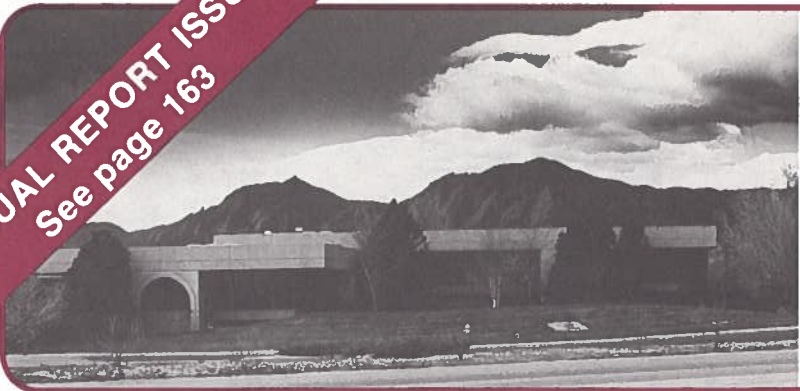


**ANNUAL REPORT ISSUE**  
See page 163



# GSA NEWS & INFORMATION

Monthly Newsletter of  
The Geological Society of America

VOLUME 6, NUMBER 10

OCTOBER 1984

## RENO, NEVADA, AND THE CORDILLERAN SECTION WELCOME YOU FOR THE 1984 GSA ANNUAL MEETING

Welcome to Reno—the “Biggest Little City in the World.” If you doubt it, wait until you see the arch that straddles Virginia Street at Casino Row. A fun-filled town, yes—and we hope to make your Annual Meeting visit informative, memorable, and pleasant.

Entertainment is spelled in capitals 24 hours a day, 7 days a week in Reno, and I guarantee that restaurants will be open regardless of time or day of arrival. If you wish to try your luck at the tables—well, Good Luck!! We have mountains on the west and mountains on the east; fabulous Lake Tahoe and historic Virginia City are within about 30 minutes drive. Those who are fascinated by western history can pay homage to the settling of the West with a 30-minute drive to the Donner Party monument. All in all, Reno is a wonderful place, and we hope you can join us in early November.

Your host organization is the Department of Geological Sciences, Mackay School of Mines, University of Nevada—Reno. Your hard-working local committee is composed of most of the department faculty, as well as scientists from the Desert Research

Institute, and from our local community of professional geologists, more than 300 strong, and their spouses.

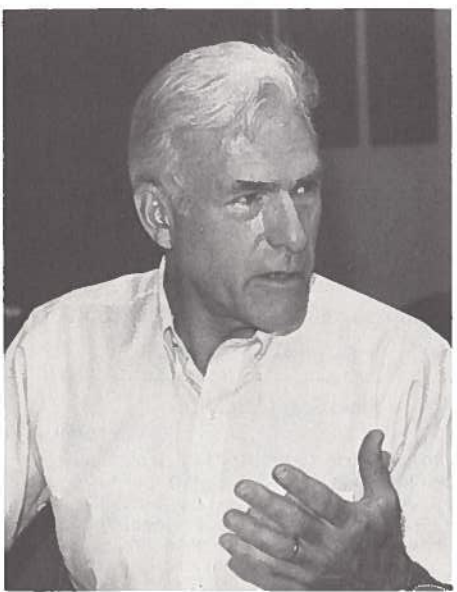
All societies and divisions other than the Paleontological Society will meet in the spacious and colorful MGM Grand Hotel. The paleontologists will hold their sessions at Harrah's Hotel.

Fifteen premeeting field trips will start from such diverse locales as Salt Lake, Denver, Las Vegas, and Reno. A half-day trip will run during the meeting, and there will be eight post-meeting trips. Subjects are as diverse as is our science, and locations range from Reno to Argentina.

Twenty-four symposia ranging in subject matter from COCORP to coal and maps to mines start Sunday, November 4, and continue throughout the meeting.

