Sedimentary Geology Division

GEOLOGICAL SOCIETY OF AMERICA

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MESSAGE FROM THE CHAIR

There are many exciting things happening within the Geological Society of America (GSA) and within the Sedimentary Geology Division (SGD). GSA leadership is receptive to new ideas, and at the recent meeting of Division Chairs in Boulder (Feb. 28-29, 2004), the Divisions gave Bruce Molnia, Council Liaison to the Divisions, quite a few things to take to Council for discussion.

The Sedimentary Geology Division

Let me begin with some of the numerical aspects of the Sedimentary Geology Division – we are the 4th largest division (about 800 members), and 40% of our members attended the Seattle 2003 Annual Meeting. As of February, about 89% of last year's members had renewed their membership in the Division. We have one of the highest percentages of members voting for officers out of all of GSA's divisions - 22% of our members voted in the 2003 ballot. This is very good, as it indicates that many of you are involved and want your voices heard within the Division.

The Sedimentary Geology Division sent out 8 group emails to Division members last year. Only one division sent out more last year; perhaps this means we need plenty of reminders, or maybe that we just have so many good things going on to tell our members about! About 11% of our members do not receive electronic mail from GSA or the Division.

Did you know that as a member of GSA you are automatically a member of a regional GSA Section, but that only ~35% of GSA members are members of a division? And since many division members join more than one division, the number of GSA members who identify with a division is fairly low. Almost all divisions note that their membership is 'graying' and are looking to increase their student memberships. At the national GSA level, *Associate Student* memberships are designated for undergraduate students, and *Student Memberships* are for graduate students, but the divisions do not make that distinction. *(continued on p. 2)*

Message from the Chair (continued)

New Initiatives and Ideas

Student Memberships

It would be great to report next year that **this** Division had the largest increase in student memberships. This would be fairly easy to accomplish if each regular Division member sponsored one student membership. Student membership only costs $4.00 (if our rate increase is approved by Council this spring), so if you know even one student who is a member of GSA but not a member of the Sedimentary Geology Division, please consider a sponsorship. To do this you can simply include your check with the student's membership application. Alternatively, you can send a check directly to GSA, CLEARLY DESIGNATED for Sedimentary Geology Division student membership sponsorship, and we will give out 'free' student memberships to students attending the Reception/Business Meeting during the annual meeting. (It would be great to sponsor a student's full GSA membership, too, if you were financially able to do so!)

GSA Exhibit Hall Booth, 2004

This year the Division will be tri-sponsoring a booth in the exhibits hall at the Denver GSA Annual Meeting. We will share booth space with the Geobiology & Geomicrobiology Division and the Limnogeology Division. We envision this as a way to increase the profile of all three Divisions during the meeting and to facilitate interdisciplinary communication between these three closely linked Divisions. We hope that the booth will function as a meeting place where you can discuss microbially mediated tufa and calcite, precipitation in sedimentary environments, or whatever else 'springs' up during these sort of informal interactions that we know often generate exciting new collaborations. We anticipate having a number of new Sedimentary Division logo items such as photograph scales or grain size charts with our logo, available for a modest donation. Look for a number of polished hand-sample slabs from the Devonian reef rock of the Canning Basin, Western Australia; Cambrian microbial reef rock from Pennsylvania; Carboniferous mud mound stromatactis from Ireland; and others, which will be raffled off during the Reception/Business Meeting or available for a donation at the booth. We are also looking for sedimentary-related books, software, rocks, or other items to 'donate' at the booth. Please bring your contributions to the annual meeting, or send them to Carol de Wet, Department of Earth and Environment, P.O. Box 3003, Franklin and Marshall College, Lancaster, PA 17604, and I'll transport them to Denver.

Volunteers Needed

One of the stipulations GSA puts on Divisions wanting a booth is that it must be staffed through-out the entire meeting. Sharing the booth makes this less onerous for all of us because SGD will be able to leave material up for the entire time, but we do need members to volunteer an hour or two to help support the booth during 'our' times in it. If you are willing to donate an hour to the Division during your stay in Denver, please email Carol de Wet <carol.dewet@fandm.edu>.

