

NEWS &  
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**GSA Publishing: A Cooperative Effort**

by Faith Rogers

When you mail your manuscript for the *GSA Bulletin*, *Geology*, or a book, most of your work on it is done, but it's just beginning for GSA's Publications Department. On the receiving end of that manuscript are five people who will see that it is listed, acknowledged, and sent to reviewers, and if it's accepted for publication, they will make sure that it's edited, proofread, and printed. Working with each other and with GSA's science editors, secretaries Barbara Patterson and Jean Davis and managing editors Jean Thyfault, Faith Rogers, and Lee Gladish make sure that the *Bulletin*, *Geology*, and GSA books get from manuscript stage to printed page.

**LOGGING THEM IN**

Editorial Secretary Barbara Patterson begins the process by listing the manuscript on the Publications Department Alpha Micro computer. She logs in an average of 5 manuscripts a day, assigning a number to each and sending the author a postcard acknowledging receipt of each submission. Barbara prepares a file folder for the manuscript and makes copies of the travel sheet (the primary record), the cover letter, and the title page and abstract to send to GSA Science Editors Eldridge Moores (*Geology*) or Robert Hatcher or William Thomas (*Bulletin*).

**INTO REVIEW**

Potential manuscript reviewers for *Geology* papers will most likely get a call from Editorial Secretary Jean Davis, on instruc-

tions from Editor Moores (University of California, Davis). Jean prepares review packages (manuscript, review form, and mailing labels) for the two geologists who will review each *Geology* manuscript. For the *Bulletin*, she will send the review package to an Associate Editor enlisted by *Bulletin* editors Hatcher (University of South Carolina) or Thomas (University of Alabama).

**AND BACK**

After review, manuscripts are returned to Moores, Hatcher, or Thomas, who then decide whether the paper is suitable for *Geology* or the *Bulletin*, or whether the author(s) should be encouraged to revise the manuscript—or try another journal. Most of the suitable manuscripts go back to the author for revision in light of reviewer comments.

**ENTER THE MANAGING EDITORS**

When *Bulletin* Managing Editor Jean Thyfault knows that a manuscript has been sent to the author(s) for revision, she checks the paper's illustrations and tables and sends instructions to the author for final preparation. *Geology* Managing Editor Faith Rogers sends the author a list of format requirements for the manuscript, illustrations, and tables. She uses a check copy from Moores's editorial assistant Linda Waite, who has sized the manuscript and has checked its references cited.

Some revised *Bulletin* manuscripts are returned to the Asso-

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Jean Thyfault guides *Bulletin* manuscripts from editing through final page proofs.



Faith Rogers manages *Geology*, *News & Information*, and manuscript records for GSA's Publications Department.



Lee Gladish coordinates all phases of production of GSA's books.



**Barbara Patterson creates manuscript records and keeps them up to date.**



**Jean Davis routes manuscripts to reviewers.**

### **Publishing** (continued from p. 185)

ciate Editor for another review, but most are put into the *Bulletin* mill for publication. Before a paper appears in the *Bulletin*, it will be copy-edited by a freelance editor, sent back to the author for checking, typeset by a local firm, proofread at GSA and by the author, laid out (dummed) by Jean Thyfault, and checked and rechecked in galley form and page proofs.

*Geology* papers are copy-edited by Faith Rogers and Linda Waite, typeset by a contracted firm, and proofread at GSA. Faith dummies the articles and checks them at all stages. Authors of *Geology* articles see neither copy-edited manuscript nor galley proofs, allowing speedy publication in the journal.

Manuscripts for GSA books are sent from headquarters to Science Editor Campbell Craddock (University of Wisconsin), who oversees the review process. Book manuscripts are not entered officially into GSA's computer records until Craddock has accepted them for publication. Then Books Coordinator Lee Gladish takes over. He assigns the manuscript (or group of manuscripts, as is usually the case with a GSA Memoir) to a local freelance editor, who copy-edits the paper and sends it to the author for checking. Manuscripts are then typeset, proofread by the authors, dummed by Lee, and assembled for printing.

Lee also works with Maps and Charts Editor Jack Reed (USGS, Denver), who makes sure that the maps are adequately reviewed and prepared by the author for publication.

When they're not working on *Geology* or books, Faith and Lee research and write articles for *News & Information*. Faith assembles material for each issue and has it typeset (currently in-house, on GSA's Varsity system) and proofread. Lee dummies the pages, which are then pasted up into camera-ready form by GSA's Production Department. Other publications such as memorials, advertising flyers, and the GSA Publications Catalogue are cooperative efforts of the managing editors and the GSA Production Department.

### **COORDINATION, COOPERATION, AND CONTRACT WORK**

Although it's difficult to reduce costs of publishing when, as now, prices for everything from typesetting to printing ink go up steadily, GSA has kept these increases at a minimum by contracting for much of the work that until a few years ago was done in-house. Use of freelance copy editors and proofreaders on

contract keeps salary and overhead costs down while allowing control of publication quality through the managing editor system. This kind of publication process requires close cooperation among authors, editors, typesetters, and proofreaders to ensure that few errors appear in print—not a simple matter, as anyone involved can attest. GSA's Science Editors Moores, Hatcher, Thomas, Craddock, and Reed (who receive no salary, only expenses, for their considerable effort), reviewers, and Managing Editors Rogers, Thyfault, and Gladish do their best to see that GSA publications are useful to geoscientists and of the highest quality.

### **HEADQUARTERS STAFF**

Lee Gladish, GSA's books and maps coordinator and associate editor for *News & Information*, came to headquarters in December 1980. Lee, who has a B.A. (cum laude) in journalism from the University of Minnesota, gained experience in all facets of publishing as head of the publications unit of the Western Interstate Commission for Higher Education in Boulder and as executive editor of the University of Colorado's literary magazine, *Colorado Quarterly*. He has designed many of the covers for recent GSA books, as well as publications advertisements. His current pet project is computer compilation of book sales in relation to advertising. He also does most of the photography for *News & Information*.

*Bulletin* Managing Editor Jean Thyfault has been with GSA since 1967, when she was hired as a staff editor. She began managing the *Bulletin* about 10 years ago. Jean is a member of

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Prepared from contributions from the staff and membership. Executive Director: F. Michael Wahl; Managing Editor: Faith Rogers; Associate Editor: Lee Gladish; Production and Advertising Manager: James R. Clark; Production Assistants: Ann H. Fogel and June E. Thomas.



## CENTENNIAL NEWS

by Allison R. (Pete) Palmer

### About Time Scales

The 1983 DNAG Time Scale was published in the September issue of *Geology*. This is now a base from which we can work toward updated and improved future versions. Already several callers have asked why the familiar American chronostratigraphic terms, particularly for the Paleozoic, were not used. One reason is that we were using published sources that used the American nomenclature only secondarily, and the other is that there is not yet agreement about international correlation of many boundaries. This question will be addressed for the next edition of the DNAG Time Scale. Meanwhile, the

Harland et al. (1982) reference cited with the DNAG Time Scale does contain correlation charts on pages 12-22 that will permit a reader to tie American nomenclature into the present scale.

Not everybody agrees with all of the numerical ages in the DNAG Time Scale, either. Documentation of better ages, preferably published, will be welcomed by the Ad Hoc Time Scale Committee for consideration in future revisions. Send your information to me at GSA headquarters, P.O. Box 9140, Boulder, CO 80301.