Exclusive of symposia, 70 oral presentation sessions have been scheduled. Superb topical coverage is ensured by, for example, four sessions on structure, six on tectonics, six on geochemistry, and seven on economic geology. Eight poster presentations, one each morning and each afternoon of every day

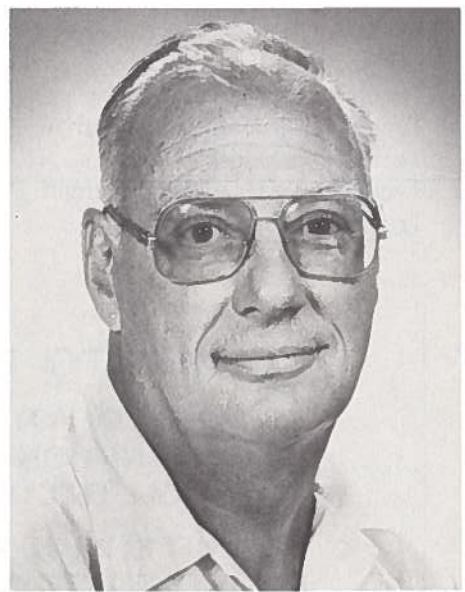
*(continued on p. 158)*



**David B. Slemmons**  
1984 Technical Program Chairman



**Lawrence T. Larson**  
1984 General Chairman, GSA Annual Meeting



**Joseph Lintz, Jr.**  
1984 Field Trip Chairman

**Welcome to the Annual Meeting** (continued from p. 157)

of the meeting, are scheduled. In addition, the Science Theater will entertain and inform throughout the convention. This year you can watch the films in comfort and splendor at one of the theaters in the MGM Grand.

In addition to all the symposia, field trips, and oral and poster presentation sessions, eight short courses will cover subjects ranging from mammals to microcomputers, and remote sensing to seismic stratigraphy. Forums and workshops range from Geo-Ref to geowriting, employment to mineral resources.

In the exhibits hall, a major attraction, more than 120 exhibitors in 180 booths will inform you of their products, projects, and programs.

Lest you think all will be work at the Annual Meeting, let me assure you that such is impossible in Reno. In addition to the sights, shows, and other attractions of the town, we have arranged a Sunday evening welcoming party; an evening of more than 50 alumni receptions; an ice hockey game; a Wednesday morning 10-kilometer run; and a Wednesday evening dinner extravaganza—"Hello Hollywood, Hello!" that is truly the MGM lion's most magnificent roar. This, added to our superb guest program that includes everything from gaming to the governor's mansion, will assure that everyone has a wonderful time.

It has been my pleasure and privilege to serve as General Chairman of the 1984 Local Committee. This message offers me opportunity to thank all the members of the Committee for their hard work and dedication. When you see them at the meeting, you might also simply say—"Thanks!"

**L. T. Larson**  
General Chairman

**1984 ANNUAL MEETING COMMITTEE**

- General Chairman ..... Lawrence T. Larson
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- Field Trip Chairman ..... Joseph Lintz, Jr.
- Field Trip Co-Chairman ..... Larry J. Garside
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- Transportation Chairman ..... M. J. Hibbard



**1984 Local Committee**

Front row, left to right: John Bell, Liang-Chi Hsu, Deborah Hamel, Frances Flint. Back row, left to right: Larry Larson, Roger Jacobson, Joseph Lintz, Jr., James Firby, Delos Flint, Malcolm Hibbard, Donald Noble. Not present: Larry Garside and David Slemmons.



