ANNUAL REPORT OF THE SOCIETY FOR 2012
DIRECTOR'S REPORT, SOCIETY AWARDS AND AUDITED FINANCIAL REPORT (2011)

Director's Report

Annual meeting

SEPM held its Annual Meeting in Long Beach, CA jointly with A.A.P.G. Outgoing President Chris Fielding turned the gavel over to the new President, David Budd. Under the leadership of SEPM ACE Vice-Chair Gareth Jones and his committee, SEPM's sole and jointly sponsored sessions accounted for about 40% of the technical program. The SEPM Research Symposium for 2012 was ***"Deposits, Architecture and Controls of Carbonate Margin, Slope and Basin Settings "***. At the business luncheon, Mike Blum gave attendees a view of the possible future of New Orleans and the Mississippi River with his ***"Impact of Sea-Level Change and Regional Subsidence on Coastal Evolution: Prospects for the Mississippi Delta"***. Then at the outgoing President's Reception Chris honored the society's 2012 medalists and the best journal papers, best poster, best oral presentation and student awardees. This year SEPM awarded three cash prizes to the 2012 top SEPM Student Posters. SEPM again offered a balanced selection of courses and trips in 2012.

SEPM Annual Meeting Committee

- Gareth Jones, Vice-Chair for SEPM
- Sean Guidry, Carbonates Theme Representative
- Andrea Fildani, Clastics Theme Representative
- Cameron Campbell, Field Trip Chair
- Rick Behl, Short Course Chair
- Brian Romans, Awards Chair
- Howard Harper, Sponsorship Chairs

Short Courses & Field Trips

Annual Meeting (AAPG - Houston)

- SEPM Short Course: Sequence Stratigraphy for Graduate Students
- SEPM Short Course: Seismic Geomorphology and Seismic Stratigraphy:
- SEPM Short Course: GIS Analysis of Facies Patterns of Modern Carbonate Sands
- SEPM Short Course: Delta Core Workshop
- SEPM Short Course: Sequence-stratigraphic analysis of shales: Key to paleoclimate archives, subsurface fluid flow, and hydrocarbon source, reservoir, and seal.
- SEPM Trip: The Great Debate: Sequence Stratigraphic and Tectonic Evolution of Deltaic Facies in the Ridge Basin, California
- SEPM Trip: Terrestrial Microbial Limestones in the Miocene Horse Spring Formation, Lake Mead Area, Southern Nevada
- AAPG/SEPM Student Trip: Rifting, Transpression, and Neotectonics of the Salton Trough, Southern California

International Meeting (AAPG ICE-Singapore)

- SEPM Short Course: Sequence Stratigraphy and Depositional Architecture for Graduate Students

GSA Annual Meeting (Charlotte, NC)

- PS/SEPM Short Course: Reconstructing Earth's Deep-Time Climate – The State of the Art in 2012

Journals

Both of our technical journals continued having great years. The Impact Factors for both journals increased again. The ***Journal of Sedimentary Research*** continues publishing top-quality papers under the guidance of the co-editors, Gene Rankey (University of Kansas) and newly elected James MacEarcher (Simon Frasier University). ***PALAIOS*** under the continuing editorship of Steve Hasiotis (University of Kansas) and newly elected JP Zonneveld (University of Alberta) published more pages and decreased turn-around time. With online science journal access being the preferred mode by many scientists and students, SEPM and its journals continued to play an important role, as a founder and current board member of the geoscience online journal aggregate, GeoScienceWorld (GSW), which continues to thrive. *JSR* is part of the GSW and AAPG-Datapages, while *PALAIOS* is part of GSW, BioOne and JSTOR online aggregates. Both of the journals as well as an SEPM Book Archive in within SEPM's independent online publications site www.sepmonline.org.

The Sedimentary Record, the full color member magazine, is now in its 10th year, continued under the editorship team of Ruarri Day-Stirrat (Shell), Xavier Janson (Bureau of Economic Geology, Texas) and

Director's Report

Wayne Wright with StatOil. The SedRec has continued publishing a current, interesting science article as well as giving members up to date information concerning the world of sedimentary geology. The Sedimentary Geology Division of GSA, continues to publish its newsletter section twice a year as part of this magazine in the March and September issues to better communicate to the wider sedimentary geology community.

Special Publications

Under the co-editorship of Gary Nichols and Brian Ricketts, the special publications of SEPM continue to produce top of the line products. In 2012, a total of four new books were published. The pipeline of future books continues to look for new proposals. SEPM's online submission and review process similar to the journals is now functioning well. This helps to reduce the time needed to take a book from idea to publication.

The SEPM Online Book Archive was launched late in 2010 and has been gaining both library and member subscribers. Books in the Special Publications, Concepts, Short Course Notes and Core Workshop Notes Series are uploaded to the archive either when they go out of print, are 5 years old or if they are sponsored to be free access such as SP #99.

- **SP # 99 -** ***Application of Principles of Seismic Geomorphology to Continental Slope and Base-of-slope Systems: Case Studies from the Seafloor and Near-Seafloor.*** Edited by Bradford E. Prather, Mark E. Deptuck, David Mohrigh, Berend van Hoorn and Russell B. Wynn.
- **SP # 101 -** ***Microbial Mats in Siliciclastic Depositional Systems Through Time.*** Edited by: Nora Noffke and Henry Chafetz.
- **SP # 102 -** ***Sedimentary Geology of Mars.*** Edited by: John P. Grotzinger and Ralph E. Milliken.
- **SC # 55 -** ***Analogs for Carbonate Deposition in Rift Settings.*** Edited by Paul M. Harris, James Ellis and Samuel Purkis

Research Conferences

SEPM ran one Research Conference in 2012 and help sponsor several others. The RC on ***Digital Geospatial Context for 3-D Source-to-Sink*** was held in April and was highly successful. Potential conferences on Terrestrial Paleoclimatic Indicators, Sea Level changes impact on coastal environments and Rifts III continue to be worked on.

Additionally, SEPM has agreed to co-sponsored these scientific meetings operated by other organizations:

- **China - 12th CMSP - October, 2012**
- **China - Western Pacific Sedimentology Conference, Taiwan, 13-18 May, 2013**
- **India - Annual Meeting of Indian Association of Sedimentologists-2012**
- **USA – Applied Micropaleontology III, Houston, April, 2013**

Collaborations (AAPG, AGI, GSL, GSA, ANAPS, NACSN and IUGS)

In 2012, SEPM continued its long tradition of holding the SEPM Annual Meeting in conjunction with AAPG and helping provide an excellent technical program with the volunteer work of the SEPM members on the Local Convention Committee. We co-sponsored a student field trip with AAPG. Also in 2012, SEPM continued to increase its presence at the GSA Annual Meeting having a Joint Technical Program Chair representing SEPM (John Snedden, UT Austin) for the meeting in Charlotte, NC, where SEPM is sponsoring several technical sessions and a Special Session honoring the late Gerald Friedman. Additionally SEPM will award three $500 prizes, sponsored by Nexen, to the top student poster presentations in the SGD/SEPM Poster Session.

The Society continues to work with AAPG, GSA, GSL, SEPM Sections, and our Global Ambassadors to produce jointly sponsored conferences and publications where applicable. SEPM is part of GSA-AGU-SEPM-GSL planned meeting on the coastal impacts of sea level change, still in planning. SEPM remains an official member of the American Geological Institute (AGI), the North American Commission on Stratigraphic Nomenclature (NACSN), the Association of North American Paleontological Societies (ANAPS), as well as an associated society with the International Union of Geologic Societies (IUGS).

Howard E. Harper, Executive Director

Director's Report

SEPM 2012 – 2013 Council
Back row left to right: James MacEachern; JP Zonneveld; Gene Rankey; Janok Bhattacharya; Steve Hasiotis
Front row left to right: Rick Sarg; Evan Franseen; David Budd; Chris Fielding
Missing: Maya Elrick; Stephen Flint; Danita Brandt; Beverly DeJarnett; Gary Nichols; Brian Ricketts; Brian Romans

Table 1. – *Membership Statistics*

	2005	2006	2007	2008	2009	2010	2011
SEPM MEMBERSHIP							
Total Members	3849	3802	3616	3580	3604	3739	3389
Professional Members	3034	3027	2883	2883	2809	2767	2562
Student Members	815	775	733	697	795	972	827
New Members	345	302	293	299	407	264	383
Dropped Members	387	495	380	408	448	619	559
Journal of Sedimentary Research							
Individual Library Subscribers	988	882	817	768	715	669	621
Aggregate Library Subscribers (GSW & DataPages)	240	349	422	486	541	583	647
Member Subscribers	2848	2762	2584	2633	2705	2386	2168
PALAIOS							
Individual Library Subscribers	386	312	278	247	221	199	181
Aggregate Library Subscribers (GSW & BioOne)	915	1217	1269	1420	1647	1774	1878
Member Subscribers	1329	1353	1243	1384	1498	1339	1281
Books Online							
Individual Libraries	NA	NA	NA	NA	NA	NA	13
Aggregate Library Subscribers	NA	NA	NA	NA	NA	NA	NA
Members Subscribers	NA	NA	NA	NA	NA	NA	650

Society Awards

Shahin Dashtgard accepts the James Lee Wilson Award from President Chris Fielding

James Lee Wilson Award
For Excellence in Sedimentary Geology Research by a Young Scientist
Shahin Dashtgard

Shahin earned his BS degree in Geology in 1998 from the University of Alberta. As an undergraduate student, Shahin served as president of the PS Warren Geological Society, and was recognized with several undergraduate awards for scholarship. For four years following his graduation, Shahin worked in the oil and gas industry, where he developed valuable skills and practical insights.