Annual Meeting Programs – Denver 2004

Topical Sessions with Sedimentary Geology Division Sponsorship

As of February 2004, there are ~24 topical sessions that the Division is sponsoring or co-sponsoring. This is a significant percentage of the total number of proposed Topical Sessions and is a good indicator of how broadly applicable sedimentary geology is to many, many topics. Remember that each topical session needs 11 or 12 abstracts to fill it and ensure its inclusion in the final program. If your research dovetails with one of the following sessions, be sure to indicate that when you submit your abstract and, even better, contact the session advocate ahead of time. **Abstract submission deadline: July 13, 2004!**

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Annual Meeting 2004 Topical Sessions (continued)

Topical Session Title and First Advocate/Convener:

- T106. Geological Context of Early Humans from Ethiopian Rift Basins – Jay Quade, University of Arizona,
- T81. Regional Geology of the Northern Rockies: A Session Honoring Betty Skipp – Paul Link, Idaho State University
- T72. Impact Geology – David King, Auburn University
- T73. Early Paleoproterozoic (2.5-2.0 Ga) Events and Rates: Bridging Field Studies and Models – Andrey Bekker, Carnegie Institution of Washington
- T61. Frontier in Understanding the Geologic Record of Climate Change: A Session in Honor of William W. Hay – Eric Barron, Pennsylvania State University
- T55. Anatomy of an Anachronistic Period: The Early Triassic Environment and Its Effect on the History of Life – Adam Woods, California State University-Fullerton
- T56. Paleontology and Stratigraphy of the Late Eocene Florissant Formation, Colorado – Herbert Meyer, Florissant Fossil Beds National Monument, & Dena Smith, University of Colorado
- T57. The Concept of Layer-Cake Stratigraphy: Then and Now – Charles Byers, University of Wisconsin
- T59. Resolving the Late Paleozoic Gondwanan Ice Age in Time and Space: Comparison of Southern and Northern Hemisphere Records – Christopher Fielding, University of Nebraska
- T60. Sedimentary Geology and Earth History: Retrospective and Prospective; In Honor of the Career and Contributions of Robert H. Dott, Jr. – Joanne Bourgeouis, University of Washington *(See separate announcement for this Topical Session in this Newsletter.)*
- T44. Lacustrine Records of Landscape Evolution – Jeffrey Pietras, BP Exploration Alaska, Inc.
- T45. Alkaline Evaporative Lakes and Playas: Insights into Microbial Physiology and Mineral Facies in Semiarid Settings – David Finkelstein, Indiana University
- T46. Biomineralization in Terrestrial Hot Springs: The Preservation of Thermophiles in Past and Present-Day Systems – Paul A. Schroeder, University of Georgia
- T47. Ocean Chemistry through the Precambrian and Paleozoic – Matthew Saltzman, The Ohio State University
- T49. Stable Isotopes in Fossils and Paleosols: Records of Late Cenozoic Environmental Change – Yang Wang, Florida State University
- T50. Marine Hard Substrates: Colonization and Evolution – Stephen Donovan, National Natuurhistorisch Museum
- T40. Hydrogeomorphology, Chemistry, Archaeology, and Evolution of Coastal Plain Depressions and Related Features – C. William Zanner, University of Nebraska
- T41. The Gulf of Mexico – Past, Present, and Future: Relating Ecology to Geology – Charles Holmes, Center for Coastal Geology
- T43. Hydrologic and Paleoclimatic Significance of Nonmarine Microbial Carbonates (Tufas, Microbialites, Stromatolites and Thrombolites) – Michael Rosen, U.S. Geological Survey

GSA also wants us to know that they have dramatically cut the time it takes to bring out a Special Publication. GSA can get a Special Publication out the door in 6 months or less, so if a topical session looks like it would make a good book, please contact GSA to get it out as a Special Publication (and let the Division know, too).