**PLACER EXPLORATION AND MINING**

November 9-12, 1984

Holiday Inn—Downtown, Reno, Nevada

Co-sponsors: University of Nevada—Reno Mackay School of Mines and Division of Continuing Education

For information, contact Leanne Stone, University of Nevada—Reno, Division of Continuing Education, Reno, NV 89557 (702) 784-4046

**GOING TO RENO?**  
**REMEMBER TO VOTE ABSENTEE**  
**IN THE NATIONAL AND**  
**LOCAL ELECTIONS.**  
**CHECK WITH YOUR**  
**COUNTY ELECTION BOARD.**

GSA News & Information

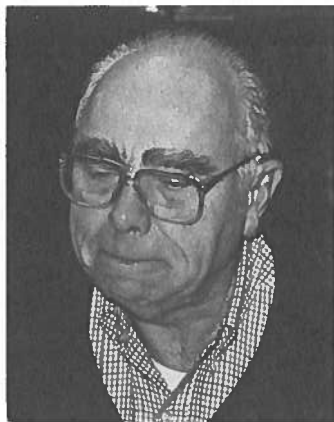
Vol. 6, no. 10 October 1984

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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; Director of Communications: Nancy A. Reed; Production and Advertising Manager: James R. Clark; Marketing/Advertising Assistant: Ann H. Fogel; Assistant Production Manager: Meredith Larson; Production Assistant: June E. Thomas.



C. A. Hopson



D. S. Gorsline



J. F. Hays



J. F. Tull

## 1984 Research Grants Fund 118 Proposals

by June Forstrom

The GSA Committee on Research Grants has recommended support for 118 of the 568 proposals received for 1984. The committee, composed of Chairman Clifford A. Hopson, members Donn S. Gorsline and James F. Tull, and National Science Foundation conferee James F. Hays, met at GSA headquarters in Boulder, Colorado, in April.

The committee had a budget of \$92,068, including donations (\$6,500 in contributions from oil companies), income from the Harold T. Stearns Fund (\$3,759), the Arthur L. Day Fund (\$694), and contributions made to the GSA Foundation (\$1,115) and interest from the Penrose Endowment (\$80,000). The total was below the 1983 figure of \$96,816. The Gladys W. Cole Memorial Research Award is \$1,200, which is interest from the Cole Award Fund.

### Applications Up, Percentage Funded Down

The 118 proposals included 73 doctoral proposals and 45 master's proposals. Of the applications received, 21% were recommended for funding, compared to 29% for 1983 and 37% for 1982.

The average grant was \$779—compared to \$663 in 1983 and \$623 in 1982. Women geologists represented 28% of the total applicants—increasing from 110 in 1982 and 135 in 1983 to 158 in 1984.

### Awards

**Robert K. Fahnestock Award.** The 1984 nominee is Kathleen M. Farrell, Louisiana State University, for "Stratigraphy and Sedimentology of a Fine-grained Meander Belt, Mississippi River (False River, LA)." The grant is awarded to the applicant with the best proposal in fluvial geomorphology and sediment transport.

**Harold T. Stearns Fellowship Award.** The six nominees for this award, for research on aspects of the geology of the Pacific Islands and the circum-Pacific region, are Paterno R. Castillo, Washington University, St. Louis, for "Geological and Geophysical Investigation of Cocos Island (Eastern Pacific)"; Patrick F. Dobson, Stanford University, for "The Petrogenesis of Boninites: A Field, Geochemical and Isotopic Study of the Volcanic Rocks of Chichi-Jima, Bonin Island, Japan"; Donald M. Fisher, Brown University, for "Strain Variations across an Exposed Accretionary Prism, Kodiak Island, Alaska"; John H. Fournelle, Johns Hopkins University, for "The Geology and Petrology of Shishaldin Volcanic Center, Unimak Island, Aleutian Islands, Alaska";

Marcy Newton, University of Texas, Arlington, for "Petrologic Evolution of Tambora Volcano, Sumbawa, Indonesia"; and Elizabeth Wright, Scripps, University of California, San Diego, for "An Investigation of Within-Flow Compositional Variation of Samoan Post-erosional Lavas."

**Gladys W. Cole Memorial Research Award.** This award goes to William L. Graf, Arizona State University, to investigate heavy metal transport in sediments of arid-region rivers. Applicants for the award must be GSA Fellows between 30 and 65 years old who are investigating the geomorphology of semi-arid and arid terrains in the U.S. and Mexico.

