## SOCIETY RECORDS AND ACTIVITIES

### SEPM 1992 ANNUAL MEETING

Peter R. Vail accepts the Twenhofel Medal from President Gail M. Ashley.

Raymond L. Ethington accepts the Honorary Membership plaque from President Gail M. Ashley.

Orrin H. Pilkey accepts the Honorary Membership plaque from President Gail M. Ashley.

Roger G. Walker accepts the Honorary Membership plaque from President Gail M. Ashley.

JOURNAL OF SEDIMENTARY RESEARCH, VOL. B64, NO. 4, NOVEMBER, 1994, P. 586–599
 1073-1318/94/0B64-586/$03.00

John D. Milliman accepts the Shepard Medal from President Gail M. Ashley.

Paul Potter accepts the Pettijohn Award from President Gail M. Ashley.

Francis J. Pettijohn receives a copy of the medal named in his honor from President Gail M. Ashley.


Roger Buick accepts the award for the Outstanding Paper in *PALAIOS* from President Gail M. Ashley.


Richard D. Elmore accepts the Excellence in Oral Presentation Award from President Gail M. Ashley.

Robert G. Loucks (center) and C. Robertson Handford (right) accept the Excellence of Poster Session Award from President Gail M. Ashley.

Dana S. Ulmer and Peter A. Scholle accept the Excellence of Poster Session Award from President Gail M. Ashley.

SEPM Council, 1992–93

*Seated, left to right:* Stephan A. Graham, Councilor for Sedimentology; Emily L. Stoudt, Secretary-Treasurer; Harry E. Cook, President; Sherwood W. Wise, Jr., President-Elect. *Standing, left to right:* S.J. Mazzullo, Councilor for Research Activities; David J. Bottjer, Editor, *PALAIOS*; Gregory H. Blake, Councilor for Paleontology; Harvey Blatt, Editor, *Journal of Sedimentary Petrology.* Not Pictured: Barbara H. Lidz, Editor, Special Publications.

# REPORT AND MINUTES OF THE SIXTY-SIXTH ANNUAL MEETING OF THE SEPM (SOCIETY FOR SEDIMENTARY GEOLOGY)

The Sixty-Sixth Annual Meeting of the SEPM (Society for Sedimentary Geology) was held in Calgary, Alberta, Canada, 21–24 June 1992, in conjunction with the Annual Convention of the American Association of Petroleum Geologists. G.M. Ross and S.L. Dorobek convened the SEPM Research Symposium "Stratigraphic Sequences in Foreland Basins". Other technical sessions of the Society's program consisted of papers on carbonate platform development, facies and cyclicity; clastic diagenesis; evolution of pore systems in carbonate rocks with progressive burial; recognition and facies of valley fills; Devonian carbonate sequence analysis; shelf and shoreline sandstones; reef initiation and development; controls on fluvial sedimentology and stratigraphy; and slope-to-basin sedimentation. Poster sessions presented at this year's meeting included sessions on lacustrine sedimentation; compaction and lithification of shales; geophysical characterization of clastic strata; evaporates; biostratigraphy and sequence analysis; cretaceous sequence stratigraphy; transgressive systems tracts; deep-water carbonates; and hydrocarbon systems.

At the President's Reception and Awards Ceremony on Tuesday evening, the Society recognized the following individuals: Roger Buick, recipient of the award for Outstanding Paper in *PALAIOS*; Dennis K. Hubbard, Arnold I. Miller and David M. Scaturo, recipients of the award for Outstanding Paper in the *Journal of Sedimentary Petrology*; Raymond L. Ethington, Roger G. Walker, and Orrin H. Pilkey, recipients of Honorary Membership; Paul Potter, recipient of the first Francis J. Pettijohn Medal; Raymond C. Gutschick, recipient of the Raymond C. Moore Medal; John D. Milliman, recipient of the Francis P. Shepard Medal; Peter Vail, recipient of the William H. Twenhofel Medal. Francis J. Pettijohn was also honored at the reception with a copy of the medal named in his honor.

## ANNUAL BUSINESS MEETING
## Tuesday, 27 April, 1993
## New Orleans, Louisiana

More than 100 members attended the 1992 SEPM Annual Business Meeting, Luncheon, and Distinguished Lecture. The Annual Business Meeting was called to order by President Gail M. Ashley at 12:30 p.m. Secretary-Treasurer Emily Stoudt stated that copies of the 1991 Annual Business Meeting Minutes had been distributed and asked for approval. The Minutes were approved. Gail M. Ashley presented the presidential report and reviewed some of the important aspects of the year, including establishment of a new Research Group on sequence stratigraphy. Secretary-Treasurer Stoudt reported on the continued improvement of the Society's financial condition and expressed the Council's appreciation to the Headquarters and Business Committee and all other SEPM Committees who had contributed to sustaining the turnaround. The Distinguished Lecture was delivered by Philip Currie, Head of Dinosaur Research at the Royal Tyrell Museum of Paleontology (Drumheller) speaking on "Ancient Dragons: The Dinosaurs of Canada and China". President Ashley introduced the new officers of the Society and presented the gavel to Harry E. Cook. President Cook discussed his goals for SEPM during the coming year and requested the input of all SEPM members in planning for the future. There being no further business to conduct, the meeting was adjourned at 1:30 p.m.

## REPORT OF THE PRESIDENT
## *(Gail M. Ashley)*

The Society initiated many actions this past year, most of which resulted from the recommendations of the Society's committees. Many of these committees' activities are summarized below by their chairpersons.

*Membership Committee (Stephan A. Graham).*—Because members are the lifeblood of the SEPM, the decline in membership in recent years is a matter of concern, although, from a historical perspective, current membership in the Society is comparable to levels typical of the period prior to the oil-price boom of the early 1980s. In order to stabilize or reverse the decline, the Membership Committee in 1991 focused on recruitment/retention of certain key groups identifiable through Headquarters' data base. SEPM's Campus Representative Program, formerly under the stewardship of David Houseknecht, is now administered

by Elizabeth Burton, who also serves as SED Award Coordinator. In this capacity, she has coordinated the Society's recognition of outstanding students of sedimentary geology. Despite widespread cutbacks in the petroleum industry, petroleum geoscientists remain a principal component of SEPM membership. Therefore, the Membership Committee is instituting an Industrial Representative Program (coordinated by Steve Graham) that engages volunteers among industrially employed SEPM members to serve as the Society's representatives within major companies. During 1991, a number of individuals who have interests in sedimentary geology, or use SEPM services but are not SEPM members, were contacted to be made aware of the benefits of membership. These included IAS members, SEPM Section members, SEPM Research Group Members, and attendees of midyear meetings. Present international efforts focus on a trial program in which complimentary SEPM membership is awarded to prominent and active sedimentary geologists in eastern Europe, the Commonwealth of Independent States, and China. A country representative program analogous to the campus and industrial representative programs will be developed in 1992.

*Publications Committee (Barbara H. Lidz).*—Special Publications *Origin, Diagenesis, and Petrophysics of Clay Minerals in Sandstone* (No. 47) and *Quaternary Coasts of the United States: Marine and Lacustrine Systems* (No. 48) will be released in 1991. In addition, Council gave approval to the title *Incised Valley Systems: Origin and Sedimentary Sequences* which will be coming out in 1994. Concepts in Sedimentology and Paleontology (Vol. 3) *The Three-Dimensional Facies Architecture of Terrigenous Clastic Sediments and its Implications for Hydrocarbon Discovery and Recovery* was released in 1991. The organizers of the 1991 Research Symposium on Stratigraphic Sequences of Foreland Areas were encouraged to prepare a final proposal for publication by SEPM.

*Publications Policy Committee (Lee F. Krystinik).*—In 1992 the Publications Policy Committee recommended a number of changes in publications procedures which Council approved. Chief among these changes was to streamline the approval process by delegating to the various editorial committees overseeing SEPM publications the authority to award final approval, provided the proposal is prepared in accordance with established procedures approved by Council, and is accompanied by a completed budget form which indicates the project can reasonably be expected to break even in three years. The Committees will report all decisions and results to Council, who will review the results in two years and monitor the procedure's effectiveness. Council also agreed to delegate to the Executive Director, in consultation with the President and the Chairman of the Publications Policy Committee, authority to authorize the reprinting of SEPM publications. Council agreed to permit the inclusion of color, foldouts, pocketed material, and pages over the page limit as a budgeted expense of any volume when the material is significant to the purpose of the volume, when authors are unable to locate funding for the material from other sources, and when doing so will not result in a price so high as to reduce the overall distribution. Council will also allow reimbursement of expenses for typing and text preparation when doing so results in a cost advantage for the volume. Council also revised the statute of limitations for submitting approved proposals to allow the Special Publications Editor authority to grant a ninety-day extension. Council agreed to a number of recommendations designed to encourage additional publications and expand the publications program, and to look into alternative publishing methods and technologies, in addition to encouraging all authors to submit their material on computer diskette.

