

2013



# GSA Medals & Awards

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of the

*Geological Society of America*

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*28 October 2013  
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# 2013 MEDALS & AWARDS

## PENROSE MEDAL

**Presented to  
Steven M. Stanley**



Steven M. Stanley  
University of Hawaii

### ***Citation by Noel P. James***

Steve Stanley is one of the world's pre-eminent paleobiologists who has fundamentally changed the way we think about and interpret the rock record. This experimentalist, natural scientist, lateral thinker, and synthesizer has left a profound mark on American science. He is recognized internationally as a paleontologist/neontologist who has specialized in the ecology and paleoecology of mollusks. His seminal research, beginning with the still-cited studies on the adaptive morphology of bivalves (and published by GSA), has continued throughout his career, and he would be a worthy nominee on the basis of this science alone. Steve has, however, worked across disparate fields such as detailed functional morphology, species selection patterns, causes of mass extinction, and Precambrian evolution. A member of the National Academy of Sciences he has been given numerous honors including the Schuchert Award, the Paleontological Society Medal, the Twenhöfel Medal, and the Mary Clark Thompson Medal of the National Academy.

Steve is, however, much more than this, as evidenced by his books that address larger fundamental problems in paleontology. His books "The Principles of Paleontology" and "Earth System History" are fundamental texts in many universities. But it is his two provocative books on evolution, and another on early humans that have both challenged current dogma and brought modern paleontological concepts to the general public,

that set him apart from his contemporaries. These are judged by many to be amongst the most original and influential books on paleontology published over the last 50 years.

But Steve too has undergone evolution. In recent years he has teamed up with Laurie Hardie to address one of the most fundamental problems in sedimentary geology, namely, how has the evolution of the world ocean affected the paleontological record of calcareous organisms? These papers connect seemingly disparate fields; plate tectonics, geochemistry, biomineralization, paleontology and sedimentology. His experimental work showed that coccolithophorids produced the vast Cretaceous deposits of chalk because seawater chemistry favored their calcitic mineralogy. This work has transformed our thinking about how the fossil record in general and carbonate rocks in particular have changed through geologic history. So, by linking the changing chemistry of the oceans with the evolution and persistence of calcareous marine organisms, he has laid the conceptual groundwork for the way we can use proxies to assess and track ocean change, especially ocean acidification.

Steve Stanley embodies what the Penrose Medal is all about, outstanding achievements that mark major advances in the science of geology. The Society honours both itself and this remarkable scientist by awarding him this accolade.

### ***Response by Steven M. Stanley***

*No text available at this time.*

# 2013 MEDALS & AWARDS

## ARTHUR L. DAY MEDAL

Presented to  
**Richard W. Carlson**



Richard W. Carlson  
*Carnegie Institution of Washington*

### *Citation by William K. Hart*

Today it is my honor and pleasure to introduce Richard W. Carlson as the 2013 Arthur L. Day Medalist. During my time as Rick's first post-doc it was clear to me that he had immense talents and I have been fortunate to benefit from many of these over our more than 30 years of friendship and collaboration.

Throughout his career Rick has tackled analytically and conceptually challenging geochemical and cosmochemical problems including nucleosynthetic isotope variability in early solar system materials; timescales and mechanisms of crust formation and mantle differentiation on the terrestrial planets; early Earth history; origin and tectonic implications of large-volume volcanism; and origin and evolution of the sub-continental mantle and its role in continent formation and preservation. Rick and his colleagues have been instrumental in developing techniques for high precision chemical and isotope analyses central to the research questions and subsequent advances. And for these accomplishments, he was recently inducted into the National Academy of Sciences. Moreover, in describing the impact of Rick's extensive scientific contributions a colleague wrote; "Carlson's careful work on these important problems has been seminal and inspirational to a new generation of geochemists who are using his discoveries as starting points for their own research."

I recently asked Rick to summarize what he thought to be his most memorable research

themes. Of these, two serve nicely to highlight the breadth and impact of his contributions; large Continental Dynamics projects and the 142-Neodymium story. Rick's extraordinary scientific, technical, and organizational skills are at the core of successful large interdisciplinary endeavors such as the High Lava Plains and Kaapvaal CD projects. I marvel at his ability to integrate and synthesize data and ideas across disciplinary boundaries leading to creative new insights on complex problems. Rick's creativity and technical savvy are no better illustrated than in his work with Maud Boyet demonstrating a difference in 142-Neodymium abundances between chondritic meteorites and the silicate Earth. Their landmark 2005 paper has spawned a number of other influential contributions providing explanations for this difference and implications for early Earth differentiation. I know that many in the solid Earth geochemistry and cosmochemistry communities agree that this series of papers may well represent the most important contributions to these disciplines in the past decade or more.

