

**Sedimentary  
Geology  
Division**

**GEOLOGICAL SOCIETY OF AMERICA**

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**MESSAGE FROM THE CHAIR**

The vitality and energy of the Sedimentary Geology Division are determined by the enthusiastic participation and creativity of its members. I am delighted to report that membership in the Division, the fourth largest of GSA's 12 (soon to be 13) divisions, reached 908 members in 2000. This is an increase in membership of 97 over 1999! Clearly, our numbers are growing, a sure sign of vitality and energy.

My personal experience in the Division indicates enormous commitment and energetic involvement by the individuals who do most for the Division, members of the Management Board and other committee members. In my three years on the Board as Second Vice-Chair, First Vice-Chair and now Chair, I have been greatly impressed with the work of my predecessors and present Board members. I want to personally thank Past-Past-Past Chair Greg Mack, Past-Past Chair Mark Johnsson and Past Chair Chris Fedo for making my job so much easier by steering the Division through important changes in our mode of operation. Greg oversaw the change in succession of our officers (I am the first officer to automatically serve a four-year term). Mark oversaw implementation of the Sloss Award. Chris kept the Division moving in the right direction, in spite of chaos at Headquarters that threatened to push us off course. These are just a few of the accomplishments of my predecessors, whom I thank for their help and guidance. Continuing members of the Management Board include First Vice-Chair Steve Driese and

**MESSAGE, continued**

Secretary-Treasurer Paul Link. They have both helped me greatly and assured that essential tasks are accomplished. New to the Management Board is our Second Vice-Chair Doug Burbank, although he has already been a regular participant in Division business in his capacity as Liaison from GSA Council. Our new GSA Council Liaison is Noel James. Becky Dorsey serves the Division faithfully as our Webmaster, and Mariana Rhoades edits the Newsletter. Carol de Wet is retiring as our Representative on the Joint Technical Program Committee (see her article in this Newsletter). Maya Elrick now has joined Mike Pope as our Representatives on JTPC, with a third member to be named (any volunteers?) Mark Johnsson, Maya Elrick and Ken Ridgway form our Nominations Committee. What a wonderful group of Sedimentary Geologists! Thank you, both personally and on behalf of the membership!

I want to give a special thanks to Bob Dott (Chair) and other past members of the Sloss Award Committee, including Gerry Friedman, Gerry Middleton and Rudy Slingerland. Present members include Terry Jordan (Chair), Bill Dickinson, George Klein, Claudia Mora, Bill Normark and Fred Read. All of these committee members have served the Division well in establishing and implementing the Sloss Award. Please help assure that the worthiest candidates are considered by sending your nominations to our Secretary-Treasurer Paul Link.

The most important development for the Division last year and continuing this year is the merging of interests and activities of the Division with GSA's newest Affiliated Society, SEPM. SEPM President Arnold Bouma and President-Elect Dag Nummedal have attended our Management Board meetings and have participated in several informal exchanges. The Division and SEPM have agreed to invite each other's officers to attend their governing board meetings, and to encourage cooperation wherever possible. The most obvious modes of cooperation are co-sponsorship of sessions, short courses and field trips at meetings, and encouragement of members (especially students) to join the other society. A large percentage of Division members are already SEPM members, so cooperation is a win-win situation. As our interests merge, more formal agreements may result. For now, I am encouraged by the completely open and constructive first steps we have taken to forge new ties with our colleagues in SEPM, especially since, for the most part, they are we!

I also recommend forging ties at the local level. For instance, the first joint meeting of the Cordilleran Section of GSA with the Pacific Sections of AAPG and SEPM will occur in April in Universal City, California (a ten-minute drive from my house!) Members of the Division are the natural constituents of such joint ventures, which might revitalize some Sectional meetings.

I encourage you all to consider attending the first joint meeting of GSA and the Geological Society of London this summer. The meeting is full of topics of interest to sedimentary geologists. The ad in this Newsletter indicates how to find additional information. Several other interesting events are highlighted below. I also encourage you to read Chris Fedo's summary of events at Reno. We hope to see most of you in Boston at our Business Meeting and Awards Ceremony.

**MESSAGE, continued**

If you have read this far, then you must be a dedicated Member of the Division! Therefore, you should respond positively to the following request. During the next month, before you forget, do three things: 1) Contribute something to the next Newsletter (contact Mariana Rhoades), 2) Recruit new members to the Division, especially students, who can join for a reduced fee, and 3) Send me information about sedimentary software (e.g., subsidence analysis, paleocurrents, triangular plots), whether free or commercial. If enough people respond to the last item, I will compile a list of everything submitted and publish it in the next Newsletter. I have found that useful software is everywhere but not necessarily where it is easy to find. A regular listing of available software should be quite useful to members.

That's all for now. Please feel free to contact any of the officers, including me. Active participation by all of you will assure a vital and energetic Division.

Ray Ingersoll, Chair, Sedimentary Geology Division  
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**ANNOUNCEMENTS****STRATIGRAPHY AND TECTONIC EVOLUTION OF THE ALBUQUERQUE BASIN,  
CENTRAL RIO GRANDE RIFT, NEW MEXICO: FIELD EXCURSION.  
APRIL 27-29, 2001, PRIOR TO GSA ROCKY MOUNTAIN/SOUTH-CENTRAL JOINT  
SECTION MEETING**

Deposits of the Santa Fe Group record the development of the Albuquerque basin and central Rio Grande during late Oligocene through early Pleistocene time. Nearly 60% of the basin has been recently mapped in detail, and numerous dates have been obtained from basin-fill strata as part of ongoing multi-agency and interdisciplinary studies. This three-day trip presents an overview of some of this recent work. Participants will examine a variety of rift-related sediments, including those associated with an initial, internally drained phase of basin development, and the later externally drained phase. We will visit newly described, biostratigraphically and radioisotopically dated, stratigraphic sections where we will discuss basinwide sediment dispersal patterns, the development of the ancestral Rio Grande axial-fluvial system during late Miocene and early Pliocene time, basinward migration of some rift-border structures, and the subsequent incision of the basin fill and development of the Rio Grande valley.