In 2002 Shahin started his PhD, which focussed on animal-sediment relationships in coarse-grained, tidal settings. During this time, Shahin expanded his skills in sedimentology and ichnology, and he produced key works that included the influence of grain-size has on the distribution of biogenic sedimentary structures and the architecture and significance of macrotidal bay-margin deposits. This work would be embryonic for the later establishment of recognition criteria for tidally modulated shoreface deposits.

Shahin finished his PhD in 2006 and took on the role of Siliciclastic Expert at the Alberta Geological Survey, where he used his broad range of skills to tackle reservoir characterization for the purpose of CO2-enhanced oil recovery and CO2 sequestration. In 2007, Shahin accepted an assistant professor position at Simon Fraser University in Burnaby, British Columbia, where he has become an integral part of their sedimentary program.

Since joining Simon Fraser, Shahin's efforts have been focussed on animal-sediment relationships in modern settings and the sedimentology of tidally influenced shorefaces and deltas. He applies these findings to the rock record of the Western Canadian Sedimentary Basin in strata that have oil and gas and CO2-sequestration potential. Shahin's research is of high quality and imaginative, with application across the field of sedimentology. In grooming his diverse career, Shahin has become a polymath. Shahin is a fearless and tireless worker who is willing to take on any challenge. Since 2006, Shahin has published ~30 peer-reviewed research papers in leading journals, and those efforts are broadly recognized.

Shahin is an active participant in SEPM, and he has served sedimentary geology by chairing conference sessions as well as serving as associate editor for JSR and Ichnos. He is a young leader in the field and his activities will provide building stones in sedimentary research for many years to come.

Biographer: Murray Gingras

Citation: In recognition of Dr. Shahin Dashtgard's contributions to animal-sediment relationships and the understanding of tidal settings.

Reply from Shahin Dashtgard

It is truly an honor to receive the James Lee Wilson Award, and I want to thank the SEPM for making that possible. I would also like to thank Dr. Murray Gingras (University of Alberta) and Dr. James MacEachern (Simon Fraser University) for nominating me. They, along with Dr. George Pemberton (University of Alberta), are three people who have played a big role in my development as a geologist, and I am greatly indebted to them for their mentorship, guidance and collegiality.

Oddly enough my intention upon entering university was to become an accountant. As a young man I enjoyed collecting rocks, but like many high school students, I hadn't even heard of geology! I took Geology 101 because it was supposed to be easy. It wasn't, but regardless, two weeks into my first semester I switched majors and I haven't regretted that decision since. During university, I had the great fortune to be taught by Dr. George Pemberton. George's enthusiasm for all things sedimentary was inspiring, and it was great to learn how seemingly esoteric ideas were applied to real-life problems.

After university I spent 4 years in the petroleum industry where I was able to apply much of what I learned in school. Working in industry was fantastic, and the risk and thrill of "drilling up" ideas and concepts is one that I think all sedimentologists should experience. I met many excellent geologists in the industry, and the lessons learned during my time there continue with me today.

My Ph.D. research was supervised by Dr. Murray Gingras, and was focused on the sedimentology and neoichnology of modern gravel-dominated coastlines in the Bay of Fundy. Murray was a fantastic supervisor and an excellent geologist, and I benefited immensely from his mentorship. As for the Bay of Fundy, there is no better location to gain an appreciation for the power and ability of tides to form the landscape and control sediment deposition. It was from that work that I set upon two research paths, studying both tidally influenced sedimentary environments and animal-sediment relationships.

As a faculty member at Simon Fraser University, I have the privilege of working with Dr. James MacEachern. I'm convinced that James remembers everything he reads, which has led to many enjoyable debates and the development of new avenues of research! Together we have established the Applied Research in Ichnology and Sedimentology (ARISE) Group that provides graduate students with an environment in which to learn about and partake in modern and ancient sedimentological research.

I count myself lucky to be in a field where I enjoy what I do and in a job that I enjoy going to everyday. From mentoring graduate students to teaching undergraduate students to interacting with many exceptional scientists, it's one fun adventure! In closing, I want to thank the SEPM for their dedication to promoting sedimentological research and education, and I look forward to continuing my involvement in the society. Thanks again for the Wilson Award.

Society Awards

Richard "Skip" A. Davis accepts the Honorary Membership Award from President Chris Fielding

Honorary Membership
For contributions to the science and SEPM
Richard "Skip" A. Davis

Honorary membership in SEPM for Skip Davis recognizes his outstanding service and leadership

to the Society, diverse technical publications in the field of coastal geology including notable contributions in the morphodynamics of barrier-island systems that have addressed modern environmental problems as well as the interpretation of ancient depositional systems, and his stimulating teaching and encouraging mentorship.

Skip has served SEPM as Councilor for Mineralogy, Secretary-Treasurer, Presidential candidate, and as chair of the Research Committee and Coastal Sedimentary Research Group. He was a

co-organizer and president of the Great Lakes Section. Skip has also served as co-convener and organizer of several SEPM conferences, Associate Editor of the Journal of Sedimentary Petrology, and co-editor of two SEPM Special Publications. He has also supported the society as a member of the publications, Shepard Medal, Wilson Medal, nominating, and convention policy committees.

Skip's research has addressed problems across a broad range of coastal geology. His varied scientific contributions include the study of beaches, tidal inlets, and the range of processes and geomorphology found along tide- and wave-dominated coasts. He and others have applied his work to difficult coastal management issues as well as the study of the rock record. He has conducted research on the coasts of Australia, New Zealand, Denmark, Germany, and all three coasts of the United States plus the Great Lakes. During the late 1960's, he began field studies along the Lake Michigan shoreline, and developed approaches for understanding nearshore and beach morphodynamics through process-response modeling. Beginning with this work, Skip has shown that careful analyses of geologic setting, historical maps, aerial photography, and field measurements can reveal how coastal systems respond to human alterations. His work has been crucial in that it has provided a geological perspective to solving coastal environmental problems and has shown the folly of relying solely on engineered solutions. His wide geographic perspective has led to significant publications on the balance between wave and tidal energy and the resulting morphodynamics of barrier island systems. Storms have provided many opportunities for Skip's research through the years, and his hurricane studies of impacts on barrier islands, beaches, and tidal inlets on the west Florida coast are extremely relevant to the issues of today. Author of nearly 150 refereed papers, Skip also co-edited SEPM special publications No. 24, Beach and Nearshore Sedimentation, and 61, Tidalites, as well as authored or edited 20 books for technical and general audiences as well as texts for beginning and advanced students. He is a Shepard Medal recipient.

Skip is retired from the University of South Florida where he is a Distinguished University Professor Emeritus. He currently lives in Texas and has taught coastal geology at Texas A&M University and is a Visiting Professor and Research Associate in the Harte Research Institute at Texas A&M University – Corpus Christi, where he has recently taught courses on geomorphology and sea-level change and completed two books, including one titled Sea-Level Change in the Gulf of Mexico. Skip's post-retirement activity is notable not just in recent publications, but in travel to work with colleagues in China, Brazil, and around the Gulf of Mexico. His current standing was preceded by a long and distinguished academic career. He received a B.S. from Beloit College, a M.A. from The University of Texas at Austin, and a Ph.D. from the University of Illinois. In 1965, he started as an Assistant Professor at Western Michigan University, and in 1973 he moved to the University of South Florida (USF) as Chairman of the Department of Geology. Subsequently he served as Associate Dean for Research and Graduate Affairs, Acting Dean of the College of Natural Sciences, Director of the Environmental Science and Policy Program, and was appointed a Distinguished Research Professor in 1988. While at USF, Skip supervised 50 theses and dissertations, and he continues to mentor graduate students and serve on graduate student committees. He is greatly appreciated among his students for his illustrative lectures and ambitious and incredibly informative field trips.

