>					
Investments	771,456	743,275			
Land	67,767	67,767			
<b>TOTAL OTHER ASSETS</b>	<u>839,223</u>	<u>811,042</u>			
	<u>\$1,449,446</u>	<u>\$1,527,411</u>			

**SEPM SOCIETY FOR SEDIMENTARY GEOLOGY AND SUBSIDIARY  
CONSOLIDATED STATEMENTS OF INCOME AND FUND BALANCE**

	Year ended 31 December			Year ended 31 December	
	1994	1993		1994	1993
<b>INCOME:</b>			<b>Publications</b>	150,788	146,620
Dues	\$ 132,060	\$ 136,770	Continuing education	108,432	78,998
Publications	209,510	264,569	Meetings, conferences, and field trips	127,790	66,178
<i>Journal of Sedimentary Research</i> —subscriptions, royalties, and other	417,218	419,411	Membership activities	76,906	82,390
<i>PALAIOS</i> —subscriptions, royalties, and other	112,600	110,064	General and administrative	466,864	488,769
Continuing education	190,995	127,743	Total costs and expenses	<u>1,374,484</u>	<u>1,197,970</u>
Meetings, conferences, and field trips	149,568	84,705	Operating income (loss)	(108,792)	100,635
Membership activities	11,474	9,165	<b>OTHER INCOME—Investments</b>		
Royalties—New Frontiers Fund	42,267	146,178	New Frontier Fund	21,413	20,348
Total income	<u>1,265,692</u>	<u>1,298,605</u>	General Fund	25,216	32,213
<b>COSTS AND EXPENSES:</b>			Total other income	<u>46,629</u>	<u>52,561</u>
Publishing costs— <i>Journal of Sedimentary Research</i>	332,958	234,975	<b>NET INCOME (LOSS)</b>	<u>(62,163)</u>	<u>153,196</u>
Publishing costs— <i>PALAIOS</i>	110,746	100,040	<b>FUND BALANCES, beginning of year</b>	990,195	836,999
			<b>FUND BALANCES, end of year</b>	<u>\$ 928,032</u>	<u>\$ 990,195</u>

**SEPM SOCIETY FOR SEDIMENTARY GEOLOGY AND SUBSIDIARY  
CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year ended 31 December			Year ended 31 December	
	1994	1993		1994	1993
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Net income (loss)	\$ (62,163)	\$ 153,196	Payments for purchases of equipment	(15,513)	(30,755)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			Purchase of investments	(419,155)	(615,840)
Depreciation	22,940	25,997	Proceeds from maturations and sales of investments	389,284	427,783
Loss on sale of assets	26	—	<b>NET CASH (USED IN) INVESTING ACTIVITIES</b>	<u>(45,384)</u>	<u>(218,812)</u>
Loss on sale of investments	1,690	50	<b>NET (DECREASE) INCREASE IN CASH</b>	<u>(61,524)</u>	<u>86,138</u>
(Increase) decrease in:			<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>	263,948	177,810
Short-term investments	99,000	99,000	<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<u>\$ 202,424</u>	<u>\$ 263,948</u>
Accounts receivable	(5,224)	(16,475)			
Due from affiliate	3,568	14,592			
Inventory	(64,652)	(8,559)			
Prepaid expenses	4,477	1,909			
Increase (decrease) in:					
Accounts payable and accrued expenses	(3,452)	33,477			
Deferred income	(18,290)	1,763			
Due to affiliate	5,940	—			
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<u>(16,140)</u>	<u>304,950</u>			

MEMBERSHIP STATISTICS

	DECEMBER					
	1989	1990	1991	1992	1993	1994
<b>SEPM MEMBERSHIP:</b>						
Members	5,795	5,474	5,360	5,438	5,408	5,241
Nondues Paying Members	104	113	116	125	133	206
	<u>5,899</u>	<u>5,587</u>	<u>5,476</u>	<u>5,563</u>	<u>5,541</u>	<u>5,447</u>
<b>PALAIOS MAILING LIST:</b>						
SEPM Members & Honorary (Regular)	1,173	1,177	1,206	1,289	1,297	1,258
SEPM Members (Students)	110	105	120	166	198	214
Subscribers	402	425	446	455	459	450
	<u>1,685</u>	<u>1,707</u>	<u>1,772</u>	<u>1,910</u>	<u>1,954</u>	<u>1,922</u>
<b>Journal of Sedimentary Research MAILING LIST:</b>						
SEPM Members & Honorary (Regular)	4,291	4,143	4,077	4,031	3,919	3,816
SEPM Members (Students)	488	395	397	451	498	511
Subscribers	1,740	1,666	1,630	1,601	1,568	1,506
	<u>6,519</u>	<u>6,204</u>	<u>6,104</u>	<u>6,083</u>	<u>5,985</u>	<u>5,833</u>
<b>TOTAL EDITIONS:</b>						
PALAIOS	2,000	2,000	2,000	2,000	2,300	2,300
Journal of Sedimentary Research	7,000	7,000	7,000	7,000	7,000	6,500
<b>NEW MEMBER INFORMATION:</b>						
Applications Completed	225	196	318	530	467	382
Reinstatements	57	91	49	27	33	31
Transfers	10	48	21	8	3	0
Resigned	109	116	66	104	99	70
Deceased	9	13	7	10	14	20
Dropped for nonpayment of dues	470	405	356	409	417	417
Unpaid: Members and Associates	371	327	306	354	360	320
Students	99	78	50	55	57	104

RONALD R. EMMONS, CPA  
PAUL HARTOG, CPA  
JOHN F. GRACE, CPA

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THE MCCLADREY NETWORK

INDEPENDENT AUDITOR'S REPORT

SEPM (Society for Sedimentary Geology)  
Tulsa, Oklahoma

We have audited the accompanying consolidated balance sheets of the SEPM (Society for Sedimentary Geology) and subsidiary as of December 31, 1994 and 1993, and the related consolidated statements of operations and fund balance and cash flows for the years then ended. These financial statements are the responsibility of the Society's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the SEPM (Society for Sedimentary Geology) and subsidiary at December 31, 1994 and 1993, and the consolidated results of their operations and their cash flows for the years then ended in conformity with generally accepted accounting principles.

*Emmons & Hartog P.C.*

Tulsa, Oklahoma  
April 18, 1995

out of Ogallala, and returning to Lincoln. Participants observed examples of and discussed the relationship among various eolian processes and surface/subsurface geohydrology.

*Report of the Gulf Coast Section (Charles C. Smith).* The GCSSEPM held its Annual Convention in conjunction with the GCAGS during 5–7 October 1994, in Austin, Texas. The local GCSSEPM organizing committee, guided by Earle McBride, Vice Chairman, Martin Lagoe, Program Chairman, and Rick Major, Editor, did an outstanding job which resulted in an excellent meeting. The Section honored Nolan Shaw with our Distinguished Service Award and Edward "Ted" McFarlan, Jr., with our Honorary Membership Award. We were especially pleased and honored to have Noel James, SEPM President, as our Business/Awards Luncheon Guest Speaker. Best published paper awards for the Convention transactions volume are: First Place, Michael D. Blum and David M. Price, "Glacio-Eustatic and Climatic Controls on Quaternary Alluvial Plain Deposits, Texas Coastal Plain"; Second Place, Rachel A. Eustice and Lynton S. Land, "Controls on the Deposition of Bedded Halite within the Haynesville Formation, Champion-Klepac No. 1 Core, Southwestern Alabama"; and Third Place, Harry H. Roberts, Alan Bailey, and Gerald J. Kuecher, "Subsidence in the Mississippi River Delta—Important Influences of Valley Filling by Cyclic Deposition, Primary Consolidation Phenomena, and Early Diagenesis."

The 1994 GCSSEPM Foundation Research Conference was held in Houston on 4–7 December. About 375 attendees took part in the Conference entitled "Submarine Fans and Turbidite Systems—Sequence Stratigraphy, Reservoir Architecture and Production Characteristics—Gulf of Mexico and International," co-chaired by Paul Weimer and Arnold Bouma.

*Report of the Rocky Mountain Section (Debra K. Higley).* The Rocky Mountain Section of SEPM includes Arizona, Colorado, Idaho, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming. We published a 24-paper volume entitled *Mesozoic Systems of the Rocky Mountain Region, USA* in 1994, and have started a new book entitled *Paleozoic Systems of the Rocky Mountain Region, USA*. The new book focuses on sequence stratigraphy and depositional systems of the region, with an emphasis on petroleum geology.