*Continuing Education Committee (William A. Morgan).*—SEPM's 1991–92 Continuing Education Program had a successful year, although registration was down from the previous year. A total of 170 people attended the four courses offered in 1991–92, compared to 231 registrants in the four courses presented in the previous year—a decrease of 26%. Two new Continuing Education volumes were published this year, one to accompany a short course on Devonian–Early Mississippian Carbonates of Canada, and the other as part of a core workshop in ichnology. The short courses presented this year were "Modern and Ancient Deep-Sea Fan Sedimentation", taught by Hans Nelson and Tor Nilsen; "Sequence Stratigraphy and Biostratigraphic Patterns: An Integrated Approach to Defining Basin History", presented by John Armentrout; and "Devonian–Early Mississippian Carbonates of the Western Canada Sedimentary Basin: A Sequence Stratigraphic Framework", taught by Frank Stoakes, Jack Wendte, and Clarence Campbell. One core workshop was held on "Applications of Ichnology to Petroleum Exploration". George Pemberton was the organizer. Generous contributions to the Student Education Program were received from Conoco Inc., Shell Oil Company, and several individual contributors. Contributions such as these enable SEPM to offer greatly reduced registration fees to students attending continuing education programs, and also to offer courses specifically oriented to the needs of sedimentary geology students.

*Committee on K–12 Earth Science Education (Heather Macdonald).*—The Committee on K–12 Earth Science Education is working both to increase the involvement of sedimentary geologists in earth science education and to provide hands-on activities that geologists and K–12 teachers can use in the classroom. This year our major project was to work with precollege teachers, using activities from the two books we have produced, *A Sedimentary Geologists' Guide to Helping K–12 Earth Science Teachers* and *Hands-On Geology: K–12 Activities and Resources.* Several committee members gave hour-long workshops at National Science Teachers Association (NSTA) meetings. David Davies conducted a workshop "What was the Ancient Environment? Hints from Fossils and Rocks" at a regional meeting in New Orleans. Steve Roof and Lauret Savoy conducted a workshop "Fossil Excavation and Quicksand Model: Innovative Earth Science Activities" at the National meeting in Boston. Although the direct impact of such workshops is difficult to assess, the enthusiastic response by teachers suggests they were effective. We have written an article for each of the SEPM newsletters to keep SEPM members informed about committee activities and to encourage them to get involved in earth science education.

*Pettijohn Design Committee (Ray Mitchell).*—The design of the Pettijohn Medal for excellence in sedimentology was completed this last year, and the first medal was manufactured and presented to Paul Potter at the SEPM Annual Meeting. A copy of the medal was also presented to Francis Pettijohn. Special thanks are due Conoco Inc. for supporting this committee's activities.

*Ad Hoc Committee on Volunteer Participation (Richard A. Davis, Jr.).*—The Society identified a need for increased volunteer assistance from the membership during the past year. Headquarters indicated that the best first step for this type of help would be in conjunction with various regional, local, and other professional meetings where Society presence would be beneficial. The obvious avenue for this type of activity is through the Sections of the Society. An organizational scheme of volunteer help is now in place with a representative from each Section and a volunteer coordinator, John Shepard of Shell Oil Company. Representatives on this volunteer board then coordinate any presence of the Society at local and/or regional meetings through Headquarters. To date there has been only modest use of this service but it is working well based on feedback from one or two Section meetings. The long-term future of this ad hoc committee is as yet undecided, both as to its role in the Society and its lifetime. The present Council will address this at upcoming meetings.

*Developing Countries' Libraries Committee (Abhijit Basu).*—Several milestone events mark the 1991 calendar of the Developing Countries' Libraries Committee and its working. The most remarkable achievement has been to set up a computerized data base of the information on libraries in developing countries. We now have information on about 80 libraries in our data base and a few are yet to be entered. One aspect of the Committee's work has been slowed because the Smithsonian Institution has been forced to discontinue their foreign mailing service. This means that the donors of books, journals, maps, etc., or their organizations now have to bear the costs of international mail. The Committee is looking into the possibility of using diplomatic missions of developing countries for the transportation of books, etc. The Committee added the State University of Moscow, Russia, and Presidency College, India, to our growing list of libraries to receive the *Journal of Sedimentary Petrology* free of charge. The Committee also sent SEPM books to 31 libraries during this period. With the break-up of the former Soviet Union and the decline of currency values of several East European countries, the Committee expects to receive and act on several requests during the 1992 year. Finally, the Committee has been approached by the AAPG and the GSA to assist them in setting up their own programs to donate books and journals to libraries and individuals in developing countries.

*AAAS Section E—Geology and Geography (Gerald M. Friedman).*—Highlights of the business meeting included several actions: 1. The mechanics of the election of fellows of the Association were amended; 2. The boundary of the Pacific section was changed; 3. The scheduling of the meeting of the Committee on Council Affairs was changed. This committee selects the agenda for the Council and screens proposed resolutions before they come to the Council; 4. The Section of Geology and Geography will have a membership committee to recruit new members who are active in the earth sciences to the Association.

A report was presented on the framework for the 1993 AAAS meeting in Boston. The report of the Scientific Program Committee for this upcoming meeting did not include a geologist. This program committee is not involved with the sections. Yet it develops the program for the next annual meeting. A debate ensued on the role of the section in preparing the annual meeting. The section members objected to the functioning of this committee, and will make their displeasure known to the Council of the Association. For next year's meeting in Boston the proposed topic on the program was titled Global Change and Hazards.

*1993 Annual Meeting (Brian J. O'Neill).*—The 1993 meeting will be held in New Orleans, LA, 25–28 April 1993 in the Ernest N. Morial Convention Center. Alan Melillo (SEPM Technical Program Chairman) and William Ward (SEPM Poster Session Chairman) are planning an exciting SEPM program with 16 oral

and 25 poster sessions including several joint sessions with AAPG. SEPM will sponsor a 3-day short course on integrated stratigraphic analysis and a paleokarst core workshop. The Gulf Coast Section-SEPM plans two field trips (Early Tertiary sequence stratigraphy in Alabama and Modern carbonates in Belize).

*1992 SEPM Theme Meeting, Ft. Collins, Colorado (Frank G. Ethridge, General Chairman).*—During 1991, the Coordinating Committee for the 1992 SEPM Theme Meeting was formed and initial planning was undertaken for the meeting. The Committee met approximately once per month to plan the technical, oral, and poster programs and field trips. The budgeting process was initiated and a call for papers for the meeting was mailed to all SEPM members, all RMAG members in the U.S. and most university geology departments in the Rocky Mountain and surrounding states. Also during this period the process of formulating a contract between SEPM and Colorado State University was initiated. Contracts were made with the 1991 Committee and a delegate was sent to this meeting to observe all activities related to the conduct of the meeting.

## EDITOR'S REPORT
### *Journal of Sedimentary Petrology*
### *(Harvey Blatt)*

During 1991 we published: 69 articles (plus 11 in the December Special Issue), 10 methods papers, 4 discussions, 1 perspective paper, 1 short note, 34 book reviews and 6 sedimentology photos. The mean page length of articles was 12.0, which was an increase over 1990 of 0.3 page. Based on home institutions of first and sole authors, published papers in all categories came from 58 countries, with those from the U.S. and Canada accounting for 65% of the total. This was a 13% decrease of U.S./Canadian authors over 1990. Submissions dropped sharply in 1991: 143 regular articles, 15 methods, 5 discussions and 1 perspective, for a total of 164. This compares with 208 articles, 11 methods, and 15 discussions and 1 perspective in 1990 (235 total). The backlog held constant during the first part of the year and started to drop in mid-1991. However, the addition of the Special Issue at the end held the backlog decline "at bay" until the beginning of 1992. The submittal-to-publication interval (of regular manuscripts) remained about the same. The average time from acceptance to publication was 9.5 months (excluding the Special Issue manuscripts) and submission to publication was 15.2 months in 1990, and averaged 17.5 in 1991. During 1991, 32 authors and/or sponsoring institutions contributed a total of $24,456 towards page charges. This compares with $21,181 given by 37 contributors in 1990, $21,557 paid by 34 contributors in 1989 and $34,805 given by 37 contributors in 1988. The number of contributors has stayed fairly constant but the total contribution amounts have risen somewhat. University systems and governmental agencies were the heaviest contributors in 1991 as in 1990.

## EDITOR'S REPORT
### *PALAIOS*
### *(David J. Bottjer)*

The end of 1991 proved to be a benchmark for *PALAIOS*, for the December issue was the first one to be printed and mailed on time in over two years. With the transition in Editors and change of printers to Allen Press, *PALAIOS* had fallen behind by six months, and catching up proved to be no easy task. We were able to get on time because there has been a steady increase in submission of manuscripts to *PALAIOS*, with the 1991 totals at 86 as compared to 60 for 1990. Of course, because SEPM budgets for 600 pages of *PALAIOS* each year, this has led to an increase in our rate of rejection of manuscripts, which currently is almost 50%. Continuing the tradition of printing one Theme Issue each year, the June *PALAIOS* was titled "Ichnofabric and Ichnofacies" and was co-edited by Tony Ekdale and John Pollard. This issue has been very well received, and several hundred extra copies have been sold to nonsubscribers. *PALAIOS* has become increasingly popular among international authors; nine of the 34 research reports and two of the six research letters published in 1991 had an international first author, for a total of over 25% of papers coming from international sources. ONLINES have also continued to be a very popular feature of the journal, with 1991 topics including biostratigraphy, paleoclimate, taphonomy, micropaleontology, and mass extinctions. By publishing on time, *PALAIOS* completed its extended period of editorial and printer transfer. *PALAIOS* entered 1992 in excellent shape, with a backlog of 8–10 months between acceptance of a manuscript and its appearance in an issue of the journal. Plans for the future are to maintain this relatively short backlog and to fine-tune the rate of acceptance as necessary to achieve this goal. Because of reader demand, *PALAIOS* will also continue to publish one Theme Issue each year. Thus, *PALAIOS* finished 1991 as a young journal with a new level of maturity, poised for even greater growth towards serving the paleontological community over the next few years.