**Grants Funded by Industry.** Donations from Conoco, Inc. (\$2,000), Marthon Oil Company and Foundation (\$2,500), and Mobil Oil Corporation (\$2,000) provided funds for grants to the following applicants:

Mark Sutton Caldwell, Western Michigan University, for "The Nature and Origin of the Synorogenic Sphinx Conglomerate, Central Madison Range, Southwestern Montana"

Carolyn H. Eyles, University of Toronto, for "Stratigraphic Architecture of the Yakatage Formation and Its Relationship to Hydrocarbon Distribution"

Martin B. Farley, Pennsylvania State University, for "The Association between Palynomorphs and Depositional Environments of the Modern Orinoco Delta, Venezuela"

Bruce Hicks Ford, University of New Orleans, for "Carbonate Diagenesis within the Dilute Portion of the Mixing Zone, Northeastern Yucatan Coast"

Neil F. Hurley, University of Michigan, Ann Arbor, for "Geology of the Oscar Range Devonian Reef Complex, Canning Basin, Western Australia"

Carol Mankiewicz, University of Wisconsin, Madison, for "Facies Analysis and the Role of Algae in Late Miocene Reefs of the Western Mediterranean"

Bruce J. Pfaff, University of Utah, Salt Lake City, for "Sedimentology and Tectonics of the Fluvial Facies of the Upper Cretaceous Castlegate Sandstone, Book Cliffs, Utah"

Brian R. Pratt, University of Toronto, for "Sedimentology and Trilobite Biostratigraphy of a Middle and Upper Cambrian Continental Margin Sequence, Mackenzie Mountains, Northwest Canada"

Suzanne Reynolds, University of Southern California, Los

(continued on p. 160)

**Research Grants** (continued from p. 159)

Angeles, for "A Detailed Analysis of Grain-Size Distribution, and Turbidity Current Flow Properties, Hueneme Fan, Santa Monica Basin, California Continental Borderland"

Ronald P. Sauermann, Pennsylvania State University, for "A Theoretical and Field Analysis of Soft Sediment Structures (SSDS) Originating from Gravitationally Unstable Bulk Density Profiles"

Charles E. Savrda, University of Southern California, Los Angeles, for "Comparison of Sediment Fabric and Faunal Elements in Modern and Ancient Oxygen-Deficient Basins"

Edward P. Simpson, Virginia Polytechnic Institute & State University, for "Facies Analysis and Tectonic Implications of the Cambrian(?) Chilhowee Group from Virginia to Southern Pennsylvania"

*Outstanding Mention.* The Committee on Research Grants specially recognized eleven of the proposals as being of exceptionally high merit in conception and presentation:

Patrick F. Dobson, Stanford University, for "The Petrogenesis of Boninites: A Field, Geochemical and Isotopic Study of the Volcanic Rocks of Chichi-Jima, Bonin Islands, Japan"

Tanya Helen Furman, Massachusetts Institute of Technology, for "A Geochemical and Petrologic Investigation of the Austerhorn Mixed Intrusion, Southeastern Iceland"

Lawrence R. Guth, Rice University, for "Kinematic Analysis for the Deformation of Isla Margarita, Venezuela"

David Michael Harwood, Ohio State University, for "Cenozoic Ice Volume Variation and Marine Sedimentation on the East Antarctic Craton"

Neil F. Hurley, University of Michigan, Ann Arbor, for "Geology of the Oscar Range Devonian Reef Complex, Canning Basin, Western Australia"

Philip Lowry, Louisiana State University, Baton Rouge, for "Stratigraphy of a Late Quaternary Arctic Barrier Island and Shoal System, Beaufort Sea, Alaska"

Kevin A. Maher, California Institute of Technology, for "The Structure, Stratigraphy, Petrology and Geochronology of the Happy Creek Igneous Complex and Related Rock Units of the Jackson Mountains, Northwest Nevada"

Craig E. Manning, Stanford University, for "Alteration and

Metamorphism in the Basaltic Host Rocks of the Skaergaard Magma Hydrothermal System"