This excursion will take place on April 27, 28, and 29<sup>th</sup>, prior to the joint Rocky Mountain/South-Central Section meeting of the Geological Society of America in Albuquerque, New Mexico.

**STRATIGRAPHY, continued**

Trip leaders are Sean D. Connell, David W. Love, and Spencer Lucas. Some stops will involve hikes over rugged terrain (up to 3 km). The field trip is limited to 24 people. The estimated cost is \$70 and includes transportation to and from the Sheraton Old Town Hotel (site of GSA meeting) near downtown Albuquerque, and lunches.

**Please contact Sean Connell** (New Mexico Bureau of Mines and Mineral Resources-Albuquerque Office, 2808 Central Ave. SE, Albuquerque, NM 87106) at (505) 366-2534, fax: (505) 366-2559, email: [connell@gis.nmt.edu](mailto:connell@gis.nmt.edu) for additional information. Registration forms are available in the March issue of *GSA Today*. Additional information can also be obtained through the GSA web site at: <http://rock.geosociety.org/sectdiv/rockymtn/01rm-scmtg.htm>.

**INTERNATIONAL WORKSHOP: MULTIDISCIPLINARY APPROACH TO CYCLOSTRATIGRAPHY  
SATURDAY, MAY 26TH – MONDAY, MAY 28TH, 2001, SORRENTO  
(NAPLES, ITALY)**

Orbital cyclostratigraphy is accepted as a powerful correlation tool in Neogene palaeoceanography. Pre-Neogene sedimentary successions in pelagic and shallow marine settings also preserve a distinct record of hierarchically organized sedimentary cycles and seem to witness orbitally induced changes in paleoenvironments. Moreover, new data indicate that, based on pre-Neogene cyclostratigraphy, often orbital chronostratigraphy can be obtained and that detailed cyclostratigraphic analysis of shallow and deep water successions will provide the chance to establish deep water-shallow water correlation at a thousands of years resolution in Cenozoic and Mesozoic stratal sequences.

Problems that should be discussed in this spirit include, among many others, styles of cyclicity, chronostratigraphy of pre-Neogene time intervals, obliquity versus precession-eccentricity syndrome, cycles of detrital fluxes versus organogenic strata, greenhouse-icehouse eustatic range and importance of changes in the gross palaeogeography (and related ocean-atmosphere circulation) in controlling the fine tuning of the cyclic signals (sediments, biota, water chemistry).

Some of the classical sites of pioneer studies in pelagic sequences are located in Italy (Cretaceous and late Tertiary) as well as more recently studied shallow water Cretaceous carbonates that can be visited during the meeting. Thus, Sorrento, a beautiful, world-renowned town with the surrounding Mesozoic Mountains rising directly from the sea, appears the perfect arena for a lively discussion between believers and a few devil's advocates.

**Conveners**

[Bruno D'Argenio](#) Naples  
[Isabella Premoli Silva](#) Milan

[Alfred G. Fischer](#) Los Angeles  
[Helmut Weissert](#) Zurich

**SEPM DIAMOND JUBILEE SYMPOSIUM  
SEDIMENTARY SYSTEMS IN TIME AND SPACE - NEW HORIZONS  
SATURDAY, JUNE 2, AND SUNDAY MORNING, JUNE 3, 2001**

SEPM is celebrating its 75th (Diamond) Anniversary with a special 1-1/2 day symposium titled "Sedimentary Systems in Time and Space - New Horizons." This symposium is being held on June 2 (Saturday) and 3 (Sunday morning). The purposes of the symposium are to illustrate the new, exciting directions of sedimentary geology, to build bridges between people in related fields to enhance creativity at interdisciplinary interfaces, and to attract bright and young minds into the exciting world of 21st Century sedimentary geology. The symposium consists of 17 invited talks by some of the outstanding professionals in broad fields of sedimentary geology. Interaction with the audience will be facilitated by five panel discussions designed to broaden and explore the topics discussed by the speakers. Lectures will be accompanied by state-of-the-art projection equipment for visualization. A special celebratory dinner will be held on Saturday evening (June 2). Students from across the world are especially encouraged to attend and make themselves seen and heard.

Program committee: Paul Weimer (University of Colorado), Dag Nummedal (University of Wyoming), Susan Kidwell (University of Chicago), Lisa Pratt (Indiana University), Lee Krystinik (Krystinik Litho-logic), and Randi Martinsen (University of Wyoming).

**Expanded abstracts are listed at: [www.sepm.org/meetings/75thanniversary.html](http://www.sepm.org/meetings/75thanniversary.html)**

**Paul Weimer** - Energy and Minerals Applied Research Center  
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**Geological Society of America and Geological Society of London present  
Earth System Processes**

June 24-28, 2001

Edinburgh International Conference Centre

*Final Pre-conference Registration Deadline: April 30, 2001*



An innovative gathering of geoscientists, anthropologists, astrobiologists, botanists, climate modelers, hydrologists, ecologists, oceanographers, chemists, physicists, and other scientists will explore:

- Relationships among the solid Earth and its hydrosphere, atmosphere, cryosphere, and biosphere.
- Earth system evolution and how processes controlling the nature of our planet have changed since the birth of the solar system.