Skip has colleagues around the world having been a Visiting Professor or Scientist at the University of Melbourne, University of North Carolina, Duke University, the Senckenberg Institute, University of Copenhagen, University of Sydney, University of Waikato, University of Seville, University of Huelva, International University of Andalucia, and University of Utrecht. He has truly been a force in bringing the international community of coastal scientists together in sharing insights on how coasts work.

Skip would not have been able to accomplish all that is written here and served our society so well without the support of his wife Mary Ann, daughter Laurie, and son Lee. Their support has been in the form of a close and loving family, but also as intrepid field assistants throughout his career starting with beach profile measurements along Mustang Island, Texas in the early years.

Biographer: James C. Gibeaut

Citation: For sustained and exemplary service to SEPM as a leader and achiever, for scholarly works reaching across national boundaries,

Society Awards

and for preparing and inspiring generations of students in the coastal sciences.

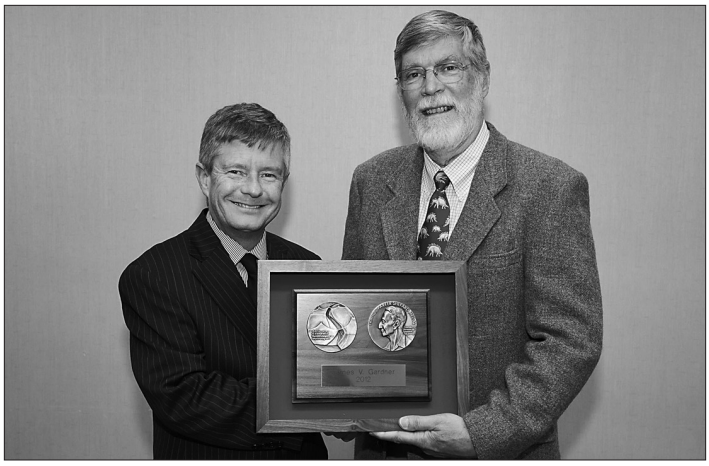
Reply from Richard "Skip" A. Davis

Wow! What a great year! I published two books: one on "Sea-level Change in the Gulf of Mexico" and the other co-edited with Bob Dalrymple on "Principles of Tidal Sedimentology". My wife, Mary Ann, and I celebrated our 50th wedding anniversary, and now this. What an honor!

I have always considered SEPM as my main professional society. After joining in graduate school and attending my first national meeting in Toronto in 1964, I began to participate in Society activities. I joined the Coastal Sedimentation research group which was led by my friend Miles Hayes, and then I succeeded him as chairman. In those days it was common for section presidents and research group chairs to attend council meetings both times each year. I was really eager to be in the company of the people who were actual members of the council and learn about the things that they did for the society. I was able to meet and know people like Bob Weimer, Ed Dapples, Donn Gorsline, Doris Curtis and many others; people whose names I knew from their research. I was in awe!

Shortly thereafter Wayne Pryor and I organized the Great Lakes Section and shortly thereafter I became president so it allowed me to continue to attend council meetings. Then I was nominated for Councilor for Mineralogy and was lucky enough to be elected. A couple of years later I lost the presidential election to John Warme. Shortly after that I was nominated and elected to the position of Secretary-Treasurer. The bottom line was that I had the opportunity of attending council meetings for about 10 years. I know that some people probably think attending these meetings is not time well spent. My take on it was a great learning opportunity. It was generally the highlight of the meeting for me.

I also had the opportunity of being on and chairman of various committees such as membership, research, Shepard Medal, Pettijohn Medal and others. I co-edited a couple of redbooks and one reprint volume, and I co-organized two research conferences. In 1999 I was honored to receive the Shepard Medal. All in all, the Society has really been great to me. Hopefully I have made a contribution to it as well. I am very pleased to be recognized and selected for Honorary Membership.



James V. Gardner accepts the Francis P. Shepard Medal from President Chris Fielding

Francis P. Shepard Medal For Sustained Excellence in Marine Geology James V. Gardner

It is indeed fitting that SEPM honors Jim Gardner with the Shepard Medal for Excellence in Marine Geology at this meeting, set alongside the Southern California Continental Borderland, the home and research haunt of Fran Shepard. Fran loved nothing more than a good geologic map of the ocean floor and a solid scientific revelation of its meaning. Jim delivered both, over and over, and in so doing, he has had immeasurable impact on a generation of marine geologists through his distinguished career with the U.S. Geological Survey and with the University of New Hampshire.

Jim hails from Kansas, far from the sea (at least the present-day one), and he started his undergraduate studies there before heading west to San Diego State University to complete them and begin a lifetime association with the ocean. His Ph.D research was at Columbia University's Lamont Geological Observatory in the late 60s and early 70s, one of the most exciting places for marine research on the planet. He immediately launched into a long and successful research career spanning the globe, leading cruises aboard the DSDP Glomar Challenger, and dozens of U.S. and foreign oceanographic research vessels, addressing such diverse topics as seafloor evolution, modern marine geological processes, and Quaternary paleoclimate and marine facies.

But it is Jim's lasting contributions to marine geology through his large, innovative programs to map the U.S. seafloor, in detail and in its entirety for which we particularly honor him. In 1983 the U.S. established the 200 mile-wide Exclusive Economic Zone (EEZ), and Jim responded with a plan to combine the unique wide-swath sonar system (GLORIA) of the U.K. with software developed by the U.S. for planetary exploration. This combination provided, for the first time, accurate, detailed seafloor maps of the entire U.S. EEZ. Under Jim's guidance, he and his colleagues mapped new volcanoes off California, turbidite pathways in the Gulf of Mexico, giant landslides off Hawaii, enormous canyons off Alaska, and a host of other features and

Society Awards

processes never before imaged or even imagined. The monumental results were published widely as journal papers, USGS reports and atlases, and in the landmark book: Geology of the U. S. Seafloor: The view from GLORIA. The GLORIA seafloor mapping program was unprecedented in its scope or achievement-- a direct reflection of Jim's scientific vision and leadership.

High-resolution multi-beam bathymetric mapping made its debut in the 1990s, and once again Jim's contributions rose to a level of prominence and distinction. Working closely with Larry Mayer, first at the University of New Brunswick and then at the University of New Hampshire, he became a leader in the new science of marine geology exploration and interpretation using high-resolution maps of the seafloor. He mapped the U.S. continental margins to identify fish habitats, coastal hazards, geologic structures, and active sediment processes. The maps that Jim produced and interpreted-from San Francisco Bay and Puget Sound, to Lake Tahoe and Crater Lake, to the Gulf of Mexico and beyond-line the hallways of academic and government institutions. His latest ventures include new, ground-breaking maps of the U.S. seafloor off Alaska, the Northern Marianas Islands, and the Atlantic margin. And when he isn't mapping some distant unknown piece of Planet Ocean, Jim can be found chasing rainbow trout across New England or traveling the globe with his lovely and talented wife and daughters.

Jim Gardner has mapped more of the U.S. seafloor than any other person, and he has published maps and geological interpretations that have provided a wealth of information for scientists and resource managers alike. He is indeed most deserving of recognition through SEPM's Shepard Award for his unique and selfless contributions in seafloor mapping and research for a generation of marine geologists. Fran Shepard would indeed be proud to have such an accomplished and distinguished scientist receive the award established in his name.

Biographer: Michel E. Field

Citation: To James V. Gardner, in recognition of his extraordinary scientific career providing insight into marine geologic processes, his leadership in application of advanced technology to seafloor research, and his unprecedented contributions to mapping the geologic landscape of America's marine domain.

Reply from James V. Gardner

I was flabbergasted when I received the phone call from Chris Fielding that I was to be awarded the Shepard Medal for 2012. My first thought was that Mike Field was pulling my leg…yet again! Then, after I was reassured by Chris that this was for real, I was humbled to think that my name would be associated with the other Shepard Medal awardees but especially because I would somehow be associated with the legacy of Fran Shepard.

As I look back over the past 45 years of my career, it seems to me that luck has had a lot to do with my love affair with marine geology. It was luck that Ned Allison, my undergraduate professor at San Diego State, invited me on a cruise with him to the Clipperton Island area. That got me hooked on marine geology.

It was luck that I arrived at Lamont during the height Bruce Heezen's work and then later to become part of the CLIMAP project that began the modern era of paleoceanography.

It was luck that the new Deep Sea Drilling Project opened its first office next to my graduate office at Lamont. Four cruises on the Glomar Challenger introduced me to an international cast of colleagues, several who became life-long friends.

It was luck that Dave Scholl invited me to become a member of the newly minted Pacific-Arctic Branch of Marine Geology at the USGS in Menlo Park. There, mentors and colleagues became more life-long friends as we outfitted ships and then took them to sea.