In closing, I am very pleased to have had this opportunity to share with you a snapshot of Rick Carlson's exemplary professional accomplishments. I have nothing but praise for these accomplishments and echo the sentiment expressed by another of Rick's colleagues who recently wrote "he is the most influential isotope geochemist on the scene today, both in terms of analytical acuity and research distinction". Clearly this level of achievement is truly deserving of the Day Medal that recognizes "outstanding distinction in contributing to geologic knowledge through the application of physics and chemistry to the solution of geologic problems". Rick, on behalf of those responsible for your Day Medal nomination and your other friends and colleagues, I sincerely congratulate you on this well-deserved award!

### *Response by Richard W. Carlson*

Thanks very much for these kind words Bill, and for the many years of enjoyable collaboration. I feel incredibly honored to be awarded the Arthur L. Day Medal and thank my nominators and the evaluation committee of GSA for making this possible. I recognize the cliché in saying so, but I had absolutely no expectation of ever seeing my name in a list like that of the Day Medalists. Along with being an early President of the GSA, Arthur Day was the founding Director of the Geophysical Laboratory, my neighbor

Department in the Carnegie Institution. We at Carnegie have a considerable advantage in the research arena because of the Institution's focus on providing the perfect environment to conduct what was once, and, given the current sentiment in the US, likely will again be derisively called "curiosity based" science. I have little doubt that Carnegie's support of its staff and its strong postdoctoral program truly are the reasons I am standing here today. Although I have a few first-authored papers, the good papers in my bibliography are written with the postdocs and visiting scientists with whom I have had the privilege to work throughout my career. I would like to read all their names, but if I did, I would have to enter my thousand words per minute rate of speech, for which a number of my less clear scientific presentations are well known. I would like to highlight a few, however. The Directors of my Department, first George Wetherill, then Sean Solomon and now Lindy Elkins-Tanton set an unmatched standard of scientific excellence and even-handed administration. In the lab, the stable support from Carnegie that allowed us to hire people like Mary Horan, Tim Mock and before them David Kuentz made it possible for me to concentrate on new techniques and approaches while being sure that the established methods would continue to be done at high quality. Among my long-term collaborators are Bill Hart, Steve Shirey, Graham Pearson, David James, Maud Boyet, and my advisors Gunter Lugmair and Doug Maccougall. How can one go wrong with associates like these? Finally, the colleague who has contributed in so many ways to my achievements is my wife of 15 years, Sonia Esperanca. Although my name will be entered into the list of Day Medalists, the achievements for which I'm being recognized would not have been possible without the contribution of these colleagues.

# 2013 MEDALS & AWARDS

## YOUNG SCIENTIST AWARD (DONATH MEDAL)

Presented to Naomi E. Levin



Naomi E. Levin  
Johns Hopkins University

### *Citation by Thure E. Cerling*

Naomi Levin has made outstanding contributions to understanding the environments of human origins in Africa. She has done extensive field work in the Awash region of Ethiopia, and in the Omo-Turkana Basin in Ethiopia and Kenya: these basins have yielded most of the dated hominin fossils in Africa older than 1 Myr. One the greatest of controversies in human evolution has to do with the environments in which humans evolved, particularly the early period when the earliest clear human ancestors arose – the Australopithecines – about 4 million years ago. She contributed to the understanding of environments through her careful stratigraphic studies and her stable isotope work on fossil soils and fossil tooth enamel. She is a welcome addition to any field party because of her scientific abilities, collegiality, and positive approach to problems, whether challenging or routine. Her lab work has opened new ways of quantifying environmental parameters – stable isotopes as absolute indicators of paleoaridity, paleodiet, and paleotemperature.

Naomi has the qualities of a future leader in the earth science – prowess in both field and laboratory science, courage in meeting controversy with reason and diplomacy, and passion for educating new generations of earth scientists.

### *Response by Naomi E. Levin*

Thank you Thure. I foremost want to thank GSA and Dr. and Mrs. Fred Donath for the creation and support of this award. I am very honored to receive it.

I feel like the best way to accept this award is to share it with the community of mentors and colleagues who have shaped me both as a scientist and a person.