RMS/SEPM conducts monthly luncheon meetings on the fourth Tuesday of September through May. The 1994–95 luncheon topics included sedimentology/sequence stratigraphy across the Rocky Mountain Region, burial and thermal histories of basins, comparison of modern and ancient reef facies, 3-D reservoir modeling, and other areas of interest.

RMS-SEPM conducts field trips separately and in conjunction with AAPG-SEPM conventions. Two field trips were sponsored during June of 1994. The John Van Wagoner field trip examined sequence stratigraphy and facies architecture of strata in the Book Cliffs of Utah and Colorado. Roderick Tillman and Al Merewether led a trip to examine valley-fill and shelf-ridge sandstones of the Frontier Formation near Casper, Wyoming.

We award two \$1000 scholarships each year. The Donald L. Smith and Edwin D. McKee Grants for Ph.D. and Master's degree students were awarded, respectively, to Steve Hasiotis, Colorado University, Boulder, and Robin Levron, New Mexico State University.

*Report of the Permian Basin (William J. Purves).* The Permian Basin Section of the SEPM has had an active Fall 1994–Spring 1995 year. We had once-a-month luncheon talks held at the Midland Convention Center. We had four one-day field trips, one that traversed the underground salt deposits near Carlsbad, N.M., where intermediate level radiation storage is planned (WIPP site), a trip to view Triassic and Tertiary exposures near Midland, an underground trip through karstedt Cretaceous sediments at the Sonora Caverns, and a hike up a reef transect in the Guadalupe Mts. (McKittrick Canyon). A jointly sponsored West Texas Geological Society and PBS-SEPM short course on "Sequence Stratigraphic Concepts" was provided by Robert Handford. Also, three evening self-improvement seminars were held, including Dr. Art Saller of UNOCAL Research presenting "How to make a Fischer Plot," Bob Lindsay of Chevron on "How to make a better core description," and Matt Laroche of Chevron on "How to balance a structural cross section." Our annual Spring Field Trip this year was preceded by a Carbonate Symposium jointly sponsored by the PBS-SEPM and Permian Basin Graduate Center. Invited carbonate "greats" such as Dr. Gerald Friedman, Dr. Lloyd Pray, Dr. James Lee Wilson and their peers provided their perspective on carbonate geology and its future. This symposium was convened to mark and honor the 20th anniversary of James Lee Wilson's Carbonate Geology book. The associated field trip was co-led by Dr. Charles Kerans and Troy Bessera, and focused on San Andres Limestone exposures on the east flank of the Sacramento Mountains and the Guadalupe Mountains.

*Report of the Pacific Section (John D. Cooper).* Pacific Section SEPM had a busy and productive year, highlighted by the annual fall field trip and barbecue. After the Denver national meeting, John Cooper, '94 Pacific Section SEPM President, accepted the invitation to be Vice-Chair for SEPM for the 1996 meeting in San Diego. Cooper thereupon assembled a team of people active in the section, and with considerable combined meeting experience to chair the various committees for the plan-

ning of SEPM's part in the national meeting. Thus the section is directly and closely involved in this exciting venture.

Our annual Fall field trip, 1–2 October 1994, was a smashing success, combining great rocks, weather, scenery, food, guidebook, leadership, and camaraderie. Eugene Fritsche, Cal-State University, Northridge, assisted by Richard Squires, Cal-State University, Northridge, and Mike Clark of Arco, masterfully led 90 participants on a hiking trip to examine Eocene outcrops in a depositional facies and sequence stratigraphic context in the Sespe Creek area. A superbly written and illustrated 106-page field trip guidebook, edited by Eugene Fritsche, was published as Pacific Section SEPM book 74.

At the end of the year, Reinhard and Mary Suchsland stepped down after 15 years of devoted and outstanding service as Managing Editors of Pacific Section SEPM. John Cooper assumed the role of Managing Editor, and in late March 1995, the voluminous book inventory was transferred from Bakersfield to California State University, the new Pacific Section Headquarters. A giveaway of selected SEPM volumes helped reduce the inventory to facilitate the move. Two new volumes were published and available at the San Francisco section meeting in May.

In March 1995, new Pacific Section SEPM officers for 1995 were announced, including *President:* Cathy J. Busby, University of California, Santa Barbara; *President-Elect:* Gary H. Girty, San Diego State University; *Vice-President:* Pedro C. Ramirez, California State University, Los Angeles; *Secretary:* Vicki A. Pedone, California State University, Northridge; and *Treasurer:* William L. Bilodeau, California Lutheran University.

The new address for Pacific Section SEPM is: % John D. Cooper, Managing Editor, Department of Geological Sciences, California State University, Fullerton, Fullerton, CA 92634. Phone: 714-773-2662; FAX: 714-449-7266; e-mail: jcoop-er@fullerton.edu.

Robert J. Weimer  
William H. Twenhofel, Medalist  
For Excellence in Sedimentary Geology

Robert Jay Weimer is a person extraordinaire—geologist, educator, and administrator. He is a most deserving recipient of SEPM's highest award, the Twenhofel Medal. What is more appropriate for a lifetime of commitment and service than recognition by his fellow peers and colleagues? In addition to this recognition of his many scientific and professional accomplishments, he is an Honorary Member and a past President of this organization, and he has served the Society in many capacities, including, appropriately, chairing the Twenhofel Medal Committee!

Bob's formal education in geology included the University of Wyoming (B.A., 1948, and M.A., 1949) and Stanford University (Ph.D., 1953). His practical education was obtained in the field, first with Union Oil Company of California and later as a consulting petroleum geologist. His experience as an educator came through teaching at the Colorado School of Mines (CSM) and as a visiting professor at Colorado, Adelaide, (Australia), Calgary (Canada), and Bandung (Indonesia), as a distinguished lecturer for AAPG and SEG, and as a prolific teacher of short courses and workshops. Bob joined the faculty of CSM in 1957 and served as Head of the Department of Geology and Director of the CSM Field Camp from 1964 to 1969; he retired in 1983 as Getty Professor of Geological Engineering. His administrative experience was gained through his university, business, and professional organization connections. In each of these areas of research, teaching, and administration, he has succeeded admirably.

Bob has shared his wealth of knowledge in all his endeavors. His publication record is prolific; his commitment to students and teaching is strong; his business adventures are productive; and his professional contributions are outstanding. His publications include more than 100 books, articles, abstracts, and reviews, mostly in the field of sedimentology, stratigraphy, and petroleum geology. This work has focused on the U.S. Western Interior and the exploration and exploitation of fossil fuels. His work has been recognized internationally, as evidenced by the number of awards and honors presented to him. These honors include election to the National Academy of Engineering (1992), the Brown Medal from the Colorado School of Mines (1990), the Parker Medal of AIPG (1986), the Powers Medal of the AAPG (1984), the Colorado School of Mines Medal (1984), and the University of Wyoming Distinguished Alumni Award (1982).

With all of Bob's accomplishments, he has never forgotten his roots or the rocks. Born in 1926 in Glendo, Wyoming, he worked in the field in the Rocky Mountains during the formative part of his career. From this beginning, he expanded his interests to include most of the world geology. His success in the practical application of geological principles allowed him the freedom, in his words, "to select research projects and participate in activities and travel [that] I regarded as most meaningful." His selection and pursuit of goals were excellent, as we note by honoring him with the highest recognition that SEPM Society for Sedimentary Geology can bestow—the Twenhofel Medal.



*Citation:* To Robert Jay Weimer for excellence in sedimentary geology; for his contributions in applying geological principles to practical problems; and for his dedication to the science and profession through his teaching and research.

Daniel F. Merriam

### Response from Robert J. Weimer

I thank SEPM and my colleagues for honoring me with the Twenhofel Medal. To join the list of distinguished Twenhofel Medalists is indeed a wonderful cap to a long scientific and professional career. I am also grateful to Dan Merriam for his generous thoughts and words in preparing my biography. We spent a year as a plane table team in Utah and Arizona in 1949–50, and together we gained an appreciation of field geology and its role in formulating and testing geologic models and interpretations. We learned that field geology is at the same time both a fulfilling and gratifying activity and is an indispensable background for all of our work in geology.