It was luck that the U.S. unilaterally declared the U.S. EEZ just after I returned from a sabbatical in Britain learning all about GLORIA and its mapping potential.

It was luck that Larry Mayer introduced me to multibeam echosounders in the mid 1990s. And it was luck that Larry asked me to join his newly founded Center for Coastal & Ocean Mapping at the Univ. of New Hampshire. Here I have had the good luck of falling in with a group of young geophysicists , acousticians, ocean engineers, & programmers that are at the cutting edge of mapping the seafloor and the water column.

I'm a seagoing marine geologist. It's an addiction, as any of you out there that share this addiction know. It's hard to describe life aboard a research ship to those who have never been there; but to those that have and continue to go to sea, they know it's an addiction. Ned Allison got me addicted and I think he knew it. But like any addict, it's those closest to the addict that also suffer. Without the support of Catherine, my wife and best friend for going on 40 years and our two daughters Brooke and Lindsay, I surely would not be standing here this evening.

Bruce Heezen once told me "never work at a latitude higher than you live". This has always seemed wise to me.

Marshall Kay told a class I was in "if it can happen it did happen". This caused my colleagues and me to ponder explanations and to apply the famous sanity check to them.

Someone also said, "perfection has nothing to do with not making mistakes". Great advice that I give to my students.

And lastly, Richard Feynman, the great physicist, once wrote something about physics that seems to me to apply equally well to Fran Shepard and his legacy to marine geology: "Our imagination is stretched to the utmost not, as in fiction, to imagine things which are not really there, but just to comprehend those things that are there".

I am deeply honored by this recognition.

Society Awards

Carlton E. Brett accepts the Raymond C. Moore Medal from President Chris Fielding

Raymond C. Moore Medal For Sustained Excellence in Paleontology Carlton E. Brett

Carlton Brett has is held in high esteem worldwide for his strikingly unique contributions in the fields of paleontology and stratigraphy, ranging from the development of novel methods for determining the regional and global age-equivalencies of strata; to his leadership in the modernization of the science of stratigraphy and its incorporation into evolutionary research; to his seminal work on the use of data on the preservational condition of fossil material to reconstruct ancient environments; to his provocative discoveries about the tempo and mode of evolution among species on a regional scale. The latter topic, dubbed "coordinated stasis", has attracted the attention of leading evolutionary theorists, who have been debating its merits for more than a decade. More broadly, Carl and his students have been at the vanguard of integrative approaches to the study of Earth history, melding the stratigraphic, sedimentological, paleontological, and geochemical records to understand the relationships among regional and global events throughout the mid-Paleozoic.

Carl earned his Ph.D. at the University of Michigan in 1978, and moved that same year into a faculty position at the University of Rochester. In 1998, he joined the Department of Geology at the University of Cincinnati. Among the highlights of Carl's professional career are his receipt the Paleontological Society's Schuchert Award; his election as a fellow of the Paleontological Society and of the Geological Society of America; his associate editorships of several journals; his receipt in 2008 of the Digby McClaren Medal for Lifetime Achievement in Stratigraphic Paleontology, awarded by the International Commission on Stratigraphy at the International Paleontological Congress in Oslo; and his receipt in 2005 of an Alexander von Humboldt Research Prize. Carl has published some 230 peer-reviewed papers, 62 guidebook articles, and five edited books; and he has supervised 22 Ph.D. and 27 M.S. students throughout his distinguished career.

Carl is certainly among the most versatile, imaginative, and hard-working researchers anywhere in the allied fields of paleontology and stratigraphy, and he has an encyclopedic memory of anything that he encounters. Carl is, first and foremost, an aficionado of field work and, as so many of his students and colleagues will tell you, there is no place that he would rather be at any moment on any day (or night) in any weather condition than at a rock outcrop. His intuitive grasp of what he observes out in the field and his ability to incorporate these observations into meaningful scientific advances are legendary.

Equally important are Carl's lack of pretentiousness and his ability to communicate what he does to just about anyone, particularly out in the field during his renowned field trips. Because of these qualities, he is a gifted teacher and mentor who inspires loyalty and enthusiasm among students at all levels, as well as among his colleagues around the world. Carl is one of those people who is able to get the very best out of his students, as evidenced by their successes after they graduate.

Biographer: Arnold I. Miller

Citation: To Carlton E. Brett for his uniquely integrative contributions to the study of Earth history, and for his unmatched dedication to field-based pedagogy.

Reply from Carlton E. Brett

I am delighted to receive this award, especially as R.C. Moore was something of a hero to me, even though I never met the man. It is remarkable to be honored for doing what is really a life-long passion/addiction. Life is contingent and I feel very fortunate that the twists of fate led me to an extraordinarily interesting career.

Almost as far back as I can remember I wanted to be a naturalist. Growing up on a small family farm in southeastern New Hampshire, I was fascinated by animals of all sorts from clams to cows. I collected, identified, and made drawings of shells, insects, and bones and eventually made my own little museum. Both of my parents were teachers and they encouraged me to follow my own interests. My father, Wesley, who just turned 98, was a skilled designer-craftsman and a much-revered professor of design; he transferred from the University of New Hampshire to SUNY College at Buffalo when I was 10 and we moved from the "Granite State" to the fossil-rich "Niagara Frontier" of western New York. It was sad to leave the farm and yet this was a defining event. I vividly recall the day that I flipped up a slab of crumbling sandstone in the new back yard and saw a fossil-a clam imprint. That was a first. I was thrilled and asked "how old is that, how did it live, and how did it get preserved in rock?" I'm still pursuing such questions.

I first encountered the name R.C. Moore in the library at Buffalo State College, as 12 year old. I tried to identify fossils I had collected in riprap along the Niagara River, using the first book I came upon: the "Treatise on Invertebrate Paleontology": a tough source for a beginner, but what did I know: obviously not much! Bit by bit, though, I began to learn. By the time I was a high school student I was determined to

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become a paleontologist and had the goal of working in one of two great "meccas" for Paleozoic fossils and strata: New York State or the Cincinnati region. Amazingly, I got to do both.

As an undergraduate at the University of Buffalo in the turbulent early 1970s, I pursued geology and paleontology with a vengeance and benefitted from the encouragement and advise of mentors Ed Buehler and Parker Calkin; above all, I appreciated the fact that they let me follow my own interests.

The year 1973 was pivotal in my life: after I graduated from UB I got engaged to my wife Betty Lou, and quite by accident, I met the incomparable Gordon Baird, then a PhD student at the University of Rochester. Both associations have proved to be very wonderful in quite different ways. It turned out that Gordon and I had highly overlapping interests and even were working independently on the same geologic projects: we worked cooperatively from that day onward. Gordon is one of the most remarkable and keen field stratigraphers and paleontologists I have ever met. Eventually, we were extremely fortunate to both get teaching positions in western New York: he at SUNY Fredonia and I at his alma mater, University of Rochester.

At the University of Michigan my PhD advisor, Brad Macurda, not only furthered my interests in crinoids, but also, incidentally introduced me to the notion of sequence stratigraphy. Professors Jack Dorr, Jim Doyle, Gerry Smith, Bob Kesling and Rob Van der Voo led by example; Bruce Wilkinson kept me on my toes. Fellow graduate students, including Ed Landing, Dave Liddell, and George McIntosh, among others sparked my interests in diverse ways and we cooperated in research projects on echinoderms paleobiology, taphonomy and paleoecology far beyond our dissertation topics.

And there were other influences, as well. Even as a high school student I became intrigued that the Paleozoic fossils of western New York seemed to show remarkably little change for what I perceived to be millions of years, followed by abrupt changes. Therefore, I read Niles Eldredge and Stephen Jay Gould's seminal paper on punctuated equilibrium with great interest; their phrase "stasis is data" became a mantra to me. I was determined to blend field studies of stratigraphy and paleontology with evolutionary paleoecology. With encouragement from both Eldredge and Gould, Gordon Baird and I proposed the now controversial notion of "coordinated stasis", based on the same empirical patterns of fossil distribution that had always intrigued me.

I was thrilled to get a position at the University of Rochester in 1978, when I was still finishing my dissertation on paleoecology of echinoderms from, of course, the Rochester Shale. Western New York is a classic testing ground for ideas in geology and paleontology. Together with hosts of students, Gordon Baird and I fed off each other's enthusiasm for stratigraphy and paleoecology, as we scrambled up 100s of stream cuts in Upstate New York; on the long drives home on the NY Thruway we excitedly pulled together new views of stratigraphic relationships, facies models, and paleoecology. Ideas flew back and forth and we raced out at the next available opportunity to test our latest hypotheses.

