

ANNUAL REPORT OF THE SOCIETY FOR 2018

DIRECTOR'S REPORT, SOCIETY AWARDS AND AUDITED FINANCIAL REPORT (2017)

Director's Report

SEPM Annual meeting and GSA Meeting Activities

SEPM held its Annual Meeting in Salt Lake City, USA, jointly with A.A.P.G. Outgoing **President Maria Mutti** turned the gavel over to the new President, **Gary Nichols**. Under the leadership of SEPM ACE Vice Chair **Cari Johnson** and their committee, SEPM's sole and jointly sponsored sessions accounted for about 40% of the technical program. The SEPM Research Symposium for 2018 was "*Dynamics of sediment transfer between linked depositional systems: from rivers to lakes and oceans*". At the business luncheon, **Margie Chan** gave attendees the latest updates on details of her presentation "*Geoconservation: Preserving Classic Outcrops, Resources, and Accessibility*." Then at the outgoing President's Reception, Maria and the membership honored the society's 2018 medalists and the outstanding journal papers, and student awardees. This year SEPM again awarded three cash prizes to the 2018 top SEPM Student Posters. SEPM again offered a balanced selection of courses and trips in 2018.

SEPM Annual Meeting Committee

- Cari Johnson, SEPM Vice Chair and Research Symposium Theme Chair
- Alan Carroll, SEPM Field Trip Chair
- Howard Harper, SEPM Short Course Chair and Sponsorship Chair
- Sam Hudson, SEPM Awards Chair
- Gary Hampson, Clastics Theme Representative
- Zane Jobe, Clastics Theme Representative
- Steve Bachtel, Carbonates Theme Representative
- Mitch Harris, Carbonates Theme Representative

Additionally, SEPM sponsored multiple technical sessions at the Geological Society of America's Annual Meeting in Indianapolis, IN, USA under the direction of **Howard Harper** as SEPM's Joint Technical Program Chair. SEPM also cosponsored the Seds & Suds. Along with the Sedimentary Geology Division of GSA and the Limnology Division, SEPM cosponsored the Tuesday evening reception for sedimentary geologists. Four cash prizes (three from SEPM and one from SGD) were awarded to the outstanding student poster presentations in the SGD/SEPM sponsored student session.

Short Courses & Field Trips

SEPM Annual Meeting (at AAPG – ACE, Salt Lake City, UT, USA)

- SEPM Short Course: Sequence Stratigraphy for Graduate Students
- SEPM Short Course: Advanced Sequence Stratigraphic Applications for Exploration
- SEPM Short Course: Sequence-Stratigraphic Analysis of

Shales and Mudstones: Key to Paleoclimate Archives, Subsurface Fluid Flow, and Hydrocarbon Source, Reservoir and Seal

- SEPM Short Course: Rock & Seismic Sequence Expression of Carbonate Systems – Exploration & Reservoir Characterization
- SEPM Trip: Stratigraphic Elements of Shoreface and Deltaic Strata, Upper Cretaceous of the Northern Book Cliffs
- SEPM Trip: Upper Cretaceous Stratigraphy, Depositional Environments, and Reservoir Geology of the Henry Mountains Region, Southern Utah
- SEPM Trip: Lake Type Evolution and Microbialite Facies of the Eocene Green River Formation, Wyoming

International Meeting (AAPG ICE- Cape Town, South Africa)

- SEPM Trip: Meandering in the main Karoo Basin Eastern Cape, South Africa

Journals

Both of our technical journals continued having great years. The 5-year Impact Factors for both journals continue to be highly ranked. The *Journal of Sedimentary Research* continues publishing top-quality papers under the guidance of the co-editors, **Gary Hampson** (Imperial College, London, UK) and **Peter Burgess** (University of Royal Holloway, London, UK). *PALAIOS* was under the editorship of **Gabriela Mangano** (University of Saskatchewan, Canada) and **Martin Zuschin** (University of Vienna, Austria). *JSR*'s annual content is about 1500 pages and *PALAIOS* is at about 900 pages. Both journals are using continuous publishing where new articles are published online as soon as they are ready, not waiting until the entire monthly issue is ready. 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 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. Additionally, SEPM's content of the Journal of Paleontology (1927-1985) is also online at JSTOR.

Both of the journals as well as an SEPM Book Archive are within SEPM's independent online publications site www.sepmonline.org, which also hosts the Gulf Coast Section SEPM (GCSSEPM) Conference Proceedings. In 2018 SEPM's online content, including GCSSEPM content, is hosted by GSW with technology partner, Silverchair. Selected SEPM journal and book content is also part of the Geofacets dataset, which SEPM members can access as a membership option, which will be at no additional cost in 2019.

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Also starting with 2016 and continuing, both SEPM journals are now available in print at the SEPM Bookstore (www.sedimentary-geology-store.com). Individuals or libraries can purchase selected issues (printed as double issues) or buy each new one as it comes out to maintain a complete set of the printed version.

The Sedimentary Record, the full color member magazine, is now in its 16th year, under the science editorship of **Lauren Bergenheier** (University of Utah, USA). The SedRec has continued publishing a current, interesting science article as well as giving SEPM 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. The online version often contains additional content.

Special Publications

Under the editorship of **John-Paul Zonneveld**, the special publications of SEPM continue to produce top of the line products. In 2018, four new books were published as complete books and the pipeline of future books continues to grow with new proposals and several additional manuscripts being prepared. SEPM's online submission and review process, similar to the journals, continues to function well. This helps to reduce the time needed to take a book from idea to publication.

New Books in 2018

- *Characterization and Modeling of Carbonates - Mountjoy Symposium*, SEPM Special Publication 109, edited by Alex J. MacNeil, Jeff Lonnie, and Rachel Wood
- *Stratigraphy, Diagenesis, and Structural Deformation of the Monterey Formation, Central California Coast*, SEPM Field Guidebook 1, edited by Richard J. Behl and Michael R. Gross

Online First. SEPM's Online First, where new Special Publications are published chapter by chapter online at <http://www.sepm.org/OnlineFirst.aspx> as each chapter or article is finalized, currently contains over 16 book articles with more on the way. After the last chapter is finalized the books are compiled and sold on the SEPM Bookstore, in print or digital format as well as being uploaded to our online sites. The current books with chapters loaded to Online First include:

- *From the Mountains to the Abyss: The California Borderland as an Archive of S. California Geol. Evolution*
- *Latitudinal Controls on Stratigraphic Models and Sedimentary Concepts*
- *Geologic Problem Solving with Microfossils IV*

SEPM Online Books. SEPM Online Book Archive I (1929-2009 books) was first launched late in 2010 and it, along with Archive II (2010-2014 books), continues to be used by both library and member subscribers. Books in the Special

Publications, Concepts, Short Course Notes and Core Workshop Notes Series are uploaded to the site as they are published and can be purchased individually or via an Archive I or Archive II collections. SEPM's new books are now available in print, hard digital format (USB) or via online access.

Additionally, SEPM book publications continue to be included in the GSW e-books collection, which first opened in 2015. SEPM book publications are also part of the Geofacets dataset which SEPM members can access as a membership option.

Research Conferences

In 2018 SEPM operated only one research conference.

- **2018 Garrison Monterey Research Conference:** May, Santa Cruz, CA, USA

Additionally, SEPM supported, cosponsored or exhibited at these scientific meetings operated by other organizations:

- **International Sedimentological Congress (IAS):** August, Quebec City, Quebec, Canada
- **Resources for Future Generations**, June, Vancouver, BC, Canada
- **Past & Present Sedimentation in Tropical Region (FOSI-IAS-SEPM)**, September, Yogyakarta, Indonesia
- **Early Career Sedimentologist Meeting (Fachsektion Sedimentology/SEPM-CES)**, Germany
- **51st Annual meeting of the AASP and The Palynological Society**, August, Calgary, Alberta
- **International Conference and Exhibition, (AAPG)**, November, Cape Town, South Africa
- **Annual Meeting of the British Sedimentological Research Group: BSRG**, Heriot-Watt University, The Lyell Centre and the British Geological Survey, Edinburgh

Collaborations (AAPG, AGI, GSL, GSA, NACSN, IUGS, AGU, IAS and CSPG)

In addition to SEPM's long standing relationship with AAPG and its memberships in AGI and NACSN, SEPM has signed Memorandums of Understandings (MOUs) with The Geological Society of London, American Geophysical Union and Geological Society of America for cooperative activities. These agreements have resulted in numerous jointly sponsored technical sessions, conferences, short courses and field trips.