Receiving the Medal has an emotional and special meaning for me. SEPM gave me, and numerous other young geologists, in the early stages of our careers, the opportunity to work with, and benefit from, an internationally recognized scientific society. This was where my society and public service work began—so my roots are in SEPM. In addition, I was SEPM President when the Twenhofel Medal was established in 1973. I presided at the Annual Awards Banquet in Anaheim, California as Professor R.C. Moore was honored as the first recipient. I am not very good at predictions, because I never thought of myself as a candidate for the Medal. So when I was informed of the selection, it was a most pleasant and wonderful surprise.

I have another historic tie to SEPM. My roots are also deeply embedded in applied research, i.e., the short-term research agenda set by the everyday problems faced by industry and society. For me, those problems not solved by applied research efforts become the targets for long-term basic research. SEPM has formalized similar views of research by having the word Economic in its name. Historically, this has given the Society a mission and special flavor that set it apart from other organizations dedicated to advancing Sedimentary Geology. Let us hope, despite the recent name change, that this unusual blending of applied and basic research will always remain a strong characteristic of SEPM.

My career has paralleled the scientific revolution in Sedimentary Geology, and related geologic fields, that started in the 1950s. These have been exciting times for advancing knowledge about the earth's history. I want to make a few observations about the 46 years since my first employment as a petroleum geologist.

The revolution came about because of the massive infusion of money into research by the petroleum industry, and to a lesser extent by government and academia. The money paved the way for new people, new organizations, and the development of new machines for analyses, measurements, and storage of data. A new technology and observational phase were developed, out of which came new concepts about the origin and distribution of sedimentary rocks. With the revolution came an entire new look at the exploration and exploitation of petroleum and other energy minerals so vital to our technologically based society. To assure success in programs, the changes brought about better integration of work among geoscientists (geologists, geophysicists, geochemists, and petroleum engineers) and with scientists of related fields. From the revolution came new disciplines and new concepts that disproved old dogma and irrevocably changed the study of sedimentary rocks. Some time-honored principles have survived the changes, but not without significant modifications. A discussion of these changes must await a future lecture opportunity.

SEPM grew in response to the events of the new era, and its membership, a blend of industry, academia, and government personnel, provided some of the scientific fuel to power the petroleum industries' technological machine. Members also assisted in raising the level of scientific and technologic literacy of people worldwide, and in educating the finest sedimentary geologists for this and the 21st century. These are geologists who will be needed to tap the vast mineral storehouse remaining hidden in sedimentary rocks, and to provide knowledge about the natural processes on and within the earth's crust to help solve environmental and other problems.

I hope that the future challenges for SEPM members will be as stimulating and rewarding as those during my career. I see these challenges as a continuation of enlightened leadership in the scientific and practical aspects of resource discovery and development. In addition, knowledgeable members must be more active in public policy, and in the broad range of associated environmental issues. We should work, not only in K–12 educational programs, but also to eliminate or significantly reduce the impact of "junk science" in the legal system, in the communication media, and in public policy. The peer review of publicly used scientific data must be an early step in regaining the public's confidence in the vital role to be played by science and technology in solving problems facing our society. The idea is that with better science, better decisions are possible.

I express my gratitude to my family, former students and professors, and other friends for support of my career. They gave me the incentive to be more professional in everything I do. Most of all, I am thankful for the opportunities provided by a

free society, allowing me to work and prosper as a geologist, educator, civic leader, and businessman.

Peter A. Scholle  
Honorary Member

Peter A. Scholle, deserving recipient of Honorary Membership in the SEPM, and Albritton Chair of Geology at Southern Methodist University, continues his distinguished career as a sedimentary geologist, having served the profession and the Society in many significant ways. Peter has been President of SEPM and is now the Society's productive Special Publications Editor. While involved in publication, editing, and innovative educational endeavors in sedimentary geology, he has had an unusual and varied career, having held positions in each of the traditional areas—academia, industry, and government. Prior to his present position, he was a faculty member at the University of Texas, Dallas, a research geologist at Cities Service and Gulf Oil (later Chevron) Laboratories, and a geologist in (and later Chief of) the Branch of Oil and Gas Resources at the U.S. Geological Survey.

Peter was born in the South Bronx, NY, but like many of us, he somehow resisted the forces that might have pulled him in other directions and became fascinated by earth science. He completed a B.S. in Geology at Yale (1965) and M.S. (1969) and Ph.D. (1970) degrees in Geology from Princeton. Although Peter's Ph.D. dissertation dealt with Cretaceous "flysch" deposits in northern Italy, his interests soon became far flung, from clastic turbidite deposition and diagenesis to carbonate burial diagenesis and porosity prediction, to chalk reservoirs and hydrocarbon production, to evaporites and replacement minerals. He has produced more than 60 refereed publications in these areas, as well as numerous reports and abstracts, with his latest efforts being devoted to understanding depositional and diagenetic patterns of Permian sedimentary rocks of the world. Among his best-known works and concepts are manuals, in color, illustrating textures and constituents of clastic and carbonate rocks in thin section, and a full-color volume for which he was lead editor on *Carbonate Depositional Environments*, all published by AAPG.

Many of us know Peter Scholle as a prodigious collector and synthesizer of data, among other things. His collections of stamps, airline barf bags, and international toilet papers are unparalleled. He also has interest and talent in photography. These skills and interests have led, in part, to his prolific and valued contributions to SEPM and other societies. For example, he has edited several SEPM Special Publications, and has produced a number of Field Trip Guidebooks, Short Courses, geology films, slide sets, and bibliographies. As Editor of Special Publications he is expanding the Society's offerings in all of these areas.

Peter has accomplished all of this while maintaining a wry sense of humor, which is well known to his friends and colleagues. While writing this brief biography, I consulted "American Men and Women of Science" for some details, only to find Peter A. Scholle listed as "deceased," a categorization that I am certain originated from his pen. On the contrary, his distinguished career is far from over, and we look to him for continued leadership of the Society for Sedimentary Geology.

*Citation:* To Peter A. Scholle in recognition of his tremendous contributions to SEPM and to the global geologic community as a scientist, a researcher, and a leader.

Michael A. Arthur

### Response from Peter Scholle

Thank you SEPM for this honor, which means a great deal to me, especially since I am not fully deceased yet. Reported-death has really cut down on the junk mail, however!

Having spent many years attending SEPM awards banquets and praying annually for short responses by awardees, I feel compelled to keep my remarks brief. That brevity should not hide the fact that I am very grateful to the SEPM for this award, and I am even more thankful for the opportunities and fellowship that the Society has provided over the years. I remember with great pleasure being appointed by my first committee and getting a chance to meet and work with some outstanding sedimentologists and paleontologists. Indeed, all the "work" I have done with the Society over the years has been more than repaid through friendships, contacts, shared ideas, and the pleasure of watching the society grow and change in useful directions.

Pleasure has also marked my career outside the Society. Family and friends rightly marvel that one can get paid to travel to the places I have worked, and do the things that I have done for a living. When one thinks of the many people who toil at unenjoyable professions, it is clear that we geologists are truly blessed to have chosen this profession. My college mentors (John Rodgers, Bob Folk, Al Fischer, Robin Bathurst, and many others), my many colleagues, especially those at the U.S.G.S. and the students that I have had over the years, have only added to that pleasure. I owe them all a great deal and hope that they will share with me the pleasure of this award.

Roderick W. Tillman  
*Honorary Member*

When I think of Rod Tillman, I think of shelf sandstones. Our west coast friends may think deep-water sandstones. Perhaps the folks in Wyoming think estuaries and valley fills. In short, Rod is like the proverbial elephant and the four blind men of the Buddhist scripture: You make a different association depending on where you are. All of us, however, see in Rod a tireless, prodigious worker in sedimentary geology, an inquisitive mind, and a man steering a steady course despite all the turbulence on his life's journey.

Rod has served our Society as president, vice-president, and chairman of numerous committees. In all these roles he has won the respect of fellow officers and the membership, and has contributed in major ways to the growth and recognition of sedimentary geology both in industrial and academic circles.

His own research demonstrates keen insight into the fundamental processes of sedimentation, combined with an exceptional ability to convey their significance to scientific colleagues, students, and industrial associates. In fact, in addition to his commitments to employers like Cities Service and other energy companies, Rod also took time to play a major role as advisor and role model for many students and post-docs. For example, he had great success with his "sedimentology associate program" at Cities Service. This program, which was at its peak in the late '70s, was an industrial post-doc program, and served as a launching pad for several outstanding academic and industrial careers.