Within this community, Thure Cerling and Jay Quade have been some of my biggest influences. Jay introduced me to working in eastern Africa but more importantly he taught me to study a system from the ground up: roll up my sleeves, walk back to that outcrop again, and figure it out. No system seems off limits with Jay– just buckle up and study it, thoroughly. Working with Thure broadened the scope my research to elsewhere in eastern Africa and to include the ecology and climate of modern systems. Thure’s tenacity is hard to keep up with, but through it he has taught me to think big, be creative and invest in long-term efforts. Both Jay and Thure have been huge models for how I work with colleagues and bridge disciplines.

I have been lucky to have worked with many people who have given me opportunities and challenged me. Among them, I thank Frank Brown, Kay Behrensmeier, Scott Simpson, and Dave Braun for their strong influences on my field work. Both Jim Ehleringer and Ed Zipser at the University of Utah enabled me to work on modern systems. And I thank John Eiler for a quick but very influential postdoc at Caltech that introduced me to an entirely different approach to isotope geochemistry.

I am also grateful for the colleagues and culture at Johns Hopkins. It’s a place where I am supported and trusted to do the kind of work that I find most interesting while also stretched to think beyond my intellectual comfort zone.

I am indebted to my parents, Carol and Jack, and my brother Daniel who have encouraged me to pursue my interests and gave me opportunities to explore. They continue to instill in me the importance of hard work, passion and curiosity.

And of course I have another reason to thank Thure. He was able to convince Ben Passey to stay at the U of U for a PhD, enabling Ben to be my lab mate when I arrived and now my husband. Ben is my best colleague and my best friend. I can’t imagine being here without him.

Thank you again to GSA.

# 2013 MEDALS & AWARDS

## BROMERY AWARD FOR THE MINORITIES

Presented to  
**Reginal W. Spiller**



Reginal W. Spiller  
Azimuth Energy LLC

### *Citation by Lisa White*

Reginal (Reg) Spiller is extremely deserving of the 2013 Bromery Award. Enthusiastic, energetic, and committed, Reg is a true ambassador for the geosciences who constantly promotes the accomplishments of diverse geoscientists when he travels nationally and internationally. Reg has worked for decades to identify oil and gas resources and highlight resource challenges around the globe. His success and leadership in industry began at then-Exxon USA and continued as a project manager for Elf Aquitaine Petroleum and Maxus Energy. Achievements in industry led to an appointment as Deputy Assistant Secretary for Gas and Petroleum Technologies at the US Department of Energy during the Clinton Administration. Reg's co-founding of Frontera Resources and his leadership as President and CEO of Azimuth Investments, a global energy advisory company, further demonstrates his business accomplishments. A distinguished alumnus of Penn State (MS in Geology in 1979), Reg's achievements as an exploration geologist and senior manager occurred on major fields in over 50 countries.

Equally as important as Reg's success in industry is his dedication to promoting geosciences to others. A geologist, a businessman, and a charitable humanitarian, Reg gives generously of his time and resources and is responsible for recruiting many African Americans and other minorities to the geoscience profession. One of Reg's

greatest achievements was the founding of the National Association of Black Geologists and Geophysicists (now NABG, National Association of Black Geoscientists) more than 30 years ago. A dynamic and ever-growing network, NABG provides leadership, mentorship, and scholarship support to diverse students in the geosciences.

### *Response by Reginal W. Spiller*

Thank you Lisa,

Ladies and gentlemen, I feel very honored to be this year's recipient of the Bromery Award. I would like to extend a very special thanks to the Bromery family for establishing this award. Thanks also to the National Association of Black Geoscientist (NABG) for the nomination and I express my sincere thanks to the Geological Society of America (GSA) for selecting me as this year's recipient. I of course share this award with my wife, Freda who has constantly supported me throughout my career and many endeavors.

I would like to thank Dr. Lisa White who has been a colleague of mine for many years and is a former recipient of this prestigious award. Lisa has played an incredible role in promoting the Earth Sciences both here in the US and abroad.

My path to this moment in time comes through and with the assistance of another distinguished geoscientist and close associate of Dr. Bromery's, Dr. Mack Gipson. It was Mack, one of the 1st African American PHD Geoscientist, who convinced me to begin my career with Exxon USA in 1979 where I was one of many geologist that both he and Dr. Bromery mentored over the years.