In 2018, SEPM, with Howard Harper as PI, was awarded an NSF grant of \$15,000 to support travel and participation of eleven US students to attend the International Sedimentological Congress. The students both attended the meeting and contributed individual reports on the meeting as well as a collaborative report for the Sedimentary Record.

In the continued cooperation between SEPM and IAS, SEPM sponsored a keynote speaker, Kitty Milliken for the International Sedimentological Congress, August, Quebec

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City, Canada as well exhibiting and offering a field trip at the meeting.

SEPM continues to be a society that works with other groups to fulfill its mission for sedimentary geology.

SEPM Governance

In 2018, SEPM made a significant change to its Bylaws. A Council approved revision to increase the terms of SEPM Council members from two years to three years was approved by more than two-thirds of the voting membership. None of the Council members voting for the change had their terms extended. The actual implementation of the new terms will occur over a few year transition period so that incoming and continuing Council members will evolve into the new three year rotation. The exceptions are that all Editors will remain with four year terms and that the SEPM President will serve one year as President-Elect and then two years as President. Additionally all SEPM Council terms will match SEPM's fiscal year which runs from January 1 to December 31.

Howard E. Harper, Executive Director



Incoming President Gary Nichols with Outgoing President Maria Mutti.



SEPM 2018 – 2019 Council

Back row, left to right: Gary Hampson, Peter Burgess, J.P. Zonneveld
Front row, left to right: Jeremy Krimmel, Gary Nichols, Rick Sarg

SEPM Governance, 2018 Council and Staff

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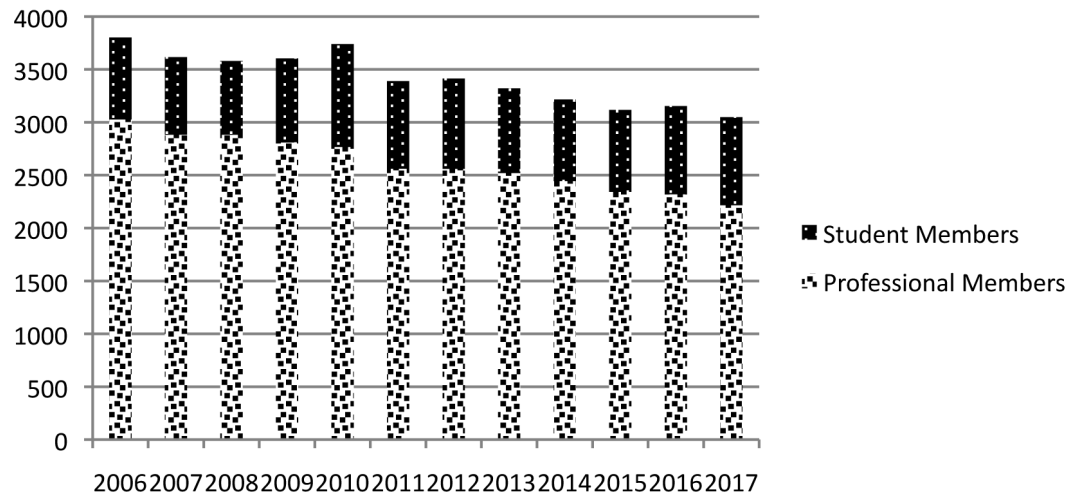
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ANNUAL REPORT OF THE SOCIETY 2018

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Table 1. – Membership Statistics

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
SEPM MEMBERSHIP												
Professional Members	3027	2883	2883	2809	2767	2562	2560	2520	2445	2342	2320	2216
Student Members	775	733	697	795	972	827	854	800	770	775	834	832
New Members	302	293	299	407	264	383	344	367	274	360	394	394
Dropped Members	495	380	408	448	619	559	658	437	554	426	426	464
<i>Journal of Sedimentary Research</i>												
Individual Library Subscribers	882	817	768	715	669	621	587	522	458	428	455	383
Aggregate Library Subscribers (GSW & DataPages)	349	422	486	541	583	647	747	836	1368	1145	1031	1041
Member Subscribers	2762	2584	2633	2705	2386	2168	1901	1672	1702	1254	1311	1179
<i>PALAIOS</i>												
Individual Library Subscribers	312	278	247	221	199	181	167	134	133	102	114	98
Aggregate Library Subscribers (GSW & BioOne)	1217	1269	1420	1647	1774	1878	1978	2129	2339	2169	2060	2039
Member Subscribers	1353	1243	1384	1498	1339	1281	1013	1060	931	724	698	713
Online Book Archive 1												
Individual Library Subscribers	NA	NA	NA	NA	NA	13	16	13	14	34	13	21
Member Subscribers	NA	NA	NA	NA	NA	650	880	1030	999	692	726	720



Society Awards



Sara Pruss accepts the James Lee Wilson Award
from President Maria Mutti

James Lee Wilson Award For Excellence in Sedimentary Geology Research by a Young Scientist Sara B. Pruss

Sara B. Pruss did her undergraduate education at the University of Rochester, where she began her career as a geobiologist through strong exposure to sedimentary geology and paleobiology within a renowned undergraduate program. After receiving her B.S. at Rochester (1999) in Biology-Geology, Sara migrated to the west coast for her graduate work at the University of Southern California. There she began work on one of the major themes of her research career, investigating the geobiology of the Early Triassic aftermath from the end-Permian mass extinction. Her master's (2001) and Ph.D. (2004) research was extremely successful leading to an Agouron Geobiology Post-doctoral Fellowship at Harvard University (2004-2007). At Harvard she further developed another big component of her research interests, the geobiology of the Precambrian-Cambrian transition and how interactions between microbes, animals and sediments play out during this time. In 2007 Sara began as an Assistant Professor of Geosciences at Smith College. There her interests continued to grow with studies of modern environments including important work with colleagues at MIT encompassing experimental work on wrinkle structures as well as geochemical work on ooids. In 2013 she became Associate Professor at Smith, which honored her for her teaching excellence with the Sherrerd Award for Distinguished Teaching in 2015. Her exceptional career trajectory was recognized early on with an award in 2014 for "Outstanding Contributions to Geobiosciences" from the GSA Division of Geobiology and Geomicrobiology. This has been followed by further recognition for her accomplishments through receipt of the Terry J. Beveridge Award for a mid-career scientist in Geobiology given in 2017 by the Geobiological Society. All the time through her research career she has woven her various research directions into a broader interest in how geobiological studies can better reveal the evolutionary and ecological history of life on Earth. It is for her broad research accomplishments that SEPM now honors her with the James Lee Wilson award, as further validation of her pioneering work in integrative geobiology.

Biographer: David J. Bottjer

Citation: Sara B. Pruss represents a model for the modern sedimentary geologist who is investigating geobiological problems. Her pioneering integrative geobiological research has been invaluable towards solving important questions from critical times in Earth and life history. With a growing research career, integrated with outstanding teaching, we can expect to hear much more from her through the lens of her innovative and creative scientific perspective.

Reply from Sara Pruss

It is a great honor to receive the James Lee Wilson Award for excellence in sedimentary research by a young scientist. I am also grateful that, in spite of what my children think, the adjective "young" can still be used loosely to describe me. James Lee Wilson's pioneering work on carbonates has shaped the field in profound ways that have influenced me throughout my study of these sediments.

Although I spent much of my childhood wandering quarries with my family, collecting as many rocks as I could, I never suspected that I would be a geologist. I was committed to being a marine biologist, spending hours probing tide pools and collecting creatures in buckets during my family's short stint in Ketchikan, Alaska. At the University of Rochester, in my sophomore year, Carl Brett revealed to me that the most interesting invertebrates were in fact preserved in sediments, and my life was forever changed. Carl's work integrating evolutionary understanding with the sedimentary record shaped me in ways that I have only come to appreciate these many years later. In 1999, I was accepted into graduate school at USC, and under the guidance of David Bottjer and Frank Corsetti, with additional support from Bob Douglas and Donn Gorsline, I worked on the unusual sedimentary record of the Lower Triassic, a record that intimately reflects the nexus of animal-sediment interactions. I finished my Ph.D. in 2004, and I joined Andy Knoll's lab at Harvard that summer. Andy and I worked on the weird and wonderful Cambrian world, and in my last year, I began a collaboration with Paul Hoffman on Neoproterozoic carbonates that continues to this day. While at Harvard, I was introduced to some of my greatest friends and collaborators of the last ten years. There are many who influenced me and shaped my thinking, including Tanja Bosak, Francis Macdonald, Jon Payne, Andy Bush, David Jones, David Fike, Nick Tosca, and John Higgins. Their intellectual and personal generosity has also extended to my many students at Smith College. I would also like to thank my colleagues in the Smith Geosciences department, who have spent these last 10 years encouraging me to pursue what makes me happy. It was also these colleagues who introduced me to the world of modern carbonates in The Bahamas.