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Annual Meeting 2004 (continued)

Division Awards

Laurence L. Sloss Award for Sedimentary Geology nominations were due to the Sloss Nominating Committee and Paul Link, Division Secretary, on March 1, but if you missed that deadline, submit the name for next year's consideration while you are still thinking about it. As a Division we have a **Student Research Grant Award** for the best student research proposal, and we give out **student travel grants** to help students go on Division sponsored field trips. Please see the Division website for more details and, Faculty, encourage your students to apply! Another way to honor a distinguished sedimentologist or stratigrapher is to nominate them as a GSA Honorary Fellow. We can do this as a Division, or you can do it as an individual, but if you have someone in mind and would like to collect the Division's backing, please let Carol de Wet know.

Reception and Business Meeting

Many Division members aren't quite clear about what the Division Reception and Business Meeting is all about. First, everyone is invited! It is not a closed business meeting just for a few Division officers but is first and foremost a venue for ALL of the members to see each other and interact in an informal setting. The meeting begins with free food and beverages (including free beer!) and a time to socialize. We then introduce the officers and give out the Division awards. Doug Burbank, last year's Chair, initiated a series of short presentations about new initiatives relevant to sedimentology and stratigraphy. We will continue that this year, so the event can be viewed as a mix of sedimentary science and socializing! We do recognize individuals who have made significant contributions to the field through the Laurence L. Sloss Award for Sedimentary Geology and encourage emerging stars with the Student Research Grant award.

Division Finances

Divisions must generate their own revenue through the membership dues. Other funds come from 'donations' for items such as tee-shirts and mugs, or from member generosity. Each Division can have only one named award. We have the Sloss Award, set up in 2000 by then Chair Steve Driese. Some divisions have amassed large endowments through member donations, and this allows them to provide more student awards and travel grants. For those members who are financially able, adding even a $20.00 donation to your Sedimentary Geology membership dues would be a significant help to the Division.

Carol de Wet, SGD Chair
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ANNUAL BUSINESS MEETING AND AWARDS CEREMONY SEATTLE - 2003

The Annual Business Meeting and Awards Ceremony took place on Tuesday evening, Nov. 4th, beginning at 5:30 p.m. Approximately 70 people attended the event. Attendees were delighted with their door prizes and gifts. Sedimentary Geology Division (SGD) Chair Doug Burbank opened the ceremony by welcoming everyone and introducing the SGD officers. He thanked the Division's JPTC representatives for working on the technical program.

Division Secretary/Treasurer Paul Link briefly went through the last meeting's minutes and gave the Treasurer's Report. He described the Division's awards; and, noted that if members want a paper copy of the newsletter, rather than an electronic one, they need to formally request that from GSA. The minutes and report were approved by the membership.

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Annual Meeting Report (continued)

Doug introduced the evening's invited speakers. Walt Snyder (section head at the NSF) spoke first about the changing areas within the NSF. He commented that this was an opportunity for sedimentologists to move ahead in funding and recognition.

Cinzia Cervanto gave an introduction to Chronos, a new database of chronostratigraphy, and discussed how members of SGD could get involved in the process of data collection and use.

Basil Tikoff spoke about the role of sedimentary geology in the Integrated Solid Earth Sciences project. He urged SGD members to get involved.

Paul Link then introduced our Outstanding Student Awardee, Ms. Jennifer Flight from Montana State University. He also noted our 5 student field trip grantees.

Doug Burbank introduced the citationist for Bob Weimer's Sloss award. The citationist, Dr. John Robinson, spoke about Bob's accomplishments, and Bob accepted the award with his thanks and reflections back on the contributions made by Sloss in the fields of sedimentology and stratigraphy.

The meeting closed at 7:20 p.m. with Doug Burbank's reminder of important deadlines, such as the Jan. 15th deadline for Pardee and Topical Sessions for the 2004 GSA Annual Meeting in Denver.

Robert Weimer
2003 Laurence L. Sloss Award for Sedimentary Geology

Report submitted by
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CALL FOR ABSTRACTS: TOPICAL SESSION T60
GSA Annual Meeting, Denver, 7-10 November 2004

"Sedimentary geology and Earth history: Retrospective and prospective: In honor of the career and contributions of Robert H. Dott, Jr."