### Publishing (continued from p. 186)

the Association of Earth Science Editors, and she has given talks at AESE annual meetings on such subjects as preparation of illustrations for publication. She also teaches courses in scientific writing for geologists. She is currently teaching an English course for the GSA staff.

Faith Rogers has been the managing editor of *Geology* since 1979, after 7 years at GSA as a proofreader and staff editor. She has a B.S. in journalism from the University of Colorado and worked as an editorial assistant for a textbook publisher and as a copy editor for a daily newspaper before joining the GSA staff. Since 1981 Faith has been the editorial coordinator for the publications department, overseeing manuscript record-keeping, general secretarial work, and disbursement to authors of copies of their articles published in GSA's journals. She became managing editor of *News & Information* in January 1983. She is a member of the Association of Earth Science Editors and of the Society for Scholarly Publishing.

Barbara Patterson came to GSA in 1974, after many years of secretarial experience that included work for the National Oceanic and Atmospheric Administration in Boulder. As GSA's manuscript coordinator and Publications Department secretary, Barbara is the primary record-keeper in the department.

Jean Davis wears two hats—one as secretary for A. R. (Pete) Palmer, coordinator for the Decade of North American Geology (DNAG), GSA's centennial project, and the other as Publications Department secretary. Besides calling manuscript reviewers and assembling review packages, Jean keeps track of books to be reviewed for *Geology*. Her work for the Decade project includes coordinating workshops and other meetings of contributors and keeping manuscript records for all volumes of *The Geology of North America*. Jean, like Lee Gladish, previously worked for the Western Interstate Commission for Higher Education.

### PRIDE IN THEIR WORK

Getting a manuscript into print is a complex process, involving attention to detail as well as ability to visualize the final product. GSA's publications staff enjoys the process and takes pride in the products: monthly issues of *Geology* and the *Bulletin*, books and maps—publications through which your hypotheses and research results are made available to your fellow scientists.

### GSA Southeastern Section Offers Grants-in-Aid for Student Research

The Southeastern Section of GSA announces its third annual grants-in-aid program for student research. Grants may be for graduate or undergraduate research and are available for Student Associates of GSA who are in attendance at colleges or universities within the geographical boundaries of the Southeastern Section. In 1983, seven grants were awarded for up to \$500 each. Information and applications can be obtained from

Stephen H. Stow  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, TN 37830

**Completed applications are due by March 1, 1984.** The final decision on awards will be made in April 1984.

### PEOPLE

GSA Fellow **John D. Haun** has been awarded the American Institute of Professional Geologists' (AIPG) Ben H. Parker Memorial Medal for outstanding service to the profession. Three GSA members have been elected AIPG officers: Member **Ernest K. Lehmann**, president-elect for 1984; Fellow **Charles J. Man-kin**, vice-president for 1984; and Fellow **Richard J. Anderson**, treasurer for 1984-1985.

Fellow **Gerald J. Wasserburg** has been appointed to the newly created John D. MacArthur chair at the California Institute of Technology.

### Who Are Those People?

The names of all those pictured in the annual report section of *October News & Information* (p. 161-168) will be revealed when we announce the name of the reader who correctly identifies the largest number of those people. Identify as many as you can and send your entry to Contest, GSA, P.O. Box 9140, Boulder, CO 80301. Entries must be postmarked by December 31, 1983. The winner will receive GSA Memoir 155, *The Geological Society of America—Life History of a Learned Society*, by Edwin B. Eckel. In case of a tie, earliest postmark wins.

Hint: Only one person pictured on the annual report pages is on the GSA headquarters staff—and he's easy to spot.

## WHAT THEY WERE READING

### 25 years ago . . .


"Rocks intruded by Precambrian granite have been previously described in several districts of central Arizona, but it has not been possible to demonstrate their stratigraphic order. In the Diamond Butte quadrangle five older Precambrian formations can be placed in depositional sequence. The oldest is the Alder Formation, consisting of wacke, slate, quartzite, and conglomerate. It is conformably overlain by the Flying W formation consisting of interbedded basic and acidic volcanic rocks and conglomerate. This is overlain with slight unconformity by the conglomerate, quartzite, and slate of the Houden formation. Above the Houden is the Board Cabin formation composed of porphyritic, pillow, and pyroclastic volcanic rocks, and volcanic sediments. The rhyolites and conglomerates of the Haigler formation complete the sequence. The Haigler is believed to be overlain by still younger rhyolites, and the Alder may be underlain by an older sequence of slate and basic volcanic rocks.

"This volcanic-sedimentary rock sequence portrays a recurrently unstable marine environment in which a large portion, if not all, of the sediment was derived from contemporary volcanic rocks. Through time the parent magma became enriched in potassium and silicon, and finally engulfed its own extrusive and sedimentary deposit to crystallize at relatively shallow depths as quartz porphyry, granophyre, and granite.

"Evidence of pre-existing metamorphic or plutonic rocks has not been found, and this depositional-orogenic cycle may represent the initial continental formation in this area."

From "Older Precambrian Rocks of the Diamond Butte Quadrangle, Gila County, Arizona"  
by Gordon Gastil

*Bulletin of the Geological Society of America*  
v. 69, p. 1495-1514, December 1958



### Call for Symposia Proposals 1984 GSA Annual Meeting Reno, Nevada November 5-8

Include title, conveners, purpose, content, speakers  
Submit questions and/or proposals to

David B. Slemmons  
Technical Program Chairman  
Dept. of Geology  
Mackay School of Mines  
University of Nevada  
Reno, Nevada 89557  
(702) 784-6050

DEADLINE: JANUARY 1, 1984

### 50 years ago . . .

"Cumberland Mountain is one of those "even-crested" Appalachian ridges whose summits, in general, are commonly supposed to represent a peneplain—the Schooley, or "Cretaceous," peneplain—which once covered the region. Cumberland Gap is a notch, cut to a depth of about 600 feet in that ridge, but not now occupied by a stream.

"If the apparent evenness of the ridge crest is due to peneplanation, one would expect the crest to have essentially the same altitude on the two sides of the gap. As a matter of fact, the ridge crest on the southwest side lies about 300 feet lower than on the northeast side. This difference in level on the two sides of the gap is a striking feature, which immediately attracts the attention of the physiographer. . . . Why should this marked change in the elevation of the ridge crest be localized at Cumberland Gap?

"If the even crests of the ridges on the two sides of the gap were due to peneplanation, and if, as is actually the case, a fault of the requisite displacement passed through the gap, it would be a natural assumption that the ridge had been displaced since peneplanation. If, on the other hand, "even" ridge crests do not necessarily imply peneplanation but may be produced by differential erosion on a resistant bed of steeply dipping rock, differences in the elevations of the crests on the two sides of the gap might be expected if, as is also true in this instance, the dips on the two sides were different.

"It thus appears that an explanation of the discrepancy in altitude of the ridge crests is not entirely simple. Obvious possibilities are, on the one hand, post-peneplain faulting, and, on the other hand, differential erosion of unequally dipping rocks.

"The lower elevation of the crest of Cumberland Mountain on the west side of Cumberland Gap cannot safely be used as a criterion of post-Schooley crustal movements, for it might have been, and probably was, produced by differential erosion alone. Furthermore, an analysis of the structure of the region indicates that post-Schooley faulting is unlikely, though settling of the Middlesboro basin, perhaps due to gravitative adjustments following erosion, seems to have occurred in relatively recent time.