When I was applying for jobs, I remember often being told that I was too sedimentological to be right for a paleontology position, or that I was too biological to fit a sed job. I deeply appreciate that my department at Smith recognized that interesting science can come from people who straddle more than one sub-discipline. I also believe that SEPM supports this notion, and it is why I have published more papers in the journal *PALAIOS* than any other journal.

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As I reflect back on a career that started as a graduate student in 1999 and continues now as a teacher and mentor to young people at Smith, I feel an overwhelming sense of gratitude for all who have taken their time to collaborate with me, pushing me to be better, and being kind and supportive in the face of the many challenges we all confront as early career scientists. I am grateful for my colleagues who sent my students samples and kept my lab busy when I was home on maternity leave and sleep-deprived. I am grateful to the many folks who have opened their labs to my students, taken them in the field, and nurtured their learning in the most selfless ways. And, I want to also take a moment to thank my students. I've had more than 50 students involved in research in my lab since arriving at Smith nearly 11 years ago. These amazing people make me strive to be the best mentor, confidante, cheerleader, and scientist that I can be. They are the reason I chose Smith for my job, and they are the reason I am happy to go to work every day.

Finally, I want to thank my Dad for always encouraging me to play in the dirt and for being my very first field assistant in the hot Nevada desert, and my mom, for letting him go. I also need to thank my amazing husband and partner of 15 years, David DeSwert, and my 2 beautiful children, Ethan and Annabel. They love me unconditionally, and they support me and my love for my job. Coming home to them is still the best part of my day. Thank you, SEPM, for this amazing honor.



Charles Kerans accepts the Honorary Membership Award from President Maria Mutti

Honorary Membership For contributions to the science and SEPM Charles Kerans

Honorary Membership in SEPM for Charles Kerans recognizes his sustained service and leadership to the Society. Many of his well-cited and award-winning papers on carbonate geology have been presented at SEPM meetings and published the *Journal of Sedimentary Research*, the *Journal of Sedimentary Petrology* and SEPM Special Publications.

Charlie Kerans is currently Professor and Goldhammer Chair in Carbonate Geology and serves as the Chair of the Department

of Geological Sciences at the Jackson School of Geosciences, University of Texas at Austin.

I have known Charlie Kerans as a professional colleague since he joined the Bureau of Economic Geology of the University of Texas at Austin in 1985, and have followed his career in research and teaching closely since. In 2005, with the Jackson School faculty's enthusiastic support Charlie moved to the Department of Geological Sciences. Since joining the Department Charlie Kerans has basically carried the carbonate program, developing and teaching the carbonate courses at the undergraduate and graduate levels, and supervising a horde of students interested in carbonates. Charlie is a mainstay in leading the Department's formal field courses, especially at the undergraduate level where beginning to know rocks and scale are fundamental to their continued geologic education and training.

Charlie Kerans is a preeminent teacher whether in the university classroom, the corporate laboratory or with colleagues and students in the field. For in all situations he brings to his teaching a strong, up to date research background, a clear and understated lecture style and a sincere engagement and identification with students and colleagues alike. He is always known as Charlie, not Professor Kerans, but commands the respect of his students, not through rank, but by a genuine sense of engagement with them. Another important aspect of Charlie Kerans' teaching is that while conveying the fundamentals and basics of his subject, he always puts what he imparts in a real world context. That is not as common in a university setting as it should be, but it is vitally important to those he teaches.

Kerans' research and teaching have a strong field orientation and it is perhaps in the field that his abilities shine the most. What he can show, teach and engage colleagues and students in on an outcrop is simply amazing and in my experience without peer.

For the past 30 years, Charlie Kerans has been and is a leader and principal in the Bureau of Economic Geology's Reservoir Characterization Research Laboratory. RCRL is an industrial associates program with current participation, by subscription, of 31 companies. The Lab is an important conveyor of both research and teaching to large number of corporate professionals. Charlie's abilities in working with professional colleagues, in the lab and in the field, are as well-known and respected and a key reason for the long-term and continuing existence of the Lab. Experience with professional colleagues deepens his sense of applying his research to real world exploration and production problems and issues and imparting such experience to students as they enter their corporate careers. Experience in RCRL plus Kerans' industry consultations keep him on top of technical advances in exploration and production and to incorporate this experience in his teaching of students. In fact, many of his students work in the RCRL as graduate research assistants during the course of their work, involving them directly with corporate professionals.

Professor Kerans' recognition as a teacher is confirmed in his recent receipt of the Murray Outstanding Educator Award from the Association and internally in the University by his award,

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on three separate occasions, of the Jackson School's Knebel Teaching Award. Uniquely the award is determined by a formal and tabulated vote of the students. And he has won the award for both undergraduate and graduate teaching. He also is the recipient of the Walter Award, the highest award of the Jackson School, for his contributions to the School in teaching, research and service. An in-depth, quality research record goes hand in hand with good teaching at both the undergraduate and graduate level. And here Kerans is superb, if not unique. In his career Charlie has won 14 best paper and poster awards, several from SEPM and its local sections. Twice he has received the Wallace Pratt Memorial Award for the best annual paper in the AAPG Bulletin and three times he has been named a Distinguished Lecturer of the Association, including a stint as an International Distinguished Lecturer. Charlie is a recent recipient of the Pettijohn Medal in Sedimentology from SEPM, one of the highest awards in the field of sedimentology. He is an Honorary Member of SEPM Permian Basin Section.

Biographer: Bill Fisher

Citation: *For career-long, exemplary contributions to SEPM and the sedimentary geology community, as a strong leader, a dedicated and prominent researcher and an inspiring teacher.*

Reply from Charles Kerans

I would like to thank Bill Fisher for the introduction and citation for the SEPM Honorary Membership award, and to the nominating committee for considering me for this award. I am very grateful to be recognized by SEPM in this way, as this is certainly the organization that I have associated with most closely throughout my career. It has been (and continues to be!) a highlight of my year being associated with SEPM activities, and getting to know the elected committee members and staff. The associations and collaborations that I have developed through the 43 years since I became a member of SEPM have sustained both myself and my students and have made an enormous positive impact on my career.

I would like to thank the many key individuals that impacted my career and helped me get involved with SEPM including my undergraduate advisor Mark Erickson, PhD supervisor Al Donaldson, inspiration and mentor Paul Hoffman, my post-doc advisor Phil Playford of Western Australia, Jerry Lucia, Don Bebout, Steve Ruppel, and Mitch Harris during the early days in Texas and at the Bureau of Economic Geology. Bill Fisher, Scott Tinker, Bill Fitchen, Chris and Laura Zahm, Jerry Bellian, Ted Playton, Ned Frost, Bob Loucks, and several others were essential colleagues during the transition from the BEG to the Department of Geosciences at UT Austin.

Throughout this time whether taking or running field trips, helping with core workshops and short courses, or meeting activities, the range of opportunities sponsored by SEPM was a central forum where our group presented ongoing research and learned of others' parallel efforts. I have always tried to illustrate to students that getting involved in SEPM is an essential and fun part of the "business" and I still firmly believe and espouse that. Can't thank you all enough and I am looking forward to the next decade of interactions!



Peter Harris accepts the Francis P. Shepard Medal from President Maria Mutti

Francis P. Shepard Medal For Sustained Excellence in Marine Geology Peter Townsend Harris

Peter Harris has made significant contributions in a number of areas. He has carried out pioneering work on tide-dominated coastal and shelf depositional systems, the sedimentary records of the Antarctic glaciation and of Antarctic bottom water formation and the geomorphology of ocean basins, especially submarine canyons.

Peter received his first degree in Geology and Oceanography in 1981 from the University of Washington and went on to complete a Master's and PhD at the University of Wales (Swansea), UK, where he was a student of the late Michael Collins. After completing his studies in 1984, he was awarded a post-doctoral fellowship from the Australian Bureau of Mineral Resources (now Geoscience Australia) to work at the University of Sydney, where he became interested in clastic-carbonate transitions. Peter continued to work at the University of Sydney as a Senior Research Fellow and Lecturer until 1994. His papers on the tidally-dominated Fly River delta were the first to document the Holocene record of deltaic clinoforms containing varves, prograding onto the shelf.