## REPORT OF THE SECRETARY-TREASURER AND THE EXECUTIVE DIRECTOR
### *(Michael E. Field and Robin Dixon)*

The Society continued to improve its financial position during 1991, finishing the year of financial surplus of $104,846. The net worth of the Society as measured by its Fund Balance rose to $752,755, up 16% over 1990. Operating income at $46,869 increased from $14,048 in 1990. This increase was partially due to the Continuing Education Program ending the year with a surplus. Long-term investment funds grew from $313,972 to $421,246. In 1991 our operating revenue was $1,089,186, up 13% from 1990 revenue of $962,091. Operating expenses increased 9% to $1,042,317 from 1990's $948,043.

## SEPM (Society for Sedimentary Geology) AND SUBSIDIARY
## CONSOLIDATED BALANCE SHEETS

| | Year ended 31 December 1991 | 1990 |
|---|---|---|
| **ASSETS** | | |
| CURRENT: | | |
| Cash and cash equivalents | $ 159,073 | $ 322,139 |
| Short-term investments | 297,000 | 149,000 |
| Accounts receivable, less allowance of $1,337 for possible losses | 14,357 | 16,171 |
| Inventory | 200,345 | 187,216 |
| Prepaid expenses | 35,674 | 30,437 |
| Due from affiliate | 6,164 | 1,877 |
| TOTAL CURRENT ASSETS | 712,613 | 706,840 |
| FURNITURE AND EQUIPMENT less accumulated depreciation | 55,982 | 41,265 |
| OTHER: | | |
| Investments | 421,246 | 313,972 |
| Land | 67,767 | 67,767 |
| | 489,013 | 381,739 |
| | $1,257,608 | $1,129,844 |

| | Year ended 31 December 1991 | 1990 |
|---|---|---|
| **LIABILITIES AND FUND BALANCE** | | |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 75,647 | $ 65,926 |
| DEFERRED INCOME | 429,206 | 416,009 |
| COMMITMENT | — | — |
| FUND BALANCES: | | |
| General—unrestricted | 670,674 | 647,909 |
| New Frontiers—restricted | 82,081 | — |
| TOTAL FUND BALANCES | 752,755 | 647,909 |
| | $1,257,608 | $1,129,844 |

## SEPM (Society for Sedimentary Geology) AND SUBSIDIARY
## CONSOLIDATED STATEMENTS OF INCOME AND FUND BALANCE

| | Year ended 31 December 1991 | 1990 |
|---|---|---|
| INCOME: | | |
| Dues | $ 105,058 | $ 108,560 |
| Publications | 214,983 | 198,141 |
| *Journal of Sedimentary Petrology*—subscriptions, royalties, and other | 392,625 | 365,321 |
| *PALAIOS*—subscriptions, royalties, and other | 169,917 | 132,306 |
| Continuing Education | 130,962 | 98,820 |
| Meetings, conferences, and field trips | 58,116 | 39,300 |
| Membership activities | 17,525 | 19,643 |
| Total income | 1,089,186 | 962,091 |
| COSTS AND EXPENSES: | | |
| Publishing costs—*Journal of Sedimentary Petrology* | 232,956 | 202,243 |
| Publishing costs—*PALAIOS* | 110,466 | 79,004 |
| Publications | 100,751 | 113,106 |
| Continuing Education | 74,547 | 60,392 |
| Meetings, conferences, and field trips | 53,255 | 31,842 |
| Membership activities | 51,436 | 63,845 |
| General and administrative | 418,906 | 397,611 |
| Total costs and expenses | 1,042,317 | 948,043 |
| Operating income | 46,869 | 14,048 |
| OTHER INCOME—Interest | 57,977 | 53,186 |
| NET INCOME | 104,846 | 67,234 |
| FUND BALANCES, beginning of year | 647,909 | 580,675 |
| FUND BALANCES, end of year | $ 752,755 | $ 647,909 |

## SEPM (Society for Sedimentary Geology) AND SUBSIDIARY
## CONSOLIDATED STATEMENTS OF CASH FLOWS

| | Year ended 31 December 1991 | 1990 |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Net income | $ 104,846 | $ 67,234 |
| Adjustments to reconcile net income to net cash (used in) provided by operating activities: | | |
| Depreciation | 18,824 | 10,954 |
| Provision for losses on accounts receivable | 1,995 | 5,272 |
| Changes in assets and liabilities: | | |
| (Increase) in short-term investments | (148,000) | (149,000) |
| (Increase) decrease in accounts receivable | (181) | 884 |
| (Increase) in due from affiliate | (4,287) | (1,877) |
| (Increase) decrease in inventory | (13,129) | 37,206 |
| (Increase) decrease in prepaid expenses | (5,237) | 4,459 |
| Decrease in other receivables | — | 4,799 |
| Increase in accounts payable | 9,721 | 52,923 |
| (Decrease) in due to affiliate | — | (6,392) |
| Increase in deferred income | 13,197 | 19,172 |
| NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES | (22,251) | 45,634 |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Payments for purchases of property and equipment | (33,541) | (22,744) |
| Purchase of investments | (897,844) | (115,181) |
| Proceeds from maturations and sales of investments | 790,570 | 24,687 |
| NET CASH (USED IN) INVESTING ACTIVITIES | (140,815) | (113,238) |
| NET (DECREASE) IN CASH | (163,066) | (67,604) |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 322,139 | 389,743 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | $ 159,073 | $ 322,139 |

## MEMBERSHIP STATISTICS

| | DECEMBER | | | | |
|---|---|---|---|---|---|
| | 1987 | 1988 | 1989 | 1990 | 1991 |
| SEPM MEMBERSHIP: | | | | | |
| Members | 6,874 | 6,212 | 5,795 | 5,474 | 5,360 |
| Nondues Paying Members | 84 | 100 | 104 | 113 | 116 |
| | 6,958 | 6,312 | 5,899 | 5,587 | 5,476 |
| *PALAIOS* MAILING LIST: | | | | | |
| SEPM Members & Honorary (Regular) | 1,155 | 1,163 | 1,173 | 1,177 | 1,206 |
| SEPM Members (Students) | 95 | 99 | 110 | 105 | 120 |
| Subscribers | 311 | 375 | 402 | 425 | 446 |
| | 1,561 | 1,637 | 1,685 | 1,707 | 1,772 |
| *Journal of Sedimentary Petrology* MAILING LIST: | | | | | |
| SEPM Members & Honorary (Regular) | 4,849 | 4,549 | 4,291 | 4,143 | 4,077 |
| SEPM Members (Students) | 549 | 531 | 488 | 395 | 397 |
| Subscribers | 1,725 | 1,740 | 1,740 | 1,666 | 1,630 |
| | 7,123 | 6,820 | 6,519 | 6,204 | 6,104 |
| TOTAL EDITIONS: | | | | | |
| *PALAIOS* | 2,400 | 2,400 | 2,000 | 2,000 | 2,000 |
| *Journal of Sedimentary Petrology* | 7,500 | 7,500 | 7,000 | 7,000 | 7,000 |
| NEW MEMBER INFORMATION: | | | | | |
| Applications Completed | 288 | 301 | 225 | 196 | 318 |
| Reinstatements | 29 | 30 | 57 | 91 | 49 |
| Transfers | 10 | 16 | 10 | 48 | 21 |
| Resigned | 320 | 110 | 109 | 116 | 66 |
| Deceased | 9 | 8 | 9 | 13 | 7 |
| Dropped for nonpayment of dues | 774 | 859 | 577 | 470 | 405 |
| Unpaid: Members and Associates | 868 | 463 | 371 | 327 | 306 |
| Students | 64 | 114 | 99 | 78 | 50 |

Emmons, Hartog & Sartain
Certified Public Accountants

INDEPENDENT AUDITORS' REPORT

Society of Economic Paleontologists
and Mineralogists
Tulsa, Oklahoma

We have audited the accompanying consolidated balance sheets of the Society of Economic Paleontologists and Mineralogists and subsidiary as of December 31, 1991 and 1990, and the related consolidated statements of income 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 Society of Economic Paleontologists and Mineralogists and subsidiary at December 31, 1991 and 1990, and the consolidated results of their operations and their cash flows for the years then ended in conformity with generally accepted accounting principles.