Rod's best known research is that on the Cretaceous Shannon Sandstone of Wyoming. It stands as a shining example of the value of meticulous observations and painstaking reconstruction of paleogeography and inferred environments. Moreover, it meets the other criterion for good science: it got people's attention! It created controversies that show no sign of abating yet. To Rod, the Shannon is a prime example of a transgressive shelf sand ridge, to others it is an even better example of a lowstand shoreface or of an incised-valley fill. They are hardly all correct. J. Harlan Bretz of the University of Chicago once wrote a philosophical paper on the value of the "outrageous hypothesis." When Rod did his Shannon work, he had no such hypothesis in mind; nevertheless, he created one, and therein lies the value.

*Citation:* To Roderick W. Tillman in recognition of his contributions to this Society, his unwavering commitment to meticulous, observation-based science, and his loyalty.

*Dag Nummedal*

Response from Roderick Tillman

I am pleased that my colleagues have voted to award me Honorary Membership in the world's premier society for sedimentary geology. Over the years I've thoroughly enjoyed SEPM activities and the people who are members of the Society.

Back in the early 1970s, when I was appointed to the SEPM Ballot Counting Committee, I had no idea that it might someday lead to the Presidency of SEPM and finally to Honorary Membership. I have enjoyed every step of the way. I've also enjoyed being a sedimentologist/stratigrapher and would like to comment on how I became an applied sedimentologist and mention two of my more exciting projects.

My first interests in geology were probably kindled by my Grandfather Whitbeck and my father, who were both earth science professors. However, I enrolled at the University of Wisconsin in the Mechanical Engineering school. It wasn't until I was a junior that I took a course in physical geology from Lowell Loudon and very soon thereafter declared a major in geology. My path in sedimentary geology began during long periods of well-site work with Conoco in west Texas. I had previously completed a mapping thesis as part of my masters degree at the University of Wisconsin under the direction of Lewis Cline and Bob Dott, and spent a summer studying outcrops in western Wyoming. During the long nights and days on well-site duty I realized that what I would really like to do is study sedimentary rocks. Without a Ph.D. my chances of doing that would be slim, so I headed to the University of Colorado at Boulder and completed a Ph.D. under Ted Walker.

My next step brought me back again to the study of western Wyoming outcrops and oil fields, this time at Sinclair Research in Tulsa. It wasn't long after that that an oil field in Venezuela that was declining in production needed some attention. I began my first Team Study on Barinas field under the watchful eye of petroleum engineer Julius Tolas. Little did I realize at that time that this type of work would later be one of my main focuses as a consultant.

From Sinclair I moved across town for a 17-year stay at Cities Service Research. During the course of my career I have almost always been able to spend at least six weeks each year doing field work, mostly in the Rocky Mountains, California, and Arkansas. Following discovery of Shannon Sandstone production at Hartzog Draw field in Wyoming, the confirmation well was cored and I was asked to describe and interpret it. The highly glauconitic and cross-laminated core was only the first of

many in the field. With co-workers Randi Martinsen and Vernon Hill we were able to convince management that the field would be more than twice as long (22 miles) as any previously discovered Shannon field and were able to establish a majority acreage position by "farming in" on acreage held by several other major companies. Before it was all over Cities Service was operator of what we interpreted as a 200 million barrel shelf-ridge sandstone oil field.

Production like that convinced us that we needed more information on shelf processes and deposits. I, with the help of Don Swift and Bill Stubblefield, then both with NOAA, concocted a "hare-brained" idea to form an industrial associates program to vibracore and collect shallow seismic on modern New Jersey shelf sands. Before it was over, sedimentologists from more than ten companies and universities were involved in collecting data on four shelf sand-ridges. Three papers on our work have been published, two with Jim Rine as senior author, and the latest one in the November 1994 JSR with John Snedden as senior author. Two additional papers are in review. We found that the lower portions of several of the ridges were inherited from sand bodies formed in shallow water, but that sedimentological and foraminiferal data (interpreted by Steve Culver and his students) indicated that there was an upward deepening progression in several of the ridges, which means that a significant portion of the ridges formed in offshore locations.

The highlight of my involvement with SEPM was the time I spent on the SEPM Council, punctuated at the end by being elected President in 1990. During this time I made many friends among the special people who are SEPM members. The time on the council was not an easy time for SEPM. We almost had to file for bankruptcy, we separated from AAPG, and we temporarily withdrew from AGI over what we perceived were financial obligations with which we were not comfortable. We have since rejoined AGI, have maintained a very good working relationship with AAPG, and have made progress in improving our financial situation. I have also greatly enjoyed my involvement in organizing several SEPM Research Conferences and field trips on siliciclastic deposits and in sharing editorship of four SEPM books on turbidites, shelf sandstones, and sedimentology of reservoir sandstones.

Finally, I want to take this opportunity to thank all of you who have made it possible for me to pursue a wonderful career in sedimentology and stratigraphy.

John L. Wray  
*Honorary Member*

John L. Wray was born in the West Virginia Appalachians, settled at the foot of the Colorado Rockies, and has worked worldwide deciphering the nature of sedimentary rocks through their contained microfossils and algae. Jack began his geological career at West Virginia University and obtained his Ph.D. at the University of Wisconsin. In 1956 he joined Marathon Oil Company (then Ohio Oil Company) as a research geologist at the newly established Denver Research Center. He remained in that dynamic atmosphere of applied research for 30 years. Simultaneously, he was Visiting Lecturer in Paleontology at the University of Colorado (1969) and from 1970 to 1980, Adjunct Professor of Geology at the Colorado School of Mines.

Jack is recognized worldwide as a leading authority on calcareous algae. He has studied and written about these critical organisms in rocks and sediments throughout the geologic column, from the Devonian in Australia to the living barrier reef off Belize. His greatest contributions, however, have been to decipher the nature of these organisms in middle and late Paleozoic carbonates. Such limestones, rich in enigmatic "phylloid algae," are important reservoir rocks worldwide. In 1977 Jack synthesized all that was known about calcareous algae into a major text. This, the most definitive and widely used work on the subject, has been translated into several languages. At the same time he directed the development of high-resolution biostratigraphy using calcareous nannoplankton, one of the most precise and utilitarian paleontological correlation methods used in petroleum exploration. To many of us Jack epitomizes the best in our profession—as much at home in the field as in the front of the laboratory microscope, an engaging speaker and communicator, a quiet teacher and rigorous scientist and, above all, a cool and collected head when others among us have lost theirs, no matter what the crisis.

His contributions to our profession are legion. In 1981 he received The Distinguished Public Service to the Earth Sciences Award and in 1984 Scientist of the Year Award from the Rocky Mountain Association of Geologists. He has organized numerous scientific meetings, among which the Third International Symposium on Fossil Algae in 1983 marked a turning point in the study of these organisms. SEPM has indeed been lucky to have him as a long-serving and committed member of the Society, where, in addition to service on innumerable committees, he has been both our Paleontology Councilor (1973–75) and our President (1980–81). Thanks, Jack.

*Citation:* In recognition of his central contributions to paleontology, especially microfossils and calcareous algae, of his excellence in basic and applied research and of his dedicated service to our Society.

*Noel P. James*



## Response from John L. Wray

It is a singular privilege to be awarded Honorary Membership in SEPM. I am grateful to the Society and to those who supported my nomination for this award. This comes as a surprise. Both my research and service to SEPM, now, alas, decades behind me, have been so rewarding that it is a little embarrassing to be honored for whatever it is I did. Good fortune—special persons, places, and timing—played a major part in the success of my endeavors in paleontology and the business of SEPM. Lloyd C. Pray and the late R. Dana Russell were important mentors in the world of sedimentological research. J. Harlan Johnson, who acknowledged that calcareous algae are important fossils, said, "Do something with them." Farrington Daniels, professor of physical chemistry at the University of Wisconsin, gave me a big push into calcium carbonate chemistry. Because of the high-flying times of the petroleum industry in the early eighties, my SEPM presidential year saw record membership figures and attendance at technical meetings. The year 1981 also marked the advent of the computer in SEPM affairs. I have greatly enjoyed my professional accomplishments, and it is especially gratifying when this is recognized by others. I truly appreciate the honor that you have granted me.

Ian Nicholas McCave  
Francis P. Shepard Medalist  
For Excellence in Marine Geology

Ian Nicholas McCave, of Cambridge University, is particularly qualified for the 1995 Francis P. Shepard Medal. Few scientists have had as much impact on our understanding of marine sediments.