The first Australian to be awarded the Shepard Medal, Peter has been a leader in the Australian marine geoscience community for over 25 years. From 1994-2014 he served as the head of Geoscience Australia's Antarctic and marine and coastal environment programmes. He published over 120 peer-reviewed articles and book chapters, documenting different aspects of the Australian and Antarctic continental margins. From the polar to the tropical, important discoveries include documenting the Holocene sedimentary record to indicate that Antarctic bottom water production is spatially episodic, which has influenced thinking of this process as being non-steady-state over century timescales; describing a vast new mesophotic coral reef province in the Gulf of Carpentaria; developing and applying quantitative methods to characterize clastic coastal depositional systems in terms of wave, tide and river power; creating depositional models for rhodoliths; and investigating unidirectional cyclone transport

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of sediment along the continental shelf. As a contribution to global marine science, Peter completed a seafloor geomorphic features map in 2014 (after compiling the first nation-scale version).

While still an active researcher, in the last five years Peter has expanded his vision, with a mission to make science central to the decisions we make about our planet and how we use its resources.

Biographer: Elaine Baker

Citation: In recognition of Peter Harris's sustained contribution across many areas of marine geology from coral reefs to deep water benthic habitats. And in appreciation of his application of robust science in support of improved national and global marine policy and management.

Reply from Peter Townsend Harris

I am deeply honored and humbled to have been awarded the Francis P. Shephard medal for marine geology. I have many people to thank for helping and guiding me through the years of my career, too many to name all of them here. This is partly due to the nature of being a marine geologist. Every byte of data and every sample collected at sea involves a team effort – ship, captain, crew, technicians and fellow marine scientists. So it is no surprise that there are literally hundreds of people behind those research papers who must all be acknowledged and thanked for their support, hard work and encouragement.

I was very fortunate to be an undergraduate student at the University of Washington in Seattle back in the late 1970's – they ran an undergraduate teaching program that included a geological oceanography option. That undergraduate program set me up for a career in marine geology. One of my professors at the UW was Dick Sternberg and he and his buddy Mike Collins (founding editors of Continental Shelf Research) conspired to organize my PhD project at the University of Wales in Swansea UK on sediment transport in the Bristol Channel. Mike was a masterful PhD supervisor, giving enough guidance to keep his students on topic while allowing them space to develop their own ideas, inspiring without dominating. Sadly Mike passed away last year (2017) and so I cannot share the news of this award with him – I know he would have been very proud and would have wanted to buy me a pint of beer to celebrate.

I have to admit to having had a lot of good luck, first with my wife and soulmate Ellen who has been my anchor for the last 35 years, and with choosing the places where I have worked. I had a great post-doc project hosted at Sydney University on the Great Barrier Reef in 1986 with Peter Davies and John Marshall who worked for the Australian geological survey (called the Bureau of Mineral Resources at that time). Later I had projects in Moreton Bay, Torres Strait and in the Fly River Delta. Elaine Baker wrote her PhD on the Fly Delta and she has remained a good friend for over 30 years - I thank her for nominating me for this award. I was joined on expeditions to the Fly Delta by Jock Keene, Chari Pattiaratchi, Jim Gardner, Bob Dalrymple, Michael Hughes, Allison Cole and Dave Mitchell who made the work so extremely interesting, scientifically rewarding and loads of fun. The Fly River was later selected by the MARGINS Source-to-Sink

research program as one of its study sites and I had the chance to work with Chuck Nittrouer and his team, re-connecting with the University of Washington.

In 1994 I had the very good fortune to be hired by the Australian geological survey (which is now called Geoscience Australia) to work in Antarctica. My co-workers included Phil O'Brien, the late Gene Domack, Fiona Taylor and Pat Quilty among many others to study the sedimentary record of ice sheet dynamics and Antarctic bottom water formation. I have a cherished photo of myself, Gene and Phil standing in front of a glacier on Heard Island. Later, I had the chance to visit the Mertz Polynya collaborating with Italian scientists Laura DeSantis and Giuliano Brancolini as part of the Australian National Antarctic Research Expeditions (ANARE).

After 10 years working on the Antarctic, I moved to Canberra in 2004 to manage the Marine and Coastal Environment Group at Geoscience Australia. My team included Andrew Heap, Tanya Whiteway and Brendan Brooke and together we produced the first geomorphic features map of the Australian EEZ for use in marine spatial planning, we discovered a new coral reef province in the Gulf of Carpentaria, carried out a survey of all Australian estuaries and produced the first global inventory of submarine canyons - a paper I think Francis Shepard would have found interesting!

It has been an exciting few decades and I have enjoyed every minute of it, thanks to the people I have worked with and the amazing places we have studied together. I thank SEPM for this honor.



William Ausich accepts the Raymond C. Moore Medal
from President Maria Mutti

Raymond C. Moore Medal For Sustained Excellence in Paleontology William I. Ausich

Bill was born in 1952 in Kewanee in northwestern Illinois and got his geological education at the University of Illinois (B.S. 1974) and at Indiana University (A.M. 1976 and Ph.D. 1978). Because his graduate advisor was the internationally well-known crinoid specialist and 1995 Raymond C. Moore medalist N. Gary Lane,

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it was natural that much of Bill's thesis work came to involve Mississippian geology in the Midcontinent region and crinoids. After six years as a faculty member at Wright State University in Dayton, Ohio, Bill was hired in 1984 by the Department of Geological Sciences at The Ohio State University, where he remained to his retirement in 2013. He served as Department Chair in 1995-99. During his university career, Bill supervised the thesis research by 11 Ph.D. and 18 M.S. students. He is still carrying out vigorous research at Ohio State and continues to fill the position as Director of the Orton Geological Museum.

As shown by the fact that he has authored or co-authored more than 230 articles, eight books, and a very large number of abstracts, Bill has been highly active in research, most of which has dealt with crinoids. However, he has also published papers on echinoids, cystoids, blastoids, sponges, cryptospores, stromatoporoids, problematic Cambrian echinoderms, conodonts, and trace fossils as well as on sedimentology. Three joint papers with D. J. Bottjer (1982, 1987, 1991) on tiering of marine suspension feeders continue to be basic references in that subject area. His discovery, in cooperation with his Ph.D. student C. E. O'Malley, of taxon specific organic molecules preserved in Mississippian crinoids has attracted international attention also from non-paleontologists. However, there is no doubt that nationally and internationally, Bill is best known as a leading expert on the morphology, taxonomy, evolution, and geologic distribution of Paleozoic crinoids. He has studied the wide distribution and diverse morphology of these fossils from their first occurrence in the Lower Ordovician to their presence in the recent oceans, and has described a very large number of new taxa and revised many old collections. Although most of his work has been on North American and European materials, some of his recent studies have been on Chinese and African collections. For many years, he has been the Coordinating Author of, and major contributor to, the revised crinoid *Treatise on Invertebrate Paleontology*, which is a huge undertaking. It is safe to state that Bill's research has added enormously to our understanding of the fossil record of crinoids.

Bill's university teaching was much appreciated by the students as indicated by the fact that at Ohio State, he received four times the prestigious 'Distinguished Graduate Teaching Award', which is given out annually by the graduate students. No other geology professor has been received this award as many times as Bill. Particularly appreciated by the students were his field courses, such as his paleoecological course at Lake Cumberland in Kentucky and his carbonate sedimentology course on San Salvador Island in the Bahamas.

Bill's professional service has been extremely comprehensive. Among other things, he has served as editor of several books and other volumes and as manuscript reviewer for more than 75 journals and other publication outlets. He was President of the Paleontological Society in 2002-04 and has served as a member of numerous organizing committees for several conferences.

Finally, it may be appropriate to note that Bill Ausich shares several similarities with Ray Moore, who has given his name to this prestigious award. As was the case with Ray, much of Bill's very extensive research has been on middle-late Paleozoic

crinoids; both these men have been successful educators, who have produced university text-books and attracted excellent students; both have been very extensively involved in work on the *Treatise on Invertebrate Paleontology*; and both have been very active in professional service, including occupying important positions in professional societies and serving as editors and manuscript reviewers. However, based on my close association with Bill for almost 40 years and having had the opportunity to meet Ray Moore once more than 50 years ago, it is my impression that their personalities differed greatly.