For information and registration, see  
[www.geosociety.org](http://www.geosociety.org) or [www.geolsoc.org.uk](http://www.geolsoc.org.uk)

Partial funding provided by The NASA Astrobiology Institute

**"FLUVIAL SEDIMENTOLOGY 2001"**

The 7th International Conference on Fluvial Sedimentology will be held on August 6-10, 2001 at the University of Nebraska-Lincoln. Registration and abstract submission from March 1-May 31, 2001. **Contact Mike Blum or see the conference web page at <http://www.unl.edu/geology/ICFS.html> for more information.**

**Mike Blum**

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<http://www.unl.edu/geology/mdb.html>

**TOPICAL SESSION AT GSA MEETING 2001****THE MARGINS OF REEFS AND CARBONATE PLATFORMS**

Contributions are solicited for this topical session during the November GSA Meetings in Boston. The aim is to present clashing ideas about fundamental problems of reef and platform margins. Possible topics include: 1] time correlations across margins; 2] facies changes; 3] margin formation by aggradation or progradation vs. antecedent topography; 4] fluctuations in sea level vs. tectonics; 5] process of margin truncation. Both oral and poster presentations are welcome. Abstracts are due at GSA by July 17 [paper] or July 24 [electronic], but early submission is encouraged.

Organizers of the session are:

**Robert N. Ginsburg**

Rosenstiel School of Marine/Atmospheric Science  
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Miami, Florida 33149  
Telephone: (305) 361-4875  
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[jwinterer@ucsd.edu](mailto:jwinterer@ucsd.edu)

**AMERICAN CHEMICAL SOCIETY PETROLEUM RESEARCH FUND**

The American Chemical Society Petroleum Research Fund welcomes geoscience research proposals from academic institutions. The grants are for fundamental research that need not be directly connected to petroleum but rather may provide a basis for subsequent research connected with the broad petroleum field. Funded subject areas have included stratigraphy, sedimentology, paleontology, hydrogeology, geomorphology, structural geology, tectonics, geophysics, geochemistry [organic and inorganic]. In recent years, success rates have been 30-40%. For examples of recently funded projects, [www.acs.org/prf](http://www.acs.org/prf)

For further information contact: **Tom Blackburn**    [t\\_blackburn@acs.org](mailto:t_blackburn@acs.org)

**SEDIMENTARY PROCESSES: MOVIES/VIDEOS/CD-ROM**

I now have available on my web site copies of movies showing, primarily, sedimentary processes in action. These are Quicktime movies showing mostly experimental flume runs of such features as turbidity currents, climbing ripples, wave ripples, stream braiding, shoreline migration, and types of debris flows that I have culled from various sources. (Also, I created some crystal growth movies.) These, and other movies, are being transferred to CD-ROM format and will be available, free of charge, for educational uses.

I am making several hundred copies of the CD that should go, primarily, to people teaching classes where such movies would be of use. I plan to start distributing the disks within a month or so, but if anyone would like to receive one (as long as supplies last), they should e-mail me.

The site can be gotten to through my home page <http://faculty.gg.uwyo.edu/heller/> and they can e-mail me at [heller@uwyo.edu](mailto:heller@uwyo.edu)  
(It probably would be best to put "Video" in subject heading).

Note: in order to make copies of the videos, you need to either 1) click the arrow on the right end of the control bar beneath the video and click on 'save' as a Quicktime movie; or, 2) simply drag the video (once loaded) onto your desk top (this will certainly work for Macs). When using a PC, you can view the video in your Web Browser, Internet Explorer (Version 4 or higher is recommended) or Netscape (Version 4 or higher is recommended).

**Paul Heller** heller@uwyo.edu

**CALL FOR COMMENTS****THE NATIONAL SCIENCE FOUNDATION**

The National Science Foundation (NSF) is seeking comments on its Earth System History (ESH) Program. Research in ESH is an initiative of the U.S. Global Change Research Program coordinated by NSF and funded by contributions from the Divisions of Atmospheric Sciences, Earth Sciences, Ocean Sciences, and the Office of Polar Program at NSF as well as the Office of Global Programs at the National Oceanic and Atmospheric Administration (NOAA).

Over the years, ESH has served a growing community of researchers engaged in an energetic and evolving research effort with the goal of understanding natural variability in the Earth's system beyond the instrumental record and across geologic time, especially in terms of climate-related processes.

To achieve these goals, ESH emphasizes interdisciplinary and coupled research to understand the mechanisms, processes, and linkages between critical elements of the atmosphere, biosphere, cryosphere, hydrosphere, and terrestrial systems. Accordingly, the ESH program supports research in quantification and development of biotic, physical, and geochemical proxy indicators,

**NSF, continued**

geochronological techniques, and statistical analysis relevant to ESH goals. Furthermore, scientific questions in ESH are organized within six broadly defined Areas of Special Interest that include: 1) Paleoclimate Variability at Annual-Decadal Resolution; 2) Rapid Climate Change; 3) Extreme Warm Conditions; 4) Spatial Patterns and Continuous Records of Climate Change; 5) Arctic Paleoclimate Studies; and, 6) Modeling of Past Climate Change. The current ESH Program announcement can be viewed on the NSF web site at <http://www.nsf.gov/pubs/2000/nsf0011/nsf0011.html>.