With significant professional positions under their stewardship, the Bromery/ Gibson Team worked closely with key individuals in Government, Industry, and Academia to make sure that there were clear path ways for the success of Minority Geoscientist in the work place. In a geologic sense, it marked a significant "*Sequence Boundary*" in how new minority STEMs talent, "*Prograded*" and "*Onlaped*" on top of the existing workforce. Subtle at the onset but rapidly filling and shifting the focus of where the US would access its workforce talent. Important because; according to the recent National Academy of Science Work Force Study, over 1/3 of the existing professional geoscientist working today, are eligible to retire in the next 5 years. Think of the University of Texas Geoforce and Fort Valley's CDEP pipelines that identify minority students in the 7th grade; Penn State's Africa Array and DOE's Mickey

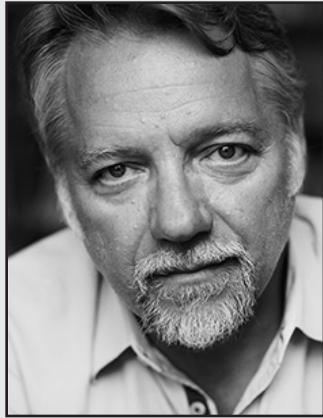
Leland Energy Fellowship program and other institutional efforts that are capturing and redirecting new talent into Earth and Engineering Sciences as the demographics of the population shift. It all had to start somewhere and Dr. Bromery was there when it began.

If you had an opportunity to know Dr. Bromery, you understood that he was a intellectual that radiated integrity and trust. Everyone wanted to be like him. Always true to his profession, he maintained his technical excellence well into his later years. More importantly however, Dr. Bromery instilled the message that in order to truly advance and prosper, a person must be both technically excellent and one of high integrity who respects and cares about others. So today... much of my time is spent doing what I observed Dr. Bromery and Dr. Gibson do before me. Passing on the special gift that each of us has received from a mentor, the encouragement, the passion and the excitement of being a Geoscientist.

# 2013 MEDALS & AWARDS

## PRESIDENT'S MEDAL

Presented to  
**Edward Burtynsky**



Edward Burtynsky  
*Photographic Works*

*Photo credit Birgit Kleber*

### ***Citation by George H. Davis***

The President's Medal of the Geological Society of America (GSA), commissioned in 2007, will be conferred only on individuals, groups, or entities whose impact has profoundly enhanced the geoscience profession through: (a) supporting and

contributing to the Society; (b) advancing geosciences, enhancing professional growth, and/or promoting geoscience in service of humankind; (c) or significantly enlarging the range of scientific achievement for the growth of our profession.

When GSA President George Davis (2012-2013) had the opportunity to nominate a distinguished candidate for this honor, he thought immediately of photographer and artist Edward Burtynsky, whose large-format photographs of industrial landscapes are incredible works supporting vastness and detail, elegance and disturbance, focus and limitlessness. Though not a natural scientist, one of Burtynsky's early influences was Ansel Adams. Though not a field geologist, he functions in many ways as a classical geologist, taking photographs with a field camera (large-format!), attuned to capturing just the right oblique 'aerial' vantage.

The body of work celebrated through the President's Medal is "*Manufactured Landscapes*". In accepting the 2005 TED Prize, Burtynsky recounted an epiphany in his realization that geological time permits seeing landscapes in a transformed manner. Indeed, the 'transformed landscape' is baseline for a life's work. In Burtynsky's own words: "*Nature transformed through industry is a predominant theme in my work. ...Recycling yards, mine tailings, quarries and refineries are all places that are outside of our normal*

*experience, yet we partake of their output on a daily basis. These images are meant as metaphors to the dilemma of our modern existence. Our dependence on nature to provide the materials for our consumption and our concern for the health of our planet sets us into an uneasy contradiction. For me, these images function as reflecting pools of our times." It can add to our understanding of who we are and what we are doing."*

Burtynsky's art is inherently geological, and it causes the multifaceted challenges of sustainability to emerge into stark view. Burtynsky has avoided 'transforming' his work into political images or indictments. He does not assign blame. Frankly, he is uncommon in not pitting sides against one another, but instead in emphasizing that *all of us* who make up humankind are transforming landscapes. The implications that all of us are engaged in transforming landscapes are vast in scope and content, just like Burtynsky photographs.

Consistent with a core theme of the intent of the GSA's President's Medal, Burtynsky is being celebrated for working in the service of humankind. Awarding him this medal is particularly appropriate, for he employs a natural-resources medium that can be grasped and appreciated especially deeply by geoscientists.

*No response from Edward Burtynsky*

# 2013 MEDALS & AWARDS

## PUBLIC SERVICE AWARD

Presented to **Scott D. Sampson**



Scott D. Sampson  
Denver Museum of Nature & Science

Photo credit: Jędrzej Borowczyk

### Citation by **Matt Hudson**

How many of us can trace our love for the earth sciences back to a specific person? For millions of children, that seed of scientific curiosity comes from Scott D. Sampson.

