



**Sedimentary  
Geology  
Division**

**GEOLOGICAL SOCIETY OF AMERICA**

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**MESSAGE FROM THE CHAIR**

**Chris Paola, Sedimentary Geology Division Chair**

**St. Anthony Falls Laboratory, University of Minnesota, Minneapolis**

The Sedimentary Geology Division (SGD) is in good shape overall. Membership in the Sedimentary Geology Division increased from 889 to 975. Our financial state is stable. At the 2005 Annual Meeting in Salt Lake City, we sponsored or co-sponsored 14 sessions (including a Pardee Symposium on the South Asian Tsunami). We also sponsored or co-sponsored seven field trips in conjunction with the Salt Lake City meeting. Our evening reception was well attended; the highlight was presentation of this year's Laurence L. Sloss Award to Professor Teresa E. Jordan of Cornell University.

That's the good news. Less good is the situation with regard to federal funding for research in sedimentary geology. The accompanying article by Rich Lane, Program Director for SGP, and his colleague Paul Filmer, gives more details about the current situation and hopes for future improvement. My main point here is that this should be an issue for the entire community, not just academics who depend directly on NSF funding. For people at non-research institutions, the current funding situation directly affects the number and quality of graduate and postdoc opportunities that will be available to your undergrads. For people in industry, the health of NSF academic support directly affects the number and quality of students with advanced degrees who will be available to replace retiring staff and bring new ideas into your workforce. All of us should be thinking about what this means for the future of sedimentary geology as a thriving research area.

It is crucial that we work with each other and with our extremely capable but hard-pressed program officers at NSF, especially Rich Lane. Rich is doing his best to raise the profile of the SGP program and community, but he can't do this by himself. The ForSed ongoing forums on the future of sedimentary geology are one way you can help our community (see accompanying article by John Holbrook and me on these). What else? We should be thinking about large-scale research initiatives that would represent exciting science, address societal needs, and draw

*(please see Message from the Chair, p2)*

**MESSAGE FROM THE CHAIR** continued

widely from our community. We should also be thinking about how we can improve the synergy between basic research and applications in sedimentary geology: this includes not only the oil industry (in what other field of science is so much of the critical data in private hands?), but also groundwater and new application areas like stream restoration, hazards, and carbon sequestration. Apart from ForSed, you can use this newsletter to provide feedback and ideas; please send your thoughts to me at the e-mail address, postal address, or phone number below, and we'll compile them for the next (Fall) SGD Newsletter.

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**NEWS FROM NSF**

**Rich Lane and Paul Filmer**

The recent reorganization of EAR into Surface- and Deep- Earth Processes sections and the establishment of three programs for Geology and Paleontology (GE) where there formerly was one is a real boost to our area of the solid Earth geosciences. We now have three and a half program officers where 6 years ago we had one. This reorganization and staffing increase allows us to focus deeper into major core science areas of Geomorphology, Sedimentology, Low Temperature Geochemistry, Geobiology, Geochronology, Sedimentary Geology, and Paleontology. Prior to this, we were forced to spread our efforts and limited resources over a large sector of the solid Earth Sciences. NSF's financial future looks hopeful because Congress and the White House are talking about a respectable increase in the NSF budget next year, which hopefully will translate to increases in the Sedimentary Geology and Paleobiology (SGP) Program, as well our other programs in the Surface Earth Processes Section. We expect to be brought up to the approximate 10 million+ funding level of other longer-lived programs in EAR, but that will be over a period of years and only as the budget allows. The net effect will be to triple the old GE budget and also the respective three new programs. We have also been contributing 4+ million, SGP, global change dollars to the Earth Systems History (ESH) Program over the last 7-8 years. For fiscal year 2007, final decisions on how those 4.1 million dollars are spent on paleoclimate related research will be decided within the SGP review process. Paleoclimate-related proposals are to be submitted to SGP at the time of the two deadlines of July 16, 2006 and January 16, 2007. We encourage you to take advantage of this opportunity. Please note that the first deadline is rapidly approaching.

All of you are familiar with the rather low success rates we have experienced the last 2-3 years. In the first five years of this century, SGP success rates progressively slipped from 28% in 2000 to 14 % in 2005. This year there was a 16% success rate for the fall competition, and the spring competition is still to be decided, but with the monetary resources available, it is clear that success rates will not increase. During this same span of time (2000 to 2005) our annual proposal load increased from 137 proposals in 2000 to 242 proposals in 2005. During this same period, the budget increased less than a million dollars from 4.2 million to 5.1 million dollars. It doesn't take too much math to figure out that our budget has not kept up with our proposal load. The same low success rates have occurred in our other new SEP programs (GG and GLD), so the problem is not limited to SGP. With hopefully favorable NSF congressional appropriations on the horizon, we hope that a good portion of the increase makes it to the individual program level.