Nick McCave's marine roots can be traced back to his early years in Guernsey, where the tidal range is 9 m. After graduating from Oxford with a B.A. (first-class honors), Nick obtained his Ph.D. at Brown University under the tutelage of Tim Mutch and Léo Laporte. A post-doc with Henk Postma at the Netherlands Institute of Sea Research gave Nick his first exposure to the world of marine research. A reinterpretation of his Brown Ph.D. dissertation won best paper in the *Journal of Sedimentary Petrology* in 1973.

Sixteen years at the University of East Anglia (1969–85) were punctuated by a sabbatical at Oregon State University in 1974 and a long-term adjunct post at Woods Hole, where Nick worked on water-sediment-bedform interactions in the HEBBLE project. As HEBBLE progressed, so did Nick's interest in the deep sea: nepheloid layers, current sorting of deep-sea sediments, and the aggregation of particles, which in turn led to studies on the Feni, Hatton, and Gardar drifts in the northeast Atlantic.

Since 1985 Nick has been the Woodwardian Professor of Geology at Cambridge, and since 1988 the Head of the Department of Earth Sciences. His other active scientific affiliations read like alphabet soup: JOIDES, ICES, SCOR, NERC, NATO, BOFS, LOIS, PNO, etc., many of which he has chaired. Less known are Nick's erstwhile pursuits as a masters rower at Cambridge and as an active member of the wine selection committee at St. John's College.

One indication of Nick's impact is the degree to which his studies are referenced by other workers. Estuarine scientists still cite his early shallow-water work, physical oceanographers use his benthic boundary layer research, and biologists refer to his 1984 paper on suspended particles in the deep ocean.

I first met Nick 20 years ago, at a conference in France where Francophiles and Anglophiles were more or less mutually exclusive. At the height of a reception in a musty wine cellar, Nick jumped on a table and gave a rousing speech of thanks to our French hosts—in French. I don't know if anyone understood much of what Nick said, but the attempt and thought united both philes and phobes into equally rousing applause, a spectacular conclusion to what otherwise might have been a less-than-successful conference.

Nick would be the first to admit that his professional success would have been hindered without a supporting home life, orchestrated by Nick's lovely wife, Susie, and made ever interesting by their four stimulating children, Thomas, Robert, Geoffrey, and Elise.

One of the hallmarks of Francis P. Shepard was his diversity of research interests and publications. In Nick McCave, one finds the same eclectic interests that Fran Shepard displayed. If Fran were alive today, he would be honored that Nick has the medal that bears his name.

*Citation:* In recognition of his excellence in research in the fields of marine sedimentology, including fundamental contributions in bedform genesis, suspended matter and nepheloid layers, and deep-sea erosion and deposition, as well as his intellectual leadership in the direction of marine geology and oceanography, Ian Nicholas McCave is hereby awarded the Francis P. Shepard Medal.

John D. Milliman

## Response from Ian Nicholas McCave

I have just received a medal which I am proud to accept and which is yet another token of the generosity of my American colleagues. Important formative periods of my career have been spent in this country and joint work with American scientists has remained significant for me. I think any success I may have had in influencing how we think about sedimentary processes stems from the enthusiasm fostered by Harold Reading at Oxford and the grounding given me by Tim Mutch, Leo Laporte, Bob Matthews, and (happily visiting for a semester) John Allen at Brown, where, apart from stratigraphy and sedimentology, I acquired a grounding in fluid mechanics. My career from there may be viewed as a descent from the sunlit uplands of the Oxford Jurassic and New York Devonian to the dark abyss of the deep Atlantic and Pacific, pausing briefly on some sandbanks in the North Sea along the way.

I was post-doctoral research fellow in Holland at the Netherlands Institute for Sea Research, where Henk Postma and Doeke Eisma had an important influence on my thinking. I was working on boundary layer sand transport over sand banks and waves, but discussions with Postma of his work on fine-grained suspended sediment transport in tidal areas put me in mind of the fact that over 60% of the stratigraphic record is mud, so I left the business of being a sand man. Indeed, the new third mate on the R.V. *Knorr* greeted me on one cruise with "I hear you're a main mud man." "Um, er, yes I suppose so," was my inarticulate reply. That was during HEBBLE, the High Energy Benthic Boundary Layer Experiment, where a group of friends from Woods Hole, Washington, and Lamont, ably led by Charley Hollister of WHOI, pillaged the ONR's coffers for a decade and provided significant insights into the dynamic interactions between deep sea currents and the sea bed, mainly in the intermittent high-intensity events we called "deep sea storms." I was able to participate in this work through the understanding of my colleagues at the School of Environmental Sciences of the University of East Anglia. We had tremendous freedom to do what we thought important with no historical constraints because we started the School in the late 1960s, designing a new curriculum along the way. My understanding of oceanography and coastal geomorphology was greatly advanced by UEA staff John Harvey, Peter Liss, Chris Vincent, and Keith Clayton. A further American excursion was a period spent at Oregon State's School of Oceanography with Jerry van Andel, Ross Heath, and Paul Komar. They directed my attention to the Deep Sea Drilling Project and the emerging field of palaeoceanography. I presently concentrate on that area with my colleagues Nick Shackleton and Harry Elderfield, but I also continue a collaboration of 25 years with Bob Dickson's group at the UK Fisheries Laboratory on shelf boundary layer dynamics. We recently measured the effects of a wave 11 m high in 27 m of water. Fortunately this was by a bottom-mounted instrument package, not from a ship!

However, it is the camaraderie of work at sea with (mainly!) convivial shipmates that has made a life in marine geology so rewarding. My thanks go to the many scientists, captains, and crew with whom I have sailed, and to whom so much credit is due. None of it would have been possible without the forbearance and support of my wife Susie, who has kept the whole show together during my frequent absences at sea. I thank the Society and my old friend John Milliman for the honour and compliment they have paid my work.

N. Gary Lane  
Raymond C. Moore Medalist  
For Excellence in Paleontology

N. Gary Lane, the 1995 Raymond C. Moore Medalist, is an enthusiastic and innovative paleontologist who has greatly advanced the study of fossil crinoids and paleoecology.

Gary was born in southwestern Indiana, grew up in east-central Illinois, and attended Oberlin College (A.B., 1952). From Oberlin, Gary went to Lawrence, Kansas, to do graduate studies under the supervision of Raymond C. Moore (he earned an M.S. in 1954 and a Ph.D. in 1958).

At the University of Kansas, Gary developed research interests in Carboniferous and Permian paleontology, paleoecology, field geology, and crinoids. Gary's crinoid research began serendipitously. He presented a stratigraphic dissertation proposal to Professor Moore but was informed that Mississippian crinoids belonging to the Family Batocrinidae would be the subject of his dissertation.

Gary began his academic career at the University of California at Los Angeles, reaching the rank of Professor of Paleontology. In 1973 he joined the faculty at Indiana University at Bloomington, also as a Professor of Paleontology. After retiring in December 1994, he remains as active as ever both in research and in teaching for the University Honors Program at Indiana University.

Gary's research on crinoids has focused, in part, on careful, systematic study with particular attention to stratigraphic context. He has worked extensively with crinoids ranging in age from the Ordovician through the Permian, and he is especially recognized for his systematic work on Lower Mississippian crinoids, Permian crinoids, and for his major contribution to the crinoid *Treatise*. In addition to systematics,



Gary has always focused on important ideas and problems, and he has introduced innovative perspectives on paleontologic questions, including being a pioneer of holistic paleocommunity studies, recognition of the importance of stem length (now tiering) and filtration fan morphology for crinoid paleoecology, and recognition of the importance that predation played in Paleozoic crinoid evolution. His work on microcrinoids developed in clear understanding of the ontogeny of Paleozoic crinoids, and his ongoing research in China will better define the impact of Late Devonian extinctions on crinoids. It is appropriate that Dr. N. Gary Lane is the first of R.C. Moore's doctoral students to receive the Raymond C. Moore Medal for Excellence in Paleontology.

Gary's contributions have been recognized previously. He has won the 1979 SEPM Outstanding Paper Award in the *Journal of Paleontology*, a Fulbright Fellowship, and the Erasmus Haworth Distinguished Alumni Award (University of Kansas). Some of his professional services are the SEPM co-editor for the *Journal of Paleontology*, President of the Paleontological Society, and associate editor of *Paleobiology*. Additionally, he has served as Chairperson of the Department of Geological Sciences at Indiana University.