Scott is the host and science advisor for the television series *Dinosaur Train*, which is viewed by more than 9 million U.S. households per month, but his influence extends far beyond that. A Canadian-born paleontologist and evolutionary biologist, Scott has authored more than 142 science publications and, with his coauthors, named 18 species of dinosaurs. He has given hundreds of presentations in K–16 classrooms and devoted himself to public science outreach, specifically using earth sciences and dinosaurs as a vehicle for connecting kids with nature.

So many forces vie for children's attention today. Thanks to Dr. Scott, a generation is growing up with dinosaurs, geologic time, and the desire to get outside and discover science.

### Response by **Scott D. Sampson**

First off, I would like to express warm thanks to the committee for selecting me as the recipient of the 2013 GSA Public Service Award. I am deeply honored. Like most of us, I was trained as an Earth scientist, so the vast bulk of my science communication skills have been acquired on the job.

I decided many years ago to devote much of my energies to public communication of science. I concluded that, at this critical juncture in history, one of the greatest challenges is broadening human understanding of earth and life systems, and how they interact. Like many others, my general audience presentations over the years have been sprinkled liberally with statistics on warming global temperatures, rates of species extinction, and precipitous loss of habitats. The unspoken message, shared with most environmentalists, has been one of doom and gloom.

The problem is, we've been operating under a false assumption. If only people understood the facts, we believed, they would alter their behavior. Yet, as any marketing executive will tell you, facts alone rarely shift behavior. It's emotions that count. Want to sell a new car? Forget about horsepower statistics and 0-60 acceleration times. Instead show beautiful people cruising through pristine landscapes.

The lesson for all of us is that if people are going to change their behaviors and act more sustainably, they must care first. And if they're going to care, they need to be inspired. Particularly when it comes to school-aged children, we are most effective as communicators when we open windows into wonder. Information is one powerful tool. It sparks the imagination to learn that we're made not only of star stuff, as Carl Sagan was fond of saying, but also of Earth stuff and the stuff of bacteria, fishes, and other mammals. Alongside information, however, equally important is direct, hands-on multisensory experience, particularly in natural settings.

Today more than ever before, we need earth scientists conveying their work to the general public. My plea tonight is that we balance the doom and gloom with inspiration, and that we seek out learning environments that foster profound experiences and enable imaginations to soar.

Once again, thank you very much.

### Selected Bibliography of **Scott D. Sampson**

Scott Sampson has an extensive publications history, including books, peer-reviewed articles, and general audience articles. I have tried to capture a cross section of these sources in the below list.

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# 2013 MEDALS & AWARDS

## GSA DISTINGUISHED SERVICE AWARD

Presented to  
Jon Olsen, Stephen G. Pollock, and Virginia (Ginger) Williams



Jon Olsen  
*The Geological Society of America*



Stephen G. Pollock  
*University of Southern Maine*



Virginia (Ginger) Williams  
*The Geological Society of America*

### ***Citation by Brendan Murphy***

When I first became involved in the GSA, I was immediately struck by its unwavering commitment to the quality of geoscience publications and its global vision to deliver the very best. It didn't take long to realize that the leadership of Jon Olsen, as Director of Publications, was primarily responsible for this positive and exhilarating culture. I know from talking to my colleagues that he maintained these impeccable standards throughout his stewardship and so GSA publications remain the envy of the geoscience world. I can think of no more deserving recipient of the GSA Distinguished Service Award than Jon Olsen.

### ***Response by Jon Olsen***

This quote from Bill Bryson's "*A Short History of Nearly Everything*" best describes my receiving GSA's Distinguished Service Award in 2013 —

"There are three stages in scientific discovery. First, people deny that it is true, then they deny that it is important; finally they credit the wrong person."

I would like to thank GSA publications staff and our science editors, and authors— they did ALL of the work and they deserve ALL of the credit.

Also, thank you to Todd Berggren. GSA would not have been able to install our solar panels and implement many of our conservation efforts without his help.

### ***Citation by Noel Potter***

I am pleased to present Steve Pollock to receive GSA's 2013 Distinguished Service Award. Steve has served with grace and distinction as the Secretary-Treasurer of the NE Section of GSA for 12 years. In that position Steve has been the real leader of the section. He has overseen all section affairs, steering the sometimes-inexperienced Management Board to wise decisions. Earlier he was Vice-Chair and Chair of our Management Board, and chaired two section meetings. The Northeastern Section endowment has grown from its infancy to in excess of \$225,000.

Steve has also dealt with the mundane with delight. Over the years I have marveled that he hand-delivered student travel checks and discussed their presentations with them. The Northeast Section has benefited from Steve's service, generally setting the tone of the section. Congratulations Steve.