Given the scientific community's interest in ESH, as evidenced by the growing number of research proposal submissions, it seems timely to consider the question; "Are the current ESH Areas of Special Interest relevant to emerging scientific research directions?" In an effort to ensure that ESH reflects the state-of-the-art in science and addresses important scientific questions, your thoughts on the future intellectual focus of ESH research are requested. It would be most effective if you offered your evaluation of the current Areas of Special Interests and what scientific questions ESH might pursue in the future.

Please submit your comments by electronic mail to Jennifer Giesler ([jgiesler@agu.org](mailto:jgiesler@agu.org)) in the ESH Secretariat at the American Geophysical Union by June 30, 2001. All verbatim comments will be collated, with full attribution, and presented to the ESH Steering Committee. The ESH Steering Committee will then analyze the comments and provide NSF with recommendations based on community input. We thank you in advance for your help in shaping the future of scientific research in ESH.

**David J. Verardo**, NSF Director of Paleoclimate  
Richard Poore, NSF Director of Marine Geology & Geophysics  
H. Richard Lane, NSF Program Director, Geology and Paleontology  
Lisa J. Graumlich, Chair of the ESH Steering Committee

**CALL FOR COMMENTS****A COMMUNITY SEDIMENTARY MODEL FOR PREDICTIVE SEDIMENTARY BASIN DYNAMICS**

We are promoting a community effort to build our equivalent of the community climate model. The following is a bare-bones vision statement about this proposed model. We encourage the community to lend their support by sending their comments, questions and proposed additions to the following statement.

**Description and motivation** We propose the development of a modular, web-based Community Sedimentary Model (CSM) able to predict the transport of sediment to sedimentary basins and its accumulation at time scales of tens to hundreds of thousands of years. The CSM Model, like the Community Climate Model (CCM) or the Princeton Ocean Model (POM), would be based on algorithms which mathematically describe the processes and conditions relevant to sediment transport and deposition and would incorporate all the important input and boundary

**COMMUNITY, continued**

conditions that define a sedimentary system. The effort, coordinated and funded by NSF, other government agencies, and industry, would be a coherent, cooperative effort by sedimentary modelers to determine the optimum algorithms, input parameters, feedback loops, and observation at the relevant scales necessary to better predict sedimentary processes and ultimately to better provide an understanding of the earth system when the earth was abiotic, hotter or colder, when there was no flocculation, when the moon was closer, or when the oceans were more saline. The model would be valuable to those working on modern environmental application, future global warming scenarios, natural disaster mitigation efforts, natural hazards efforts, reservoir characterization, oil exploration, and national security. In fact, it could be argued that the new EOS global databases and the large scale 3-D geophysical datasets to be collected by the MARGINS and Earthscope initiatives can only realize their full potential in collaboration with a community sediment model.

**COMMENTS TO:**

**James P. M. Syvitski**, Institute of Arctic and Alpine Research, University of Colorado  
1560 30<sup>th</sup> Street, Boulder, Colorado 80309-0450

**Rudy Slingerland**, Department of Geosciences, The Pennsylvania State University  
University Park, Pennsylvania 16802

**Chris Paola**, Department of Geology and Geophysics, University of Minnesota,  
Minneapolis/St. Paul, Minnesota, 55455

**GSA SYMPOSIUM****GSA SEDIMENTARY DIVISION-SPONSORED SESSION ON  
SEDIMENTARY EXTREMES**

A Pardee Symposium entitled "Sedimentary Extremes: Modern and Ancient" was presented at the 2000 GSA Annual Meeting in Reno, Nevada. This session, co-hosted by Marjorie Chan of the University of Utah and Allen Archer of Kansas State University, was an attempt to broaden the perspectives regarding the size and extent of depositional systems. The talks presented during the symposium concerned large-scale systems and included a variety of modern analogs and ancient counterparts. The opening remarks, presented by Chan, provided an overview of what constitutes large-scale depositional systems. Archer followed up with a discussion of some Carboniferous sandstone units of the eastern U.S. and their comparison, in terms of scale, to sedimentation within the Amazon River system.

The initial part of the symposium focused on continental depositional systems. Paul Hoffman described some of the most extreme climates that have ever existed; these resulted in Proterozoic ice-albedo catastrophes. This was followed by Gary Kocurek's presentation on the theoretical limits of eolian systems, primarily from the perspective of dune formation. Dan Muhs discussed occurrences of loess and the paleoclimatic significance of such deposits. Scaling and theoretical limits on lake systems were discussed by Kevin Bohacs and examples of particularly large lakes, which are the Permian megalakes of China, were presented by Alan Carroll. The terrestrial aspects concluded with a discussion, presented by Michael Blum, on the geologic and climatic controls on Cenozoic big rivers.

**SEDIMENTARY, continued**

For clastic marine systems, Dag Nummedal presented aspects of the Pliocene paleo-Volga delta and the response of this large-scale system to climatic cycles. Charles Nittrouer provided an overview of the work that has been performed on the Amazon subaqueous delta and related large-scale depositional systems. Ray Ingersoll then described aspects of the largest sedimentary systems on Earth, which are marine turbidite fans.

The third part discussed carbonate and chemical-deposition systems. Here, Paul Copper discussed the megareefs that were formed during the Siluro-Devonian super greenhouse period. This was followed by an overview of chalks given by Peter Scholle. Examples from the saline giants as sedimentary extremes were presented by Rick Sarg. Bruce Simonson described the unique large-scale iron formations and related their formation to balancing the budget with supply-side economics. To conclude the symposium, Marty Perlmutter discussed extremes in climate and the response of the global depositional system.