March 18, 1992

Emmons, Hartog & Sartain

## DENNIS K. HUBBARD
### Outstanding Paper Award, 1990
### *Journal of Sedimentary Petrology*

Dennis Hubbard had started his Masters under Miles Hayes at the University of Massachusetts. Halfway through his graduate work, his major professor and the entire coastal research program departed, so the myth goes, in the middle of the night for South Carolina. Despite the best efforts of Hayes and the University of South Carolina, Dennis found them again, and completed both his Masters and doctorate there, the latter in 1977. Up to 1977, Dennis's research had ranged from the hydrodynamics of estuaries to tidal inlet processes and coastal geomorphology. Some of the classic literature in the inlet bedforms contains photos of a young field assistant who looks suspiciously like Dennis. In 1978 he accepted a position at the West Indies Laboratory on St. Croix, and the utter lack of tidal inlets required an abrupt change in focus. Since his arrival at the West Indies Laboratory, Dennis has adapted his research to encompass a variety of oceanographer and sedimentary processes in modern carbonate environments. The publication we recognize today represents at least ten years of that experimentation and research.

Dennis has participated as chief scientist on at least 15 geologic cruises, Alvin dives, and saturation diving missions in the Hydrolab underwater habitat. He finds time to pursue his love of bluegrass banjo (regardless of nimble audience!), and contributes time and expertise to the social and environmental betterment of his community, and to his wife, Karla, and daughter, Amy. In his years at the West Indies Lab, Dennis has inspired and, just as importantly, included, a wide range of students in his research and his teaching. He has consistently shown an appreciation for his students' energy, and a quiet respect for their ideas. The offspring of Dennis' efforts include both a range of publications as well as a large number of former students who will make a mark on a variety of professions. In 1990 Dennis' house was destroyed, and the West Indies Laboratory and a good portion of the island of St. Croix were heavily damaged by Hurricane Hugo. His continued energy, scholastic output, persistence, and good humor remain a source of inspiration.

*Citation:* In recognition of Dennis K. Hubbard, who has consistently shown a willingness to enrich his research by collaborating with a range of coworkers, and who has consistently contributed to the inspiration and training of students from a variety of fields. We salute his energy, humor and imagination, and his contributions to carbonate sedimentology.

*Ivan Gill*

## ARNOLD I. MILLER
### Outstanding Paper Award, 1990
### *Journal of Sedimentary Petrology*

It was on a 1982 field trip to the Silurian reefs of Indiana that I first met Arnie Miller, and this was my first clue as to the breadth of interests in this energetic and congenial young Chicago paleobiologist who was to become my academic colleague in a few years' time. Since then I have learned that Arnie's interests span ancient to modern reefs, the evolution of bivalves, paleocommunity evolution, global extinction patterns, spatial resolution in fossil assemblages, and taphonomy. How can it be said that the new generations of geologists are too narrowly focused? The Renaissance man lives! Maybe Arnie's wide horizons grow out of his upbringing in that cosmopolitan town, New York City, but Arnie is one New Yorker who discovered the world beyond the Hudson. At the University of Rochester he discovered paleontology through the inspiration of Dave Raup and Jack Sepkoski and as part of the Biology-Geology program, received his first exposure to modern Caribbean reefs. This in turn led to a Masters at Virginia Tech with Dick Bamback on spatial resolution in subfossil molluscan assemblages of St. Croix. It was at this time that he began the collaboration with Dennis Hubbard and David Scaturo for which we honor him. He became intimately acquainted with the subsurface of the St. Croix reefs as a Hydrolab saturation diver in strenuous endeavors to core the reefs underwater. His Caribbean sojourn did not lure him away from paleobiology as he returned to work with Jack Sepkoski and Dave Raup, now at the University of Chicago, for his Ph.D., completed in 1986, through the Paleozoic. Since 1986 Arnie has been a member of the Geology faculty at the University of Cincinnati, where he is vigorously conducting research along several lines: Ordovician paleoecology and event stratigraphy, global patterns in extinction, and taphonomy in both ancient and modern assemblages. His productivity in publications and presentations at meetings is impressive and has been supported by several externally funded grants. He has initiated a popular course, "Evolution of Life", and supervises several graduate students. While his varied and prolific activities provide a source of pride and stimulation to those of us around him, he has also given us some moments of anxiety, when, in 1989, he and a research team were stranded on St. Croix during Hurricane Hugo. Happily, they "weathered the blow" and later turned the experience into a research bonus by exploiting a rare opportunity to examine immediate effects of a major storm on benthic assemblages sampled just prior to the hurricane.

*Citation:* In recognition of Arnold I. Miller, who, in collaboration with Dennis K. Hubbard and David Scaturo, has conducted a remarkably detailed investigation of carbonate production and cycling in a Holocene reef which provides a new outlook on depositional patterns and processes over the entire geologic history of reef systems.

*David L. Meyer*

## DAVID M. SCATURO
### Outstanding Paper Award, 1992
### *Journal of Sedimentary Petrology*

David Scaturo began studying geology in order to fulfill additional credit requirements while pursuing an undergraduate degree in marine biology. He quickly became hooked. On the recommendation of his advisor, H. Gray Multer, he finished his studies at the West Indies Laboratory in St. Croix, U.S. Virgin Islands. It was there that he met Dennis K. Hubbard. He spent several years participating in research of ancient and modern carbonate depositional environments under the guidance of Dennis Hubbard. David Scaturo completed his M.S. in geology at the University of South Carolina, where his thesis involved the computer simulation of carbonate facies response to relative sea-level fluctuation and clastic sediment input. After working as a consultant in a coastal engineering firm, he returned to USC to pursue a M.S. in civil engineering with emphasis on water resources/environmental engineering. His thesis work involves numerical modeling of contaminant transport and groundwater hydraulics in heterogeneous aquifers.

*Citation:* In recognition of David M. Scaturo, who, in collaboration with Dennis K. Hubbard and Arnold I. Miller, has helped quantify Holocene reef development processes and apply these results to reef systems in the fossil record.

*Mark A. Widdowson*

## ROGER BUICK
### Outstanding Paper Award, 1990
### *PALAIOS*

Paleobiological research in the remote Archean terranes of western Australia requires the acumen of a good scientist, the meticulous approach of a watchmaker, and the survival skills of a kangaroo. Roger Buick possesses all three. Born and raised in Australia in a family that stressed the importance of both nature and the arts, Roger studied geology at the University of Western Australia, earning a B.Sc. with first class honors in 1976 and a Ph.D. in 1986. Receipt of a Gleddon Overseas Fellowship for post-doctoral research enabled Roger to migrate to Harvard, where he worked for five years. At present, he roams the Western Australian outback for BHP Minerals.

Roger is the author of a dozen important papers on the sedimentary geology and paleobiology of Archean successions from Western Australia. He was the first to recognize the presence of probable stromatolites in the 3500 Ma old Warrawoona Group. His detailed sedimentological analysis of the "chert-barite" beds in the same group contributes strongly to our understanding of the world in which early organisms lived. More recently, he has published an innovative paper on the antiquity of oxygenic photosynthesis and has applied his skills to the elucidation of Mesoproterozoic carbonate packages. Roger's work reveals a deep understanding of geology coupled with matching biological insight. His hallmarks are skilled field work, careful attention to detail, and a healthy skepticism for received wisdom—traits well illustrated by his award-winning paper in *PALAIOS*, "Microfossil recognition in Archean rocks: An appraisal of spheroids and filaments from a 3500 m.y. old chert-barite unit at North Pole, Western Australia". His two Crocodile Dundee movies have grossed more than $200 million, and his TV commercials for the Australian Tourist Board helped to double the annual number of visitors Downunder. Oops, no. Sorry, that's the other Australian. What Roger has done is sharpen our focus on the critical events that shaped the early evolution of life.

*Citation:* For his critical analysis of the paleoenvironmental and paleobiological record of the early Earth.

*A.H. Knoll*

## RAYMOND C. GUTSCHICK
*Raymond C. Moore Medalist*
For Excellence in Paleontology

Ray Gutschick's life is a model of an academic scientist. The intensity of his search for knowledge, his drive toward completion of an unending pile of projects, and his incredible enthusiasm and passion for geology cannot fail to affect those with whom he comes in contact. The list of his achievements is long and impressive. He can be described as a remarkable paleontologist, a superb optical mineralogist and a meticulous mapper and structural geologist. His prowess covers both the field and the lab; Ray represents a vanishing breed—the complete geologist. Raymond Charles Gutschick was born in Chicago on 3 October, 1913. As a teenager during the Great Depression, he worked at the family fruit and vegetable store, collecting fossils on the side. After attending Morton Junior College for two years, he took a job as a draftsman, thus acquiring the artistic skills that characterize his publications and chalkboard lectures. Ray saved his money and in 1936 enrolled at the University of Illinois in Champaign. He graduated in 1939 with a B.S. in Engineering Physics and enough geology electives to gain admission into the graduate geology program at Illinois. He was strongly influenced by his advisor A.H. Sutton, H.W. Scott, F.P. Shepard, H.R. Wanless, C.C. Chapman, and R.P. Sharp among the faculty, and graduate student colleagues included R.V. Kesling, Virgil Winkler, K.O. Emery, and R.S. Dietz. In 1939, Ray married Alice Lude. During the spring of 1941, he met E.D. McKee and decided to do his dissertation on the Mississippian Redwell Limestone on the Colorado Plateau. He received his Ph.D. in Geology, with a minor in Zoology, in June of 1942. From 1943 to 1947 Ray worked for Mobil, Gulf, and ALCOA, but he decided in 1947 to take a job at Notre Dame, where his arrival doubled the size of the department and started him on the long and still active career for which he is best known.