*(please see NSF News, p3)*

**NSF NEWS** continued

On other matters, Hermann Zimmerman, EAR Division Director since 2000, recently retired, and Art Goldstein was appointed Acting Director. Currently, a replacement search for Zimmie is underway. Mike Mayhew will also be retiring soon from the Education and Human Resources Program, and a permanent Program Officer will be hired to handle half time educational matters and half time devoted to one of the Surface Earth Processes Section programs. Please see <http://www.nsf.gov/pubs/2006/e20060074/e20060074a.txt> for more information. We encourage you to apply and assist us in managing SGP!

**FORSED: FORUM ON THE FUTURE OF SEDIMENTARY GEOLOGY****John Holbrook and Chris Paola**

The Forum on the Future of Sedimentary Geology (ForSed) offers an ongoing venue for developing and articulating a broad compelling research agenda for sedimentary geology. ForSed evolved from discussions sponsored by NCED (National Center for Earth Surface Dynamics) and the National Science Foundation (NSF), motivated by a sense that sedimentary geology has not fared well recently in terms of overall federal support relative to other areas of Earth science. Given a future in which funding is tight and the role of sediment-related resources like oil and gas is uncertain, it is critical that we think hard about where our field is headed and what it can offer the scientific community and general public. Everyone in the sedimentary research community is encouraged to participate.

ForSed has thus far met twice at GSA and once at AAPG for one-day sessions. Each generated lively debate. Views and consensus gained from these meetings are summarized in a white paper available at [http://www.nced.umn.edu/Sedimentology\\_Stratigraphy\\_Initiative.html](http://www.nced.umn.edu/Sedimentology_Stratigraphy_Initiative.html), the NCED website. In addition, ForSed has spawned a smaller working group on Environmental Stratigraphy, which recently met through the sponsorship of NCED to discuss the role of sedimentology and stratigraphy in environmental management. Notes and results of this meeting are also available at the NCED website. New ideas are constantly emerging from this forum. We would like to draw particular attention to two upcoming events initiated from discussions at prior ForSed meetings. These are the upcoming "Seds and Suds" meeting at the 2006 GSA Annual Meeting in Philadelphia and a planned initiative to use the stratigraphic record in support of wetland restoration in the Mississippi Delta.

Mark your calendars for "Seds and Suds" Saturday evening approximately 6-8 pm before GSA in Philadelphia. This will be an open town hall discussion for anyone and everyone in the sedimentary research community. This is your opportunity to contribute to developing an agenda for sedimentary research and to discuss new research ideas of your own with your colleagues. Discussion will be informal and will come with a cool libation. We will take this time to catch everyone up on new and ongoing developments at NSF and other funding agencies, but the floor will be open to all researchers who have items they would like to share, and there will be time for open discussion. Consider this the official meeting ice-breaker for the sedimentary crew with a beer and a side order of friendly banter. The agenda is still developing. If you would like to take this opportunity to discuss an ongoing research initiative or a new idea with your colleagues, we invite and encourage you to step up to the podium. Please contact us. We are currently soliciting speakers and topics, and would be happy to give you some air time during the event to share your views. Look for a more complete list of topics as the GSA Annual Meeting approaches.

*(please see NSF News, p4)*

**FORSED** continued

Much of the discussion at the Environmental Stratigraphy workshop in October of 2005 centered about the idea that sedimentology and stratigraphy had much to offer regarding the sustainable management of natural systems. Knowledge of the parameters within which depositional systems operated gained from the recent stratigraphic record can be used to predict/mitigate natural hazards, more efficiently restore habitat, and prevent environmental destruction through poor planning. Everyone agreed that the key to giving traction to this argument is more demonstration projects which successfully prove this utility of stratigraphic techniques for environmental applications. In light of this, the members of the workshop have initiated an effort to set up a major demonstration project, which would use the stratigraphic record to evaluate the rates and processes by which the pre-modification Mississippi Delta maintained its fluvial system and wetlands against the destructive forces of subsidence and coastal processes. This project will use modern sedimentary and stratigraphic techniques to probe the recent record of the Mississippi Delta in detail to gain insights into rates, materials, and growth vectors of natural delta self-maintenance processes. This work would be done in close conjunction with parallel engineering work on delta restoration. An initial presentation will be made to NSF at the Arlington headquarters this coming June.

For more information about ForSed and its activities, feel free to contact either John Holbrook [holbrook@uta.edu](mailto:holbrook@uta.edu), or Chris Paola [cpaola@umn.edu](mailto:cpaola@umn.edu). ForSed is sponsored by SEPM (Society for Sedimentary Geology), NCED, Sedimentary Geology Division of GSA, and NSF.

**OKLAHOMA GEOLOGICAL SURVEY**

*Proposed Workshops, Meetings, Conferences and Field Trips, 2006-2007*

Submitted by Neil H. Suneson, Oklahoma Geological Survey

Information on the following events is also available at <http://www.ogs.ou.edu/>.