Biographer: Stig M. Bergström

Citation: *In recognition of Bill Ausich's wide-ranging, scientifically fundamental, and voluminous contributions to national and international paleontology, especially as a leader in crinoid research, his inspiring and exemplary university teaching at both the undergraduate and graduate levels, and in appreciation of his very extensive professional service to the geological community.*

Reply from William I. Ausich

Thank you President Mutti. Being awarded the Raymond C. Moore Medal is a tremendous honor, and I humbly accept. This award is doubly meaningful to me because Raymond C. Moore was my academic grandfather. He advised N. Gary Lane, my dissertation advisor, who also received the Moore Medal. Moore's scholarship stressed the importance of basic systematic paleontology coupled with the need to understand large-scale patterns in the history of life. R. C. Moore provided a model that I have always strived to follow.

The essence of an academic career is the summation of one's mentors, colleagues, and students. My grandfather introduced me to "alphabet rock." I was embraced in the University of Illinois paleontology labs by Daniel B. Blake, Philip A. Sandberg, and their students, where I learned much more about the o's, c's, l's, and u's of alphabet rock. At Indiana University, I was surrounded by an extraordinary group of faculty and student colleagues who provided an unparalleled atmosphere to mature as a paleontologist. N. Gary Lane and Alan S. Horowitz were my primary mentors, and David J. Bottjer, Thomas W. Kammer, and Johnny A. Waters were fellow graduate students and have been lifelong collaborators. Other key collaborators through the years have been Tomasz K. Baumiller, David L. Meyer, George D. Sevestopulo, and Mark A. Wilson. At Ohio State University, I have worked with remarkable colleagues, including Stig M. Bergström, Lawrence A. Krissek, James W. Collinson, Matthew R. Saltzman, Walter C. Sweet, Loren E. Babcock, and Peter-Noel Webb. Finally, no greater joy exists for an academic than to watch a student grow intellectually so that by the time she or he graduates, they are challenging me and teaching me. I have worked with fantastic students at both Wright State University and Ohio State University, and I thank them all (too many to list). Finally, my family, especially my wife, Regina, has been a rock of support and encouragement. Whatever has been accomplished was a team effort with them.

President Mutti, it is a profound honor for me to accept the 2018 Raymond C. Moore Medal.

Society Awards



Peter DeCelles accepts the Francis J. Pettijohn Medal
from President Maria Mutti

Francis J. Pettijohn Medal For Sustained Excellence in Sedimentology Peter G. DeCelles

Peter G. DeCelles stands at the forefront of a distinguished congress of sedimentologists and stratigraphers investigating the links between orogenic- and basin-filling processes. Pete has been a leader in understanding the interaction between contractional deformation systems and sedimentation in associated basins for more than two decades. Pete is instrumental in changing tectonic basin analysis from a purely descriptive to a quantitative science. He successfully linked foreland basin-thrust belt evolution to the extent that we rarely think of these as decoupled systems. His publications are standard texts both for understanding the theory behind thrust-belt and foreland basin interaction and also for describing the interaction of specific systems spanning the globe.

Pete's scientific contributions encompass scales ranging from bed-scale sediment transport to lithosphere-scale orogenic evolution. The fine-scale, quantitative focus is exemplified by his early contributions which systematized paleocurrent measurements using trough cross-stratification and quantitatively modeled sediment provenance and source area exhumation.

In his most widely recognized work, Pete masterfully summarized the systematic relationship between flexural loading by thrust sheet stacking and the resultant foreland basin geometry. His expansion of the tripartite foreland basin system including foredeep, forebulge, and backbulge into a four part system which includes the proximal wedgetop depozone cut the Gordian knot facing foreland basin models at the time. Pete further predicted a systematic stacking of depozones and depositional environments in foreland basins that result from migration of their associated fold-thrust belt. This publication, and subsequent research bearing out these predictions, has set the paradigm for understanding and describing foreland basin systems.

Pete's research at the thrust-belt scale encompasses the western USA, the Andes, and the Himalaya. His is still the definitive kinematic reconstruction of the Utah thrust belt. In the Himalaya, Peter's kinematic reconstructions of the fold-thrust belt sparked

the ongoing understanding of the role of underthrust Indian lower crust and lithosphere in the evolution of the Tibetan Plateau.

At the orogen scale, his synthesis of the linked evolution of the Cordilleran thrust belt and foreland basin in the Western USA is a standard text for students of retroarc systems. Pete's recognition of the links between basin formation and fold-thrust belt evolution led to a revision of the chronology of Andean deformation, pushing the onset of contractional orogenesis to the early Cenozoic rather than early Oligocene as had been previously thought. Finally, Pete continues to push the bounds of our understanding of orogenic system-basin pairs by identifying cyclicity that links magmatic arcs, orogenic hinterlands, fold-thrust belts, and foreland basins in retroarc systems.

Pete's students and colleagues can attest to his commitment to a "data-rich", multi-disciplinary approach to geology research, with a focus on fundamental geological field observations. Pete carries this multidisciplinary approach to all aspects of research, seeking synergies between academia and industry approaches to the geosciences. His students' success in both academic and industry positions is a testament to the power and scope of his approach to tectonic basin analysis. He continues to set a rigorous scientific standard not only for his students, but also for the broader sedimentology community.

Biographer: Joel Saylor

Citation: *In recognition of an ongoing record of leadership in tectonic basin analysis covering more than two decades of innovative and high- quality research on the links between tectonics, sedimentology, and basin evolution, from the students and colleagues who are better scientists for knowing Pete.*

Reply from Peter G. DeCelles

Thank you Joel for the generous citation; thanks to those who supported the nomination; and thank you to the SEPM for this honor.

I have many people to thank: first are my parents, Paul and Jeanne, for guidance, education, and a childhood introduction to the Alps that kindled my interest in geology; and my daughters Naomi and Clare, for tolerating my long absences while doing fieldwork in far-flung places. I am grateful to be recognized in the same sentence that contains the name Francis Pettijohn, who, along with many previous recipients of this award, was one of my early heroes as an undergraduate at Notre Dame. My ties to SEPM began in those undergraduate days nearly 40 years ago.

My undergrad mentor was Ray Gutschick, a remarkable scientist, teacher, and the 1992 SEPM Moore medalist. Ray introduced me to the joys of scholarship and research, the Journal of Sedimentary Petrology where I published my first two papers, and to Lee Suttner, who became my Ph.D. advisor at Indiana University. As an undergraduate I was fortunate to become involved at Indiana's wonderful Geological Field Station in Montana, and this led to a USGS internship with Earle Cressman, mapping the Belt Supergroup in northwest Montana for a summer; coming on the heels of the intensive mapping experience I had at the IU Field Station, Earle's mentorship solidified my understanding of the importance of regional

Society Awards

geology and stratigraphy. At IU, Lee initiated my continuing interest in the power and beauty of foreland basins as geodynamic features containing the life histories of their conjoined orogenic belts, while Enrique Merino, Abhijit Basu, and Kase Klein focused my eyes on diagenesis, sedimentary petrology, and mineralogy. While working on my dissertation in Montana, I was fortunate to overlap with Bob Schwartz, another of Lee's former students. A masterful field geologist, Bob taught me much about how to study sedimentary rocks. Some years before I arrived at IU in 1980, Lee had mentored a remarkable undergraduate named Steve Graham, who would eventually become my postdoctoral advisor at Stanford (1984-1985). Steve had been a Ph.D. student of Bill Dickinson at Stanford, and was hired there to replace Bill when he moved to Arizona in 1979. Steve introduced me to quantitative basin analysis and the tectonics of active continental margins. Bill was the SEPM Twenhofel Medalist in 2000 and Steve was awarded last year's Pettijohn Medal.

Asish Basu hired me at the University of Rochester in 1986, and immediately introduced me to radiogenic isotope geochemistry; he encouraged me to develop applications in sedimentary rocks and opened his laboratory to me. Asish was an ideal department chair for me as a young faculty member, guiding me through the subtleties of balancing research, teaching, and fund raising. Also at Rochester, Gautam Mitra taught me much about thrust belt structural geology, and introduced me to the spectacular conglomerates of the Sevier belt in Wyoming and Utah. This was back in the days before we fully understood growth structures and their relationships to the greater foreland basin system, and Gautam's tutelage on thrust belt structure was instrumental in developing the orogenic wedge-top concept.