Nearly all of the authors have committed to a GSA Special Publication on large-scale and extreme depositional systems. Additional papers are being solicited on topics that include: huge glacial meltwaters, giant alluvial fans, the theoretical limits of fluvial systems, immense supracontinental Cambro-Ordovician sandstone bodies, large modern and ancient deltas, large-scale estuarine systems, super shelf-sand bodies, and giant submarine canyons and their deposits. Persons who might be interested in providing a manuscript on these or other related topics should **contact Chan (machan@mines.utah.edu) or Archer (aarcher@ksu.edu).**

**GSA ANNUAL MEETING 2000 REPORT**

The Annual Meeting in Reno was an exciting time for the Sedimentary Geology Division. Aside from the diverse sampling of standard and topical sessions that covered the spectrum from sequence stratigraphy, to carbonate depositional systems and associated microbialites, to appreciating the importance of pre-Cenozoic eolian silt, the Division sponsored a very dynamic Pardee Symposium on modern and ancient sedimentary extremes. Our thanks to Marjorie Chan for successfully guiding the symposium proposal through the competitive process. Again, I would like to stress that Division presence for sponsorship of topical sessions, short courses, and field trips relies on active participation of the Division members working with the Management Board. Do not hesitate to contact Board members with ideas and suggestions for continuing to increase our presence at the annual meeting.

In 1999, it was announced that SEPM had joined with GSA as an Associated Society. During the time since this announcement, Management Board members and officers of SEPM have had a constructive dialog as to how these separate bodies will complement each other. I expect in the next few years that we will see a robust intellectual merging of goals and that the connection between the Division and SEPM will look seamless. Exciting times are on the way!

(continued on page 13, Annual Meeting)

<p>The following page is your ballot for the GSA Sedimentary Geology Division's Second Vice-Chair. Please see the candidate profiles on page 19 and send in your vote by May 15, 2001.</p>
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GSA Sedimentary Geology Division Newsletter Spring 2001

**BALLOT FOR SECOND VICE-CHAIR  
GSA SEDIMENTARY GEOLOGY DIVISION  
2001-2002 TERM**

Candidates in alphabetical order:

**CAROL B. DE WET**

**JIM SCHMITT**

**VOTE:**

**CAROL B. DE WET** \_\_\_\_\_

**JIM SCHMITT** \_\_\_\_\_

**OTHER** \_\_\_\_\_  
**(print name; must be GSA-SGD Member)**

Print your name \_\_\_\_\_

Sign your name \_\_\_\_\_

**Return ballot by May 15, 2001.  
Detach ballot from adjacent page.  
Fold ballot in thirds.  
Add 34-cent postage.  
Send: Address on reverse side.**

Sedimentary Geology Division  
GSA  
P.O. Box 9140  
Boulder, Colorado  
80301-9140

**ANNUAL MEETING, continued**

The Division Business Meeting and Awards Ceremony was well attended. This represents the second year in a row that the Division has held a more prominent gathering to have our ceremonies. In an effort to bring such occasions to Division members at large, we have dipped into our savings a bit, but we are a very fiscally healthy division. Our membership is increasing and we now are more than 900 members strong, which makes us the fourth largest Division in the Society. After the brief business meeting, we moved on to presenting Division awards. We had a very close competition for outstanding student research proposal leading to a dead heat and presentation of two Student Research Awards. One went to Beth McMillan for her proposal to investigate Cenozoic exhumation of the Central Rocky Mountains and the other went to Tara Curtin for her study on climate signals preserved within Triassic lacustrine rocks in Argentina. The evening concluded with the presentation of the Laurence L. Sloss Award for Career Achievement to George D. Klein. In the role of citationist, Kathleen Marsaglia led us through the important contributions George has brought to the field of sedimentary geology, including that George served as the very first Chair of the Division when it was founded in 1986. As with last year, we had an exciting raffle of a number of cool geologic goodies. Division T-shirt and mug sales were handled enthusiastically by Paul Link!

We closed the gathering by transferring the mantle of responsibilities to the new Management Board, which has the Division's best interests well in hand.

- **Chris Fedo**, Past Chair      email: cfedo@gwu.edu



**GEORGE D. KLEIN, Year 2000 Recipient of the Laurence L. Sloss Award for Career Achievement**

**FIELD TRIP REPORTS: SUMMARIES OF TRIPS TAKEN IN CONJUNCTION WITH THE GSA MEETINGS IN RENO, NEVADA, FALL 2000.**

**NEOGENE BASINS IN WESTERN NEVADA DOCUMENT THE TECTONIC HISTORY OF THE SIERRA NEVADA - BASIN AND RANGE TRANSITION ZONE FOR THE LAST 12 MA.**

**SUBMITTED BY JIM TREXLER, PAT CASHMAN.**

The Walker Lane right-lateral strike-slip zone currently takes up about 20% of the relative motion between the North American plate and the Pacific plate. This strike slip zone is wide and complex; it separates the Basin and Range (on the east) from the Sierra Nevada (on the west). The strain is taken up by strike-slip faults, normal faults, and vertical-axis block rotation. The result is a complex zone of basin formation and destruction, culminating in the uplift of the Sierra Nevada as a massif in the last 3 million years. Outcrops of Neogene sedimentary rocks (ca. 12Ma - <3Ma) are scattered across western Nevada into northeastern California, and until recently have been, for the most part, poorly understood. These sedimentary rocks span the age of the evolution of this important transition zone and are the target of study by a large group within the University of Nevada and the Nevada Bureau of Mines and Geology. This field trip and the accompanying paper in the guidebook are a report on progress to date in reconstructing this recent history.