### ***Response by Stephen G. Pollock***

I am honored and pleased to share the 2013 Distinguished Service Award with Ginger and Jon. Both Ginger and Jon have made very significant contributions to GSA and are truly deserving of the Distinguished Service Award. Volunteering for GSA has always been rewarding, both professionally and personally. My service to GSA began in 1987 when I was appointed by the Northeastern Section Management Board to be the General Chair of the Section's 1988

### ***Citation by William A. Thomas***

It is my great pleasure to present Virginia (Ginger) Williams for the Geological Society of America Distinguished Service Award. Ginger began her appointment in the office of the Executive Director, as Executive Administrative Assistant, in July, 1999, and retired from that position in June, 2013. For fourteen years, Ginger has shown selfless dedication to the workings of GSA. Never asking, is this good enough, she has always gone the extra mile (or two) to make the best even better, and she has done that by recognizing what needed to be done and then doing it. GSA has always operated on the basis of the dedication of loyal employees, members, and friends; Ginger totally exemplifies that dedication.

My most direct observations of Ginger's contributions to GSA came during my term as President in 2004–2006. Of course, I had the advice and example of my immediate predecessors, Clark Burchfiel and Rob Van der Voo, but it was frequently to Ginger I turned with endless questions about specifics of my responsibilities. In particular, the President's obligations at the Annual Meeting seem at first to be rather overwhelming, but Ginger had my schedule programmed down to the minute and kept me moving from committee meeting, to presentation, to Council meeting. I never went to Boulder for a Council meeting without a list of half a dozen questions, and my first stop was in Ginger's office, where I found a cheerful reception, understanding



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## *Olsen continued*

Finally, a special thank you to Jeanette Hammann for her support and efforts over the past 13 years.

## *Pollock continued*

annual meeting. GSA staff welcomes and promotes service to the Society in many areas through a high level of intelligence, professional cheerfulness, patience and wisdom. Always forward thinking and acting, staff and volunteers have built and continue to build a vigorous highly relevant Society of global dimension and mission.

I have seen positive changes both at the Section level and Society as a whole. Attendances at the section meetings were in decline when I became Secretary in 2001. Today, section meeting attendances in the Northeast exceed 1100 registrants annually. Both the Northeastern Section operating account and Northeastern Section Endowment in GSAF are at all time highs. Student programs are robust and growing. Noel Potter kindly mentioned that I attended many student presentations and personally delivered student travel checks. Distributing checks was possible when there were 40 or so student presentations. Today this would not be realistic because at the 2013 Annual Meeting the Northeastern Section has awarded travel assistance to 119 students from the Northeast.

The Distinguished Service Award which is presented to me today was not earned through solo efforts. I have received much support from my wife Linda and my family. My professional service efforts are aided by numerous individuals. I benefitted from, and have been pleased to serve with a hard working, enthusiastic and passionate crowd of geoscientists. I thank everyone for their support of my stewardship over the years. It is a true pleasure to serve GSA.

## *Williams continued*

of my questions, and a quick and accurate response. Many times, my needs included printing documents that I would need in the Council meeting only a few minutes later. No matter the stress of time and competing demands, Ginger maintained a cheerful and positive disposition, and provided the needed answers or materials. Now, I realize that one could say this was part of her job, but these meetings were on Saturdays and Sundays, and they frequently extended after hours.

Both in the office in Boulder and in the GSA office at Annual Meetings across the country, Ginger was the face and voice of GSA. She always fielded the broad range of questions, and she did it with grace and enthusiasm. Her ability to gather diverse information, keep it sorted, and dispense it clearly has served GSA in a most distinguished way. Over the years in various administrative appointments, I have been privileged to work with a number of outstanding administrative assistants, so I do have a first-hand measure of quality in that line of work. Against that very high bar, Ginger stands out. Her total dedication to the well being of the Geological Society of America has been clear in her performance and eminently qualifies Ginger for the GSA Distinguished Service Award.

## ***Response by Ginger Williams***

I am so pleased to be awarded the GSA Distinguished Service award.

Thank you Bill Thomas and Jack Hess for this honor.

Also I would like to thank the GSA Officers, Councilors, and GSA Headquarters Staff, who made my 14 years at GSA a pleasant experience.