I was delighted to become a part of the great department at University of Cincinnati in 1998, some 30 years after I first marveled over drawers of spectacular Cincinnatian trilobites on a ninth grade field trip to Harvard's MCZ. It is not simply that the Cincinnatian rocks, so well exposed in the Tristate area, provide an unparalleled natural laboratory to pursue questions of Paleozoic sedimentary geology, paleoecology, and evolution. The UC Geology Department is a uniquely stimulating, collegial and nurturing place for students and faculty, alike. In addition, the Department's long-standing association with the Cincinnati Dry Dredgers amateur paleontology organization provides an opportunity to interact with a wonderful group of local experts whose combined knowledge of the Cincinnatian fossils and strata is stunning. I greatly appreciate the support and friendship of all of my esteemed colleagues in the Geology Department and, especially Dave Meyer and Arnie Miller, who have long nurtured my interests in taphonomy and evolutionary paleoecology. Dave was a role model to me even when he was still a youngster. Arnie, who graduated from Rochester the month I was hired there, not only urged me to apply for my present position, he has been very supportive in a great many ways.

I have been inspired and encouraged by a great many other colleagues and students, too numerous to name. But I must mention Curt Teichert, Dolf Seilacher, and Paul Potter. How could one help but revere these legendary scientists, each still publishing important books and teaching well into their late 80s. With role models like these, don't expect me to retire any day soon!

I also owe a great debt of gratitude to dozens of students past and present-many of them now paleontologists and sedimentary geologists in their own right. I view students as junior colleagues; they inspire me and keep me on my toes. The possibility of direct involvement of students at all levels in new research keeps what might become routine activities vibrant and exciting and some of my most important lines of research evolved from discussions raised by "simple" student questions. There is nothing so gratifying as seeing students develop sparks of interest and then seeing them go on to pursue their own investigations and careers in Earth sciences. I have been fortunate, indeed, to get to work with so many outstanding students.

Finally, I must thank my wife, Betty Lou, who has patiently encouraged and helped me for over 38 years-and my children Kenton and Leanne who have taught me many things and put up with an eccentric father who ran around the world in search of rocks and fossils and what they can tell us about the history of this planet. It's a wonderful life. Thank you all very much.

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Norman D. Smith accepts the Francis J. Pettijohn Medal from President Chris Fielding

Francis J. Pettijohn Medal For Sustained Excellence in Sedimentology Norman D. Smith

Norman D. Smith was born and grew up in upper New York State, received a BS at Lawrence University and then went on to Brown University in Providence, RI for MSc and PhD. His doctorate was on Silurian siliciclastic rocks, but he preferred the challenges and dynamics of modern sedimentary environments and turned his attention to rivers in a wide range of settings, measuring their processes, observing sediment patterns and documenting sedimentary records. He was Editor of Journal of Sedimentary Petrology (1983-1988) and was one of leading proponents for changing its name to Journal of Sedimentary Research.

Norm is a practical, field-oriented sedimentologist. His research is rooted in keen observation and ingenious measurement and often supported by laboratory studies. He was one of the pioneers in early 1970's relating stratification to bedforms. This research laid the foundation for the application of "alluvial architecture" to interpretation of fluvial deposits. His 1980 seminal paper with Derald Smith on anastomosing rivers forever changed traditional views of river geomorphology.

His publications are invariably data rich with interpretations well constrained by observations. They are also paragons of clarity. Working alone or with students and colleagues, he has made many important discoveries that have enriched the general field of physical process sedimentology. For example (with James Syvitsky) the importance of pelletization in high sedimentation rates in glacial lakes. With John Southard he noted that bed load transport occurred as gravel waves passing down river (Hilda Creek) producing distinct peaks in the transport curve. This phenomenon was later produced in flume experiments.

His research took him to South Africa where he applied fluvial expertise to the concentration of heavy minerals in braided fluvial placer deposits. This culminated in 1986 with publication of a major review paper on water-laid placers with Rudy Slingerland.

Glacial outwash provided an ideal location to study high-discharge high-sediment load systems and in 1980s-1990's Norm traveled to Canada, Alaska and ultimately to Antarctica to better understand the role of ice and melting ice on sedimentary processes. For over 20 years he worked on tidewater glaciers (Ross Powell) and surging glaciers (A.C. Phillips) in Alaska and even calving glaciers (Gail Ashley) in Antarctica. He even insisted on collecting sediment-rich icebergs calving from an active ice front using a small zodiac in order to maintain a quality dataset.

Cumberland Marshes, Canada has been an irresistible siren call for Norm for over 25 years. Described as being in the "middle of nowhere", this low-gradient, fine-grained fluvial system has been the site of a number of startling discoveries. He has collaborated with G.S. Morozova, M. Perez-Arlucea and R. Slingerland among others. Starting off as a study of anastomosed rivers and avulsion, the long term research program is tackling fundamental questions such as river bifurcation and has yielded what might be viewed Norm's greatest contribution to sedimentology……the development of a new model for sedimentation of fine-grained alluvial deposits. The gist of the model is that floodplain deposits don't alluviate in lockstep with channel-belt deposits through levee-overtopping and small crevasse splays, but rather are deposited in shorter bursts during avulsions and then lie relatively dormant for long periods (during which peats and soils form). Norm's avulsion model offers an alternate viewpoint. The thin sand sheets and ribbons ubiquitous in fluvial deposits are avulsion deposits, not crevasse splays from a single meander belt. Norm has conjectured that anastomosed rivers are more likely to be short-term transitional patterns forced by the need to supply a large sediment sheet during avulsions. They disappear when the low areas of the basin are aggraded and flows are capture into single-thread channel.

Norman D. Smith is most deserving of the Pettijohn Medal for excellence in sedimentology. Despite the fact that he likes country and western music, he has made major contributions to the field of sedimentology. He is a keen observer, a great companion in lab and field and a role model of how to conduct science.

Biographer: Gail M. Ashley

Citation: For his outstanding contributions to sedimentology via field-based research in a wide range of settings; for keen observations and ingenious measurements focused on fundamental fluvial processes; for data-rich and clearly written papers and for his long-term service to SEPM.

Reply from Norman D. Smith

I am honored and humbled for this recognition that bears the name of Francis J. Pettijohn, truly a giant in our business. Though I grew up on his books, I never met him until shortly before he died at age 95. From reading his *Memoirs of an Unrepentant Field Geologist* some years ago, I discovered that we shared two things in common. First, we both became sedimentologists by accident. Early in his career, Francis considered himself a petrologist in the broadest sense and didn't become focused on sedimentary rocks until, as a newly hired

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assistant professor at the University of Chicago, he was asked to teach a course in sedimentation. In my case, I entered graduate school (Brown University) intending to become a petrologist or mineralogist, but soon switched to sed/strat , irrevocably and never to look back, when JRL Allen came to Brown on sabbatical and taught a course that made sedimentology jump alive. Allen's course especially piqued my interest in fluvial sediments (he was hot into upward-fining alluvial cycles at the time), so I decided to pursue this as a dissertation topic, settling on Silurian clastics in the North-Central Appalachians after stumbling onto a paleocurrent study of these strata by Pettijohn's PhD student, Lloyd Yeakel (GSA Bull., 1962). The rocks (Shawangunk Cg, Tuscarora Ss) turned out to be mostly deposits of braided rivers --- at least I thought so, and my grad committee apparently concurred--- of which little was known at that time. This outcome steered me next to the braided Platte River and an ensuing lifelong interest in the sedimentology and geomorphology of modern river systems. These, together with lakes, glaciers, placers, and occasional forays into ancient deposits, plus enthusiastic endorsement of the whole world as our laboratory, have pretty much defined the course of my geological life. These, and a lot of serendipity and good company.

A second thing shared with FJP is that we both had an early fascination with the wilds of Canada. Pettijohn's student days included field work in the northern Lake Superior region and a later six-week canoe trip in northwest Ontario that he considered to be the turning point in his career and the beginning of his "lifelong odyssey" in the study of Precambrian rocks. With me, it was a combination of growing up near the border, copies of my father's *Northern Miner* lying around the house, and dreams of exploring for gold or whatever else in far-off places like the Yukon and Labrador that drew me into geology, later clinched by two summers in the Canadian bush as an undergraduate field assistant with mineral exploration parties. FJP later shifted his focus to the relatively tame Appalachians, but I never lost the "Call of the Wild" for Canada. Well over half of my research projects and output, and those of my students, have originated from field areas in Canada and Alaska.

I'm indebted to many for this occasion: to Gail, old friend and colleague, for nominating me and writing that nice bio; to mentors Robert Erwin, Tim Mutch, and Bob DeMar who were wiser than they knew; to a great bunch of colleagues and collaborators who stimulated, shared, laughed, argued, and put up with me; to my students, grad and undergrad, who taught me much and actually did most of the work; and certainly to my beautiful and supportive wife Judy who endured long field absences and many missed Saturdays. Thanks to you all.