The morning of the trip began early (and cold) with coffee, muffins, and a short drive west into the Sierra, where we looked at the underpinnings of the Tertiary basins: the granite basement and overlying Miocene volcanic arc rocks. Coarse volcanogenic sediments and flows dominate this early basin stratigraphy. As the "pogonip" (freezing fog) glittered in the sun and burned away, we were treated to the sight of a family of three bald eagles fishing on the river below the lahar outcrops.

As the day warmed, we worked our way east and lower in elevation, but higher in the section, into the stratigraphy of the Verdi basin in outcrops along the Truckee River west of Reno. The lower section includes fluvial sediments that contain the famous "Verdi flora" originally used by Axelrod in the 1950's to propose that uplift of the Sierra was more recent than 7Ma. We also visited Verdi basin exposures of deltaic and lacustrine sediments, including diatomite. Of particular interest were outcrops of lahar deposits and basalt flows, the latter dating the base of the section at 11Ma, and tephra in lacustrine sediments that date the top of the section as <3Ma. The morning ended with an excellent (and indoor!) lunch of fish burritos at a small west Reno restaurant.

We spent the afternoon looking at deltaic and lacustrine sediments in the upper part of the section and focusing on the structural evolution of the Verdi basin. Numerous small faults occur throughout the sections. Most of these are strike-slip faults that post-date tilting and exhumation. The last outcrops of the day demonstrated how, less than 3 million years ago, the basin was exhumed, deeply eroded and buried once more, followed by tilting and uplift. The end of the day came too soon, with early sunset and a promise to have everyone back at the convention hotel for the GSA pre-convention mixer. The general attitude of the participants was amazement at how lucky we are to have such dynamic geology literally right in our backyard.

**GSA FIELD TRIP VISITS THE EDGE OF THE TRIASSIC SHELF.  
SUBMITTED BY FREDERICK HECK.**

One of the GSA 2000 postdating field trips led a group of 13 hardy souls to investigate the Pershing carbonate olistostrome in the southern Humboldt Range northeast of Reno. This unusual deposit consists of a sequence of carbonate gravity flows deposited near the base of the Triassic shelf. The weather was typical of Nevada in November: sunny and cold with snow at higher elevations and in the shade. Fortunately the snow did not cover too much rock, and hiking kept the chill off. After a picnic lunch complete with red-checked table cloth, we hiked across a section of the olistostrome from top to bottom.

This mass of carbonate sits in the midst of a several-kilometer thick section of mudstones and channeled sandstones. The top is defined by a beautiful turbidity flow deposit consisting of carbonate pebbles to fine sand that varies in thickness from a few to 10's of meters and is the only laterally continuous marker bed in the entire deposit. Below this important horizon is a carbonate debris flow in which clasts of layered shelf limestones and dolomites that range from cobbles to 10's of meters in dimension are floating in a matrix of pebbly carbonate mud. The two deposits appear to be part of the same depositional event because the turbidite grades down into the debris flow.

Much larger clasts of the layered carbonates occur near the base of the deposit and indicate an earlier and larger scale debris flow. It is separated from the upper debris flow by thin bedded shales and micrites that contain fossils of Norian age ammonites. The clasts in the lower debris flow are several hundred meters in length and show evidence in their folds of rolling and sliding down slope before coming to rest. This earlier debris flow was more localized and appears to have filled a pre-existing trough near the base of the Triassic shelf. Our last stop had us looking at stretched pebbles in the olistostrome where it was caught up in a shear zone that formed as Triassic and Jurassic basinal sediments to the west were plastered against the shelf.

All in all, it was an excellent day. There was much lively discussion about carbonate rocks, debris flow deposits, fossils, and the Triassic geography of western Nevada. All the participants agreed that this trip to the Pershing Hills was a most excellent way to spend a day and bring closure to the GSA 2000 meeting.

**NEOPROTEROZOIC GLACIAL RECORD IN THE DEATH VALLEY REGION,  
CALIFORNIA AND NEVADA.****SUBMITTED BY MARK ABOLINS**

The Sedimentary Geology Division co-sponsored this field trip in association with the GSA Annual Meeting, 2000, Reno, Nevada. Mark Abolins (Middle Tennessee State University), Tony Prave (University of St. Andrews), Catherine Summa (Winona State University), and Frank Corsetti (University of Southern California) led the trip and prepared the accompanying guide (Abolins et al., 2000). Participants included researchers and science writers interested in the dramatic climatic and tectonic events that broadly coincided with the evolution of late Neoproterozoic metazoans. During the trip, many discussions focused on physical and chemostratigraphic evidence for glaciation. Dropstones provided relatively non-controversial evidence

**NEOPROTEROZOIC, continued**

for glaciation during deposition of the Kingston Peak Formation, but cap-like carbonates and sequence boundaries elsewhere in the succession invited more discussion. Incised horizons within the Johnnie Formation, a younger Neoproterozoic unit, are particularly intriguing because this unit has been interpreted as a "passive margin" or "drift" deposit (e.g., Stewart, 1972; Prave, 1999). Did incision happen in response to eustasy or because of previously unrecognized tectonism? Ongoing field investigations by Abolins and Summa will examine this question, and results should invite comparison with previous studies of incised valleys within Neoproterozoic "passive margin" successions in Utah and Australia. Prave and Corsetti continue to investigate the Neoproterozoic stratigraphic record around the world.

Abolins, M., Oskin, R., Prave, A., Summa, C., and Corsetti F., 2000, Neoproterozoic glacial record in the Death Valley region, California and Nevada, in Lageson, D.R., Peters, S.G., and Lahren, M.M., eds., Great Basin and Sierra Nevada: Boulder, CO, Geological Society of America Field Guide 2, p. 319-335.