Ray Gutschick's contributions to paleontology include fundamental work on holothurian sclerites, arenaceous and calcareous foraminifera, bryozoa, sponges, brachiopods, radiolarians, and ichnofossils. Much of his work since 1949 has focused on the Late Devonian–Early Mississippian biostratigraphy of the Western Interior. In 1975 he became affiliated with the U.S. Geological Survey in Denver, and his collaborations with Survey geologists, particularly C.A. Sandberg and W.J. Sando, have revolved around the Mississippian Desert basin in the western interior. Ray also managed to plane-table map the complex Kentland quarry astrobleme in northwestern Indiana, and his four decades of study of this unique locality make it a geological classic. Over 70 publications have resulted from Ray's research. Perhaps most impressive is that all of Ray's work took place in the context of a small undergraduate geology program. Ray never had graduate students and extensive financial support for his research. Instead, he taught his undergraduates how to do geological research; the result is a long list of professionals in industry, government, and academia who owe much of their success to Ray's inspiration. Among these are two Schuchert Awardees, a Neil Miner Awardee, and a state governor. It seems that nearly everyone who knows Ray has an amazing story about his exploits in the field. At Indiana University's Field Station, where he taught for many years, he was known to some as "Piston Legs". Caught out in the field by impending darkness with no sample bags, but unwilling to leave the hard-won outcrop with empty hands, he persuaded his students to take off their pants, tie off the pant legs and load them with fossils. In recognition of his teaching, Ray was awarded the Neil Miner Award by the National Association of Geology Teachers in 1977. Ray retired from Notre Dame in 1979, but he is never at rest and his productivity actually has increased. Ray taught his students mainly by example. If one merely spends some time around him, observing the way he talks and writes, the way he remembers and catalogues, the way he perceives and questions, and the joy he derives from the successes of his students, one cannot help but learn something uncanny about how to be a scientist, a scholar, and a teacher.

*Citation:* To Professor Raymond C. Gutschick, extraordinary scientist and gentleman, consummate professional and role model, wise friend and mentor; for unsurpassed contributions in paleontology, geology, and education.

*P.G. DeCelles and L.J. Suttner*

## RESPONSE FROM RAYMOND C. GUTSCHICK

I extend my appreciation to the Council of the Society, with special thanks to the committee whose task it is to select the Moore Medal recipient. It has been my good fortune to brainstorm field research and published research with some very knowledgeable geologists/paleontologists. I strongly recommend such complementary team approaches early in one's pursuit of our science. My thanks to all who have contributed to my education since college, most importantly my wife of 53 years, Alice.

Dr. Raymond C. Moore did his Ph.D. thesis on Mississippian rocks of Missouri under Professor Stuart Weller (University of Chicago, 1916). Checking through my college education, my conclusion is that I am a clone of Weller and the Universities of Chicago and Illinois. Three faculty members at Illinois received their doctorate at Chicago: Arle Sutton, 1927, who did his thesis involving Mississippian rocks of Kentucky under Weller; Harold Scott, 1935; and Francis P. Shepard, 1922. My thesis at the University of Illinois was on Mississippian rocks of northern Arizona, under advisor Arle Sutton and field mentor Eddie McKee, the Grand Canyon geologist. Harold Scott and Walter Moreman of the University of Kansas (whose advisor was Moore) taught me micropaleontology. Marine geologist Francis P. Shepard was a versatile, inspiring teacher who introduced me to the Kenland structural anomaly. The new SEPM medal honoring Francis Pettijohn and its first recipient, Paul Potter, were respectively teacher (1929–52) and student (Ph.D., 1952) at the University of Chicago.

My paleontological life started in the early 1930s with quarry exposures of Silurian bioherms and strip pit coal measure concretion floras and faunas of northeastern Illinois. My first major field project was the extensive Mississippian Redwall carbonate shelf across the canyon and plateau country of northern Arizona. This was followed by field study of the Mississippian Lodgepole carbonate ramp with Waulsortian build-ups overlain by Mission Canyon shoaling carbonate shelf. Search to establish the Devonian–Mississippian contact led to a study of the Late Devonian black shale, algal oncolite, shelly biostrome, and by-the-wind-sailors on an ancient beach sequence. All of the above were traced across the mountain ranges and hills of western Montana. Base camp was Indiana University Field Station, Tobacco Root Mountains. Field study of the Mississippian Deseret foreland basin (Delle phosphatic litho- and biofacies, low oxygen) or western Utah and surrounds filled the gap between two classic dominantly carbonate shelf areas. The above experience was applied to the Late Devonian black concretionary Antrim Shale of the Michigan Basin where Ellsworth prodeltaic sediments almost half-filled the deep-water anoxic basin. During the time of my western studies (1949–91) I pursued quarry geology of a concealed (glacial cover) impact structure near Kentland, Indiana.

Paleontology abounded for all of the above treks and other related excursions with a wide array of micro- and megafossils applied in various ways—systematics, zonation, correlation, taphonomy, paleoecology, and paleogeography in time and space. My interests have been and continue to integrate the unique story fossils have to offer into the physical history of the rocks of each area.

## PAUL EDWIN POTTER
*Francis J. Pettijohn Medal*
For Excellence in Sedimentology

Dr. Paul Edwin Potter is a legend in sedimentology. Paul's name was one of the first I heard when I ventured into the field of clastic sedimentology. His were the fundamental textbooks to which I was referred to learn the basic concepts of clastic sedimentary geology including petrology. His was the source book for the use of paleocurrent data for basin analysis. Paul grew up mostly on a farm near Cincinnati and attended a two room school for grades 5 through 8. When a senior in high school, he was a student at the University of Cincinnati for a year. He served his country during World War II in the U.S. Army stationed in the Philippines. After the war, Paul attended the University of Chicago (1949). It was here, in a Great Books course, that Paul says he finally learned how to read a book. Paul graduated with a M.Sc. (1950) and a Ph.D. (1952) also from the University of Chicago. Not being satisfied with his geological background and seeking more training in the quantification of geological data, Paul obtained a M.Sc. in statistics from the University of Illinois (1959).

Paul's interest in measuring paleocurrent was initiated during a structural field trip to Vermont with Robert Balk. Paul always enjoyed field work, but learned subsurface geology while working the Coal Section of the Illinois Geological Society. In Paul's words, this was truly a great experience that provided him with many opportunities to learn sedimentary geology. Paul has seen the geology in many parts of the world, but it was a visit to Brazil and the rest of South America that was a great event in his life. It was here that he first saw Gondwana with its vast, broken plateaus and deep tropical weathering. It is from this work that we have seen a series of incisive papers such as "South America and a few grains of sand", which is my favorite. Paul has authored or co-authored six books. Three of these, *Paleocurrents and Basin Analysis, Sand and Sandstone,* and *Atlas and Glossary of Primary Sedimentary Structures,* were coauthored with the individual for whom this medal is named. These books reflect Paul's interests in geology and became major treatises in clastic sedimentology. The book *Sedimentology of Shale*

was one of the first major syntheses on the subject and is basic reading to anyone beginning to study mudrocks. Paul has written 104 journal articles and maps with a broad range of contributions from geological statistics, paleocurrent analysis, coal and petroleum geology, clay mineralogy, petrology, and fluvial sedimentology. Several papers have been published in Spanish. It is most fitting that Paul Potter should be the first recipient of the medal which bears his close colleague's and coauthor's name.

*Citation:* In recognition for Excellence in Sedimentology for his continued and long-standing record of fundamental contributions to sedimentary geology, and as a teacher through his textbooks and field guides, Paul Edwin Potter is awarded the first Francis J. Pettijohn Medal for Excellence in Sedimentology.

*Dale Leckie*

## RESPONSE FROM PAUL EDWIN POTTER

It is a pleasure to be here in Calgary to receive the Pettijohn Medal for 1992—almost exactly 40 years to the day after I received a Ph.D. from the University of Chicago in June 1952. Certainly I am most grateful to both the Society and all those who supported my nomination. Please be sure that I appreciate and will remember this most significant honor that you all have granted me. My very best wishes to the Society for many decades to come—far into the 21st century and beyond. Thank you.

## JOHN D. MILLIMAN
### *Francis P. Shepard Medalist*
### For Excellence in Marine Geology

Friends of this year's Shepard Medalist celebrate the selection because it publicly recognizes what we have known for years. John D. Milliman is not only a creative scientist but also a prodigious writer, role model for students, and skillful international leader. He is a world class scientist who has influenced the field of marine geology for 25 years. John was born in 1938, son of a bank president who hoped he would follow in his footsteps. President of his freshman class at the University of Rochester, John enjoyed English literature, art, and sports. For his science requirement he took the "real easy Rocks for Jocks course" but found it, as taught by Ed Hoffmeister and Bob Sutton, so inspiring he became a geology major. John went to the University of Washington for an M.S. in oceanography and met a wonderful coed, Ann Broughton, whom he later married. John's Ph.D. is from Miami where he says it took a year's dialogue with Emiliani, Ginsburg, Hoffmeister, Rusnak, Shinn, and Multer to feel certain about marine geology as a career. During John's dissertation work on Hosty reefs, a dredge haul revealed planktonic limestone lithified with Mg-rich calcite. This discovery led to a paper in *Science* describing such submarine lithification for the first time! K.O. Emery bet a steak dinner that John could not finish his dissertation in a year. The following spring Emery provided the steak and the opportunity to come to Woods Hole to work on a four-year Atlantic slope and shelf sediment project. This was the beginning of a long and beautiful friendship with WHOI.