"Cumberland Gap was not cut by a northward-flowing stream, but considerable evidence points to its having been formed by a stream, draining southward from the Middlesboro region, which has since been captured and diverted northward to Cumberland River."

From "Physiography and Structure at Cumberland Gap"  
by John L. Rich

*Bulletin of the Geological Society of America*  
v. 44, p. 1219-1236, December 31, 1933

### 75 years ago . . .

"An extremely interesting comparison can be drawn between the shores of lake Ontario and those of its predecessor, glacial lake Iroquois. The shores of lake Iroquois presented lines of sea-cliffs similar in nearly every respect to those of the present lake; barrier beaches were built across open bays; one of these still retains its lagoon as a small pond, known as Silver lake, near Colborne, Ontario. Flying spits were thrown out from salient points and belts of dunes behind sand beaches were built as on the present lake. An almost exact counterpart of Toronto island

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75 years ago (continued from p. 188)

is found in an Iroquois flying spit near York, and another in the Dawnport gravel ridge north of Toronto. At the west end of lake Iroquois a strong barrier beach was built across the valley between the limestone escarpments, cutting off what is now the Dundas marsh from the main lake, counterparts of the present Burlington beach and bay.

"On the south shore similar bars and spits have been noted. One of them, near Pultneyville, New York, was a flying spit similar to that at Scarboro, but pointing eastward.

"The type of shore developed on lake Iroquois was very similar to that developed on lake Ontario at the present time, and would be classed as adolescent. Since the disappearance of lake Iroquois, subaerial erosion processes have only slightly modified the abandoned adolescent shorelines. Slips on the sea-cliffs have obscured old beaches; winds and rains have variously modified the old dunes and sand beaches. All the old sea-cliffs are graded to the summit, but in a few cases even yet an occasional slip may occur under special conditions. The original forms of adolescence, while not yet destroyed, are gradually fading and sequential forms of subaerial origin are developing."

From "Shoreline Studies on Lakes Ontario and Erie"  
by Alfred W.G. Wilson

*Bulletin of the Geological Society of America*  
v. 19, p. 471-500, December 3, 1908

## USGS Solicits Research Proposals on Earthquake Hazard

The U.S. Geological Survey invites proposals for research contracts and grants under the continuing Earthquake Hazard Reduction Program.

The proposed research must be directed toward the goal of identifying, evaluating and characterizing the immediate and long term seismic hazard. Program objectives and tasks required to achieve those objectives are described in Proposal Information Package No. RFP-1485.

Written inquiries concerning this program, and requests for Proposals Information Package No. RFP-1485, should be addressed to

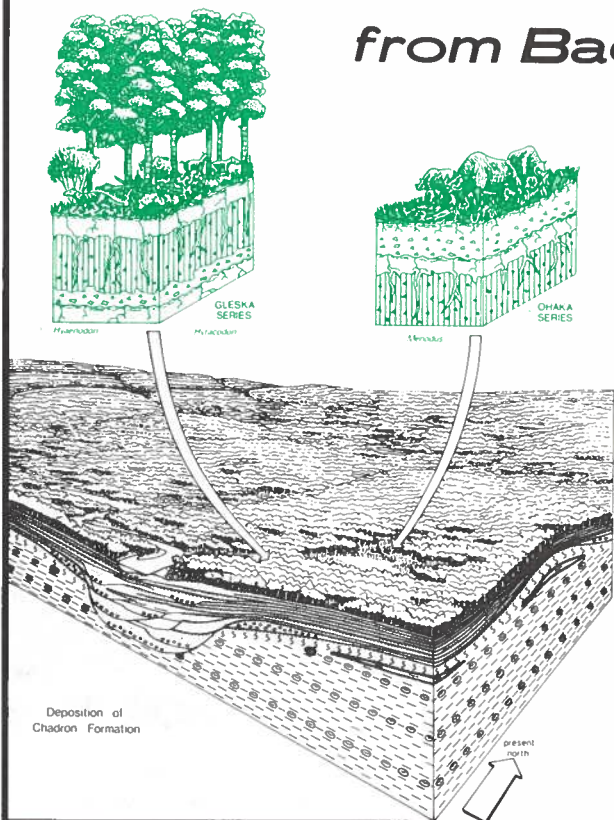
Contracting Officer  
U.S. Geological Survey  
Mail Stop 85  
345 Middlefield Road  
Menlo Park, California 94025

Proposals are due February 10, 1984. It is anticipated that funding of selected programs will start on or after October 1, 1984.

### GSA Special Paper 193

## Late Eocene and Oligocene Paleosols from Badlands National Park, South Dakota

By Greg J. Retallack



The Late Eocene and Oligocene White River and lower Arikaree Groups in the Pinnacles area of the Badlands are largely superimposed fossil soils (87 of them in 143 m of stratigraphic section). In this volume the author describes the features of the paleosols and provides description and classification of 10 paleosol series. He also reconstructs paleosols and their environments. Fascinating artwork.

Special Paper 193, vii + 82, ISBN 0-8137-2193-8,  
CIP ..... \$15.00

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Publication Sales, Geological Society of America,  
P.O. Box 9140, Boulder, CO 80301

## MEETINGS

### 1983

**AGU Fall Meeting**, Dec. 5-10, 1983, San Francisco, California. Information: American Geophysical Union, 2000 Florida Ave., N.W., Washington, DC 20009.

### 1984

**Society of Exploration Geophysicists and Office of Naval Research 4th Symposium on Three-Dimensional Marine Data Collection, Processing, Interpretation, and Presentation**, March 13-15, 1984, Bay St. Louis, Mississippi. Information: Myron Webb, University of Southern Mississippi, Long Beach, MS 39560; (601) 688-3054.

**International Conference on Case Histories in Geotechnical Engineering**, May 6-11, 1984, St. Louis, Missouri. Information: Shamsher Prakash, University of Missouri—Rolla, Rolla, MO 65401; (314) 341-4461.

**International Groundwater Symposium on Groundwater Resources Utilization and Contaminant Hydrogeology**, May 21-23, 1984, Montreal, Canada. Information: A. Kohut, Ministry of the Environment, Victoria, British Columbia V8V 1X5, Canada.

**25th U.S. Symposium on Rock Mechanics**, June 25-27, 1984, Evanston, Illinois. Information: Charles H. Dowding, Dept. of Civil Engineering, Northwestern University, Evanston, IL 60201; (312) 492-7270.

**International Symposium on Deep Structure of the Continental Crust: Results from Reflection Seismology**, June 26-28, 1984, Ithaca, New York. Information: Muawia Barazangi, Dept. of Geological Sciences, Cornell University, Ithaca, NY 14853; (607) 256-6411; Telex 937478.

**Canning Basin Symposium**, June 27-29, 1984, Perth, Western Australia. Information: Phil Connard, Shell Development (Australia) Pty. Ltd., G.P.O., Box W2050, Perth, W. A. 6001, Australia.

**8th World Conference on Earthquake Engineering**, July 21-28, 1984, San Francisco, California. Information: EERI-8WCEE, 2620 Telegraph Ave., Berkeley, CA 94704.