Tony Douglas Peterson, Johns Hopkins University, for "Petrogenesis of the Nephelinite-Carbonatite Magmatic Association"

Charles E. Savrda, University of Southern California, Los Angeles, for "Comparison of Sediment Fabric and Faunal Elements in Modern and Ancient Oxygen-Deficient Basins"

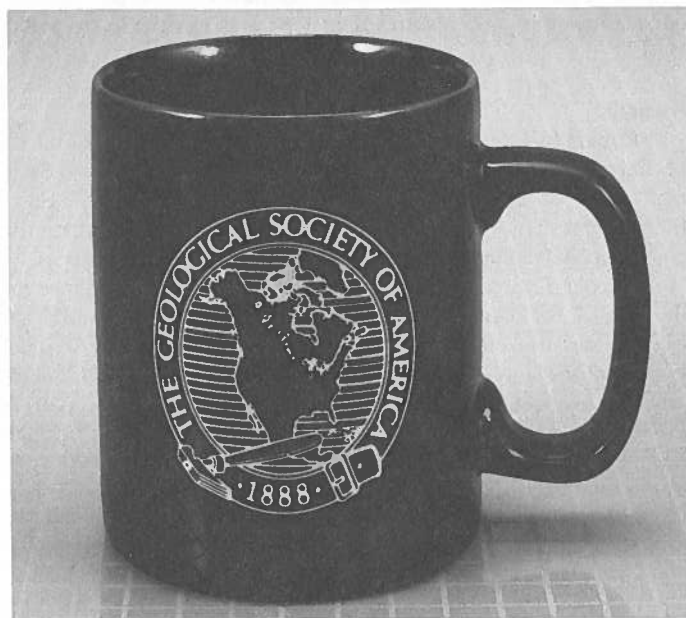
Jane Selverstone, Massachusetts Institute of Technology, for "Pressure-Temperature-Time Constraints on Metamorphism and Overthrusting in the SW Tauern Window, Austria/Italy"

*Other Successful Applicants.* The remainder of the applicants who were recommended for funding are the following: James E. Almendinger, David John Anastasio, Lawrence M. Anovitz, Tomasz K. Baumiller, Margaret Elaine Berry, Robert B. Blodgett, Peter T. Bobrowsky, Susan Quin Boundy, Marcus Ivan Bursik, Joyce Castro, Moonsup Cho, Stephen C.L. Clark, Kenneth Spencer Coles, William H. Collins III, Cricket Corwin, Clinton A. Cowan, Ellen A. Cowan, Robert Sayre Cox, Kenneth M. Cruikshank, Andrea Marie Dakoski, David A. Dellinger, Yildirim Dilek, Lee Dolores DiTullio, James Francis Dolan, Richard A. Dubiskas, Nelia W. Dunbar, Paul A. Dunn, Tracy Allen Dunn, James D. Eckert, Kenneth D. Ehman, William Perdue Elder, Sarah Eldredge, Bradley G. Erskine, Billy E. Faggart, Jr., Wu Fang, Julia E. Fonseca, Ivan P. Gill, Elizabeth A. Gordon, Charles T. Herzig, Rebecca Leigh Hill, Thomas D. Hoisch, Amy L. Hoover, Jeffrey T. Hsu, Mark R. Hudson, John W. Hunter, Craig A. Johnson, Kathleen E. Johnson, Paul Lewis Koch, Jane Kozinski, Matthew Joseph Kramer, Elana Lynn Leithold, Richard C. Marty, Lisa A. McBroom, G. Wesley McCall, Arnold I. Miller, David Paul Moecher, Claudia I. Mora, John R. Noel, Robert Lynch O'Neill, Kristin E. Orr, Kathleen M. Ort, John M. Pandolfi, Jong-Sim Park, Brian E. Patrick, David A. Pickett, Ronald Marcel Pilette, Heather Boek Ponader, Gretchen Marie Protzman, Kelvin W. Ramsey, William A. Reinthal, Daniel E. Sampson, Mindy Sayres, Carolyn L. Schwartz, Richard L. Sedlock, Zachary D. Sharp, Moira Smith, Kevin G. Stewart, Louis S. Teng, K.C.N. Touyinhthiphonexay, Yen Touyinhthiphonexay, Dan J. Van Roosendaal, Lynn Marie Vogel, Kenneth Daniel Vogel, Edward Timothy Wallin, Damon Waresback, James Brian Warner, Stephen L. Wust, Sandra J. Wyld, Brian A. Zaitlin, William George Zempolich, Gregory A. Zielinski.