As Alexander von Humboldt Guest Professor in Germany, John wrote *Marine Carbonates,* a classic, and probably the most cited text of its kind. During a Brazilian continental shelf project (1971–74), John became fascinated with the Amazon and the role of rivers and their suspended sediment loads. After studying the Fraser River, his interest turned to two of the largest rivers in the world when NOAA asked him to organize and lead a team to work with the Chinese in the East China Sea. This program continues under ONR and NSF in the Yellow Sea. These efforts led to a world synthesis of rivers with Bob Meade in 1983 and a current paper with Jim Syvitski on the same subject. John's cruises have involved marine scientists from Brazil, China, Egypt, Germany, Kuwait, Norway, and Venezuela.

John has always made time for teaching young marine scientists (at WHOI, the West Indies Lab, aboard ship, and in laboratories abroad). "John never wanted to disguise good science behind statistical mumbo jumbo. Either the trends were obvious or we were reading too much into Mother Nature". Jude Wilber claims "John's enthusiasm for the 'discovery' process in science is unmatched . . . often he will stop in the midst of a discussion and say 'Hey, isn't this neat stuff?' " John loves being an oceanographer and is fortunate in having a very supportive wife and family. Other loves include Airedale terriers, Vermont meadows, cross country skiing, rowing (national champion several times), and running (completing the Boston Marathon in borrowed shoes). Bill Haq comments: "John has had such a tremendous impact on our thinking in both shallow and deep-water sedimentology for so long that I am surprised he wasn't offered the medal earlier. For over a decade he has edited *Deep Sea Research.* His active participation in UNESCO and UDNP as well as IOC projects to third-world countries is testimonial of his generous nature".

*Citation:* In recognition of his fundamental contributions to the fields of marine carbonates, suspended sediments, rivers and continental shelves, his inspiring teaching abilities, his outstanding skills as an editor, and his successful leadership in fostering international cooperation in the field of marine geology, John D. Milliman is hereby awarded the Francis P. Shepard Medal.

*Gray Multer*

## RESPONSE FROM JOHN D. MILLIMAN

One lesson I learned from my father was the importance of liking one's profession. I go my father one better—I love oceanography. As in any romantic courtship, however, this love affair has not always been an easy one. Two debilitating years at the University of Washington left me questioning whether oceanography was really a career I wanted to pursue. There had to be more to life than grain-size analyses! It was only with the mentorship of people like Ed Hoffmeister, Gene Rusnak, and Cesare Emiliani at Miami that I teamed the joy of studying the Earth and its oceans. This joy continues today; in fact there are still many days, whether in the lab or on a ship, when I wonder if I really should accept money for having such a good time. Even now I often fall asleep at night thinking about river flow or Bahamian sands.

Success in oceanography, however, requires (at least for this geologist) the support of a loving and understanding family. The missed birthdays and holidays were never as difficult for me as for Ann, Chris, and Heather, but they understood and accepted. Oceanography also has given me some dear colleagues and friends—people like Gray Multer, Yuri Butenko, Bill Haq, Frank Manheim, Jens Müller and many others—as well as some gifted and inspiring students—such as Jim Syvitski and Stephanie Pfirman. This sense of camaraderie, in fact, characterizes our science, something we all should strive to continue. Downsides? Sure, those missed holidays, the 12 to 4 watch on stormy nights, equipment that didn't work. But the inconveniences pale in contrast with the midnight sun north of the Arctic circle, measuring the tidal variation in suspended matter discharge at the mouth of the Yangtze River, or obtaining seismic profiles that depict the accumulation of bank-derived muds on the leeward slope of Great Bahama Bank. Fran Shepard was not only a pioneer in marine geology, but also a man who loved practicing his profession until the day he died. He continues to be an inspiration to all marine geologists, and I am honored to receive a medal bearing his name.

## ROGER G. WALKER
### *Honorary Member*

Roger attended Oxford University, where he obtained first class honors in geology. His doctorate supervisor was Harold Reading: rarely can there have been such a fruitful interaction between teacher and student, for out of it came much of modern facies analysis. From Oxford, Roger went to Johns Hopkins for two years with Francis Pettijohn, and then to a position at McMaster University. He has taught there ever since—but not exclusively there. Roger has given more than seventy short courses for SEPM and for AAPG, as well as for many petroleum companies. Roger participated in two of the first three short courses offered by SEPM—including the phenomenally successful course "Depositional Environments as Interpreted from Primary Sedimentary Structures and Stratification Sequences", first offered in Dallas in 1975, and rerun (with continuous revisions) at least half a dozen times. Probably almost everyone reading this biography has attended at least one of Roger's short courses—thus his influence as a teacher has extended far beyond his students at McMaster. Not that this influence should be discounted: half of the organizing committee for the AAPG meeting in Calgary were once Roger's students! Roger is an inspiring lecturer and graduate supervisor.

A large part of Roger's teaching is based on his own research: Roger's vitae lists more than a hundred publications, and the first appeared while he was still a student. His interest in facies analysis was established early, and has been constant over 30 years. At first he specialized in turbidites and deltaic sediments. He pioneered in applying the concept of submarine fans to the analysis of turbidite sequences, and in sedimentological studies of the "Catskill delta". Then came resedimented conglomerates—with studies in the Gaspé peninsula, Oregon and California. Next he studied braided fluvial sequences in the outwash of southern Ontario, in the Devonian of the Gaspé and finally (Roger's only excursion into modern sediments) in the South Saskatchewan River. In 1979, Roger published his first paper on the Mesozoic of western Canada—and these rocks have absorbed much of his energy since then. He began in the Jurassic, moved to the Cardium, and has since studied almost every marine (and some non-marine) sandstone that he can lay hands on in outcrop, core, or geophysical log. Roger has not yet published

a textbook, but besides his course notes, he produced *Facies Models,* the best selling volume ever produced by the Geological Association of Canada. This collection of papers, many written by Roger himself, and all much influenced by his tough editorial instructions, has been used as a text by students all over the world, and will soon appear in its third edition. Besides all this, he has found time to work for at least five major societies, not least SEPM, which Roger served as President of Eastern Section (1975–76) and Councilor for Mineralogy (1979–81). And did you know that he was also a keen photographer, model railroader, downhill skier, and one-time Scottish dancer?

*Citation:* To Roger Walker, for a life devoted to the investigation of sedimentary facies, both as a researcher of uncommon power and originality, and as a teacher who has led a generation of geologists to an understanding of what facies are and how that knowledge may be applied to the search for petroleum.

*Gerard V. Middleton*

## RESPONSE FROM ROGER G. WALKER

In bestowing honorary membership on me, I feel that you are thanking me for having enjoyed myself for the last thirty years. I was lucky to begin my career in the early 1960s, when so many new concepts were evolving in sedimentology. I was also lucky to have worked with Harold Reading at Oxford during the beginnings of modern facies analysis. Among many other things, he taught me the art of very careful field observation. The "facies analysis" aspect of my career has been emphasized by Gerry Middleton's kind comments. What Gerry did not tell you was that our first field trip together was in Santa Paula Creek, California. He arrived after some of us had been working in that very hot, airless narrow creek for several hours, and was sent off again to get some cold drinks. He arrived with milk shakes; I had never had one before, but it was love at first taste. In this way, Gerry influenced both my academic career and my waistline for many years. After my NATO Post-Doctoral Fellowship at Johns Hopkins, he tempted me to McMaster University, which I had never heard of. However, I was newly married and without any other job, so I accepted the invitation, fully expecting to move on to a University I had heard of, in a town I had heard of, after a few years. Well, obviously, things worked out very well at Mac, and I am still there 26 years later.

My association with SEPM began when Donn Gorsline sent me the usual form letter thanking me for reviewing a manuscript. On the bottom was a scribbled note which said, "You do such a marvelous job . . . would you like to be an Associate Editor?" The informality of this invitation appealed to me, so I agreed, and inevitably my involvement with SEPM increased—I particularly remember an evening in a cabin in the Catskills where the establishment of an Eastern Section was debated over a bottle of Crown Royal. The satisfaction of serving a scientific society is to see it influence and encourage the progress of the science. I think SEPM has been outstandingly successful in doing this, particularly through publications and short courses, and I have learned a lot from the participants in many of the courses I have helped to teach. The Geological Association of Canada (with Gerry Middleton as editor of *Geoscience Canada*) also had the right idea at the right time when it encouraged the series of papers now published as *Facies Models.* I hope that SEPM will continue to actively pursue authors and editors of research monographs and texts, to keep these manuscripts away from the large and outrageously expensive European publishers. Publications are of most value in the hands of scientists, and must be priced to sell to individuals, and not just to those few remaining libraries with large budgets.