Co-convenors: Jody Bourgeois and Marjorie Chan

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Call for Abstracts: Bob Dott (continued)

Bob Dott's career has spanned important changes in sedimentary geology, in the study of Earth history, and in philosophy of geology. Students and colleagues of Bob Dott are encouraged to submit abstracts reflecting on those changes.

This session honors the research and educational contributions of a major 20th century geologist, bringing out the themes: 1) how sedimentary geology has had an impact on the Earth sciences; 2) how the field of historical geology has evolved over this time; and 3) how the philosophy of geology has changed (e.g., changes in views of catastrophic events, changes in views of cyclicity). Also, sedimentary geology continues to make contributions to the extraction industry, but has new roles to play, e.g., in environmental geology.

REPORT FROM PARDEE SYMPOSIUM: GSA ANNUAL MEETING 2003

The Division co-sponsored one of the six prestigious Pardee Symposia convened at the Geological Society of America 2003 Annual Meeting in Seattle. The session was "The paleoenvironmental and paleoclimatic framework of human evolution", convened by Gail M. Ashley and Craig S. Feibel (Rutgers University).

The hominid fossil record reaches back in time to >6 million years ago and stone tools >2.6 million years, but the details of paleo-environmental framework are poorly known. Traditional geological studies of hominid-bearing deposits have focused on correlation and chronology of sites, with usually only local site-based descriptions accompanying each find. There have been few attempts to synthesize within regions or to place key sites within a broader temporal and spatial context. With the growing realization and understanding of astronomic climate forcing during the Plio-Pleistocene, there is an opportunity to integrate what is known about the paleoenvironment and paleoclimate from the geologic record and the evolutionary history from archaeological and paleoanthropological records.

This interdisciplinary symposium brought together researchers with a variety of perspectives. The first 2 talks, one on climate during the last ~6 million years (William Ruddiman) and the other on human evolution during the same time period (Bernard Wood), provided a broad overview. The other 9 speakers presented their perspectives representing key locations from around the globe (South Africa, East Africa, China, Europe, and North and South America.) Attempts were made to answer some difficult questions regarding the factors that may have nudged hominids toward bi-pedalism and developed species that failed, while only one ultimately succeeded. Were the development of tools, exodus from Africa, and brain development a passive or direct response to paleoenvironmental stresses (global climate change)? A consensus appears to be growing that looks to climate variability (i.e., magnitude and frequency of climate change) as an important factor in natural selection. The session was very well attended (350-400 people), and there was great interest by the press.

2004 GREAT LAKES SECTION-SEPM FIELD CONFERENCE

Devonian black shales of the eastern US: New insights into sedimentology and stratigraphy from the subsurface and outcrops in the Illinois and Appalachian basins
Location: Southeastern Indiana and North-Central Kentucky
Date: September 24-26, 2004
Field Trip Leaders: Juergen Schieber and Remus Lazar, Indiana University, with contributions by Carlton Brett, University of Cincinnati

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Great Lakes SEPM Field Conference (continued)

Geologic Summary: Black shales are organic-rich, fine-grained sedimentary rocks which at a global scale have been the main source of more than 90% of recoverable oil and gas reserves. Understanding the formation of black shale successions is, however, not only of great importance for the energy industry, but also for advancing our understanding of the carbon cycle and the global climate-ocean system.

In the eastern US, the Middle to Late Devonian period was characterized by a general rise in sea level, atmospheric decline in pCO_2, and major diversity change and extinction of biota. As relative sea level rose, flooded continental areas of eastern U.S. became parts of shallow seas where carbonaceous muds accumulated and became black shales that are known today as the New Albany, Ohio, and Chattanooga Shales.

The 2004 field conference will focus on an examination of the New Albany Shale in the Illinois Basin (SE Indiana & NW Kentucky) and its lateral equivalents (Ohio Shale) in the Appalachian Basin (Kentucky). Correlation of major shale subdivisions that are separated by erosion surfaces and identified in complete cored intervals and spectacular outcrops from Indiana and Kentucky will provide participants with new insights into the depositional dynamics and the stratigraphic framework of these shales. The field trip stops will cover a transect that runs from the eastern Illinois Basin across the Cincinnati Arch and into the Appalachian Basin. Discussions will be based on detailed outcrop studies, petrography, and geochemistry.