**27th International Geological Congress**, August 4-14, 1984, Moscow, USSR. Information: Secretary General, 27th International Geological Congress, Institute of the Lithosphere, USSR Academy of Sciences, 22, Staromonetny, Moscow, 109180, USSR; 231-48-36; Telex: LITOS 411484.

**International Gas Research Conference**, Sept. 10-13, 1984, Washington, D.C. Information: L. Hirsch, 8600 West Bryn Mawr Ave., Chicago, IL 60631; (312) 399-8300.

**American Institute of Petroleum Geologists Annual Meeting**, Oct. 17-19, 1984, Orlando, Florida. Information: Bobby J. Timmons, Timmons Associates, P.O. Box 50606, Jacksonville Beach, FL 32250; (904) 246-4533.

**International Conference on Ground-Water Technology**, November 12-17, 1984, Johannesburg, South Africa. Information: David M. Nielsen, National Water Well Association, 500 West Wilson Bridge Rd., Worthington, OH 43085; (614) 846-9355.

### 1985

**International Association of Hydrogeologists 17th International Congress, Hydrogeology of Rocks of Low Permeability**, January 7-12, 1985, Tucson, Arizona. Information: Eugene S. Simpson, Hydrology & Water Resources, University of Arizona, Tucson, AZ 85721.

**26th U.S. Symposium on Rock Mechanics**, June 26-28, 1985, Rapid City, South Dakota. Information: Eileen Ashworth, Dept. of Mining Engineering, South Dakota School of Mines and Technology, Rapid City, SD 57701-3995; (605) 394-2344.

### GSA 1984

#### Sections

**Northeastern Section**, March 15-17, Providence, Rhode Island

**South-Central Section**, March 26-27, 1984, Dallas, Texas

**North-Central and Southeastern Sections**, April 4-6, 1984, Lexington, Kentucky

**Rocky Mountain Section**, May 11-12, Durango, Colorado

**Cordilleran Section**, May 30-June 1, Anchorage, Alaska

#### Penrose Conferences

**The West-African Connection—Evolution of the Central Atlantic Ocean and Its Continental Margins**, January 16-21, 1984, Giens, France. Conveners: John Rodgers, Yale University; Xavier T. LePichon, University of Paris; Jean Sougy, University of Marseilles

**Structural Styles and Deformational Fabrics of Accretionary Complexes**, April 30-May 4, 1984, Eureka/Arcata area, northern California. Conveners: J. Casey Moore, University of California, Santa Cruz; Daniel E. Karig, Cornell University; Darrel S. Cowan, University of Washington

**Processes and Products of Multistage Melting and Metasomatism in the Mantle**, April 29-May 4, 1984, Apache Junction, Arizona. Conveners: Jane E. Pike, USGS, Menlo Park, California; Arthur L. Boettcher, University of California, Los Angeles; Frederick A. Frey, MIT; Frank M. Richter, University of Chicago

**Melanges of the Appalachian Orogen**, June 23-30, 1984, Stephenville, Newfoundland. Conveners: Harold Williams, Memorial University of Newfoundland; Nicholas Rast, University of Kentucky; Brenna E. Lorenz, Memorial University of Newfoundland

## SPECIMEN OF THE MONTH



This 2-ton stromatolite is from the 1.8-b.y.-old Kona Dolomite in the Chocoy Group of the Marquette Range supergroup near Negaunee, Michigan. Such laminated structures were built, most likely, by blue-green algae in shallow seas. Be sure to look for this stromatolite, in GSA's parking-lot area, when you visit headquarters in Boulder, Colorado.

# NORTHEASTERN SECTION, GSA, ANNUAL MEETING

## Providence, Rhode Island, March 15–17, 1984

The Northeastern Section of the Geological Society of America will meet March 15–17, 1984, at the Biltmore Plaza and Holiday Inn in Providence, Rhode Island. This 19th annual meeting is held with the Eastern Section of the Society of Economic Paleontologists and Mineralogists, the Northeast Section of the Paleontological Society, and the Eastern Section of the National Association of Geology Teachers. The meeting is sponsored by the Department of Geological Sciences, Brown University and the Department of Geology, University of Rhode Island.

### REGISTRATION

Registration is required for all those attending the meetings, exhibits, short course, and spouse's programs. Admission to meeting functions is by badge only.

Preregistration at reduced rates can be completed by mail. Preregistration forms must be received by **February 27, 1984**. Refunds on canceled preregistrations will be made in full until February 27, 1984. After that date, no refunds will be made except for short-course registrants if the short course is canceled.

On-site registration begins Wednesday evening, March 14, 1984, on the second-level balcony of the Biltmore Plaza.

### WELCOMING PARTY

A welcoming party for all those attending the meeting will be held from 1930 to 2200 hours on Thursday, March 15, in the Grand Ballroom (17th floor) of the Biltmore Plaza. Admission is by registration badge.

### TECHNICAL PROGRAM

General technical sessions will be scheduled as oral presentations and poster sessions from Thursday through Saturday noon. Sessions will be held in the Biltmore Plaza and Holiday Inn.

### SYMPOSIA

1. **The Upper Devonian (Frasnian-Famennian) Biotic Crisis.** James E. Sorauf, Department of Geological Sciences and Environmental Studies, State University of New York at Binghamton, Binghamton, NY 13901; George R. McGhee, Department of Geological Sciences, Rutgers State University, New Brunswick, NJ 08903.
2. **Mylonites and Shear Zones of the Northern Appalachians.** Arthur G. Goldstein, Department of Geology, Colgate University, Hamilton, NY 13346; Robert P. Wintsch, Department of Geology, Indiana University, Bloomington, IN 47401.
3. **Geology of the Meguma Terrane, Nova Scotia, Canada.** J. Duncan Keppie, Department of Mines and Energy, P.O. Box 1087, 1690 Hollis St., Halifax, Nova Scotia B3J 2X1, Canada; William H. Poole, Geological Survey of Canada, 601 Booth St., Ottawa, Ontario K1A 0B8, Canada.
4. **Comparison of Modern and Ancient Convergent Plate Boundaries with Evolutionary Aspects of the Appalachian Orogenic Belt.** A symposium dedicated to the professional life of William M. Chapple. Rolfe S. Stanley, University of Vermont, Burlington, VT 05401;

Tim Byrne, Department of Geological Sciences, Brown University, Providence, RI 02912.

5. **Hydrotechnology: Advanced Technology for Hydrology.** Frank J. Wobber, Office of Energy Research (ER-75), U.S. Department of Energy, Washington, DC 20545; Jeff Sgambat, Geraghty and Miller, Inc., 844 West St., Annapolis, MD 20401.
6. **Perspectives on the Regional Geology of Maine: A symposium on the new state geologic maps.** Walter A. Anderson, Marc C. Loiselle, and Woodrow B. Thompson, Maine Geological Survey, State House Station 22, Augusta, ME 04333.
7. **Avalonian Terrains in the Northern Appalachians: I. Igneous Petrology, Geochemistry and Petrogenesis.** Rudolph Hon and J. Christopher Hepburn, Department of Geology and Geophysics, Boston College, Chestnut Hill, MA 02167. **II. The Effect of the Alleghanian Orogeny upon the Avalonian Geology of South-eastern New England.** Daniel Murray, Department of Geology, University of Rhode Island, Kingston, RI 02881. Sharon Mosher, Department of Geology, University of Texas at Austin, Austin, TX 78712.
8. **Glacial Sediment Production and Dispersal.** Byron D. Stone, U.S. Geological Survey, National Center, MS 928, Reston, VA 22092; Jon C. Boothroyd, Department of Geology, University of Rhode Island, Kingston, RI 02881. Sponsored by the Eastern Section of the Society of Economic Paleontologists and Mineralogists.
9. **Geophysics of the Coastal Plain and Continental Margin of the Northeastern United States.** Kim Klitgord, U.S. Geological Survey, Woods Hole, MA 02543; Wallace A. Bothner, Department of Earth Sciences, University of New Hampshire, Durham, NH 03242.