I would like to thank all of my graduate students, who have contributed immensely to my research program at McMaster; their hard work has made it easier for me to contribute to the profession at large. My family has also been extremely supportive, and my wife steered the Walker household through smooth, calm waters; no HCS and no wave ripples at home. So thank you again to my colleagues and friends in SEPM for the honor you have given me today, and thank you to my students and family who made so much of the work possible.

## ORRIN H. PILKEY, JR.
### *Honorary Member*

Few scientists will freely acknowledge that one of their greatest contributions to society can be bridging the information gap between technology and public policy. Orrin Pilkey is one of those rare individuals. Orrin began his professional career at the University of Georgia Marine Institute on Sapelo Island. This coastal setting would later play a major role in formulating his ideas about the future of coastal development worldwide. Except for brief stays at the University of Puerto Rico and the U.S. Geological Survey at Woods Hole, Massachusetts, Orrin has been at Duke University since 1965, where he is a James B. Duke professor of geology and director of the Program for the Study of Developed Shorelines. Orrin's marine research initially focused on beach and nearshore environments; then it moved into progressively deeper water across the continental shelf and slope, and finally onto the abyssal plain. Over a period of three decades, he has published more than 150 papers on such diverse topics as the geochemistry of shells, sedimentological significance of phosphate deposits, geological history of continental shelves and deep-sea environments, prediction of shoreline changes, and performance of beach nourishment projects. His most recent efforts have emphasized the need to incorporate geological assessments into coastal management plans at all levels of government. Toward that end he has been producer, editor, and author of the 16-volume "Living with the Shore" series that informs homeowners and potential property buyers in each coastal state how to evaluate natural hazards, select safe building sites, and build better houses. For his monumental environmental efforts the North Carolina Wildlife Federation named him the 1991 Conservation Educator of the Year. Orrin's contributions to SEPM are matched by few peers. He has served as President of the Society, President of the SEPM Foundation, and Editor of the *Journal of Sedimentary Petrology*; he has also received the Society's prestigious Francis P. Shepard Medal for Excellence in Marine Geology.

Diving in headlong while risking life and limb is a way of life for Orrin. This unique trait can be traced to his summers as a smokejumper for the National Forest Service. His outspoken style and sobering message have captured the attention of the popular press like no other coastal geologist, and he has been at the forefront of the international debate regarding the economic and environmental costs of hard shoreline stabilization. Some would argue that his rhetoric has polarized coastal geologists and engineers when, in fact, he has tried to stimulate communication between the two groups through interdisciplinary discussions and technical papers. Examples that come to mind are a edited Special Publication dealing with the environmental effects of seawalls and the two Skidaway conferences that resulted in frequently cited "white papers" calling for a national strategy to preserve beaches. Orrin is at his best when standing on an eroding beach, reciting his truths of the shoreline, and defending his intentionally shocking paradigm "let the lighthouse fall in"—a message that has echoed through high schools and the halls of Congress. He, perhaps more than any other person, is responsible for popularizing the idea that retreat is a viable, economically sound, and frequently necessary option for managing many eroding coasts. Once considered a radical solution, retreat is now a theory becoming reality, partly as a result of his work on a National Academy of Science committee convened to examine rising sea level and its implications regarding coastal engineering practices. Visionaries offer ways of adapting to changing circumstances and new challenges that threaten the status quo. Orrin Pilkey has given recreational beaches and coastal communities renewed hope for the future by explaining how a knowledge of reduced sediment supply, rising sea level, and frequent storms can be used to resolve some current and anticipated social conflicts.

*Citation:* In recognition of outstanding contributions to marine and environmental geology, as well as to society as educator, philosopher, coastal conservationist, and architect of public policy.

*Robert A. Morton*

## RESPONSE FROM ORRIN H. PILKEY, JR.

Thanks to all of you for the honor that SEPM bestows on me tonight. My thanks to Bob Morton for the sparkling award biography. I feel that the honor should be reversed. Working for SEPM as editor, officer, and committee member was exciting, challenging, and sometimes even exhilarating. There were, of course, those down moments, but my SEPM days were my best days professionally and the *Journal of Sedimentary Petrology* editorship was the highest professional honor I shall ever receive.

Unable to resist any podium opportunity, I am impelled to point out that SEPM thrives because of a broad base of membership participation. This keeps the good old boy network to a small and controllable size, and assures us that the Society is driven only by our needs. I urge everyone in earshot to get involved with SEPM: join a committee, organize a meeting, join the regional SEPM, stomp out the good old boy network, and help SEPM remain the dynamic group that it is today. The best SEPM days are yet to come! I am on this podium tonight because of a lot of people who helped me along the way. Frank Scott of Washington State University took an interest in an undergrad with a less than inspiring record. The late John Hower taught me about the big picture in science and Donn Gorsline made marine geology seem like the most exciting and important specialty in all the world. In all of my SEPM activities, Executive Director Robin Dixon has been a valued adviser. I recall with pleasure our countless long conversations concerning SEPM "crises", discussions in which, as an added bonus, we often solved a few of the world's problems, as well. It is with a deep sense of appreciation that I accept this great honor.

## RAYMOND L. ETHINGTON
*Honorary Member*

Raymond Ethington was reared and scientifically pedigreed in the soft-rock heartland of North America: B.S. and M.S. at Iowa State University, Ph.D. at the University of Iowa in 1958. At the latter, he trained with A.K. Miller and W.M. Furnish, and became another of the numerous paleontologists and biostratigraphers from the school to distinguish themselves in research concentrating on conodonts. After four years at Arizona State University, Ray returned to the Midwest, to the University of Missouri–Columbia, where he successfully scaled the academic ladder and is now Department Chairman (although he often questions this position as among his successes). He has taught most soft-rock courses, his favorite being the summer field course in Wyoming, with the outcrops and open spaces nearby and bureaucracy far-removed. Whatever his many students have called him over the years, rigorous, accessible, good-natured, and fair have always been included.

Ray's career-launching in Arizona was timely, as the western U.S. was then frontier territory for conodont study. Ray wrote several of the early papers on Great Basin Conodonts of Ordovician to Permian age. He soon devoted himself to the study of faunas, partly because of the vast exposure and attendant stratigraphic problems involving those rocks, and perhaps partly because of the challenge he encountered early-on when told by a senior scientist that there were no conodonts in the Great Basin Ordovician. Ray's 30, and continuing, years of documenting the Lower and Middle Ordovician conodonts of the western and central U.S. stand as a major accomplishment. From the beginning his research has included the systematic stratigraphic collection and taxonomic description of the faunas. Clear writing is a hallmark of his work; when reading an Ethington paper there is no question as to provenance of each sample and range of each species. His taxonomic and stratigraphic descriptions and discussions are models of comprehensiveness and clarity. He consistently has declined to leap onto the bandwagon of the day, but rather prefers to develop and critically examine data that solve geologic/stratigraphic problems. Ray's papers thus are among those with the longest shelf life. His leadership in the study continues in his current role of Chief Panderer, the sole officer of the international organization of conodont researchers, the Pander Society.

Ray's career is marked by long and continued service to the profession, and especially to SEPM. Since 1968, he has served SEPM as editor of the *Journal of Paleontology,* editor of 14 SEPM books, member and chair of the Editorial Boards and Publications Committee, Councilor, and national President. Most of this service has been related to scientific publication, again the insistence on clarity of communication showing through. Ray takes his roles as reviewer and editor seriously and conscientiously, but always in a positive sense and leavened with good humor. When he was editing the *Journal of Paleontology* across the hall from his students' office, it was always obvious when an issue was about to be "put to bed" or when a particularly troublesome paper was being edited or reviewed. One reason his students might feel that we spent more time than "normal" finishing our theses probably was our anticipation of Ray's scrutiny of our work. Both students and authors whose works have had attention from Ray's blue pencil certainly have benefited from the experience.

Throughout, Ray has been dedicated to and been supported by his family, now extended to include several grandchildren. Those fortunate enough to be among his students, collaborators, and colleagues remain a close circle of friends. It is my pleasure to present Raymond L. Ethington for this award and it is especially appropriate that he is being honored by this Society which he has served so well.

*Citation:* For his career-long research on the taxonomy and biostratigraphy of conodonts, his sustained excellence in teaching both undergraduate- and graduate-level earth science, and his truly outstanding record of service to, and leadership in, sedimentary geology and SEPM, especially with his talents as editor and publications expert.

*John E. Repetski*

## RESPONSE FROM RAYMOND L. ETHINGTON

It was most kind of John to write so many complimentary things about me, and it has been equally kind of those of you who know me well not to laugh when you heard some of them. On occasions like this, recipients of awards commonly review the contributions that parents, spouses, colleagues, students, and mentors have made in the framing of their careers; I acknowledge that much of what I am is attributable to others and I hope they know how very much I have appreciated their support and counsel. I hesitate to be more specific for fear first of all of mouthing banal platitudes and secondly for fear of becoming emotional, to my discomfort and yours. Nearly 30 years have elapsed since I innocently accepted the editorship of the *Journal of Paleontology* representing SEPM and even longer since my first serious attempts to work with conodonts. It has been my privilege to pursue these interests for several decades, and I did so because I considered them to be worthwhile and important. These activities have provided me with opportunities for personal development that I could not have envisioned 50 years ago on a small Iowa farm during the previous Great Depression or even during my student years. So, as I believe I said previously to an SEPM gathering years ago in Atlanta, I really should be thanking SEPM for making it possible for me to do what I still believe after so many years to be worthwhile and important. So few people anywhere are as fortunate.