Logistics: details will be posted on the Great Lakes Section-SEPM (GLS-SEPM) web site as they become available.
Cost: Registration fee is tentatively set at $50 for professionals and $35 for students. Registration includes fieldtrip guidebook, bus transportation (roundtrip) from New Albany/Indiana to field trip locations, box lunch and dinner (field trip).
Contact Info: Juergen Schieber, Indiana University, 812-856-4740; jschiebe@indiana.edu

OTHER MEETINGS OF INTEREST TO SGD MEMBERS

May 23-25, 2004: **8th Annual DOSECC Workshop** on Scientific Drilling, New Brunswick, NJ Information: Theresa Fall, 675 S. Arapeen Drive, Suite 201, Salt Lake City, UT 84104, USA (801) 585-9687, <tfall@dosecc.org> <http://www.dosecc.org/html/workshop_2004.html>

June 19-24, 2004: Gorges, Clays, and Coulees, **Clay Minerals Society 41st Annual Meeting**, Richland, WA. Information: Jim Amonette, (509) 376-5565, <jim.amonette@pnl.gov> <http://pnl.gov.cms/>

September 15-17, 2004: **International Association of Sedimentologists 23rd Annual Meeting**, Coimbra, Portugal. Information: Rui Pena dos Reis, email: <penareis@ci.uc.pt>

October 3-5, 2004: **Eastern Section-AAPG Annual Meeting**, Columbus, Ohio, USA. Information: Steve Zody, Ohio Geological Society, PO Box 14304, Columbus, OH 43214 (330) 262-4323. <zodyoil@sssnet.com> <www.dnr.state.oh.us/geosurvey/aapg04.htm>

July 9-15, *2006*: Frontiers of Soil Science: Technology and the Information Age, **18th World Conference of Soil Science** (Soil Science Society of America, US National Committee for Soil Science, International Union of Soil Sciences), Philadelphia, PA. Info: Organizing Committee Co-chairs: Lee E. Sommers, Colorado State University <Lee.Sommers@colostate.edu>, Larry P. Wilding, Texas A&M University <wilding@tamu.edu> <www.18wcss.org>

SEDIMENTARY GEOLOGY INITIATIVE

Ssubmitted by Michael Kelberer, NCED

Background

About a dozen people had an informal discussion at the 2003 GSA Meeting about how to begin a sustainable process of getting community input on the future of our field. Several other informal discussions had or have taken place since with varying groups of individuals. The consensus of the participants in these discussions was to have a series of forums/workshops about the future of basic research in sedimentary geology. These forums would start with the big picture then move on to individual subtopics. The plan is to establish this as a continuing process.

While the deep-earth research efforts have begun to unify, Earth's sedimentary carapace has been relatively unattended to, although it is the source of our energy and groundwater supplies and the record of 4 billion years of Earth history. There is a great need for the promotion of, and unifying of, research issues in the part of the solid Earth, and it is up to the sedimentary geology and paleontological communities to lead this effort.

Previous Efforts

Going back only as far as 1994, there have been several efforts to explore the future of sedimentary geology or one of its many specialties. Results of some of these efforts are listed here and provide an excellent background on which to build:

Applications of Sedimentary Geology and Paleontology into the 21st Century (1995), SEPM/IAS Workshop
Sedimentary Systems in Space and Time (1999), NSF
www.geo.nsf.gov/ear/programs/sedgeology.doc
Dynamic History of the Earth-Life System (1999), NSF
www.geo.nsf.gov/ear/programs/PaleoSocWorkshop.doc
A Vision for Geomorphology and Quaternary Science Beyond 2000 (1999), NSF
www.geo.nsf.gov/ear/programs/Geomorph.doc
The Future of Applied Sedimentary Geology (2000) W. Schlager
www.sepm.org/sedrecord/reference/schlager.pdf
Sedimentology and the Oil and Gas Industry (2001) W. Schnollnberger
www.sepm.org/sedrecord/reference/schnollnberger.pdf