### SHORT COURSE

#### Mechanics of Sediment Movement

Sponsored by Eastern Section, SEPM (a revised version of SEPM Short Course 3). The course is designed to introduce sedimentologists, geomorphologists, marine and environmental geologists, and others to the basic physics of sediment movement by unidirectional and oscillatory currents. Topics will include the properties and behavior of fluids in motion; aspects of turbulence important for an understanding of sedimentation phenomena; modes of sediment movement; dynamics of settling, suspension, and sediment movement on

*(continued on page 192)*

**Northeastern Section, Short Course** (continued from p. 191)  
 the bed; nature and origin of bed forms; dynamics of sediment  
 gravity flows; and nature of sediment deposition.  
*Instructors:* G. V. Middleton, McMaster University;  
 J. B. Southard, MIT  
*Dates:* March 13-14, 1984

*Place:* Biltmore Plaza Hotel, Providence, RI  
*Registration Fee:* \$60

There will be about 10 hours of lectures, plus ample time  
 for questions and discussions. A book of notes (a thoroughly  
 revised edition of the notes for SEPM Short Course 3) will be

Northeastern Section, GSA, Annual Meeting

**PREREGISTRATION FORM**

March 15-17, 1984, Biltmore Plaza and Holiday Inn, Providence, Rhode Island

*Preregistration forms must be received no later than February 27, 1984*

**PLEASE PRINT OR TYPE**

**NAME** \_\_\_\_\_  
Last First Middle Name for Badge

**Registered as:** Professional  Student  Spouse/Guest   
**Membership Affiliation:** GSA  SEPM  PS  NAGT  NONE (Note Surcharge)

*Please note: Valid student ID required for student badge pickup.*

**Institution or Firm** \_\_\_\_\_

**Mailing Address** \_\_\_\_\_  
Street City State Zip Code

**Phone: Business ( )** \_\_\_\_\_ **Home ( )** \_\_\_\_\_

**Spouse or Guest** \_\_\_\_\_  
Last First Middle

**Affiliation (abbreviate for badge)** \_\_\_\_\_

**Mailing Address** \_\_\_\_\_  
Street City State Zip Code

**FEES:**

Preregistration (until February 27) per person .....	\$15.00	\$ _____
Registration (after February 27) per person .....	\$20.00	\$ _____
Student/Guest Preregistration (until February 27) per person .....	\$ 4.00	\$ _____
Student/Guest Registration (after February 27) per person .....	\$ 8.00	\$ _____
<b>Non-GSA Member Surcharge</b>		
For Professionals .....	\$ 8.00	\$ _____
For Students/Guests .....	\$ 2.00	\$ _____
Extra Abstracts Volume (reserved on-site) .....	\$ 5.00	\$ _____
<b>GSA Luncheon (subsidized)</b>		
Friday, March 16, Biltmore Plaza Ballroom .....	\$ 5.00	\$ _____
Short Course: Mechanics of Sediment Movement, March 13-14 .....	\$60.00	\$ _____

**TOTAL FEES**

Make check or money order, US funds only, payable to GSA Northeastern Section \$ \_\_\_\_\_

**PREREGISTRATION FORMS MUST BE RECEIVED NO LATER THAN FEBRUARY 27, 1984**

Refund on canceled preregistration will be made in full if we receive notice by February 27, 1984.  
 After that date no refunds will be made except for canceled short course.

**FOR OFFICE USE ONLY**

Date received \_\_\_\_\_  
 Amount received \_\_\_\_\_  
     Registration \_\_\_\_\_  
 Short Course \_\_\_\_\_  
 GSA Luncheon \_\_\_\_\_  
 Personal check \_\_\_\_\_  
 Other \_\_\_\_\_  
 Issued by \_\_\_\_\_

**Mail completed preregistration forms and full payment to:**

Northeastern GSA Registration  
 Department of Geological Sciences  
 Brown University  
 Providence, RI 02912



provided without extra charge to each registrant. The fee does not include overnight accommodations or meals; registrants who need accommodations should choose the Biltmore Plaza Hotel on the Housing Form. Enrollment is limited to 100 persons. For more information, contact John Southard, Room 54-1026, MIT, Cambridge, MA 02139; (617) 253-3397.

**STUDENT PAPERS**

Awards will be given for the best student papers presented in the technical sessions. To be judged and eligible, the abstract must be by one author and be designated on the abstract form as a student paper (item 5).

**PROJECTION EQUIPMENT**

All slides must be 2" x 2" and fit in a standard 35mm carousel tray and projector. Only one projector and screen will be used in each of the technical sessions. Please plan presentations accordingly and bring your own loaded carousel tray if possible.

**EXHIBIT SPACE**

Exhibits will be held in the Bacchante Room of the Biltmore Plaza. A single booth is US\$75 for educational and nonprofit institutions and US\$150 for commercial organizations. For additional information, contact

Dr. Bruno J. Giletti, Department of Geological Sciences  
Brown University, Providence, RI 02912  
(401) 863-2242

**SPOUSE/GUEST ACTIVITIES**

Planned spouse/guest activities include walking tours of 18th and 19th century neighborhoods and homes and visits to museums and exhibits at Brown University and the Rhode Island School of Design. If there is sufficient interest, an excursion to Newport, Rhode Island, can be arranged at modest additional cost.

**SPECIAL EVENTS**

The Northeastern Section GSA Annual Luncheon will be held Friday, March 16, in the Grand Ballroom of the Biltmore Plaza. The cost of the luncheon is partially subsidized.

The times and places of business meetings of the Northeastern Section GSA and for associated societies (sections of SEPM, PS, and NAGT) will be announced in *Abstracts with Programs*.

**TRAVEL INFORMATION**

The Biltmore Plaza and Holiday Inn are located in downtown Providence, Rhode Island, just off I-95. Both hotels are within easy walking distance of the bus and train terminals. Air service to Providence is through T. F. Green Airport. Both hotels offer transportation to and from the airport for their registered guests (use courtesy phones at airport). Parking at each hotel is free to their registered guests.

**HOUSING FORM**

Northeastern Section, Geological Society of America, March 15-17, 1984

Applications for housing must be received by the hotel by February 15, 1984. After this date, the hotels will accept reservations on a space-available basis only. Reservations will be held until 6:00 p.m. To hold reservations beyond this time, a guarantee for the first night's lodging by check or credit card is required. This should be provided directly to the hotel after you receive a confirmation.

Indicate hotel and room choice below. Send the completed form directly to the chosen hotel. In the event that the room block of one of the hotels becomes filled, reservation requests will be forwarded to the other hotel.