Finally, Gary Lane has had a tremendous impact as a teacher. His teaching has excited undergraduate and graduate students about geology and paleontology. Furthermore, Gary's graduate students have prospered from his enthusiastic example of excellence and innovation.

*Citation:* For excellence and originality in the study of fossil crinoids and paleoecology and for encouragement and inspiration to the work of many students and colleagues, N. Gary Lane is awarded the 1995 Raymond C. Moore Medal.

William I. Ausich

### Response from N. Gary Lane

I am surprised and honored to receive the Moore medal. When Woody Wise called me to announce the award, all I could say was, "I can't believe it." I am especially pleased, both because I am the first of Ray Moore's Ph.D. students to receive the medal, and because I join many of my paleontological heroes as a recipient. Because of my close association with Ray Moore, I would like to speak about him.

Moore was not an easy man to work under. He was always very busy and I made an appointment with his secretary any time I needed to talk about my thesis research. The longest I was every able to talk with him was when he had to catch a plane in Kansas City and needed a ride to the airport. I volunteered and had him trapped in the car for 45 minutes. After I finished at Kansas and went to UCLA, he completely changed. When my wife, Mary, and I came to Lawrence he would drop everything and spend a half to a full day talking to me about his and my crinoid research.

Ray loved to edit. Put a sheet of manuscript in front of him and his hand automatically reached for the red pencil. I learned many stylistic idiosyncrasies from him.

I took two courses from Moore while at Kansas. One course, *Geologic Development of the World*, was one of the worst memorization courses I ever had. We had to know the details of every type section of every Phanerozoic stage in western Europe. There was no synthesis or guiding principles involved—just straight memorization. The text was in French, which was a great help for my Ph.D. language exam. The other course, *Field Stratigraphy*, was one of the very best courses I ever took. It was entirely field oriented and we had to work on our own, make interpretations and synthesis of the information we collected. It taught me a lot about how to do field stratigraphy, sedimentology, and paleontology.

Ray and Lillian always came to student parties. We knew to have some bourbon on hand for them. They both would always ask for "two fingers of bourbon and one finger of water."

Ray Moore was my very strong supporter for employment, for grants, and for tenure and promotion. I know that I will always owe him a very great debt of gratitude.

Earle F. McBride

### Francis J. Pettijohn Medalist For Excellence in Sedimentology

On a warm, windless spring day, while walking on a till plain near the Mississippi River, a young student, Earle Francis McBride, decided to add geology to chemistry and do a double major at Augustana College in Rock Island, Illinois, where he was working toward a bachelor's degree. He had no courses in geology. He had enjoyed collecting fossils with a friend along the Mississippi. Suddenly he was captivated by the mysteries of ancient life and rocks. It was a religious conversion, he now says. As a man, McBride would become one of the leading sedimentary petrologists in the world, an authority in sandstone diagenesis and basin analysis, and, while pursuing these major fields of study, an expert on the origin of chert, concretions, and red beds.

Earle McBride was born on the 25th of May, 1932, at Moline, Illinois, one of the Quad Cities—Moline, East Moline, Rock Island, and Davenport—on the Mississippi River at the Illinois-Iowa border. His father was employed as an insurance auditor and later as a realtor, but due to bad health he virtually retired in his early thirties. Earle's mother then became the breadwinner at a time when bread was dear.

Unlike a great many of those who become field geologists, Earle did not collect rocks or fossils at an early age. He was, however, a Boy Scout who camped out under loess bluffs to bake potatoes and sear steak. Unlike Huckleberry Finn, he never explored the Mississippi by canoe and capricious raft. Recently, he did spend a night adrift floating without power in a boat on Laguna Madre in the Gulf of Mexico. No sailor is Earle.

He was a small kid, too light for football, too short for basketball. His sport was tennis, his passion was reading, his indulgence comic books. He adventured with colorful comic heroes through dark worlds, a dreaming, horseless Don Quixote firmly lodged in the till-covered Midwest through the Great War and for five years afterward.

In the Rock Island public schools of the 1940s, Earle prepared for college. He chose to stay at home and attend Augustana. He discovered there the earth's demand on our attention if only we are open to it. In a square-dancing class, he met Donna Hixson and they married several years later. They have two daughters, Suzanne and Deborah, whom I best remember in Italy climbing the Spanish Steps and walking along in the dark with Earle and me to the place where Keats once lived.

In the autumn of 1954, at the age of twenty-two, McBride entered graduate school at the University of Missouri, Columbia. He had graduated from Augustana with honors, a Phi Beta Kappa. At Missouri he studied with Walter Keller, who became a friend. A quarter of a century after earning his M.A. in 1956, Earle was the citationist when the SEPM awarded Keller the Twenhofel Medal.

From Missouri Earle drove east to study with Francis Pettijohn at Johns Hopkins University. He joined a large group of graduate students who, under Pettijohn's supervision, were pioneering basin studies, using primary sedimentary structures and paleocurrent indicators. Earle took on the Ordovician Martinsburg Formation in the central Appalachians—six thousand feet of deep marine black mud deposited in twelve million years. By 1960, having completed his dissertation, he began teaching at the University of Texas, Austin. The Martinsburg work was published in 1962 by the *Journal of Sedimentary Petrology*, his first journal article. In the 33 years since then, 16 other *JSP* papers have followed.

At Texas Earle joined R.L. Folk to give that department two extraordinary sedimentary petrologists to lead them in the remarkable growth of the field from about 1960 to 1985. Both advanced rapidly. Earle became an Associate Professor in 1963, a Professor in 1968. He was named Wilton E. Scott Centennial Professor in 1982 and rewarded with a chair in 1990, the J. Nalle Gregory Centennial Chair in Sedimentary Geology. He served the Department as Chairman, 1980–85.

In his 35-year teaching career, Earle has supervised 12 Ph.D. students and 43 M.A. students. He has reproduced himself 12 times, a result of his attracting many students, especially in the decade 1975–84, and of his skill and diligence in working with them and others before and since. It is a result we will seldom see again in geology, or in the other physical sciences. Study of the earth has diminished. Geology offers few jobs to students. It is also hard to imagine many of us working patiently with 55 graduate students and reading over and over their theses, many of which were certainly not up to the mark in English.

As a teacher and invited lecturer—there have been 103 such invitations—Earle is inspiring and thorough. He lectures simply and impersonally, leaving his presentations with self-deprecating wit. No smokescreen of words or dim slides mar the material.

Geologists who look at outcrops travel, and Earle has been an indefatigable traveler. As I write this and shiver in Salt Lake City, his is chipping away at concretions near Bologna, on his 14th trip to Italy. He has knocked off rock slivers in Mexico, Czechoslovakia, Germany, Austria, Switzerland, France, Yugoslavia, the British Isles, Iceland, Morocco, Egypt, South Africa, New Zealand, Australia, and Japan. In foreign lands, as at home, he works hard—days, nights, Sundays. Such work is for the public's good, though the public does not always value geologic research.

The SEPM has been Earle's society. In 1986, he was named an Honorary Member. He has held several offices: Councilor (1967–68), Secretary-Treasurer (1972–74), President-Elect (1978–79), and President (1979–80). In addition, he's served on 10 committees. Few members have given as much time and enlightened leadership to the SEPM. As we know, these necessary jobs pay poorly.

Earle's publication record is one of the finest in geology. During 33 years, there have been 102 journal and guidebook articles, 70 abstracts, 13 book reviews, and with E.C. Jonas, the book *Diagenesis of Sandstone and Shale*. To name a few of his topics, he has written on flysch, stream and eolian deposits, deltas, beach sands, submarine fans, sandstone classification, stratigraphic problems, red beds, sedimentary structures, radiolarites, trace fossils, compaction, and diagenesis. Late in the 1970s he turned his major attention to compaction, diagenesis, and porosity in sandstones. About a third of his articles treat these subjects. I believe that Earle's most

distinguished research has been in the petrology and diagenesis of sandstones and chert. He also has astutely used stratigraphy and sedimentology to solve broader geologic problems. It is this work that has brought him international renown and honors, in particular, the Pettijohn Medal, which he now receives.

*Citation:* To Earle McBride, for his distinguished research in the petrology and diagenesis of sandstones and chert and for his use of stratigraphy and sedimentology to solve broader geologic problems.