Parallel Efforts

There are several similar efforts going on in other areas of geoscience that can be a model for and an opportunity for collaboration within sedimentary geology. All of the geoscience initiatives have a strong incentive to be well-integrated, both to show unity of effort and to benefit through the sharing of ideas and resources. Several of these parallel efforts are:

ISES (Integrated Solid Earth Sciences forum) http://serc.carleton.edu/earthworkshop02/
NCED (National Center for Earth Dynamics) http://www.nced.umn.edu
CSDMS (Community Surface Dynamics Modeling System)
http://instaar.colorado.edu/deltaforce/workshop/scdms.html
CHRONOS www.chronos.org
PaleoStrat www.paleostrat.com
Paleobiology Database http://www.paleodb.org/
GEON http://www.geongrid.org/
EarthTime http://eaps.mit.edu/earthtime/

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Sedimentary Geology Initiative: Parallel Efforts (continued)

Dallas Forum

The first forum of the Sedimentary Geology Initiative was designed to discuss the future of basic research in sedimentary geology. This open forum was scheduled for April 16, 2004, in Dallas Texas. The forum included basic background on current research environment; the major stakeholders; input from all attendees; and, breakout groups. Sponsors for the Dallas Forum are the NSF, SEPM (Society for Sedimentary Geology) and the National Center for Earth-surface Dynamics (NCED). Please visit the website for information: <http://www.nced.umn.edu/Sedimentology_Stratigraphy_initiative.html>

Steering Committee

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THE NATIONAL CENTER FOR EARTH-SURFACE DYNAMICS (NCED)

Submitted by Michael Kelberer, NCED

The National Center For Earth-Surface Dynamics is a National Science Foundation (NSF) Science and Technology Center. It was funded in August 2002, by the NSF with a matching grant from the University of Minnesota, and is headquarter at the St. Anthony Falls Laboratory at the University of Minnesota. Principal Investigators (PI) are included from the University of Minnesota, the University of California, Berkeley, the Massachusetts Institute of Technology, Princeton University, the University of Wyoming, Fond du Lac Tribal and Community College, and the Science Museum of Minnesota.

NCED's mission is to develop integrated ecogeodynamic models of the channel systems that shape the Earth's surface through time, in support of landscape restoration, environmental forecasting, and resource development.

In particular, NCED research on channels and channel systems is focused on:

1. Network dynamics and scaling: global processes
2. Channel and floodplain dynamics: unit processes
3. Advanced Mathematical and Observational Methods
4. Ecogeomorphology: channel system biophysics
5. Long-term Dynamics: bridging engineering and planetary time scales

Research in all five areas will contribute to the body of sedimentary geology knowledge, especially that relating to the long-term dynamics of channel systems.

NCED and its PIs are also involved with several efforts in the larger scientific community, including CSDMS (also known as the Community Sediment Model) and the Sedimentology/Stratigraphy Initiative.

More information about NCED, its research programs and its participants can be found on its website: www.nced.umn.edu *(continued on p. 10)*

NCED (continued)

Newsletter for Future Events and Mailing List

NCED will be supporting a newsletter with the first issue expected in Summer of 2004. This newsletter has strong connections to sedimentology especially in the areas of channels and channel networks, and long-term channel dynamics; see the research section of the NCED website at <www.nced.umn.edu/research.html>.

If you are interested in receiving the newsletter, please contact the Editor, Michael Kelberer, NCED, Communications and Information Management, (612) 624-6283, <kelb0004@umn.edu>.

OUT OF GAS: THE END OF THE AGE OF OIL

By David Goodstein, 140 pp., New York: W. W. Norton and company, $21.95.
Book Review by M. Dane Picard

David Goodstein, physicist, proponent of nuclear power, and vice provost of the California Institute of Technology, begins and ends his serious book with a warning: "Civilization as we know it will come to an end sometime in this century unless we can find a way to live without fossil fuels."