**SEDIMENTARY GEOLOGY ARTICLES****WHAT IS A SEDIMENTARY GEOLOGY DIVISION JOINT TECHNICAL PROGRAM COMMITTEE (JTTPC) REPRESENTATIVE?****CAROL B. DE WET, RETIRING SEDIMENTARY GEOLOGY DIVISION JTTPC REPRESENTATIVE**

The complicated title accompanies one of the volunteer service capacities available to GSA members. Each division has representatives that provide input to the Society as a whole. This can be as a Division Executive Officer or an elected Representative to the JTTPC. The members of the JTTPC are the people who put together the sessions for the GSA Annual Meeting.

The processes of evaluating each abstract and sorting them into appropriate sessions, based on content and on poster versus oral presentation, can be a daunting task. Fortunately the staff at GSA is very helpful and can answer all sorts of queries. The process is entirely web-based and requires concentrated effort on the part of all of the Representatives for a week to ten days in the summer. The Representatives are asked for input in assembling invited session such as the Pardee Symposium during the winter as well.

How does the process work? GSA sets up a secure web site and only the Society and Associated Society Representatives and the GSA Staff have access to it. Associated Societies that participate in technical program abstract review and scheduling include the Cushman Foundation, National Association of Geoscience Teachers, Geochemical Society, Paleontological Society, Geoscience Information Society/AESE, Society of Economic Geologists, and the Mineralogical Society of America. The GSA Divisions that have JTTPC Representatives are: Archaeological Geology, Coal Geology, Engineering Geology, Geology Education, Geophysics, History of Geology, Hydrogeology, Planetary Geology, Quaternary Geology and Geomorphology (QG&G), Sedimentary Geology, and Structural Geology & Tectonics. Representatives-at-Large are from Environmental Geoscience, Marine Geology,

**JTPC, continued**

Paleoceanography/Paleoclimatology, Precambrian Geology, and Public Policy. Engineering Geology, Hydrogeology, Planetary Geology, QG&G, Sedimentary Geology, and Structural Geology & Tectonics have two JTPC Representatives.

By the spring of the year before each annual meeting, the Program Committee members, in consultation with the JTPC and Associated Society Representatives, have organized the major themes and sessions for the meeting. Invited sessions will have been assigned their leaders, and abstract solicitation for those sessions will be underway. By late spring, the web site is being set up with time slots for the invited symposia and with other slots ready to fill in the technical sessions. The Sedimentary Geology Division JTPC Representative's main task is to assemble the Sedimentary Geology abstracts into coherent technical sessions.

Copies of abstracts submitted to the appropriate division are mailed out to their respective JTPC Representatives in late July or early August. Over two thousand abstracts are submitted each year. For the largest GSA Meeting (Year 2000), 3,387 abstracts were received. The Sedimentary Geology Division JTPC Representatives reviewed 145 abstracts: 57 for carbonate sessions and 88 for siliciclastic sessions. The Sedimentary Geology Division based abstract acceptance on content and clarity. Few abstracts are rejected (in 1999, 90% of the total meeting volunteered papers were accepted), but some may be offered to another Division if they seem as though they would fit better elsewhere.

The technical program organization must be done with accommodation for the presenter's preference for oral presentation versus poster format. Sometimes you will find that there are eight abstracts that would make a great oral session, but two of the authors have checked, "a poster presentation or withdraw abstract" on their form. The solution to this is to e-mail or call those authors and see if they are willing to switch format types to be part of a unified session. If they say, "yes", then it is easy. If they are unwilling to change, then you must find a poster session that is as closely related as possible.

Just as you think that a session has been filled, a colleague from another Division sends you a formal request for you to accept additional abstracts that seem as though they would fit better in your discipline. You read the abstracts on the web, decide whether to accept them into the Sedimentary Geology Division or not, and if you do accept them, find the appropriate time slot for them. With many other similar adjustments, you finally get to name the sessions and cajole participants to serve as session chairpersons. This can be difficult when no one has checked the "willing to serve" box on their abstract forms!

Putting together a meeting is an exciting, evolving process for about two weeks of intense activity. Many times, it is the result of a series of compromises to accommodate the most number of people's wishes as possible. Serving as the JTPC Representative is the best way to get a first-hand view at how our meetings are structured and arranged. The Representatives play a major role in the intellectual organization. If you have ever felt that you would have organized sessions differently or that you think certain disciplines should never be assigned the same time

**JTPC, continued**

slots, volunteer to be a JTPC Representative. It will give you a three-year opportunity at organizing one of our field's biggest meetings.

**ENVIRONMENTAL SEDIMENTOLOGY AND SURFICIAL GEOLOGY  
STEVE DRIESE, FIRST VICE-CHAIR OF SEDIMENTARY GEOLOGY DIVISION**

Not long ago, I ran into an old friend who remarked that "I (meaning me) sure am doing different research than when I left graduate school"! Yes, it is true that I was trained as a classical facies or process-oriented sedimentologist at the University of Wisconsin, where I graduated 18 years ago. I interpreted sedimentary rocks based on primary sedimentary structures and using facies models. However, even at that time, my advisor, Bob Dott, saw the "writing on the wall" in the sense that he encouraged me to cross-train in allied sciences and engineering, because he felt that cross-disciplinary research in sedimentary geology would be the norm in the future, and those who were not adequately prepared would be left behind. He had a premonition that our discipline was going to evolve, and in a big way - and was he right!