**30<sup>th</sup> Annual Forum of Coal Geologists, Western Interior Coal Basin**

**June 5-7, 2006**, Poteau, Oklahoma

Contact: Brian Cardott, (405) 325-3031, (800) 330-3996, E-mail: [bcardott@ou.edu](mailto:bcardott@ou.edu)

**Caney Play Workshop**

**July 26 or August 2 or August 3, 2006**, Moore Norman Technology Center, Norman, OK

*Sponsored by Oklahoma Geological Survey and the Petroleum Technology Transfer Council*

Contact: Michelle Summers, (405) 325-3031, (800) 330-3996, E-mail: [mjsummers@ou.edu](mailto:mjsummers@ou.edu)

**Booch Gas Play Workshop**

**November 1, 2006**, Moore Norman Technology Center, Norman, Oklahoma

Field trip: McAlester, Oklahoma (see following entry)

*Sponsored by Oklahoma Geological Survey and the Petroleum Technology Transfer Council*

Contact: Michelle Summers, (405) 325-3031, (800) 330-3996, E-mail: [mjsummers@ou.edu](mailto:mjsummers@ou.edu)

**Booch Gas Play Fieldtrip**

**November 8-9, 2006**, McAlester, Oklahoma

*Sponsored by Oklahoma Geological Survey and the Petroleum Technology Transfer Council*

Contact: Michelle Summers, (405) 325-3031, (800) 330-3996, E-mail: [mjsummers@ou.edu](mailto:mjsummers@ou.edu)

## **BOOK REVIEW: *A CRACK IN THE EDGE OF THE WORLD***

**Reviewed by M. Dane Picard**

Author: Simon Winchester. Publisher: Harper Collins. 462 pages.

Subtitled “America and the Great California Earthquake of 1906,” this is Simon Winchester’s most recent offering on a geological subject. It follows *The Map That Changed the World* (2001) and *Krakatoa* (2003), known as Krakatau by volcanologists. The 100<sup>th</sup> anniversary of the catastrophic earthquake in northern California—5:12 A.M. Pacific Time on Wednesday, 18 April 1906—has set pens to paper and computers cracking. Among the interesting writing is Winchester’s book and *The Great Earthquake of 1906* by the journalist Philip L. Fradkin, the third book in his trilogy on earthquakes.

Winchester is no minimalist: If you want lean and taut, read Joan Didion’s painful exploration into death and illness, *The Year of Magical Thinking*. “Crack” meanders, beginning with a long ago trip to Wapakoneta in western Ohio, birthplace of the astronaut Neil Armstrong. Winchester uses Armstrong and a connecting paragraph by the essayist and physician Lewis Thomas, to bridge a foray into the Gaia hypothesis. There he pauses briefly. From Gaia, Winchester skitters on into the “New Geology,” which is where he must be when he finally arrives at the great quake.

What Winchester disdains is the hard slog of historical research. Too frequently this book resembles a *mélange* of Geology 101, old and new travels of Winchester, and literary sketches of the famous and the unknown, splinters and blocks weakly cemented by the earthquake. Though operatic, his account of the earthquake is adequate, though in places the geology is shaky. The offset, about 20 feet, along the San Andreas fault was principally horizontal, a long rupture of about 267 miles. The west side moved northwest relative to the east side; damage on the west side was greater. Vertical displacement was less than 3 feet.

We meet the terrified Enrico Caruso, who claims, “the quake was a punishment sent to him directly...announcing that his voice had been irreparably damaged.” The foremost American geologist, G.K. Gilbert, who was sleeping at the Faculty Club at the University of California, said, “the dominant factor was a swaying in the north-south direction, which caused me to roll slightly as I lay with my head toward the east.” Gilbert’s later extensive study, though descriptive and interpretative, was the best account.

Firestorms raged; there was little or no water. Water pipes and lines broke, chimneys crashed, gas and oil lines ruptured, iron safes failed, paper money burst into flames, 30 million gallons of premium wine were lost, and, thrown to the ground, the superb photographer Ansel Adams, four years old, broke his nose.

We will never know how many people died—more than 1,500 and probably less than 5,000. Thousands suffered from injuries and post-traumatic stress disorder. A total of 28,188 structures burned, about nine-tenths of them wooden. There are many ways to estimate the value of property destroyed—Winchester gives amounts ranging from \$8 billion to \$195 billion—but such calculations are difficult to make. Reliable cost estimates, for example, are yet to come out of the Katrina disaster.

For geologists and many others, Winchester’s rambling account may become hypnotic. He is enthusiastic, he has a following. I learned that ‘nullah’ is another word for gully, but I won’t be springing it on my Bridger Creek relatives and friends.

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