# 2013 MEDALS & AWARDS

## SUBARU OUTSTANDING WOMAN IN SCIENCE AWARD

Presented to  
**Whitney M. Behr**



Whitney M. Behr  
*The University of Texas at Austin*

### *Citation by John P. Platt*

With great enthusiasm, I nominate Dr Whitney Behr for a Subaru Outstanding Woman in Science Award. Dr Behr's dissertation, completed in June 2011 at the University of Southern California, had several related strands, all of which have had significant impact on the geosciences. Early in her graduate career, she carried out a study on the slip-rate of the San Andreas Fault at Biskra Palms, California, initially under the aegis of the USGS in Pasadena, where she worked as an intern before starting her PhD program. This study evolved into investigation into the epistemic uncertainties associated with such measurements, and the possible causes of discrepancies between "geologic" and geodetic estimates of slip rates. These perceived discrepancies have been the source of substantial debate among the earthquake science community, and have led to a variety of hypotheses concerning the causes of earthquake clustering, transient rheological changes within the lithosphere,

and the "storing" of seismic energy in the lithosphere over periods of tens of ky. Dr Behr's contribution was to show that the correct analysis of uncertainties associated with both the measurements of offset geomorphic features, and the dating of these features, meant that the perceived discrepancies were less than the uncertainties on the measurements. Her analysis is already leading the community to reassess many of these perceived discrepancies, and also to re-examine their methods in an attempt to reduce the uncertainties.

As the main topic of her dissertation, Dr Behr worked on the measurement of flow stress in ductilely deformed rocks from various depths in the crust, as exposed in the footwalls of core complexes in SE California and southern Spain. This approach became possible partly because of improved experimental calibration of the "paleopiezometer" used to measure flow stress from the dynamically recrystallized grain-size of quartz in mylonites, and partly because of the realization that increased strain localization with cooling during exhumation of these rocks means that all the stages in their evolution can be preserved. Her contribution was to find and recognize these stages, to quantify the stress and the temperature at which the rocks were deformed, and then to use thermal modeling of the exhumation process to work out the depth from which they came. This led to the construction of a stress/depth profile through the crust in SE California, which is now widely recognized at the first observational validation of the widely used "Christmas tree" diagrams to represent the strength of the lithosphere as a function of depth.

Another aspect of her work in southern Spain was to show that high-strain rocks, which were subducted during the collision of an exotic terrane with the southern margin of Iberia, underwent a progressive evolution in their rheology during subduction and exhumation. During subduction they were deformed primarily by pressure-solution mechanisms at relatively low temperature and low stress. As they were exhumed, they underwent transitions first into the dislocation creep regime, and then into the grain-boundary-sliding regime, as a result of changes in temperature, water activity,

and stress. Her quantification of these transitions has contributed substantially to our understanding of the mechanical properties of intracontinental subduction zones.

In all three areas, Dr Behr's work is having a significant impact on workers in these different fields of endeavor, and the recognition she is receiving is reflected both in citations of her work and in invitations to speak at international conferences.

In conclusion, Dr Behr is a true rising star, whose work has already had impact, and whose on-going research promises to continue to be of great significance. She is an ideal candidate for the Subaru Outstanding Woman in Science Award.

### *Response by Whitney M. Behr*

Thank you to GSA and Subaru for the honor of this award. I would first and foremost like to thank John Platt for nominating me and for being a wonderful Ph.D. advisor and colleague over the past several years. My thanks also go to Greg Hirth, Tom Hanks and Donna Whitney for contributing letters in support of my nomination and for being strong advocates of my dissertation research. I'm also incredibly grateful for the encouragement, intellectual stimulation and mentoring that I received during my Ph.D. from my committee members Greg Davis, Thorsten Becker, and Ken Hudnut. Although this award is based on my dissertation research, my success in graduate school came from the strong educational foundation I received as an undergraduate, first at Pasadena City College and later at California State University Northridge. I am especially grateful for the field and research experiences I had while an undergraduate, and I would particularly like to thank Jerry Lewis, Janet Gordon, Dave Douglass and Bruce Carter at Pasadena City College, as well as Doug Yule, George Dunne, Kathy Marsaglia, Vicki Pedone, and Jorge Vazquez at Cal State Northridge. Finally, last but not least, my dissertation would not have been possible if it weren't for the support I received from my friends and family along the way and I am incredibly grateful for their support as well. Again, it is a great honor to be receiving the Subaru Outstanding Woman in Science award. Thank you."