John C. Harms accepts the William F. Twenhofel Medal
from President Chris Fielding

William F. Twenhofel Medal
For a Career of Outstanding Contributions in Sedimentary Geology
John C. Harms

John Conrad Harms was born in 1930 in Albuquerque, New Mexico, where his parents lived close to the Santa Fe Railroad tracks, within sight of the Rio Grande. His parents were from immigrant families that had settled near Loveland, Colorado in the late l800s. His father, who had an engineering degree from the University of Colorado at Boulder, worked for the Santa Fe Railroad in that era. But when an opportunity allowed, the Harms family returned to Colorado.

In the 1940s, John enrolled at Denver's East High School, considered one of the best public high schools in the region. At East his intellectual curiosity and scholastic achievement led his physics teacher, a graduate of Columbia University, to encourage and enable John to apply there. John enrolled at Columbia in 1947 as an undergraduate geology major, and studied under the stratigrapher and generalist Marshall Kay and the structural geologist Walter Bucher, among others in a well-known department. And at Columbia he met Bobbe Barber, his wife to be, who was then a student at the Juilliard School of Music. They were married after his graduation from Columbia in 1951, but after a year of graduate study at the University of Kansas, the needs of his family forced him to apply for a job as an exploration geologist with Continental Oil Company in Ponca City. He served for two years in that position, but was drafted by the Army for military service, fortunately for a two-year term in the Army Map Service based in Washington, DC.

After 1956 when that term of service was near completion, he applied successfully for admission in the fall of 1956 to the University of Colorado at Boulder's graduate program in geology. After a year of study with structural geologist Larry Warner, sedimentary petrologist T. R. Walker, and geomorphologist Bill Bradley, among others, his Ph.D. research was done under Warner, on the structural geology of the southern Front Range. His Ph.D. came quickly in 1959.

Shortly thereafter in 1959, John Harms accepted an offer from Marathon Oil Company (still the Ohio Oil Company at that time), and went to work as a research geologist in its new Denver Research Center in Littleton, Colorado. There he quickly became a uniquely productive and influential scientist on the exploration research staff. His first work was

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a subsurface study of some Cretaceous "J" (Muddy) sandstones in cores from a small oil field in the Nebraska part of the Denver Basin. Building on log studies by exploration-geologist colleagues, John interpreted the productive sandstones along a sinuous trend as fluviatile valley-fill deposits in stratigraphic traps (Harms 1966). These were then contrasted with adjacent shallow-marine sandstones outside the incised valleys (Exum & Harms 1968), a pioneering concept that helped initiate a rush to identify and exploit incised valley-fill sandstones worldwide.

The two subsurface studies focused John's interest in the importance of primary sedimentary structures in interpreting the origins and settings of sandstones. In the next few years he investigated sandstones in many parts of this country, and studied the effects of waves, currents and combinations of both on bed forms and primary structures under controlled hydraulic conditions, in a large flume at Colorado State University. The flume work (Harms 1969) and two studies of modern sands in the Red River north of Shreveport (Harms, MacKenzie & McCubbin 1963), and the Rio Grande north of El Paso (Harms & Fahnestock 1965), led in turn to interpretations of primary structures in terms of bed forms, varieties of ripples and cross-stratification built by differing flow regimes. These findings led to two important SEPM short courses in 1965 and 1975 that he initiated with academic colleagues John Southard and Roger Walker. By the 1970s he was known internationally as a master in interpreting sandstones in a broad array of environments from fluviatile to marginal-marine to deep-water. A colleague at Marathon's lab, watching John walk swiftly one day from one building to another, quietly remarked to coworkers next to him, "There goes a giant." No one disagreed: John's growing stature as a mature scientist was already understood by his associates.

In Marathon, he also commanded a full range of skills to interpret indirect information from the subsurface, including general lithologies, porosity and fluid from various logs, and general stratigraphic information partly from seismic records. A colleague of John's in management at the Lab observed that years before Peter Vail led the seismic stratigraphy revolution, John and a geophysicist colleague published with convincing documentation on the seismic signatures of some sandstone depositional models (Harms & Tackenberg 1972)

Over the years with Marathon, John worked on Devonian, Permian, Jurassic, Cretaceous, and Cenozoic sandstones and associated shale and siltstone. In the 1970s and early 1980s he applied his generalist's perspective and exceptional energy to exploration projects for Marathon in Egypt, Pakistan and the North Sea.

Following two years as Manager of Regional Exploration based at the Lab, however, John resigned in 1982 to establish a partnership with M. J. Brady, a former co-worker in Marathon's lab. Harms & Brady Geological Consultants, in which John was principal, was intensely active from 1982 until 2004. The partnership carried out more than 40 contracted projects. Most early projects, such as an evaluation of the Jurassic worldwide and a study oil and gas potential of offshore Brazil, were done for companies operating in this country or Canada. Later projects, the majority of them overseas, required subcontracted help from structural or stratigraphic geologists, geophysicists, paleontologists and others, and were done for governments such as Somalia, Turkmenistan, Uzbekistan and Mongolia, and, and for national oil companies such as PETROM (oil) and ROMGAZ (gas) in Romania. The country-wide study for Somalia involved reinterpreting the structure and stratigraphy and produced a new geologic map based on satellite imagery. These and some other projects were funded by the World Bank.

John and Bobbe Harms have lived over 50 years in the Denver suburb of Littleton, a few miles from the site of Marathon's former Lab. Since 2004 John has been involved in independent companies doing recompletions and production enhancement of badly depleted oil and wells in parts of the Denver Basin, and still consults actively in this country and overseas.

Biographer: Philip W. Choquette

Citation: For his leadership during the research-intensive 1960s-1980s, in greatly clarifying geologists' understanding of sedimentary structures in sandstones, over the range of environments from fluviatile to deep sea -- always emphasizing the processes in sandstone deposition. His distinguished career spans more than 50 years.

Reply from John C. Harms

I am very deeply honored to receive the Twenhofel Medal. I have been privileged to have a long geological career and many colleagues , some of whom actively supported my nomination. To them I am especially appreciative.

I make two promises. First, I will be brief, and second, I will try to not bore you with many details of my career. Rather, I would like to remark on the science of geology and what makes it so interesting, dynamic and exciting. There are several young geologists in the audience, and I hope to impart to them why I think geology is such a great career.

Geology is not a static science, but is dynamic and ever changing. Before about the end of the 18th century and James Hutton, there was no science of geology. He and colleagues of the time put it on a firm footing of scientific method, clearly recognizing the Principal of Uniformity, although it was Geikie that crystallized the concept into the succinct phrase, "The present is the key to the past". My theme in following remarks is how the concept of Uniformity has changed somewhat and why this makes geology such a fascinating science.

I became a geology major at Columbia University in the late 40's, roughly 150 years after Hutton and the birth of geology. I was privileged to take a course on stratigraphy from Marshal Kay, centered on his classification of geosynclines. Kay had recognized broad large scale stratigraphic associations which he classified as myogeosynclines, eugeosynclines, taphrogeosynclines and the like. At that time, the concept of continental drift was not popular in North America, although we dutifully recognized it as an alternative hypothesis. With advances in the knowledge of magnetism and magnetic reversals in the deep sea, the lateral movement of continents by sea-floor spreading was proven and widely accepted in the 1960's. Kay's observations were as valid as ever, but became organized in the context of continental movement into passive margins, convergent margins and rift basins. That was a remarkable advance that rationalized many observations, but also points out that our view of Uniformity is limited by our short observational span. The continents are moving under our feet, but it is so slowly and ponderously that we can't feel it. We must rely on more long term historical information to correctly interpret our earth. To me, this was an important lesson.

Early in my career, I was attempting to understand primary sedimentary structures so as to better interpret ancient sedimentary sequences. To do this, we did flume experiments or used those done by others, observed flow in modern streams and trenched river beds. This is a good example of the application of Uniformity, that is, what we observe today can be used to interpret the ancient. This work was quite useful in interpreting rocks formed in many environments. This system of defining flow

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regime, bed forms and sedimentary structures works well as long as flow is steady and uniform, or nearly so, over a fair time span. When flow is neither steady nor uniform, but is more catastrophic in nature, the scheme of interpretation changes because the phenomena are infrequent or very difficult to observe. Then we rely on the geologic record rather than direct observation to interpret the events. An example is sandy deposits formed during storm episodes in the shallow offshore. Cross stratification of unique form, which I dubbed "hummocky cross stratification", results from the strong oscillatory flow caused by large waves moving into shallow near shore waters. We knew that during storm episodes

bottom profiles from the beach to offshore steepened, but we had no idea about the detailed character of these sediments that moved into deeper water. Those deposits were at least partially destroyed as fair weather waves returned and again flattened the bottom profile. It is nearly impossible to experimentally replicate these large storm waves, and it is hazardous to observe the effects directly under water. So it was the geologic record of prograding shoreline sequences and inference that led to the recognition of hummocky cross stratification as storm deposits. And so it goes in geology. Uniformity has to be somewhat restated as, "The past is the key to the present and to the future".