The shining searchlight of Bill Dickinson once again passed over my career when he retired early in 1991, and thus created an enormous gap on the Arizona faculty in sedimentary geology. They ran an ad in search of a person who does "Global Sedimentary Geology," and I thought that sounded like a good job even if I wasn't certain what it was all about. As with my old postdoc advisor Steve Graham, Bill's choice to move on had created opportunity for me at Arizona. I was firmly set on a path of continuous collaborations too numerous to mention, in a department filled with magical instruments capable of measuring anything I could imagine. I have to mention George Gehrels, Jay Quade, Paul Kapp, Susan Beck, George Zandt, Mihai Ducea, Andy Cohen, Clem Chase, Jon Pelletier, and my favorite, Barbara Carrapa, who also happens to be my wife! I've been aided and abetted on numerous wild geological adventures by colleagues in Nepal, China, Bolivia, northern Canada, Argentina, Italy, Tajikistan, India and Switzerland, including Ken Ridgway, Tank Ojha, Bishal Upreti, Ding Lin, Ricardo Alonso, William Cavazza, Ray Ingersoll, Gian Paolo Cavinato, Jay Chapman, Sean Willett, Tapan Chakraborty and Partha Ghosh, among others. With so many accomplished colleagues and mentors, how could I not succeed in at least a few projects?

Perhaps I could have attracted bad graduate students, but again by some good fortune I've been surrounded by amazingly creative young scientists since my first days on the faculty at Rochester, people like Joel Saylor, and this year's SEPM inaugural W.R.

Dickinson awardee, Brian Horton. Or my research could have been strangled by lack of funding, but even this has been forestalled by the generosity of NSF, the National Geographic Society, and various oil companies.

The transformation in the scope of sedimentology that has taken place since I was an undergraduate is amazing to behold. Our discipline has flowered into a cosmopolitan field, with widely recognized significance across the spectrum of Earth and planetary sciences. I am excited to participate in this ongoing expansion of sedimentological discovery.

Most of all I am grateful for the deep friendships that I've developed with kindred spirits: To all these wonderful people, I owe a debt of gratitude for a career blessed with good fortune at every turn.



Donald R. Lowe accepts the William F. Twenhofel Medal from President Maria Mutti

William F. Twenhofel Medal For a Career of Outstanding Contributions in Sedimentary Geology Donald R. Lowe

Donald R. Lowe's career is celebrated with the William F. Twenhofel Medal, awarded for contributions in two important arenas: the processes and deposits of sediment-gravity flows and reconstructions of the Archean Earth from its sedimentary rocks.

Don Lowe grew up in Sacramento, California, near the Cretaceous turbiditic strata of the Great Valley Group that later hosted his PhD field work and formed a cornerstone for much of his life's work. Following high school, Don migrated 90 miles to the southwest to Stanford University, where he quickly discovered geology. He moved to the University of Illinois for graduate school, yet elected to study a Turonian deep-water mass transport complex northwest of his Sacramento home for his 1967 PhD dissertation. After a two-year USGS post doc, Don became an Assistant Professor at Louisiana State University, rising to the rank of Professor. In 1998, he returned to Stanford, where he is currently the Max Steineke Professor of Geology.

Since his first sole-authored paper on his thesis rocks, published

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in the Journal of Sedimentary Petrology (JSP) in 1972, Don has published over 40 papers on sediment-gravity flow processes and deposits from across the globe. His works have tremendously influenced thought on deep-water depositional systems: his 1982 JSP paper on the deposits of high-density turbidity currents has been cited over 2500 times.

Don's interest in the Archean Earth began with a field trip to South Africa in 1975 and has been nearly continuous since. Mapping by Lowe and colleagues published in 2012 won several national and international awards. Topical studies have included major papers on early life, surface temperatures, large meteorite impacts, and pyroclastic sedimentation.

Don's advising of graduate students (31 at LSU; 28 at Stanford) was recognized by AAPG's Grover E. Murray Memorial Distinguished Educator Award. Through a half century of research and mentoring of students, Donald R. Lowe has registered lasting impact in sedimentary geology.

Biographers: Gary Byerly and Stephan Graham

Citation: For a half century, Donald R. Lowe has been in the vanguard in understanding sediment-gravity flow processes and deep-water sedimentation, as well as surface processes and life on early Earth. As a distinguished educator, he has impacted the lives and education of generations of university students and professionals in sedimentary geology.

Reply from Donald R. Lowe

I can hardly begin to express my gratitude for having been awarded the Twenhofel Medal by the SEPM. When I decided as an undergraduate at Stanford a few years ago to declare geology as my major, I did so under the mentorship and guidance of several great geologists, including Ben Page and Bill Dickinson, who were the real drivers behind my decision. Simeon Muller and Myra Keen played key roles as well and almost had me convinced that I wanted to be a paleontologist. My attraction to geology derived then and now from the historical aspects of our science; the ability to look back into deep time is unique, I think, to geology and cosmology, and our resolution of the artifacts and events of deep time is unequalled. It is a pleasure to look at a rock outcrop, written in a language that I am finally beginning to think that I understand, and see currents flooding across an Archean tidal flat or a debris flow rumbling down a Cretaceous slope. Reading sedimentary rocks has been and remains a wonderful way to make a living. Almost every day, I find myself looking forward to going to work in the morning and, in the afternoon, to going home to see the wife, vegging out on the sofa, and, of course, to spending a few hours editing someone else's manuscript or grant proposal. During my more than 50 year professional journey from a student to near-retiree, I have had the pleasure of working at two wonderful universities, LSU and Stanford; of having a cadre of good friends and professional colleagues, such as Gary Byerly and Steve Graham, from whom I have learned an incredible amount of geology; and, most of all, of sharing my knowledge with and in turn learning from a fleet of spectacular students, some of whom I know were responsible for nominating me for this award. It really does not get any better than this! I would sincerely like to thank SEPM, those who worked on my behalf for this award, and all of the people who have enriched

my life, shared their knowledge and friendship with me, and continue to make being a sedimentary geologist such a wonderful experience.



Brian K. Horton accepts the William R. Dickinson Medal from President Maria Mutti

William R. Dickinson Medal

For mid-career research geoscientist, significantly influencing the sedimentary geology community with innovative work; with a track record of impactful publications, pioneering approaches and the establishment of an influential research program

Brian K. Horton

Brian Horton is an intellectual leader in employing the clastic stratigraphic record to determine tectonic histories of continental orogenic systems. He has a sustained record of fundamental contributions (> 90 publications) that combine meticulous documentation of sedimentary strata in the field and subsequent analytical approaches for illuminating further detail, including detrital zircon geochronology and sedimentary petrology for provenance insights, as well as varied geo/thermochronological and geochemical approaches that seek to reconstruct past topographic, erosional, and depositional histories. He received the Young Scientist (Donath Medal) award from the Geological Society of America in 2004 and was awarded an endowed Chair at UT Austin in 2015. Throughout his career he has successfully guided and promoted the development of a long string of diverse graduate students, who have endeavored with their dedicated mentor to further discover and highlight relationships between sedimentation and mountain building. Brian continues to be at the leading edge of this research, and is entirely worthy of receiving the William Dickinson Medal from SEPM.

Brian Horton has boldly identified an earlier onset of foreland basin sedimentation and mountain building in several settings, recognized the importance of fluvial megafans in modern systems and the rock record, and explored the feedbacks between erosion and tectonics. He has worked on the Tibetan Plateau (documenting basin growth and deformation during the India-Asia collision), in the Zagros Mountains of Iran

Society Awards

(generating the first large-scale detrital geochronological and thermochronological studies of the region) and in the North American Cordillera (on Cretaceous-Paleogene retroarc shortening and foreland basin formation). However, he is best known for his sustained research in the Andes of South America.

The Andean research has crossed disciplinary boundaries. Whereas his early work in the Central Andes (Bolivia) involved basin analysis and structural mapping, over the past decade Brian and his students have expanded their field-based research into the Northern Andes (Colombia, Ecuador, Peru) and Southern Andes (Argentina). In this period he further developed his use of detrital geochronology, thermochronology, and chronostratigraphy to document the growth of hinterland, wedge-top, and foreland basins in numerous settings, revealing a complex history of retroarc thrust-belt propagation. Most recently, he has generated grand syntheses of the Mesozoic-Cenozoic histories of sediment provenance, accumulation, and basin evolution along the ~7000 km stretch of the Andes, venturing into the fundamental geodynamic processes governing mountain building along convergent plate margins.

Brian Horton is a giant in the unravelling of orogenic belts by detailed examination of the sedimentary sinks within these systems. He has made many fundamental and lasting contributions to our knowledge on the intersection of tectonics and sedimentation.