## PETER R. VAIL
*William H. Twenhofel Medalist*
For Excellence in Sedimentary Geology

Forty years ago, when I first met Peter Vail, it would not have been easy to predict that we would be gathered here in celebration of his rise in preeminent stature in the disciplines represented by SEPM. At that time he was a new graduate student from an upscale New York suburb, encumbered by education in a polite prep school and recently released by an Ivy League college where his records provided only two indications of future success—a "D" in Economics 1 and abysmal scores in the Graduate Record exam. How, out of this unpromising material, did one of the most deserving of Twenhofel medalists prepare himself for the future? For one thing, as some wise man at Dartmouth let it be known, Pete wasn't nearly as dumb as his transcript might suggest. Further, his graduate training was as broad as the competence of the faculty would permit, and graduate-student research was not driven by the need to justify the next team-supporting grant proposal. (Would this be possible in today's environment?) Sure, Bill Krumbein pumped him full of sedimentology and Ed Dapples exposed him to the stratigraphic intricacies of the Cumberland Plateau, but essential breadth was provided by workers in alien fields. Art Howland, one of the last of the gentleman/scholars, provided the opportunity for a field-based M.S. thesis on the Stillwater Complex of Montana. There were two important products—how to record significant observations and how to write an intelligible report. Howard Slack, who derived from Tuzo Wilson, made it clear that geophysics need not be mysterious to anyone equipped with mastery of First Principles and the requisite numerical skills. Peter learned about the grittier side of geophysics as a jug hustler in downstate Illinois during an undergraduate summer. He may not have seized the chance to learn all about reflection coefficients and such, but he did form a lasting attachment to a young lady from Taylorville. As soon as residence requirements for the degree were fulfilled, Pete and Carolyn got married and she became an essential element in progress toward the reward we bestow. That progress, however, did not include early completion of a dissertation. Instead, the young couple took off for Tulsa and the research lab of the Carter Oil Co., the Midcontinent and Rocky Mountain arm of what we now know as Exxon.

Those were the days when it was popular to keep geologists and geophysicists in separate cages so that prospect evaluations could be arrived at "independently". Parke Dickey, head of geologic research at Tulsa, didn't see it that way; he believed that geophysical data such as were displayed on wiggly-line seismograms contained essential stratigraphic information, and his thinking was welcomed by Pete and a cadre of young bucks that came to include former Vail classmates Bob Mitchum and John Sangree, among other receptive minds. Concurrently, the technology of acquisition of digital seismic-reflection data on land and sea, their computer message and graphic display, was in rapid evolution, making available simulations of stratigraphic cross sections at sub-regional scales. Pete and friends, predisposed to recognize "operational units" bounded by unconformities and key beds, soon identified the homology between the geometry of recorded reflection events, especially their terminations, and the configurations of strata truncated or overlapped at unconformities. Progress beyond these observations required two critical elements from which our Society seems to shrink as though ashamed of them—paleontology and mineralogy (the "P" and "M" in SEPM were placed there in reference to biostratigraphy and the petrophysical-geochemical character of sediments applied in correlation and interpretation). Without the data from forams and nannofossils recovered from subsurface cores and samples it would not have been possible to determine that the succession of unconformity-bounded stratal packages recognized on a seismic profile off West Africa is duplicated in essential detail a few hundred kilometers up the coast—and, with variations, to the Bay of Biscay and beyond. Thus, the discipline of seismic stratigraphy was born, to remain largely submerged under company shrouds until Pete appeared on the lecture circuit and, finally, AAPG Memoir 26 was released (1977). The rest is history—the initial period, featuring both wide acclaim and resistant pockets of Vail bashing, the latter brought on by perceived reliance on "unsubstantiated" proprietary data;

a period of evolution featuring emergence of the New Sequence Stratigraphy and abundant documented publication plus the development of (too much?) terminology; and now the current period of mature consolidation. Today's award has been earned by all of the above, but, at least to me, the great achievement of Peter Vail and colleagues is the identification of a physical framework within which litho-, bio-, and magnetostratigraphy combine to produce a giant step toward a rational intercontinental (if not global) chronostratigraphy. We know it works, at least part of the time; now let's find out why! It gives me pride and pleasure to present Peter Robbins Vail, the Twenhofel Medalist for 1992.

*Citation:* For outstanding contributions to the organization and interpretation of the stratigraphic record.

*L. L. Sloss*

## RESPONSE FROM PETER R. VAIL

Thank you for the presentation of the Twenhofel Medal. I'm extremely grateful and honored to receive this prestigious medal. And thanks also to Larry Sloss, not only for his part in accepting me at Northwestern University, but for providing the key insights into stratigraphy that inspired and motivated me my entire career. I truly appreciate that Larry delivered my biography, because he is that one Professor who turned me around and motivated me to spend a lifetime career on the chronostratigraphic interpretation of sedimentary rocks, a career that I have thoroughly enjoyed both as an oil company researcher and a university professor. To receive the Twenhofel Medal is extremely exciting and motivating to me. I'm now very much involved in the sequence stratigraphic interpretation of outcrop and well log data. I work very closely with many biostratigraphers and sedimentologists. In general, the biostratigraphers tend to be supportive of sequence stratigraphy and the sedimentologists tend to be more skeptical. To receive this award from an organization representing both of these groups is a great honor to me.

Much of my early professional career was concerned with the interpretation of seismic data. Mechanical logs were as close as I ever came to the real rocks. My research at this time concerned the integration of geology and geophysics to better interpret stratigraphy and lithofacies from seismic reflection data. From this research we learned that seismic reflectors don't necessarily correlate with the lithologic formation boundaries, but instead they correlate with the biostratigraphic time correlations. This was my introduction to the importance of working with biostratigraphers. A colleague of mine at Exxon referred to this combined interpretation approach as the "Unholy Alliance". Our interpretations commonly developed into intense debates with the geophysicists, tectonic geologists, and sedimentologists. The geophysicists debated how reflections could follow geologic time lines when rock impedance contrasts produce the reflections. The answer, we believe, is that impedance contrasts, and thus seismic reflections, follow through-going physical stratal surfaces across time-transgressive lithologic formation boundaries. The reflectors derived from through-going stratal surfaces are geologic time lines because the stratal surfaces that they are derived from separate older from younger rocks which were deposited over a relatively short period of time. The realization that seismic reflection profiles show chronostratigraphy and not lithostratigraphy was a "Eureka" type of discovery for me. We could now determine geologic time lines from the physical expression of stratal surfaces on seismic data and determine the age of the time lines from biostratigraphic data derived from well cores and cuttings.

My research now concentrates on documenting the Mesozoic and Cenozoic sequences in outcrops as well as the subsurface, and on endeavoring to solve some of the important questions being proposed by geophysicists, tectonists, and sedimentologists. This research is now centered on a project called the Mesozoic–Cenozoic Sequence Stratigraphy of European Basins. The goals of the project are to develop a new Mesozoic–Cenozoic sequence chart for Europe patterned after the Haq et al. chart. This chart will be documented with sequence stratigraphic interpretations of outcrop sections throughout most of Europe. Well log cross sections and seismic profiles showing Mesozoic–Cenozoic sequences and systems tracts will be correlated to the outcrop sections. To provide the most up-to-date biostratigraphic correlations, a team of biostratigraphers is preparing a new chart summarizing the biochronostratigraphy of Europe for both micro- and macrofossils. Over 80 biostratigraphers are contributing to this project. The results of their work will provide the foundation for correlating the sequences and systems tracts throughout Europe. In addition a second team is involved in identifying or developing a numerical time scale that is acceptable to more geologists. The major problem is how to handle the up to 10-million year difference between time scales for the early Cretaceous and late Jurassic. Well over 30 projects are now under way documenting the sequences and systems tracts within outcrop and subsurface sections throughout much of Europe. The plan is to integrate the results of this work into a new Mesozoic and Cenozoic Sequence Cycle chart, which could serve as a reference section to correlate sequence stratigraphy sections from other continents. In the course of this project we hope to provide a forum for discussions of the debates concerning sequence stratigraphy.

I thank you very much for the honor of receiving the Twenhofel Medal and I plan to continue my close involvement with biostratigraphers and sedimentologists in trying to resolve the many debates that relate to the sequence stratigraphic interpretation of seismic, well log, and outcrop data.

## IN MEMORIAM

It is with regret the SEPM (Society for Sedimentary Geology) reports the deaths of the following members:

**Doris Curtis**
**John J. Gouty**
**Edward Guzman**
**Manley L. Natland**
**Juergen Reinhardt**
**Seymour Schlanger**
**Frank S. Westmoreland**

The Society acknowledges its indebtedness for their contributions to science and for their support of the Society's objectives.