We are running out of oil, a decline over the next 40 years down to nothing, says Goodstein. The peak year for world production will be 2005 said K. C. Deffeyes in his book *Hubberts's Peak*, or near the end of this decade, says Goodstein. As it is used up, a natural resource, if fully developed, follows a bell-shaped curve with a rounded top and tails on both ends. Based on estimates of the ultimate U. S. discoverable oil, the Shell Oil Company geophysicist M. King Hubbert predicted in 1956 that production would peak in the early 1970s. The actual year turned out to be 1970. Goodstein's new forecast and those of other scientists rely on estimates of how much oil remains in the world. In order to predict a history, various bell-shaped curves are fitted to cumulative oil production and reserves. For more than a decade, most researchers, especially a notable few in the U. S. Geological Survey, rejected Hubbert's 1956 hypothesis. Goodstein's analysis will also be rejected by many; there are always doubters.

What will actually happen is uncertain; there are few optimistic scenarios. There may be more oil than Goodstein supposes. He suggests we have used 1 trillion of the 2 trillion barrels that ever existed. The USGS estimates that originally there were 3 trillion barrels. For that to be reached, however, would require the implausible discovery of another Middle East, says Deffeyes. Whichever estimate is correct, the extra decade or two we would gain means little in human history. Goodstein fears worldwide panic when people realize that we have reached the peak: riots at gas stations, oil wars, trembling governments. The present fluctuations in crude oil prices may be the beginning of such a crisis. Faced with oil's end, opposition to nuclear power will weaken, but it takes ten years or more for new power plants to come on line. As oil becomes exhausted, there is, in the short run, no alternative to greatly increased utilization of nuclear power. Goodstein also leans toward solar power: "Beyond fossil fuel and nuclear power, all that remains is sunlight." He dismisses tar sands and oil shale as future energy sources because of environmental and technologic problems, the expense of development, and the amount of energy necessary to extract the hydrocarbons.

Immense steps are needed, yet we have no national energy policy. If Goodstein and Deffeyes are close to being right, which I believe, my oldest granddaughter will be 52 when the Age of Oil ends. What we do before and after Hubbert's world peak has passed can end or save civilization as we know it.

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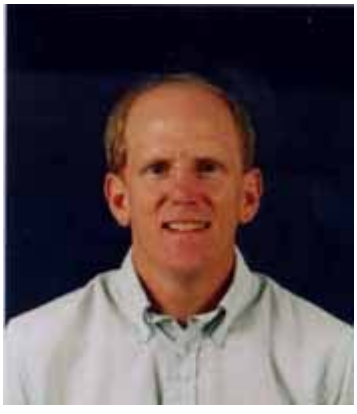
CANDIDATES FOR 2004-2005 SECOND VICE-CHAIR GSA SEDIMENTARY GEOLOGY DIVISION

The ballot for Second Vice-Chair of the GSA Sedimentary Geology Division is on the following page. Please be sure to vote by June 30, 2004. You may vote by paper ballot by using the ballot from this newsletter and returning it to GSA, or you may vote online at <http://rock.geosociety.org/balloting/sedimentary.asp>.

The candidates' biographies are included on the ballot. Here are their smiling faces!

Dan Larsen



Mike Pope

If you vote by paper ballot, please return your ballot to the Geological Society of America, PO Box 9140, Boulder, CO 80301-9140, Attn: Sedimentary Geology Division Ballot, by June 30, 2004.

Ballot for the Election of 2004-2005 Second Vice-Chair of the GSA Sedimentary Geology Division

Vote for **one** candidate for Second Vice-Chair by checking the appropriate box or by filling in the write-in space to vote for an individual not listed on this ballot. Brief biographies for both candidates are given below the ballot.

Your ballot must be signed in the space provided below and must include your GSA member number in order to be valid; it must be **postmarked by June 30, 2004, and must be returned to the Geological Society of America, PO Box 9140, Boulder, CO 80301-9140, Attn: Sedimentary Geology Division Ballot**.

Election results will be announced at the Sedimentary Geology Division meeting at the 2004 GSA Annual Meeting in Denver and will be posted on the SGD website at: <http://rock.geosociety.org/sed/SGD.html>.