Biographer: Ronald J. Steel

Citation: In recognition of a defining influence and sustained high-level research in mountain belts, high plateaux and their associated sedimentary basins; intellectual leadership and the fostering of field education in tectonics and sedimentation; a great teacher, researcher and friend who has boundless energy and creativity.

Reply from Brian K. Horton

Bill Dickinson inspired countless sedimentary geologists. He applied insights from plate tectonics to sedimentary systems, demonstrated the power of provenance studies, and propelled our understanding of North America and the Pacific Basin. These themes fueled my interests in the linkages between tectonic and sedimentary processes. My interactions with Bill were always transformative. He told me there was still much to discover in South America, and that enthusiasm helped chart my course to address sedimentary, tectonic, and geochronological issues all along the Andes and its associated basins.

I am thankful for field-based student opportunities at the University of New Mexico, Montana State University, and at the University of Arizona where my Ph.D. advisor Peter DeCelles ably filled Bill's shoes as the resident global sedimentologist. Students in my own research groups have kept me on my toes with their curiosity and willingness to reconsider establishment viewpoints. I have also been fortunate to have a wonderful and supportive family.

I think Bill would be pleased to see how U-Pb provenance studies have become a cornerstone of geoscience research, how the surface and subsurface sedimentary record remains essential to meaningful structural, tectonic, and geodynamic studies, and how stratigraphy

and sedimentology still offer the most fundamental insights into the history of mountain belts, continental-scale rivers, the early Earth, and the evolution of life.

Thanks to the nominators and to SEPM for establishing this award. None of us could ever measure up to Bill Dickinson's legacy. Tonight I wear my western shirt and bolo tie in his honor. I hope that Bill would not be too disappointed to hear that the inaugural SEPM award in his name went to a kid who grew up in the rural Midwest, could hop barbed-wire fences, drive a tractor, bale hay, and who discovered geology upon moving to northern New Mexico at age 15 and falling in love with the landscape of the Colorado plateau. This is the honor of a lifetime. Thank you for this recognition.

2018 ACE OUTSTANDING PRESENTATION AWARDS

Top Oral Presentation:

Nicole Wilson

*Improving Paleohydrologic Source-to-Sink Estimates by
Merging Big Data and the Fulcrum Approach*

Top Poster Presentation (tie):

Zane Jobe

*Comparing Aggradation, Superelevation, and Avulsion
Frequency of Submarine and Fluvial Channels*

Bhavik Harish Lodhia

*Source-to-Sink at Continental Margins: A Novel Approach to
Reservoir Prediction in Offshore Deep-Water Settings*

Top Research Symposium Oral Presentation (tie):

Andrew Canada

*Multi-Isotope Geochemistry of the Eocene Elko Formation,
Northeastern Nevada*

Dave Keighley

*Heavy Metal Oil Shale From the Upper Green River Formation,
Uinta Basin, Utah*

Top Research Symposium Poster Presentation:

Jostein Myking Kjærefjord

*Stratigraphic Architecture and Bayfill Classification in the
Upper Cretaceous Neslen Formation, Eastern Book Cliffs, Utah*

ANNUAL REPORT OF THE SOCIETY 2018

Audited Financial Report – 2017

Society Awards

2018 Outstanding Paper in the
Journal of Sedimentary Research

Paul R. Durkin, Ron L. Boyd, Stephen M. Hubbard,
Albert W. Shultz, and Michael D. Blum

2018, *Three-Dimensional Reconstruction of Meander-Belt
Evolution, Cretaceous McMurray Formation, Albert Basin,
Canada: JSR 87:10.*

2018 Outstanding Paper in Palaios

Logan A. Wiest, Ilya V. Buynevich, David E. Grandstaff,
Dennis O. Terry Jr., Zachary A. Maza,
and Kenneth J. Lacovara

2018, *Ichnological Evidence for Endobenthic Response to the K-
Pg Event, New Jersey, U.S.A.: PAL 31:5.*

2018 Outstanding Paper in Palaios
Honorable Mention

Ken P. Coulson and Leonard R. Brand

2016, *Lithistid Sponge-Microbial Reef-Building Communities
Construct Laminated, Upper Cambrian (Furongian)
'Stromatolites': PAL 31:7.*



INDEPENDENT AUDITOR'S REPORT

To the Council
SEPM (Society for Sedimentary Geology)

Report on the Financial Statements

We have audited the accompanying financial statements of SEPM (Society for Sedimentary Geology) (a not-for-profit organization), which comprise the statements of financial position as of December 31, 2017 and 2016, and the related statements of activities and cash flows for the years then ended, and the related notes to the financial statements (collectively, the financial statements).

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

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 involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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, 2017 and 2016, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

HoganTaylor CPAs + ADVISORS

Tulsa, Oklahoma
August 8, 2018

www.hogantaylor.com

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SEPM (Society for Sedimentary Geology)
STATEMENTS OF FINANCIAL POSITION
December 31, 2017 and 2016

	2017	2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,205,931	\$ 1,435,743
Accounts receivable	108,571	44,314
Receivable from affiliate	219,281	162,119
Inventory	85,733	72,278
Prepaid expenses	28,734	23,415
Total current assets	1,648,250	1,737,869
Furniture and equipment, net	22,256	23,301
Investments	3,147,465	2,846,594
Total assets	<u>\$ 4,817,971</u>	<u>\$ 4,607,764</u>
Liabilities and Net Assets		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 84,638	\$ 62,583
Deferred income	390,233	465,965
Total current liabilities	474,871	528,548
Unrestricted net assets:		
Unrestricted	3,152,918	2,974,428
Board designated	1,190,182	1,104,788
Total net assets	<u>4,343,100</u>	<u>4,079,216</u>
Total liabilities and net assets	<u>\$ 4,817,971</u>	<u>\$ 4,607,764</u>

See notes to financial statements.

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SEPM (Society for Sedimentary Geology)
STATEMENTS OF ACTIVITIES
Years ended December 31, 2017 and 2016

	2017	2016
Revenues, Gains and Other Support		
Dues	\$ 102,195	\$ 104,221
Publications	240,848	265,003
Journal of Sedimentary Research - subscriptions, royalties and other	513,392	635,651
Palaios - subscriptions, royalties and other	163,613	157,835
Continuing education	50,750	38,830
Meetings, conferences and field trips	225,320	158,770
Membership activities	9,428	20,497
Net realized and unrealized gain on investments	228,393	170,907
Investment income	112,929	84,618
Total revenues, gains and other support	1,646,868	1,636,332
Expenses		
Program expenses:		
Publishing costs - Journal of Sedimentary Research	185,617	169,723
Publishing costs - Palaios	119,414	103,832
Publications	158,594	141,677
Continuing education	21,575	15,310
Meetings, conferences and field trips	164,972	82,114
Membership activities	168,691	185,062
Grant award to SEPM Foundation, Inc.	-	108,579
General and administrative	564,121	557,048
Total expenses	<u>1,382,984</u>	<u>1,363,345</u>
Change in net assets	263,884	272,987
Net assets, beginning of year	<u>4,079,216</u>	<u>3,806,229</u>
Net assets, end of year	<u>\$ 4,343,100</u>	<u>\$ 4,079,216</u>

See notes to financial statements.

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Audited Financial Report – 2017**SEPM (Society for Sedimentary Geology)****STATEMENTS OF CASH FLOWS****Years ended December 31, 2017 and 2016**

	2017	2016
Cash Flows from Operating Activities		
Change in net assets	\$ 263,884	\$ 272,987
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:		
Depreciation	7,521	8,252
Net realized and unrealized gain on investments	(228,393)	(170,907)
Change in operating assets and liabilities:		
Accounts receivable	(64,257)	(43,096)
Receivable from affiliate	(57,162)	(60,946)
Inventory	(13,455)	50,035
Prepaid expenses	(5,319)	1,458
Accounts payable and accrued liabilities	22,055	(3,182)
Deferred income	(75,732)	87,121
Net cash provided by (used in) operating activities	(150,858)	141,722
Cash Flows from Investing Activities		
Purchase of furniture and equipment	(6,476)	(14,052)
Purchase of investments	(111,478)	(704,920)
Proceeds from sales of investments	39,000	659,931
Net cash used in investing activities	(78,954)	(59,041)
Net change in cash and cash equivalents	(229,812)	82,681
Cash and cash equivalents, beginning of year	1,435,743	1,353,062
Cash and cash equivalents, end of year	\$ 1,205,931	\$ 1,435,743

See notes to financial statements.