## MUG SHOT



You've heard the GSA definition of a "mugger," a current member who recruits a new member. You've also learned of the drawing for a trip for two to the 1985 Annual Meeting in Orlando, Florida. Your entry in the drawing is your reward for a job well done. But what about your GSA mug, our way of thanking you for your participation in the "every-member-get-a-member" campaign? Here it is—a fine English ironstone mug. Made in Manchester, England, especially for the Geological Society of America, your eleven-ounce mug is a bold ceramic blue with a white imprint of the GSA seal. Your mug is waiting for you! Just encourage one colleague to make a wise investment in GSA membership. It will cost him or her less than 25¢ per working day, far less than the cost of a mug of coffee! Your new member receives all the benefits of GSA, plus a poster, and you receive a marvelous mug. Recruit your member today. Here's looking at you!



PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS

**NORTH-CENTRAL SECTION, GSA, 19th Annual Meeting**  
**DeKalb, Illinois**  
**April 25-26, 1985**

The North-Central Section of the Geological Society of America, hosted by the Department of Geology, Northern Illinois University, will meet concurrently with the North-Central Section of the Paleontological Society, the Great Lakes Section of the Society of Economic Paleontologists and Mineralogists, and the National Association of Geology Teachers.

**CALL FOR PAPERS**

Technical sessions on Thursday, April 25, and Friday, April 26, will include the following: paleontology, paleoecology, stratigraphy, sedimentology, economic geology, geomorphology, hydrogeology, Quaternary geology, mineralogy and petrology, geochemistry, structural geology, geophysics, engineering and environmental geology, and general geology. Papers on these and other subject areas are solicited. Sessions may be added or deleted after abstracts have been received by the Program Committee.

**SYMPOSIA**

1. **Paleozoic Marine Invertebrates: Their Paleobiology and Paleocology.** Robert J. Elias. Sponsored by the Paleontological Society.
2. **Sedimentation and Stratigraphy of the Lake Michigan Basin during the Late Quaternary.** Allan F. Schneider, Gordon Fraser.
3. **Glaciogenic Deposystem Models: Processes, Lithofacies, and Landforms.** Ross D. Powell, Dan Lawson.
4. **Silurian of the Great Lakes Region.** Don Mikulic.
5. **Use of Microcomputers in Geological Instruction.** Robert S. Nelson, Richard J. Gentile. Sponsored by the North-Central Section of the National Association of Geology Teachers.

**ABSTRACTS**

Abstracts, which are limited to 250 words, must be submitted camera ready on official abstract forms available from  
C. J. Casella or Abstracts Coordinator  
or E. C. Perry, Jr. Geological Society of America  
Northern Illinois University P.O. Box 9140  
Department of Geology Boulder, CO 80301  
DeKalb, IL 60115 (303) 447-8850  
(815) 753-1943

**ABSTRACTS ARE DUE DECEMBER 7, 1984**

Acceptance or rejection of an abstract will be based on the abstract as submitted by the author. Send one original and five copies to

C. J. Casella or E. C. Perry, Jr.  
Department of Geology  
Northern Illinois University  
DeKalb, IL 60115

**PROJECTION EQUIPMENT**

All slides must be 2" x 2" and fit a standard 35mm carousel projector. Only one projector will be available in each meeting room.

**STUDENT AWARDS**

Student papers are encouraged, and awards will be made to students presenting the most outstanding papers. Student papers

must be clearly identified as such and must be authored exclusively by students. Prizes awarded for student papers with more than one author will be divided among the authors.