Name \_\_\_\_\_

Address \_\_\_\_\_

Arrival \_\_\_\_\_  
day date time

Departure \_\_\_\_\_  
day date time

Sharing room with: \_\_\_\_\_

Biltmore Plaza  
Kennedy Plaza, Providence, RI 02903  
(401) 421-0700

Holiday Inn  
I-95 at Atwells Avenue, Providence, RI 02903  
(401) 831-3900

___ Single (\$52)	___ Quad (\$72)	___ Single (\$50)	___ Quad (\$65)
___ Double (\$60)	___ Student (3-4) (\$60)	___ Double (\$55)	___ Student (3-4) (\$58)
___ Triple (\$66)		___ Triple (\$60)	

(8% tax will be added to room charges)

## \$1,000 COAL SCHOLARSHIP OFFERED

To further interest and research in coal within the Rocky Mountain and northern Great Plains coal provinces, the Coal Geology Division of GSA and the Ad Hoc Committee for the Symposium on the Geology of Rocky Mountain Coal are offering a \$1,000 scholarship award in 1984. As this scholarship is derived from the Ad Hoc Committee's funds invested in the GSA Foundation, only applicants whose research pertains to the coals in the states or provinces of Arizona, Alberta, British Columbia, Colorado, Idaho, Montana, New Mexico, North Dakota, Utah, Saskatchewan, South Dakota, and Wyoming will be considered.

**Requirements:** Applicants must meet the following criteria to qualify for consideration of this scholarship:

A. He or she must be currently enrolled in a graduate program (M.S. or Ph.D.) at a private or state college or university.

B. The main theme of an applicant's research must be an aspect of coal research, and further, the research must pertain to coals in the states or provinces listed above. (The institution where the research is being conducted need not be in the states or provinces listed above.)

C. Although the applicant must be involved in coal research, he or she does not have to be a geology major but can be majoring in another field.

**Applications:** Interested students can obtain scholarship applications from the chairman of the Scholarship Committee,

Gary B. Glass, Geological Survey of Wyoming, Box 3008 University Station, Laramie, WY 82071. Completed applications should be sent to this same address. **Deadline for applications is February 1, 1984.**

**Selection Committee:** A committee made up of two ad hoc members of the Symposium on the Geology of Rocky Mountain Coal and two GSA Coal Geology Division members will screen applications and select the most appropriate proposal by May 1, 1984.

### In Memoriam

Lawrence C. Craig  
Denver, Colorado

Charles T. Holland  
Morgantown, West Virginia  
April 14, 1983

Clark Goodman  
Coronado, California  
June 23, 1983

Joseph H. Peck, Jr.  
Orinda, California  
November 20, 1982

John T. Rouse  
Billings, Montana

Memoir 157

# TECTONICS AND STRATIGRAPHY OF THE EASTERN GREAT BASIN

Edited by David M. Miller, Victoria R. Todd,  
and Keith A. Howard

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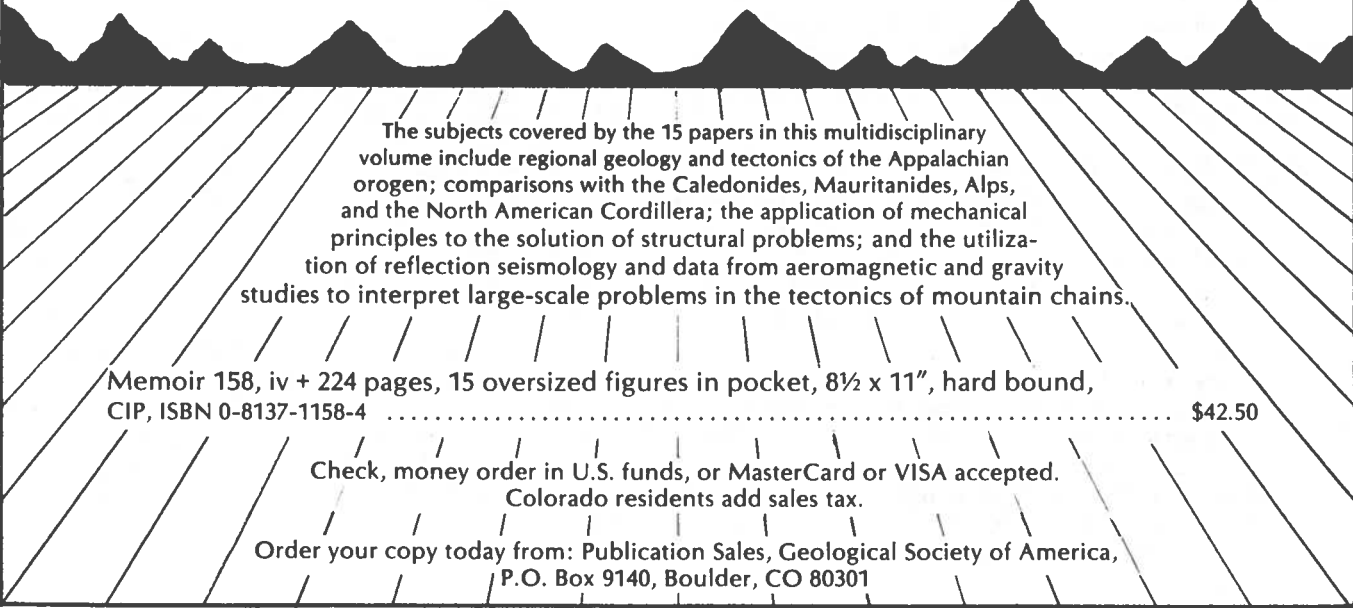
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### Memoir 158

Edited by R.D. Hatcher, H. Williams, and I. Zietz

## Contributions to the Tectonics and Geophysics of Mountain Chains



The subjects covered by the 15 papers in this multidisciplinary volume include regional geology and tectonics of the Appalachian orogen; comparisons with the Caledonides, Mauritanides, Alps, and the North American Cordillera; the application of mechanical principles to the solution of structural problems; and the utilization of reflection seismology and data from aeromagnetic and gravity studies to interpret large-scale problems in the tectonics of mountain chains.

Memoir 158, iv + 224 pages, 15 oversized figures in pocket, 8½ x 11", hard bound, CIP, ISBN 0-8137-1158-4 ..... \$42.50

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## SOUTH-CENTRAL SECTION, GSA, ANNUAL MEETING

### Dallas, Texas, March 26-27, 1984

The Geosciences Program at the University of Texas at Dallas will host the 18th Annual Meeting of the South-Central Section of the Geological Society of America, concurrently with the Texas Section of the National Association of Geology Teachers, on Monday and Tuesday, March 26-27, 1984, in Richardson, Texas. The meeting will consist of two days of symposia and volunteered papers, four field trips, a welcoming party, annual banquet, and luncheons. For further information, write or call General Chairman Richard M. Mitterer, (214) 690-2406 or 690-2401, Technical Program Chairman Emile A. Pessagno, Jr., (214) 690-2430, or Field Trip Chairman Kent C. Nielsen, (214) 690-2448, Geosciences Program, The University of Texas at Dallas, P.O. Box 830688, Richardson, TX 75083-0688.