My own career evolution is certainly a reflection of Bob Dott's prediction. For the past 11 years my research has concerned the genesis of fossil soils, or paleosols, and especially interpreting their climate and landscape record. I work collaboratively with Claudia Mora, stable isotope geochemist colleague in my Department, on the use of stable carbon isotopes of pedogenic calcite in paleosols as proxies for paleoatmospheric pCO<sub>2</sub>, and with Gail Ashley, sedimentologist at Rutgers University, on paleolandscape reconstructions of Pleistocene strata in Olduvai Gorge, Tanzania. I also work collaboratively with several soil scientists, including Lee Nordt (Baylor University) and Larry Wilding (Texas A & M University), sampling and describing soil pits in Texas in order to learn more about modern and ancient soil processes, using classical "actualistic" approaches. And for the past three years I have been working with Larry McKay, hydrogeologist colleague in my Department, on interpreting the influences of sedimentary rock lithology and overprinting pedogenic processes on pore structure and hydraulic conductivity of soil and saprolite (weathered rock) as these relate to contaminant transport and environmental restoration.



Today it seems that Geoscience Departments across North America are increasingly searching for tenure-track Faculty positions in either surficial geology, soil geology, environmental sedimentology, or some other combinations of names, which reflect an emphasis on interpreting surface and near-surface geologic systems. What is clear to me is that most of these programs are seeking individuals, broadly trained in sedimentary geology, but with additional knowledge in pedology, geomorphology, hydrogeology, and low-temperature geochemistry. Environmental consulting firms are also interested in such individuals, although not necessarily at the Ph.D. level. How can we sedimentary geologists better prepare ourselves and our graduate (and undergraduate) students for these new opportunities?

Don't get me wrong—I am not advocating abandonment of traditional instruction in principles of stratigraphy and sedimentation; I will always consider myself first and foremost a sedimentary geologist. Rather, I encourage substantial cross-disciplinary fertilization. Talk to soil scientists,

**JTPC continued**

hydrogeologists, geomorphologists, archaeologists, etc., and find out how you can contribute to their research efforts, and vice versa. Take some courses in these allied areas, or at least begin to read some of the literature. For example, I recently joined the Soil Science Society of America, and subscribe to soil science journals. Integrate some of these subjects into your existing courses, as I have in my existing Stratigraphy and Sandstone Petrology classes, and possibly even create new courses. For example, next Fall semester I plan to offer a Paleopedology course for the first time. Encourage your students to take courses in Plant and Soil Science, or in Civil and Environmental Engineering, rather than just taking Geoscience courses in their home department. Above all, encourage breadth, rather than narrowness. It will pay off dividends in the long run.

**CANDIDATE PROFILES for Second Vice-Chair, Sedimentary Geology Division**

<p><b>Jim Schmitt</b></p> 	<p>I am a clastic sedimentologist with diverse research interests including tectonics and sedimentation, alluvial fan sedimentology, vertebrate taphonomy, paleoenvironmental reconstruction of dinosaur nesting grounds, and biomolecular preservation in fossils. A graduate of the University of Michigan (B.S. 1977) and University of Wyoming (M.S. 1979; Ph.D. 1982), I am presently Associate Professor of Geology in and Head of the Department of Earth Sciences at Montana State University, and Curator of Paleontology in the Museum of the Rockies. In addition, I am a GSA Fellow, Chair of the GSA Research Grants Committee, and have received several teaching awards for contributions to undergraduate education at Montana State University. As Division Second Vice-Chair, I would work to develop student-accessible Division-sponsored symposia, theme sessions, short courses, and field trips reflecting the rapidly emerging interdisciplinary nature of sedimentary geology. Synergistic interaction of sedimentary geology with such allied fields as ecology and paleoecology, environmental science and paleoclimatology, microbiology, tectonics, and planetary geology represents the future of our discipline. Communicating the importance of sedimentary processes and their products for understanding earth and planetary systems and the development and diversification of life will serve to advocate improved sponsorship of sedimentary geology research with funding agencies, and expose students to the excitement of sedimentary geology.</p>
<p><b>Carol B. de Wet</b></p> 	<p>My undergraduate degree is from Smith College ('81) in Geology and English. I completed a M.Sc. in Geology at University of Massachusetts, Amherst, in 1984 and then went to the University of Cambridge, England for my Ph.D. ('89). After a post-doc at the University of Kentucky I began teaching at Franklin &amp; Marshall College. This year I received the GSA BIGGS award for excellence in teaching. I have served as one of the GSA Sedimentary Geology Division representatives on the Joint Technical Program Committee for the past three years. I am also a member of the GSA Committee for Women and Minorities and am active in elementary science education in our local school district. My research interests include microbial interactions in carbonates, trace element and isotopic diagenesis of carbonate rocks, and Mesozoic rift basin limestone deposits. One of our Division's strengths is its diversity, and that puts us in a strong position as we regard the future of the geosciences. In the coming few years we can focus our diversity to put sedimentary geoscientists at the forefront of interdisciplinary fields such as geobiology, medical geology, extremophile habitats, and Martian sedimentology, to name but a few. There remains, however, a fundamental need for top-notch physical stratigraphers, facies modelers, and provenance researchers, among others. As we as a Division sense the excitement that abounds in our field, we can translate that to productive and dynamic professional growth.</p>

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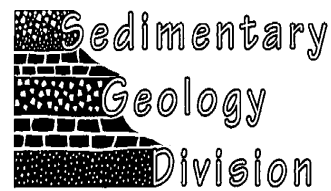
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