**FIELD TRIPS**

All formal field trips will be scheduled for Saturday, April 27. Field-trip coordinator is Ronald C. Fernald.

1. **Depositional Environments and Correlation Problems of the Wedron Formation (Wisconsinan), Northeastern Illinois.** Ardith Hansel, W. Hilton Johnson, Leon Follmer, Betty Socha, John M. Masters.
2. **Silurian Lithostratigraphy and Biostratigraphy and the Silurian/Ordovician Disconformity in the Des Plaines River Valley, Illinois.** Don Mikulic, Mike Sargent, Rod Norby, Dennis Kolata.
3. **Early Pennsylvanian Geology and Paleobotany of Rock Island County, Illinois.** Richard L. Leary, C. Brian Trask.
4. **Geological Investigations of a Low-Level Nuclear Waste Disposal Site, Sheffield, Illinois.** R. W. Healy, John Gray, Rob Striegl.

In addition, an informal trip (tentative) to the Silurian reef at Thornton, Illinois, will be led by Don Mikulic on Sunday, April 28.

**SOCIAL EVENTS**

A welcoming party will be held on Wednesday evening, April 24, and the annual banquet will be on Thursday evening, April 25. The Paleontological Society will hold a luncheon on Friday, April 26.

**DETAILED INFORMATION**

Information concerning registration, motel and hotel accommodations, transportation, and other activities will appear in a future issue of *GSA News & Information* and as part of *Abstracts with Programs* for 1985. Additional information, requests, or suggestions should be directed to

Jonathan H. Berg  
Local Committee Chairman  
Department of Geology  
Northern Illinois University  
DeKalb, IL 60115  
(815) 753-1943

**CALL FOR NOMINATIONS FOR HISTORY OF GEOLOGY AWARD**

Nominations for potential recipients of the History of Geology Award should be sent by April 1, 1985, to Dr. Robert N. Ginsburg, University of Miami, Fisher Island Station, Miami Beach, FL 33139, telephone (305) 350-7508.

The award, by GSA's History of Geology Division, is given for contributions of fundamental importance to our understanding of the history of the geological sciences.

# Growth Support Achievement



## GROW WITH US

For membership information contact:

Clara Hodgson  
Membership Coordinator  
The Geological Society of America  
3300 Penrose Place, P.O. Box 9140, Boulder, CO 80301  
(303) 447-2020

GSA SPECIAL PAPER 194

# THE GRENVILLE EVENT

*in the Appalachians and related topics*  
Edited by Mervin J. Bartholomew

The Grenville Event — about 1 billion years ago — formed the crystalline basement on which later rocks accumulated prior to middle to late Paleozoic orogenic pulses. This volume provides the first synopsis ever done of the basement rocks of the Appalachians and lays the foundation for future searches for similar rocks in

Africa and Europe. Fifteen papers presented in geographical order starting with an exhaustive summary of the Adirondacks of New York and ending with a discussion of the tectonics of the Pine Mountain window of Georgia and Alabama. The newly discovered Grenville rocks of eastern Virginia are described.

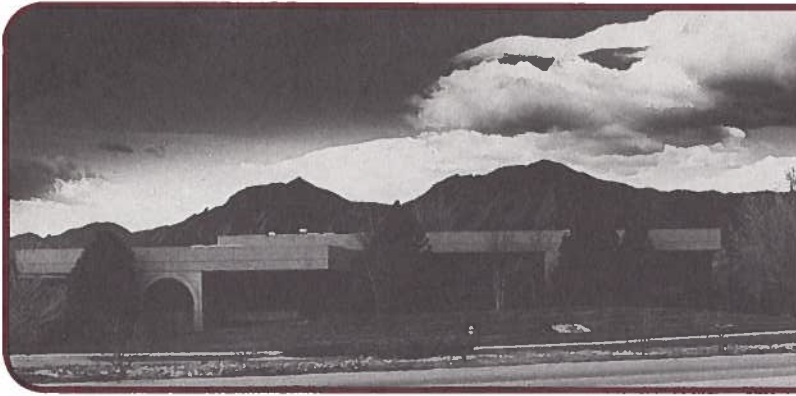
Special Paper 194, viii + 288, 8½ × 11", soft bound, CIP, ISBN 0-8137-2194-6 ..... \$31.00