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SEPM (Society for Sedimentary Geology)**NOTES TO FINANCIAL STATEMENTS****December 31, 2017 and 2016****Note 1 – Nature of Operations and Summary of Significant Accounting Policies**Nature of operations

On September 27, 1987, the Society of Economic Paleontologists and Mineralogists (the 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. In 1989, the Society changed its name to SEPM (Society for Sedimentary Geology).

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.

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 included in inventory.

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.

Furniture and equipment

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

Revenue recognition

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

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

Publications, continuing education and membership activities are recognized as revenue when the publication is delivered, and the service is provided.

Contributions

Contributions, including unconditional promises to give, are recognized as revenue in the appropriate category of net assets in the period received. Unconditional promises to give are recorded net of an allowance for uncollectible receivables. This estimate is based on such factors as prior collection history, type of contribution and the nature of the fund-raising activity. Donor-restricted contributions are classified as unrestricted support if the restrictions are satisfied in the same reporting period in which the contribution was received.

Pledges receivable are charged off when deemed uncollectible by management.

Income taxes

The Society is exempt from federal and state income taxes under Section 501(c)(3) of the Internal Revenue Code and has been determined not to be a private foundation. As a result, as long as the Society maintains its tax exemption, it will not be subject to income tax.

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the accounting period. Actual results could differ from those estimates.

Subsequent events

Management has evaluated subsequent events through August 8, 2018, the date the financial statements were available to be issued.

Note 2 – Inventory

Inventory consists of the following at December 31:

	2017	2016
Publications	\$ 82,065	\$ 59,825
Continuing education materials	338	5,923
Work in process	3,330	6,530
Total inventory	\$ 85,733	\$ 72,278

Inventory write-downs were \$14,598 and \$11,979 for the years ended December 31, 2017 and 2016, respectively.

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Note 3 – Furniture and Equipment

A summary of furniture and equipment at December 31 is as follows:

	2017	2016
Furniture and equipment	\$ 173,070	\$ 167,810
Less accumulated depreciation	(150,814)	(144,509)
Total	\$ 22,256	\$ 23,301

Note 4 – Investments

The fair value measurement standards establish a consistent framework for measuring fair value and a fair value hierarchy based on the observability of inputs used to measure fair value. These inputs are summarized in three broad levels:

- Level 1 Quoted prices in active markets for identical assets or liabilities.
- Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

There were no investment transfers due to changes in the observability of significant inputs between Level 1, Level 2 and Level 3 assets during the years ended December 31, 2017 and 2016.

Investments measured at fair value on a recurring basis consisted of the following:

	Fair Value Measurements as of December 31, 2017			
	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 3,147,465	\$ -	\$ -	\$ 3,147,465
	Fair Value Measurements as of December 31, 2016			
	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 2,846,594	\$ -	\$ -	\$ 2,846,594

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Audited Financial Report – 2017

Investments held at December 31 consist of the following:

	December 31, 2017	
	Historical Cost	Market (Carrying Amount)
General investments:		
Cash and cash equivalents	\$ 53,083	\$ 53,083
Growth and capital appreciation funds	927,546	1,119,648
Bond and balanced funds	544,964	568,165
International funds	78,687	114,448
Total general investments	1,604,280	1,855,344
New Frontiers Fund:		
Cash and cash equivalents	1,208	1,208
Growth and capital appreciation funds	555,143	885,040
Bond and balanced funds	188,314	193,597
International funds	125,673	212,276
Total New Frontiers Fund	870,338	1,292,121
Total investments	\$ 2,474,618	\$ 3,147,465

	December 31, 2016	
	Historical Cost	Market (Carrying Amount)
General investments:		
Cash and cash equivalents	\$ 52,012	\$ 52,012
Growth and capital appreciation funds	664,634	800,420
Bond and balanced funds	738,104	753,424
International funds	71,930	93,126
Total general investments	1,526,680	1,698,982
New Frontiers Fund:		
Cash and cash equivalents	803	803
Growth and capital appreciation funds	558,256	792,741
Bond and balanced funds	191,155	190,466
International funds	119,405	163,602
Total New Frontiers Fund	869,619	1,147,612
Total investments	\$ 2,396,299	\$ 2,846,594

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Realized and unrealized gains for the years ended December 31, were as follows:

	2017	2016
Unrealized gains	\$ 222,153	\$ 140,856
Realized gains	6,240	30,051
	<u>\$ 228,393</u>	<u>\$ 170,907</u>

Note 5 – Deferred Income

Deferred income consists of the following at December 31:

	2017	2016
Dues	\$ 62,614	\$ 81,877
Subscriptions	234,389	235,830
Publications in process and other	93,230	148,258
	<u>\$ 390,233</u>	<u>\$ 465,965</u>

Note 6 – Commitments

The Society leases its offices and warehouse under operating leases having expiration dates through July 2023. Minimum annual rental commitments are as follows:

Year	Amount
2018	\$ 51,573
2019	24,165
2020	24,489
2021	24,624
2022	24,624
Thereafter	14,364
	<u>\$ 163,839</u>

Rent expense was approximately \$46,000 for each of the years ended December 31, 2017 and 2016.

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Note 7 – Unrestricted Net Assets

Unrestricted net assets consist of the following at December 31:

	2017	2016
General fund	\$ 3,152,918	\$ 2,974,428
Board designated:		
New Frontier Fund	1,114,677	971,876
Other	75,505	132,912
Total	<u>\$ 4,343,100</u>	<u>\$ 4,079,216</u>

The New Frontier 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 8 – Related Party Transactions

The Society received \$8,000 for each of the years ended December 31, 2017 and 2016, from SEPM Foundation, Inc. (an affiliated nonprofit entity) for management fees. The management fees are netted against general and administrative expenses in the statements of activities.

The Society contributed \$108,579 to SEPM Foundation, Inc. during 2016 for general operations. No such contributions were made during 2017.

The Society had receivables from SEPM Foundation, Inc. of \$219,281 and \$162,119 at December 31, 2017 and 2016, respectively, resulting from the Society funding SEPM Foundation, Inc. grants and capital project expenses, net of SEPM Foundation, Inc. revenue received by the Society.

Note 9 – Concentration of Credit Risk

The Society maintains accounts and deposits with financial institutions which are insured by the Federal Deposit Insurance Corporation (FDIC). Typically, cash balances exceed the FDIC insurance limits.

Note 10 – New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, requiring an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The updated standard will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either a full retrospective or retrospective with cumulative effect transition method. In August 2015, the FASB issued ASU 2015-14 which defers the effective date of ASU 2014-09 one year making it effective for annual reporting periods beginning after December 15, 2018. The Society has not yet selected a transition method and is currently evaluating the effect that the standard will have on the financial statements.

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In August 2016, the FASB issued ASU 2016-14, *Not-for-Profit Entities (Topic 958)*: Presentation of Financial Statements of Not-for-Profit Entities, which provides more relevant information about available resources (and the changes in those resources) to donors, grantors, creditors and other users. The most significant aspects of the ASU are as follows: (1) replaces the current presentation of three classes of net assets (unrestricted, temporarily restricted, and permanently restricted) with two classes of net assets – net assets with donor restrictions and net assets without donor restrictions, (2) expands the disclosures about the nature and amount of any donor restrictions, board designations of net assets without donor restrictions as well as any underwater endowment funds, (3) requires expenses to be presented by nature and function, as well as an analysis of the allocation of these expenses, and (4) requires specific quantitative and qualitative disclosures to improve the ability of financial statement users to assess the entity's available financial resources and the methods by which it manages liquidity and liquidity risk. ASU 2016-14 is to be applied retrospectively, and is effective for years beginning after December 15, 2017, with early adoption permitted.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which seeks to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and by disclosing key information about leasing arrangements. Consistent with current U.S. GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee will depend primarily on its classification as a finance or an operating lease (i.e., the classification criteria for distinguishing between finance leases and operating leases are substantially similar to the classification criteria for distinguishing between capital leases and operating leases under the previous guidance). However, unlike current U.S. GAAP, which requires only capital leases to be recognized on the balance sheet, ASU No. 2016-02 will require both operating and finance leases to be recognized on the balance sheet. Additionally, the ASU will require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases, including qualitative and quantitative requirements. Topic 842 is effective for years beginning after December 15, 2019, with early adoption permitted. The Society has not calculated the impact this standard will have on its financial statements but expects that it will not be significant.

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