#### REGISTRATION

All persons participating in any events of the meeting **must be registered.**

**Preregistration.** Advance registration will aid the local committee in making final plans. Advance registration is \$35 until February 24, 1984, and includes one luncheon. After February 24, 1984, registration is \$40 and does not include the luncheon. Student's advance registration is \$15 with a complimentary luncheon. After February 24, 1984, student registration is \$15 with no luncheon. To qualify for the reduced preregistration fees, your registration form, with payment, must be postmarked **no later than Friday, February 24, 1984.** Please complete the accompanying registration form and return it with a check or money order in U.S. currency (made payable to South-Central GSA/Dallas) to Richard M. Mitterer, South-Central GSA, Geosciences Program, The University of Texas at Dallas, P.O. Box 830688, Richardson, TX 75083-0688. Preregistrants can pick up their meeting materials and badges at the Hilton Inn—Richardson (headquarters hotel) on Sunday, March 25, 1984, from 1800 until 2000 hours, or on Monday and Tuesday during registration hours at the Conference Center.

**On-Site Registration.** Registration will be held at the Conference Center on the UTD campus from 0800 to 1630 hours on Monday, March 26, and Tuesday, March 27, 1984. Some tickets for the banquet and for the field trips may be available Sunday evening and Monday morning, both on a space-available basis.

If requests for advance registration refunds are received at the Geosciences Program by March 10, 1984, all but \$10 will be returned. Field trip fees will be refunded only if the space can be resold.

#### TECHNICAL PROGRAM

1. **Mesozoic Tectonics and Stratigraphy in the Circum-Gulf: Bearing on the Origin of the Gulf of Mexico** (Jose Longoria, The University of Texas at Dallas)
2. **Tectonics and Stratigraphy of the Caribbean Region: Bearing on its Origin** (Peter M. Mattson, Queens College, N.Y.)
3. **Cretaceous-Tertiary Boundary in the Gulf Coastal Plain and Terminal Cretaceous Extinction Event** (Charles C. Smith, Tenneco, Houston; Ernest A. Mancini, University of Alabama, Tuscaloosa)
4. **Paleozoic Crustal Evolution in the Southern Mid-Continent** (R. E. Denison, Independent, Dallas; Kent C. Nielsen and Robert J. Stern, The University of Texas at Dallas)

5. **Paleozoic Biostratigraphy and Chronostratigraphy in the Ouachita-Arbuckle-Marathon Trends** (Merlynd K. Nestell, and Rex E. Crick, The University of Texas at Arlington)
  6. **Subsurface Diagenesis: Rock-water Interaction** (Bimal Mukhopadhyay and Robert G. Loucks, Arco Oil & Gas Exploration & Production Research, Dallas)
  7. **Geophysical Crustal Studies of the Southern Mid-Continent Region** (Carlos Aiken, The University of Texas at Dallas; Don W. Steeples, University of Kansas)
  8. **Geologic Education: Industrial and Academic Viewpoints** (William Brown, Baylor University)
  9. **Quantitative Techniques in Structural Geology** (Sharon Mosher, The University of Texas at Austin; Ian Duncan, Southern Methodist University, Dallas)
- In addition, topical general sessions will be arranged on the basis of abstracts submitted and accepted.

#### FIELD TRIPS

One field trip will precede the meeting, two will be post-meeting, and one will be conducted during the meeting. Field trip coordinator is Kent C. Nielsen, Geosciences Program, The University of Texas at Dallas, P.O. Box 830688, Richardson, TX 75083-0688. **Field-trip registrants must preregister for the meeting.** Field-trip registration is on a first-come, first-served basis. Full refunds will be made for any oversubscribed trips and for any trips that may be canceled.

#### Premeeting

1. **Recent Developments in the Wichita Mountains** (March 24-25). Leaders: Charles Gilbert, Texas A & M University; R. N. Donovan, Oklahoma State University.

Recent research has elucidated the importance of wrench-style tectonics, basement and lower Paleozoic rock character, and neotectonics in the evolution of the Southern Oklahoma aulacogen. Field stops will illustrate the character of fracturing and faulting and differing mechanical response of carbonates and igneous rocks to the applied stresses and will survey major lithostratigraphic units for distinctive characteristics. Specific attention will be given to the Meers Fault and the possibility of Quaternary movement. This trip will complement the observations of the postmeeting trip to the Ouachita and Arbuckle Mountains, providing the potential of a complete overview of this important tectonic province. **Limit: 40; Cost: \$85.**

(continued on p. 197)

**Field Trips** (continued from p. 196)

**During Meeting**

**2. Urban Geology of Dallas** (March 27). Leaders: Peter Allen, Baylor University; O. T. Hayward, Baylor University.

This trip will strive to show the interrelationship of geology and city development. Stops will include observation of hazardous slopes, floodplains, expansive soils and mineral resources with guidelines for development. In addition, the trip will review an interfloodplain lake proposal. **Limit: 40; Cost: \$30.**

**Postmeeting**

**3. Mesozoic Stratigraphy and Tectonics of Northeastern Mexico** (March 27-31). Leader: Jose Longoria.

This field trip will examine outstanding Mesozoic (Triassic through Cretaceous) sections in northeastern Mexico, representing the most complete Late Jurassic-Cretaceous marine sequence in the entire Gulf of Mexico region. Classic localities within the Sierra Madre Oriental and the Sabinas Basin will be visited. Outcrops of stratigraphically important units such as

(continued on p. 198)

**PREREGISTRATION FORM**

18th Annual Meeting, South-Central Section, GSA  
March 26-27, 1984

The University of Texas at Dallas, Richardson, Texas

Mailing Deadline for Advance Registration: **February 24, 1984**

Name \_\_\_\_\_  
Last First Middle Nickname for badge

Social Security No. \_\_\_\_\_ Student I.D. No. \_\_\_\_\_

Institution or Firm \_\_\_\_\_

Address \_\_\_\_\_  
Street City State Zip Code

Phone: Business ( ) \_\_\_\_\_ Residence ( ) \_\_\_\_\_

Spouse or Guest \_\_\_\_\_  
Last First Middle

Address \_\_\_\_\_  
Street City State Zip Code

**REGISTRATION FEES**

	UNTIL February 24, 1984 (mailing date)	AFTER February 24, 1984	
Regular	\$35	\$40	\$ _____
Student fee (see below)	\$15	\$15	\$ _____

**Preregistration Complimentary Luncheon Choice:**

Monday, March 26       Tuesday, March 27: NAGT      \$ \_\_\_\_\_

**Annual Banquet**

Monday evening, March 26 (\$15)      \$ \_\_\_\_\_

**Total Preregistration** \$ \_\_\_\_\_

**Note: Refunds are subject to \$10 processing fee**

**STUDENT VERIFICATION:** I certify that the above registrant is a full-time student.

Signature \_\_\_\_\_ Bus. Phone \_\_\_\_\_  
(Head or Chairman, Dept.)

Address \_\_\_\_\_

**Mail this preregistration form and check (payable to South-Central GSA/Dallas) to**  
Richard M. Mitterer  
Geosciences Program, The University of Texas at Dallas  
P.O. Box 830688, Richardson, TX 75083-0688

**South-Central Section, Field Trips** (continued from p. 197)

the Triassic Huzachal Group, the Oxfordian Minas Viejas evaporites, and the Upper Jurassic and Cretaceous carbonate and siliciclastic facies will be examined. Special emphasis will be given to the deep- versus shallow-water origin of the Late Jurassic succession. Pre-Laramide, Laramide, and post-Laramide tectonics will be viewed. Includes lodging (in the Sierra Madre), meals, guidebook, and transportation (includes roundtrip airfare from Dallas to Monterrey and field transportation vans). Walking and climbing expected. **Limit: 20-30; Cost: \$550.**

**4. Comparative Structural Evolution of the Arbuckle and Ouachita Mountains** (March 27-29). Leaders: Kent C. Nielsen, The University of Texas at Dallas; W. G. Brown, Baylor University.