**This award sponsored by  
Subaru of America, Inc.**



# 2013 MEDALS & AWARDS

## AGI MEDAL IN MEMORY OF IAN CAMPBELL

Presented to  
**Peter A. Scholle**



Peter A. Scholle  
*Scholle Petrographic LLC*

### *Citation by Noel P. James*

Peter Scholle has had an extraordinary career that few of us can match. After graduating with his PhD from Princeton he occupied senior scientific positions within the petroleum industry, was a branch chief with the USGS, a university professor, and state geologist. Peter began his professional career as a petroleum geologist and this aspect has occupied a central part in his life ever since. He then spent almost a decade with the USGS, the latter few years as branch chief the Oil and Gas Division here in Denver. His first foray into the academic sphere was at UT Dallas followed by 14 years as Albritton Professor of Geology at Southern Methodist University. Peter has just retired after being State Geologist and Director of the New Mexico Bureau of Geology and Minerals in Socorro for 12 years.

He was extraordinarily successful in all of these endeavors largely because of his engaging personality and his vibrant intellect. Most of us know Peter as an easygoing, charming person with a quick smile and engaging repartee. Beneath this exterior, however, is a razorsharp mind whose extraordinary memory and quick imagination that have made him a world-renown scientist. He was well known to his employees as demanding and yet inspiring because of his unending enthusiasm for earth science.

Likewise all of his students speak of his caring attitude as a mentor. His leadership qualities and especially as the president of SEPM, AGI and the AASG are known to all and each of these societies has benefitted greatly from his days in the chair.

Peter's scientific accomplishments are the envy of many. He is best known for his numerous papers and presentations on the genesis and diagenesis of deep water carbonates and their attributes as hydrocarbon reservoirs. His other fields of research for which he is renown are the diagenesis and porosity development of carbonate reservoirs in general and their burial history. It is, however, the two major books that he as edited and co-written on carbonate rocks and published by AAPG that lie on the desk of just about every carbonate geologist in the world that have made him a household name in sedimentary geology. Recognition of this work and more than 250 scientific contributions has led to 20 prestigious awards.

In addition to all of this all Peter is a teacher who engages his students, undergraduate, graduate, and professional with his casual but focused delivery backed up by personal experience of his working in more than 30 countries over the years. So many of us remember with fondness his field trips to the Caribbean or the Permian Reef Complex because we just learned so much by just being with Peter. As a result it is not surprising that he has garnered so many awards amongst which are the AAPG Distinguished Lecturer, AAPG President's Award (twice), the AAPG Certificate of Merit, the Sproule Memorial Award, and the R. H. Dott Sr. Memorial Award.

Peter shifted focus somewhat in his latter years in government towards more fundamental societal issues. He has been especially active in providing specialist information to legislators and decision makers about the critical importance of geoscience in energy, mineral, and water resource issues. Who of us could have had a better spokesperson?

I cannot think of anyone who is more deserving of this award and a person who exemplifies the very qualities that everyone admired in Ian Campbell.

### *Response by Peter A. Scholle*

I thank Noel James for his kind and generous citation and the AGI, AASG and GSA for this wonderful award. It is humbling to stand here and receive a medal named after a person as distinguished, prolific and

beloved as Ian Campbell and equally difficult to stand here in comparison to the many prior recipients. Nonetheless, I accept the medal gratefully.

There are simply too many people to thank in the time allotted, but I cannot go without thanking my early mentors, John Rodgers and John Sanders at Yale, Robert Folk at UT Austin, Al Fischer and Robin Bathurst at Princeton, my many carbonate collaborators and friends, especially James Lee Wilson and of course Noel James. In addition there were so many wonderful colleagues at the U.S.G.S., the New Mexico Bureau of Geology and the Association of American State Geologists — friends who taught me so much as I journeyed through geology and geopolitics. My career also included contacts with 22 prior Campbell medal recipients but, alas not Ian Campbell himself. Each of the many people I interacted with in my numerous jobs and organizations deflected my career, molded my outlooks on geology and life, and helped guide me through a world of innumerable competing pathways. And more than anyone, I must thank my geologist wife, Dana Ulmer-Scholle, who has been my inseparable companion, my inspiration, and my soul mate over the last 21 years — even more beloved to me than my Labrador retrievers!!!

I would like to say that the “service” for which this medal is largely awarded was never a sacrifice or a burden, but was a chance to give something back to a profession that has given me so much. I think the “service” that I enjoyed the most was working, as a state geologist, to educate both the public and state and federal legislators about current societally important earth science issues. We took participants on field trips and provided them with non-technical explanations about issues as diverse as energy supplies, climate change, water resources limitations, and geologic hazard prediction and mitigation. As a profession, we need to do more such outreach education.

Finally, I am happy to say that I meet the most absolute criterion for receiving this medal — “The recipient must be living at the time of selection”. I am glad to be alive, delighted to be a geologist, and overjoyed and grateful to receive this award.