If you prefer, **you may vote online by June 30, 2004 at <http://rock.geosociety.org/balloting/sedimentary.asp>** using your GSA member number to access the ballot (your e-mail address will open the ballot only if it is in GSA's database.) For assistance, contact GSA at <gsaservice@geosociety.org>, (303) 357-1000 option 3, or toll free at 1-888-443-4472. Thank you in advance for participating in the Sedimentary Geology Division election of officers.

Ballot

Second Vice-Chair (vote for one):

❑ Daniel Larsen ❑ Michael C. Pope ❑ _____ (or write-in)

Daniel Larsen. Dan Larsen obtained a Bachelor's degree, Summa Cum Laude, in Geology from Arizona State University in 1985. He received a Master's degree that focused on the geochemistry and volcanic paleoenvironments of the Upper Triassic Falla and Lower Jurassic Prebble formations in Antarctica from the Ohio State University in 1988. He obtained his Ph.D. from the University of New Mexico in the areas of low-temperature geochemistry and sedimentology in 1994, focusing on the depositional paleoenvironment and alteration of the sedimentary and volcanic fill of the Oligocene-age Creede caldera in southwestern Colorado. His current research interests span a broad spectrum of sedimentary, hydrologic, and environmental geoscience, including depositional and geochemical processes in ancient lake deposits, influence of sediment properties and stratigraphy on water resources and quality, and relationships between Quaternary sedimentation, tectonics, and climate. Current projects include climatic and tectonic controls on paleohydrology, sedimentation, and geochemistry of the Pliocene – Pleistocene Lake Tecopa beds, California; hydrostratigraphic controls on recharge, water quality, and ground-water flow in the Memphis aquifer, Tennessee; and post-impact alteration and pore-water evolution of impact breccia within the Chesapeake Bay impact structure. He has been a faculty member at the University of Memphis, Memphis, Tennessee, since 1995 and is currently an Associate Professor in the Department of Earth Sciences, with over 20 peer-reviewed publications and 50+ abstracts and conference proceedings in the areas of sedimentology, low-temperature geochemistry, petrology, and hydrogeology. He was the 2003 General Chair for the South-Central and Southeastern Joint Section Geological Society of America meeting in Memphis, Tennessee. He has been a GSA Member since 1989 and is completing his third year as a Joint Technical Program Committee representative for the GSA Sedimentary Geology Division. He is also a member of AGWSE, AGU, Clay Minerals Society, SEPM, and Tennessee Academy of Sciences. E-mail: <dlarsen@memphis.edu>.

Michael C. Pope. Mike Pope obtained a Bachelor's degree in Earth and Space Sciences from UCLA in 1985. He earned a Master's degree from the University of Montana in 1989 that focused on the sedimentology and stratigraphy of Lower Cambrian carbonate rocks in an allochthonous terrane of northern British Columbia and southern Yukon Territories. He obtained his Ph.D. from Virginia Tech in the areas of carbonate sedimentology and stratigraphy in 1995, focusing on the sequence stratigraphy of Upper Ordovician, mixed siliciclastic and carbonate rocks in Kentucky and Virginia. Following his Ph.D. he held a post-doctoral research position at MIT studying Precambrian carbonates in Russia and northern Canada. He worked for a year at the Mobil Oil Company Research Laboratory before taking his current position as a faculty member in the Department of Geology, Washington State University in Pullman, Washington in 1999. His current research emphasizes the sequence stratigraphy, paleoclimatology and paleoceanography of transitions between greenhouse and glacial periods in earth's history. His research areas include the Paleozoic rocks of Idaho, Texas, and the Northwest Territories. He also is currently studying the Sierra Madera crater in Texas to determine how carbonates deformed during meteorite cratering. He has 20 published papers and 40+ abstracts in the area of carbonate sedimentology and stratigraphy, paleoclimatology and paleoceanography. He has been a GSA Member since 1989, and recently served on the Joint Technical Program Committee, GSA Sedimentary Geology Division, for the 2000 and 2001 Annual Meetings. He also served as the leader of the SEPM (Society for Sedimentary Geology) Carbonate Research Group and is currently serving in this position again. E-mail: <mcpope@wsu.edu>.

Your Name (printed) _____ Your GSA Member Number (required) _____

Your Signature (required) _____

This ballot must be postmarked by June 30, 2004.