M. Dane Picard

### Response from Earle F. McBride

I express my sincerest gratitude to my nominators, to the awards committee who selected me for this award, to the SEPM Council who approved it, and to my good friend, Dane (Duke) Picard, for his kind words. But most of all I express my gratitude to the person most responsible for whatever professional success I have attained in my career—my wife, Donna. It was she who did far more than her share of the parenting and household chores while I was working on lectures, exams, and research; while I was away on field trips, field courses, and at conferences, and even at times engaged in SEPM affairs. I share this award with her. I also thank my daughters, who not only served as scales for innumerable photos in the hot sun, but adapted to a frequently absent father. I am prouder of them than they know.

Many awardees thank former professors for some of their success. But I got little help from my key professors over the years. I went to them for answers, but all I got was questions! As an undergraduate at Augustana College, I asked Doc Fritof Fryxell about the origin of the Earth. He gave me three hypotheses of origin and asked me which one I favored. I quickly realized that he didn't know the correct answer. I went to the University of Missouri for my M.A. and came under the influence of Walter Keller. He was no better than Fryxell. "Mac, this sandstone has kaolinite cement, but this one has dickite cement. What do these differences mean?" I found that he didn't know the answers, either.

So I decided to go to Johns Hopkins to get some answers from Francis Pettijohn. After all, he had recently completed a world-famous textbook on sedimentary rocks. Well, Pettijohn was no better than my earlier professors. He, too, constantly asked questions. My fellow students and I at Hopkins proposed bringing P.D. Krynine in for a lengthy visit, because he seemed to have some answers about sedimentary rocks. While doing field work for my dissertation, I found in a piece of sandstone a bizarre sedimentary structure that neither I nor my student colleagues could understand. I knew that if I took the structure to Pettijohn, he would just ask me how it formed. So over several days I carefully rehearsed the precise wording that I would use when I showed the structure to Pettijohn. The wording would force a response from him. Finally I developed sufficient courage. I walked with the structure down the hall to his office, turned into it, and took only two steps when Pettijohn looked up from his desk and said, "Hey, that's sure an odd structure, what is it and how in the world did it form?" So you see, I got little help from my professors.

When I got my Ph.D., I became an instructor at the (then) Geology Department of the University of Texas. The chief reason was that it was the only job offer I had. The sedimentary geology program at UT needed to be expanded, and Chairman Sam Ellison wanted to add a "Francis J. Pettijohn man" to balance the ideas of their "Paul D. Krynine man," Bob Folk. I was made an offer on the basis of a phone conversation between Pettijohn and Ellison. There was no national advertisement, no on-site interview, no phone interview, no letter of interrogation, nothing. My decision to join UT—Austin was the third best decision of my life.

One key to success is to work with bright, eager students who frequently make exciting discoveries and share them with you. Another is to have brilliant colleagues willing to share their time, expertise, and ideas with you. Over the years in Austin I have greatly benefited from the counsel and companionship of numerous colleagues, especially Bob (Luigi) Folk, Lynton Land, and Kitty Milliken. Luigi Folk and I spent several summers pondering the origin of bedded chert. From our encounter I learned how to use a hand lens, how to speak Italian, and the pleasure and value of looking at weird and unusual sedimentary rocks. And I almost won one of his baseball games, played with dice, before the game was cancelled because of a riot. Lynton has graciously shared ideas, generated countless isotopic values for me (and my students), and counseled me on the judicious use of them and other geochemical data. He is remarkably generous with his time and ideas. Kitty has provided invaluable insight to many issues, in part because of her ability to see problems at all scales, from the minute to the global. In addition, her upbeat outlook is a constant inspiration.

For about 10 years, Duke Picard and I have studied stream and beach sands, calcite-cemented concretions, pastries, wine, and ice cream in Italy. In addition to providing broad insight into our geologic studies, Duke has tried to expand my prose and poetry reading beyond the *JSP* (oops, *JSR*) and *Mad Magazine*. His colorful essays, in the *Journal of Geological Education*, about our travels in Italy have provided valuable educational messages for readers of diverse backgrounds. His friendship and counsel on many matters are greatly appreciated.

In addition I acknowledge the support of my parents and other caring relatives, the Department of Geological Sciences of UT—Austin, and, of course, my supervising professors.

Who can explain to others the fascination that sedimentary rocks hold; or the thrill of being the first person to see and interpret an interesting feature in a core, thin section, SEM or other device; or the joy and satisfaction of creating a report of one's discoveries? The past 40 years have been an incredibly exciting time to study sedimentary rocks, and I am thankful for the privilege of having been part of this talented and dedicated peer group, of which the members of this society constitute a major part.

Keene Swett

Outstanding Paper Award, 1993

*PALAIOS*

Keene Swett, B.S. (1955) Tufts University, M.S. (1961) University of Colorado, Ph.D. (1965) University of Edinburgh (Scotland), joined the faculty in the Department of Geology at the University of Iowa in 1966. His contributions to teaching, research, and administration have earned him respect from and lasting friendships with innumerable students, faculty, and research colleagues. His love of the outdoors and his lifelong dedication to field studies and field-oriented research in sedimentology and sedimentary petrology has inspired many students. His early research centered on Cambro-Ordovician strata of the north Atlantic region, including his Ph.D. work on the Scottish succession. Later research included coeval successions in Newfoundland, central East Greenland, and Svalbard. In 1980 he joined forces with Andy Knoll to continue research in the Arctic, albeit slipping down [stratigraphically speaking] into late Proterozoic successions. With close field and laboratory collaboration, Swett and Knoll have examined Neoproterozoic successions in Spitsbergen, central East Greenland, and Canada's Northwest Territories on Baffin Island, Somerset Island, and Victoria Island. Their work, in collaboration with others, has already garnered them two previous "Best Paper" awards from the Paleontological Society for their contributions to *Journal of Paleontology*. Keene Swett has recently entered a phased retirement agreement with the University of Iowa, but continues his teaching and research on a half-time basis.

*Citation:* Selection of the study of Neoproterozoic carbonates by Keene Swett and his co-authors for the *PALAIOS* Best Paper award recognizes an important contribution toward understanding pre-Phanerozoic biochemical sedimentation. Furthermore, it is an elegant tribute to the importance of interdisciplinary international collaboration in research.

Brian F. Glenister

Ian J. Fairchild

Outstanding Paper Award, 1993

*PALAIOS*

This award is in recognition of Ian Fairchild's contribution to the paper "Calcified microbes in Neoproterozoic carbonates: implications for our understanding of the Proterozoic/Cambrian transition," which he co-authored with Andy Knoll and Keene Swett. The paper beautifully illustrates microbial textures in carbonates from Spitzbergen, and the discussion centers on the role of changing ocean composition on the preservation of such structures in the rock record.

Ian Fairchild graduated from Nottingham University with First Class Honours in 1974 and obtained his Ph.D. there in 1978. He was employed as a Demonstrator at Cambridge University from 1977 to 1980 as been a Lecturer, and is now Senior Lecturer, in the Department of Earth Sciences at Birmingham University.

Ian's dual interests in Precambrian carbonates and in carbonates associated with glacial deposits started with his Ph.D. project on the Late Precambrian Bonahaven Formation on the Scottish Island of Islay. Ian has subsequently educated us all by pointing out that carbonates and glaciers are not mutually exclusive! His work has expanded globally and stratigraphically and includes studies of carbonates in Recent glacial terrains, on the controls on cathodoluminescence in carbonates, and on the role of diagenesis in the production of apparent secular isotopic variation in Proterozoic oceans. Ian is a first-rate petrologist and geochemist with an enviable eye for detail and for elucidating a good story from the material he is working on. He has worked in Scotland, Spitzbergen, China, Greenland, Mauritania, the Rockies, and the Alps. His publications span from the Proterozoic to the Recent, with notable bimodality! He is currently engaged in field and laboratory studies of fluid-rock and ice-rock interaction in glacial settings and in paleoclimatological investigation of cave deposits.

Ian is a dedicated and innovative teacher. He has served as an editor of the *Journal of the Geological Society* of London, and a member of NERC and Royal Society Committees. He has contributed to the text on *Techniques in Sedimentology*, and has written several field guides. In recognition of his contribution to our science he



has been awarded the Lyell Fund of the Geological Society. I suspect that more good things are yet to come!

*Citation:* In recognition of your contribution to the excellent study of calcified microbes in Neoproterozoic carbonates, and for making us think about the role of ocean compositions in controlling fossil preservation.