Part of this lesson is that Uniformity does not mean status quo. Rather geologic history is punctuated by unusual events, some of which are catastrophic. Some we clearly recognize, such as volcanic eruptions and tsunamis, because they happen fairly often and within our life spans. Others, such as climate change, are slow and subtle and more difficult to evaluate. We are in the midst of a debate about "global warming", whether it is caused by man's activities or is part of normal earth cycles or perhaps a combination of both. This controversy should be tempered by good science. My perspective, which is admittedly limited, is based on geologic field work in the deserts of southern Egypt and Sudan. There, the desert is profound. It is possible to drive hundreds of miles without seeing a living plant. However, it has not always been so. Man occupied these deserts at least twice in the fairly recent past when the climate was more cool and humid. Once was about five to six thousand years ago when Neolithic people harvested seed crops and kept cattle around playa lakes, and then again ten to twelve thousand years when Paleolithic people roamed the area as evidenced by their hand axes scattered over a broad area. These times of greater precipitation were separated by times of great dryness, some more profound and far reaching than even modern times. In central Sudan, for example, there are linear sand dunes resting on a lateritic soil surface that attest to great aridity. However, these dunes are now stabilized by vegetation and are farmed with crops like sesame. The desert has marched back and forth across this part of Africa several times without man being involved, so I urge caution in assigning cause. Uniformity can be a balancing act between broad limits.

So I find geology exciting and full of change. I could cite other examples, but in my own field of petroleum geology, concepts have changed and evolved. When I was a boy, oil and gas were found on anticinal structures, and that concept guided exploration successfully for many decades. It was embellished later by defining stratigrapic traps, and the profession amplified the understanding of depositional models to better predict the distribution and properties of reservoir and sealing rocks. That work, of course, continues. But now, part of the model for hydrocarbon exploration has been totally revised. We are identifying thick tight source rock sequences that, when thermally mature, retain the generated hydrocarbons. These previously unexploitable resources are now developed by horizontal drilling and hydraulic fracturing. With the combination of geology and improved drilling and fracturing technology, the estimates of recoverable hydrocarbons have greatly increased. The dire predictions of when fossil fuel supplies would be exhausted are now seen to be incorrect. This revolution in concept and practice began in the USA, but is now spreading to the rest of the world. President Putin very recently admonished the Russian petroleum industry to join the "shale revolution" because of its tremendous impact on economies. Petroleum geology is not and will not be a dying profession!

I hope that I have conveyed something of my excitement about geology, from pure science to application to man's needs. It is changing, growing, expanding continually. For me, it has been a great ride, and I intend to stay in the saddle to see what happens next. Thank you for your kind attention.

2010 Outstanding Paper in the Journal of Sedimentary Research

Adrian J. Hartley, Gary S. Weissmann, Gary J. Nichols, and Gail Warwick

Large Distributive Fluvial Systems: Characteristics, Distribution, and Controls on Development,
JSR, vol 80 iss 2, pgs. 167-193

2010 Outstanding Paper in the Journal of Sedimentary Research - Honorable Mention

Gail M. Ashley, Manuel Dominguez-Rodrigo, Henry T. Bunn, Audax Z.P. Mabulla, and Enrique Baquedano

Sedimentary Geology and Human Origins: A Fresh Look at Olduvai Gorge, Tanzania,
JSR, vol 80 iss 8, pgs. 703-709

2010 Outstanding Paper in the Journal of Sedimentary Research - Honorable Mention

Sarah M.A. Duguid, T. Kurtis Kyser, Noel P. James, and Eugene C. Rankey

Microbes and Ooids,
JSR, vol 80 iss 3, pgs. 236-251

2010 Outstanding Paper in PALAIOS (Tie)

Sara B. Pruss, Seth Finnegan, Woodward W. Fischer, and Andrew H. Knoll

Carbonates in skeleton-poor seas: New insights from Cambrian and Ordovician strata of Laurentia,
PAL, vol 25 iss 2, pgs. 73-84

2010 Outstanding Paper in PALAIOS (Tie)

John-Paul Zonneveld, Murray K. Gingras, and Tyler W. Beatty

Diverse ichnofossil assemblages following the P-T mass extinction, Lower Triassic, Alberta and British Columbia, Canada: Evidence for shallow marine refugia on the northwestern coast of Pangaea,
PAL, vol 25 iss 6, pgs. 368-392

2010 Outstanding Paper in PALAIOS - Honorable Mention

G. Alex Janevski and Tomasz K. Baumiller

A biomechanical model and characteristics of swimming crinoids,
PAL, vol 25 iss 9, pgs. 588-596

Audited Financial Report – 2011

HKS
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Certified Public Accountants

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Independent Auditor's Report

SEPM Council
SEPM (Society for Sedimentary Geology)
Tulsa, Oklahoma

We have audited the accompanying statements of financial position of SEPM (Society for Sedimentary Geology) as of December 31, 2011 and 2010, and the related statements of activities 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 auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit 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 financial statements referred to above present fairly, in all material respects, the financial position of SEPM (Society for Sedimentary Geology) as of December 31, 2011 and 2010, and the changes in its net assets and cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Hartog, Kallenberger & Swarthout, PLLC

Certified Public Accountants
Tulsa, Oklahoma
March 15, 2012

SEPM (Society for Sedimentary Geology)
Statements of Financial Position
December 31, 2011 and 2010

	2011	2010
Assets		
Current Assets		
Cash and cash equivalents	$ 1,266,055	$ 1,048,994
Accounts receivable	327,287	272,181
Inventories	273,453	205,315
Prepaid expenses	39,124	40,985
Total current assets	1,905,919	1,567,475
Non-Current Assets		
Furniture and equipment, less accumulated depreciation	25,331	24,072
Long-term investments	1,833,200	1,885,385
Total non-current assets	1,858,531	1,909,457
Total assets	$ 3,764,450	$ 3,476,932
Liabilities and net assets		
Current Liabilities		
Accounts payable and accrued liabilities	$ 36,517	$ 24,848
Deferred income	692,645	616,194
Total current liabilities	729,162	641,042
Net Assets - Unrestricted	2,268,300	2,002,501
Net Assets - Board Designated	766,988	833,389
Total net assets	3,035,288	2,835,890
Total liabilities and net assets	$ 3,764,450	$ 3,476,932

See Accompanying Summary of Accounting Policies and Notes to the Financial Statements.

SEPM (Society for Sedimentary Geology)
Statements of Activities
For the Years ended December 31, 2011 and 2010

	2010	2009
Changes in unrestricted net assets		
Revenues, gains and other support		
Dues	$ 118,950	$ 106,508
Publications	340,435	223,428
Journal of Sedimentary Research - subscriptions, royalties and other	630,086	571,168
Palaios - subscriptions, royalties and other	195,704	191,881
Continuing education	68,618	67,790
Meetings, conferences and field trips	128,064	168,040
Membership activities	14,179	49,486
Net realized and unrealized (loss) gain on investments	(19,467)	134,155
Investment income	51,547	61,260
Total revenues, gains and other support	1,528,116	1,573,716
Expenses		
Publishing costs - Journal of Sedimentary Research	225,651	296,638
Publishing costs - Palaios	158,699	158,120
Publications	231,785	128,330
Continuing education	41,286	31,735
Meetings, conferences and field trips	82,768	121,166
Membership activities	121,225	161,173
General and administrative	467,304	474,371
Total expenses	1,328,718	1,371,533
Change in unrestricted net assets	199,398	202,183
Net assets - beginning of year	2,835,890	2,633,707
Net assets - end of year	$ 3,035,288	$ 2,835,890

See Accompanying Summary of Accounting Policies and Notes to the Financial Statements.