The coeval and structural history of the Arbuckle and Ouachita Mountains provides insight into the deformational stage of an aulacogen and a neighboring fold-and-thrust belt. Field stops in the Ouachita Mountains will include the multi-stage deformation in the Broken Bow Uplift and the thrust sequence in the Frontal Zone. Stops in the Arbuckle Mountains will address the style of folding and faulting along the principal fault traces. This trip will complement the observations of the premeeting trip to the Wichita Mountains, providing the potential of a complete overview of this important tectonic province. **Limit: 40; Cost: \$98.**

**SPECIAL EVENTS**

**NAGT Meeting.** The Texas Chapter of the National Association of Geology Teachers will hold its annual meeting with the South-Central Section of GSA. The luncheon and business meeting will be at noon on Tuesday, March 27, in the Conference Center.

**Welcoming Party.** An informal cocktail party (cash bar) will be held for all registrants at the Hilton Inn—Richardson from 1900 to 2100 hours, Sunday, March 25, 1984. Suitable beverages and snacks will be available.

**Annual Banquet.** The annual banquet will be at 1930 hours, Monday, March 26, 1984, in the Enterprise I Ballroom at the Hilton Inn—Richardson, following a cash-bar cocktail party starting at 1830 hours. A guest speaker will present an address following the meal. Cost of the banquet will be \$15.

**Open House.** The Geosciences Program will hold an open house on late Tuesday afternoon, March 27, in the Founders Building.

**STUDENT AWARDS**

The South-Central Section will present three cash awards (\$200, \$100, and \$50) for the best papers written and delivered exclusively by students. Prizes awarded for student papers with more than one author will be divided among the authors.

**TRAVEL TO UTD**

The Hilton Inn—Richardson is at the intersection of Campbell Road and North-Central Expressway (U.S. 75). The UTD campus is about two miles west of this intersection on Campbell Road. Free visitor parking is available at the UTD Conference Center.

**MEALS**

Breakfast and lunch are available at the UTD cafeteria and the Student Union Building. Several restaurants are within convenient driving distance of the university.

**HOUSING**

Lodging to suit a range of tastes and budgets is available. Rooms have been blocked at several motels and hotels (listed below) that are within a short driving distance of the UTD campus. To reserve a room at one of these, **contact the motel or hotel directly.** Mention that you are attending the **Geological Society of America Meeting at the University of Texas at Dallas.** Rooms not reserved by March 15, 1984, will be released.

Hotels marked with an asterisk offer accommodations for 2 to 4 persons per room at the same rate. A free shuttle service will be provided from two of the hotels (double asterisk) to the campus and return in the early mornings and late afternoons.

Hilton Inn—Richardson (headquarters)** 1981 N. Central Expwy., Richardson, TX 75080 (214) 644-7000 (2 miles from UTD campus)	Single \$66 Double \$66*
Holiday Inn—Richardson** 1655 N. Central Expwy., Richardson, TX 75080 (214) 238-1900 (2 miles from UTD campus; walking distance to Hilton Inn—Richardson (headquarters hotel))	Single \$54 Double \$54*
Brookhollow Inn 250 Municipal Dr., Richardson, TX 75080 (214) 669-1000 (2 miles from UTD campus; walking distance to Hilton Inn—Richardson (headquarters hotel))	Single \$70# Double \$82**
Continental Inn—Richardson 1758 South Central Expwy., Richardson, TX 75080 (214) 235-8321 (4 miles from UTD campus)	Single \$25 Double \$28*
Ramada Inn—No. Dallas 13900 N. Central Expwy., Richardson, TX 75080 (214) 231-5181 (4½ miles from UTD campus)	Single \$38 Double \$38*
La Quinta Motor Inn 13685 N. Central Expwy., Richardson, TX 75080 (214) 234-1016 (3½ miles from UTD campus)	Single \$34 Double \$50*
La Quinta Motor Inn 1820 N. Central Expwy., Plano, TX 75075 (214) 423-1300 (3½ miles from UTD campus)	Single \$35 Double \$35*
The Harvey House 7815 LBJ Freeway, Dallas, TX 75240 (214) 960-7000 or (800) 922-9222 (5 miles from UTD campus)	Single \$50 Double \$50*
The Harvey House 1600 N. Central Expwy., Plano, TX 75075 (214) 578-8555 or (800) 922-9222 (3½ miles from UTD campus)	Single \$50 Double \$50*
Texian Inn 2550 N. Central Expwy., Plano, TX 75075 (214) 578-1626 (3½ miles from UTD campus)	Single \$36 Double \$38*

\*Accommodations for up to four (4) persons at this rate.

\*\*Free shuttle service to UTD campus.

#Suites with kitchens.

# FIELD TRIP REGISTRATION FORM

South-Central Section, GSA  
 The University of Texas at Dallas  
 March 26-27, 1984

Name \_\_\_\_\_  
Last First Middle

Institution or Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone: Business ( ) \_\_\_\_\_ Home ( ) \_\_\_\_\_

Professional  Student  Student I.D. No. \_\_\_\_\_

Student Verification: I certify that the above named registrant is a full-time student.

Signature \_\_\_\_\_ Bus. Phone \_\_\_\_\_  
(Head or Chairman, Dept.)

Address \_\_\_\_\_

**Premeeting**

Trip 1. Wichita Mountains (March 24-25) \$ 85 \$ \_\_\_\_\_

**During Meeting**

Trip 2. Urban Geology of Dallas (March 27, morning) \$ 30 \$ \_\_\_\_\_

**Postmeeting**

Trip 3. Northeastern Mexico (March 27-31) \$550 \$ \_\_\_\_\_

Trip 4. Arbuckle and Ouachita Mountains (March 27-29) \$ 98 \$ \_\_\_\_\_

**TOTAL, FIELD TRIPS \$ \_\_\_\_\_**

**Note:** Reservations for field trips will be accepted only if accompanied by full payment and Preregistration Form. Field trips may be canceled if registration is insufficient or for reasons beyond GSA's control. Full refund will be made in those circumstances. *Personal cancellations must be received in writing before March 10, 1984.* Refunds are subject to a processing fee.

**Mail this registration form and check (payable to South-Central GSA/Dallas—Field Trips) to**  
 Richard M. Mitterer

Geosciences Program, The University of Texas at Dallas  
 P.O. Box 830688, Richardson, TX 75083-0688

**REGISTRATION DEADLINE: February 24, 1984**



Member # \_\_\_\_\_ Name \_\_\_\_\_

New Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Country \_\_\_\_\_

Effective Date of Change \_\_\_\_\_

Phone number during business hours: ( ) \_\_\_\_\_

Check here if you **DO NOT WISH** to have this number included in the Membership Directory .

Former Address—Attach Mailing Label

North American members should report address changes 6 to 8 weeks in advance; all others, 3 months in advance.

SOUTH-CENTRAL SECTION

HOLIDAY GIFT CERTIFICATES  
SEE PAGE 2



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