Jim Marshall

Andrew H. Knoll  
Outstanding Paper Award, 1993  
*PALAIOS*

Andy Knoll is an internationally renowned biologist and geologist, who enjoys field work in remote areas and who sprinkles references to modern and classical literature throughout his scientific publications. His extensive research interests include Precambrian microbes and their ecosystems, the origin and early evolution of eukaryotes, Precambrian global change, Proterozoic chemostratigraphy and biostratigraphy, and the evolution of Phanerozoic vascular plants. The global and highly interdisciplinary approach that characterizes his more than 130 publications is exemplified in the paper we are honoring today.

Andy Knoll is of Pennsylvania Dutch origin, and received his B.A. in geology from Lehigh University in Pennsylvania in 1973. Four years later he had obtained his M.A. and Ph.D. in geology from Harvard University, where he studied under the legendary Elso Barghoorn. Upon graduation, Andy taught geology at Oberlin College until 1982, when he joined the faculty at Harvard University. Within a decade, he achieved the rank of Professor and Chair of the Department of Organismic and Evolutionary Biology and Professor in the Department of Earth and Planetary Sciences.

Andy is our first two-time winner of the Best Paper Award in *PALAIOS*, having previously won this award in 1989 for his paper on secular variations in the deposition of chert. He has also won the Journal of Paleontology Best Paper Award twice, and twice received "Honorable Mention" from that journal. He was honored with the Charles Doolittle Walcott Medal of the National Academy of Sciences and the Charles Schuchert Award of the Paleontological Society, and has been inducted into the American Academy of Arts and Sciences and the U.S. National Academy of Sciences.

Andy's contributions to science extend considerably beyond his publications. He has served on the editorial boards of six journals, and on numerous federal and international scientific boards and commissions. He edited a tribute volume to Preston Cloud entitled *Proterozoic Evolution and Environments*, and he co-organized a Nobel Symposium on "Early Life on Earth" and a GSA Penrose Conference on "Late Proterozoic Plate Tectonics and the Dawn of the Phanerozoic." He is Chair of the IUGS Working Group on the Terminal Proterozoic System, which is responsible for formally defining a new geological period to characterize this critical interval in Earth history.

*Citation:* In recognition of Andrew H. Knoll, a renaissance man who has so ably integrated paleontology, ocean and atmospheric chemistry, carbonate sedimentology, and tectonics to elucidate the early history of life on Earth.

Guy Narbonne

Patrick J. Lehmann  
Outstanding Paper Award, 1993  
*Journal of Sedimentary Petrology*

Patrick came to work for Exxon Production Research Company in 1978 after completing his Masters in geology at the University of Wisconsin under Lloyd Pray. Since beginning his career with Exxon, Patrick has worked on production and exploration-oriented studies around the world—including the Middle East, the U.S. Gulf Coast, west Texas, and Indonesia. In addition, he has done extensive field work and research in the Permo-Carboniferous of the Barents Sea, the Paleozoic of west Texas, and the modern carbonates of the Caribbean. After several years as the supervisor of the research lab's research and technical service work in the areas of carbonate sequence stratigraphy and carbonate diagenesis, Patrick is currently serving as an exploration advisor with Exxon Ventures (C.I.S.).

*Citation:* In recognition of outstanding technical contributions by Patrick J. Lehmann, who, in collaboration with Robert Goldhammer and Paul Dunn, has made advances in our understanding of carbonate sequence stratigraphy.

John Mitchell

Paul A. Dunn  
Outstanding Paper Award, 1993  
*Journal of Sedimentary Petrology*

Paul Dunn grew up in the metamorphic terranes of New Hampshire and Vermont. An interest in sedimentary geology was kindled during Dartmouth College's field

program, which included visits to Lake Powell and the Goosenecks of the San Juan. After graduating from Dartmouth in 1981 Paul took a job as a researcher for the National Geographic Society in Washington D.C. During his two-year stint, he worked on a plate tectonics and historical geology book entitled *Exploring Our Living Planet* by Robert Ballard and on *A Field Guide to the Birds of North America*. While the latter project was a pleasure to research, it was a bit removed from Paul's main geological interests. Saying good-bye to our nation's capital and a steady job, Paul enrolled in the University of Michigan, where he studied the vagaries of carbonate diagenesis and the application of stable isotope techniques under the supervision of K.C. Lohmann (1983–85). Paul's Master's thesis examined secular variation in  $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$  of Devonian-Carboniferous marine carbonates from Belgium and western Ireland. After marrying Marguerite Suarez of Export, Pennsylvania, Paul entered the Ph.D. program at the Johns Hopkins University in Baltimore, Maryland (1985–89). It was there that his advisor, Lawrence Hardie, showed Paul the "true path" of comparative sedimentology as a tool for understanding ancient carbonates. At that time, students at Hopkins were involved in a joint program co-directed by Alfonso Boellini (University of Ferrara, Ferrara, Italy) with the goals of understanding the controls on platform morphology and diagenesis of a middle Triassic buildup, the Latemar massif, in the Dolomites mountains of northeastern Italy. Working in the field with Dr. Hardie and fellow student Bob Goldhammer, Paul was impressed by the well-developed stratigraphic cyclicity visible in the peaks of the Latemar. These field observations sparked an interest in computer modeling of carbonate platform evolution. Paul's thesis, "Diagenesis and Cyclostratigraphy: an Example from the Middle Triassic Latemar Platform, Dolomites Mountains, Northern Italy," was equally split between a field-based stratigraphy and diagenesis study and computer simulation of depositional cyclicity. Since 1989 Paul has been employed at Exxon Production Research Company in Houston, Texas, where he has spent most of his time unraveling the architectures of the Miocene carbonate reservoirs of Indonesia.

*Citation:* In recognition of Paul Dunn, who is remarkably talented in a diverse range of geologic studies—from the details of carbonate sedimentation to the solution of structural and stratigraphic problems with 3-D seismic data.

Dan Lehrmann

Robert K. Goldhammer  
Outstanding Paper Award, 1993  
*Journal of Sedimentary Petrology*

Bob Goldhammer spent his childhood in the suburbs of Boston and later attended Colgate University in Hamilton, New York, where he received his undergraduate degree in Geology in 1979. Bob went on to pursue a Master's degree at the University of Oklahoma. There he worked with Dr. R.D. Elmore on a thesis that was aimed at understanding the sedimentologic and diagenetic records of high-frequency subaerial exposure in the Pennsylvanian Black Prince Limestone of Arizona. After obtaining his Master's degree in 1982, Bob spent seven months working at the Exxon Production Research Company in Houston, Texas, where he was a member of the ARAMCO carbonate reservoir analysis group. Bob then continued his research at Johns Hopkins University in Baltimore, Maryland, into the stratigraphy of shallow water carbonates. While at Hopkins his research followed two divergent pathways: (1) the facies stratigraphy and compaction/burial history of Cambro-Ordovician carbonates of Western Maryland, and (2) the stratigraphic analysis of middle Triassic carbonates in the Dolomites mountains of northern Italy. Under the guidance of Dr. Lawrence Hardie, Bob made significant progress and published on both topics, but when it came time to decide on his dissertation topic he chose the Dolomites. The Hopkins sedimentology group benefitted greatly in its Italian work from an alliance with the University of Ferrara and Drs. Alfonso Bosellini and Carlo Doglioni. Bob concentrated his efforts on unraveling the stratigraphy of the platform facies of the middle Triassic Latemar platform. The Latemar was an ideal area for study as it provided continuous, accessible exposures of limestone that had largely escaped the dolomitization seen in adjacent platforms. Using field observations, graphical techniques, forward modeling, and statistical analysis, Bob discovered several distinct patterns encrypted in the cyclic stratigraphy of the Latemar, which he interpreted to be the record of composite eustatic sea level change. For this work Bob received his Ph.D. in May 1987. After graduation Bob took a job with the Shell Research Center in Bellaire, Texas. One year later he joined the Exxon Production Research Company's carbonate reservoirs group, where he continues to work at present. While at Exxon he has been involved in a variety of projects, including sequence stratigraphic analyses of the late Proterozoic section of the northern Alaska, the Lower Ordovician of West Texas, the Pennsylvanian of the Paradox Basin, and the Mesozoic-Cenozoic of Mexico and Belize.

*Citation:* To my friend and co-author, Bob Goldhammer, in recognition of his contributions to the field of carbonate stratigraphy.

Paul A. Dunn