Audited Financial Report – 2011

SEPM (Society for Sedimentary Geology)
Statements of Cash Flows
For the Years ended December 31, 2011 and 2010

	2011	2010
Cash flows from operating activities		
Change in unrestricted net assets	$ 199,398	$ 202,183
Adjustments to reconcile change in unrestricted net assets to net cash (used in) provided by operating activities:		
Depreciation	9,182	20,011
Net realized and unrealized (gain) loss on investments	19,467	(134,156)
(Increase) decrease in:		
Accounts receivable	(55,106)	(105,851)
Inventory	(68,138)	(40,073)
Prepaid expenses	1,861	(3,828)
Increase (decrease) in:		
Accounts payable and accrued expenses	11,669	(10,196)
Deferred income	76,451	113,891
Net cash provided by (used in) operating activities	194,784	41,982
Cash flows from investing activities		
Payments for purchase of equipment	(10,440)	(9,370)
Purchase of investments	(367,563)	(661,136)
Proceeds from maturations and sales of investments	400,280	628,151
Net cash provided by (used in) investing activities	22,277	(42,355)
Net increase (decrease) in cash	217,061	(373)
Cash and cash equivalents - beginning of year	1,048,994	1,049,367
Cash and cash equivalents - end of year	$ 1,266,055	$ 1,048,994
Supplemental cash flows information		
Interest paid	-	-
Income taxes paid	-	-

See Accompanying Summary of Accounting Policies and Notes to the Financial Statements.

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SEPM (Society for Sedimentary Geology)
Summary of Significant Accounting Policies
December 31, 2011 and 2010

Organization and business

On September 27, 1987, the Society of Economic Paleontologists and Mineralogists (Society) became a separate entity from the American Association of Petroleum Geologists. Prior to this date, the Society was an unincorporated technical division of the American Association of Petroleum Geologists. In the event of the dissolution of the Society, the net assets will be donated to charitable, scientific or educational institutions; no assets shall inure to the benefit of any member.

The objective of the Society is to advance the science of stratigraphy through the dissemination of scientific knowledge of, promotion of, research in, and other contributions to paleontology, sedimentology, and allied disciplines.

The Society primarily deals with members of the organization for services, to universities and oil-related companies for attendance at educational schools, workshops, and short courses, and for sales of special publications. Substantially all customers are located in oil-producing regions both within the United States of America and Internationally.

Estimates

In preparing financial statements in conformity with generally accepted accounting principles, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and cash equivalents

The Society considers all cash and short-term securities with maturities of three months or less when purchased as cash and cash equivalents.

Inventory

Inventory consists of special publications (including short course notes), which excludes the journals published by the Society. The limited excess quantities of the journals are provided as reference material to the profession and, as such, are not inventoried.

Special publications are valued at cost (specific identification) in the year of publication and the two succeeding years. After this period, publications are valued at 50% of cost, with the further limitation that the valuation of publications over five years old is limited to 100 copies.

Inventory write-downs were as follows:

	2011	2010
Publications	$ 4,710	$ 8,442

Inventory consists of the following:

	2011	2010
Publications	$ 242,304	$ 163,256
Continuing education materials	22,027	26,309
Work in process	9,122	15,750
Total	$ 273,453	$ 205,315

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SEPM (Society for Sedimentary Geology)
Summary of Significant Accounting Policies
December 31, 2011 and 2010

Furniture and equipment

Furniture and equipment are valued at cost. Depreciation is provided using the straight-line method over the useful life of three to seven years.

Revenue recognition

The Society recognizes income and expense on the accrual accounting basis for financial statement presentation.

Membership dues and subscriptions are recognized as revenue ratably over the period of membership or subscription term.

Contributions

Donor-restricted contributions are classified as unrestricted support if the restrictions are satisfied in the same reporting period in which the contribution was received.

Advertising expense

Advertising costs are expensed when incurred. No advertising expenses were incurred during the years ended December 31, 2011 and 2010.

Tax status

The Society is exempt from taxation under Section 501(c) (3) of the Internal Revenue Code. It is not a private foundation.

Accounting principles generally accepted in the United States of America require Society management to evaluate tax positions taken by the Society and recognize a tax liability (or asset) if the Society has taken an uncertain position that more likely than not would not be sustained upon examination by the Internal Revenue Service. The Society's management has analyzed the tax positions taken by the Society, and has concluded that as of December 31, 2011, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The Society is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Society management believes the Society is no longer subject to income tax examinations for years prior to 2008.

Subsequent events

The Society has evaluated subsequent events through March 15, 2012, the date the financial statements were available to be issued.

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Audited Financial Report – 2011

SEPM (Society For Sedimentary Geology)
Notes to the Financial Statements
December 31, 2011 and 2010

Note 1 – Furniture and equipment

Included under this caption are the following:

	2011	2010
Furniture and equipment	$ 236,179	$ 225,738
Less accumulated depreciation	210,848	201,666
Total	$ 25,331	$ 24,072

Note 2 – Investments

Investments at December 31, 2011 and 2010, consist of the following:

	December 31, 2011	
	Historical Cost	Market (Carrying Amount)
General investments		
Cash and cash equivalents	$ 19,596	$ 19,596
Growth and capital appreciation funds	319,978	288,630
Bond and balanced funds	708,474	705,095
International funds	57,824	73,391
Total general investments	1,105,872	1,086,712
New Frontiers Fund		
Cash and cash equivalents	$ 2,001	$ 2,001
Growth and capital appreciation funds	465,423	508,732
Bond and balanced funds	115,081	126,409
International funds	106,505	109,346
Total New Frontiers Fund	689,010	746,488
Total	$ 1,794,882	$ 1,833,200

	December 31, 2010	
	Historical Cost	Market (Carrying Amount)
General investments		
Cash and cash equivalents	$ 82,127	$ 82,127
Growth and capital appreciation funds	384,720	381,612
Bond and balanced funds	500,552	499,265
International funds	101,573	119,492
Total general investments	1,068,972	1,082,496

SEPM (Society For Sedimentary Geology)
Notes to the Financial Statements
December 31, 2011 and 2010

Note 2 – Investments (continued)

New Frontiers Fund		
Cash and cash equivalents	$ 1,992	$ 1,992
Growth and capital appreciation funds	453,210	489,082
Bond and balanced funds	160,711	162,274
International funds	124,197	149,541
Total New Frontiers Fund	740,110	802,889
Total	$ 1,809,082	$ 1,885,385

Realized and unrealized gains and losses were as follows:

	2011	2010
Unrealized gains (losses)	$ (37,984)	$ 154,091
Realized gains (losses)	18,517	(19,936)
Total investment income	$ (19,467)	$ 134,155

Note 3 – Fair value disclosures

FASB ASC 820-10-50 (formerly FAS 157), *Fair Value Measurements*, establishes a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). The three levels of the fair value hierarchy under FASB ASC 820-10-50 are described as follows:

Level 1 inputs: quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 inputs: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly through corroboration with observable market data.

Level 3 inputs: unobservable inputs for the asset or liability, that is, inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing an asset or liability (including risk assumptions) developed on the best information available in the circumstances.

The Society's financial assets that are measured at fair value on a recurring basis were recorded using the fair value hierarchy as follows:

December 31, 2011	
Level 1:	
Mutual funds	$ 1,833,200
December 31, 2010	
Level 1:	
Mutual funds	$ 1,885,385

SEPM (Society For Sedimentary Geology)
Notes to the Financial Statements
December 31, 2011 and 2010

Note 4 – Deferred income

Deferred income consists of the following:

	2011	2010
Dues	$ 59,500	$ 66,330
Subscriptions	392,950	427,990
Publications in process and other	240,195	122,874
Total	$ 692,645	$ 616,194

Note 5 – Commitment

The Society leases its offices and warehouse under operating leases. Total minimum rent commitments for space and equipment leases are as follows: years ending December 31, 2012 - $46,896; 2013- $27,597.

Rent expense was $48,913 and $47,226 in 2011 and 2010, respectively.

Note 6 – Unrestricted net assets

Unrestricted net assets consist of the following:

		2011	2010
General fund		$ 2,268,300	$ 2,002,501
Board designated			
New Frontier fund	- long term purposes	732,688	789,089
	- current purposes	13,800	13,800
New opportunities		5,500	5,500
Capital projects		15,000	25,000
Total		$ 3,035,288	$ 2,835,890

The New Frontiers Fund represents board-designated funds for the purpose of funding the development of science and education. The board has designated one-third of the royalties from the Copyright Clearance Center, Inc., to be used specifically for the building of this fund.

Note 7 – Related party transactions

The Society received $8,000 for each of the years ended December 31, 2011 and 2010, from the SEPM Foundation, Inc. (an affiliated non-profit entity) for management fees.

During 2011, the Society received a grant for $5,000 for publications from the SEPM Foundation.

The Society had receivables from the SEPM Foundation, Inc. of $137,374 and $95,957 at December 31, 2011 and 2010, respectively.

Note 8 – Concentration of credit risk

The Society maintains its cash in bank deposit accounts which, at times, may exceed federally insured limits. The Society has not experienced any losses in such accounts. The Society believes it is not exposed to any significant credit risk on cash and cash equivalents.