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## THE GEOLOGICAL SOCIETY OF AMERICA



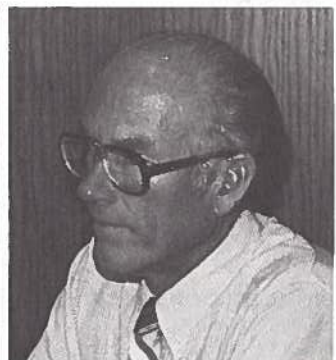
# GSA NEWS & INFORMATION

Monthly Newsletter of  
The Geological Society of America

VOLUME 6, NUMBER 10

OCTOBER 1984

# 1983 ANNUAL REPORT



# Officers of The Geological Society of America 1983

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Robert L. Fuchs ..... *Treasurer*  
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Robert S. Yeats ..... Second Vice-Chairman	





## Report of the President

By Paul A. Bailly

To the Membership and Council of the Geological Society of America, Inc.:

There are quite a few things to report to you since my mid-year message in the September 1983 issue of *GSA News & Information*. At its October 30, 1983, meeting, the Council ratified the appointments of (1) a steering committee to guide the Society in developing a program of short courses, and (2) an ad hoc committee to evaluate the desirability of a GSA reprint series. Both committees will present to the Executive Committee their conclusions and recommendations about such new GSA services to the geological community.

Campbell Craddock, University of Wisconsin at Madison, has been appointed Books Editor. He is planning for an expansion of the GSA books publications program to match in quality the revitalized, expanded, and successful *GSA Bulletin and Geology*.

The members' monthly newsletter, *GSA News & Information*, has been made more informative and readable. Please do write to Executive Director Mike Wahl about opinions, announcements, and items of news that may be of interest to all members of GSA and/or Associated Societies. That's what this newsletter is for. Its current popularity is a good sign that its liaison value for all members is increasing.

The headquarters staff writes, edits, and publishes this newsletter in the building pictured on the front page. At headquarters the Executive Director, whose report appears hereafter, is orchestrating the efforts of a lean, energetic, and productive staff. If you are lucky enough to visit headquarters, you will see for yourself a

well-coordinated group of people working in friendly and computerized harmony to serve the membership.

In 1983, the Council, the Executive Committee, and the Executive Director continued their efforts to improve the effectiveness and the efficiency of the administrative processes of your Society. The three-year planning cycle installed at mid-year and the increase in the Executive Director's delegated authority will allow the following improvements:

1. A steadying of program continuity as each year the three-year plan, discussed in detail at the Council's spring meeting, is updated and extended one more year, and then becomes the basis for the next year's budget approved at the fall meeting and for long-range planning.
2. Firm and consistent guidelines for the Executive Director in his implementation of Council-approved short- and long-term activities.
3. Concentration on key issues, problems, and decisions at Executive Committee and Council meetings.
4. Reduction in the number and duration of Council and Executive Committee meetings.

GSA continues to improve its publications, scientific meetings, and other services to members. Our plan to be the premier generalist geological society is on track. At the Indianapolis meeting in November 1983, M. Gordon (Reds) Wolman became President of GSA; I am sure that under his leadership GSA will keep moving forward.



## Report of the Executive Director

By F. Michael Wahl

The year 1983 was the first full year that the activities and affairs of the Society were under my direction, from budget preparation stage to closing of the books on December 31. Highlights included computerization of nearly three-fourths of the headquarters operation; the implementation of significant changes in all categories of our publications program; substantial changes in our annual meeting, especially in the category of exhibits; the reorganization of the production/marketing/sales functions of the Society into one department; and a steady increase in the size of our membership.

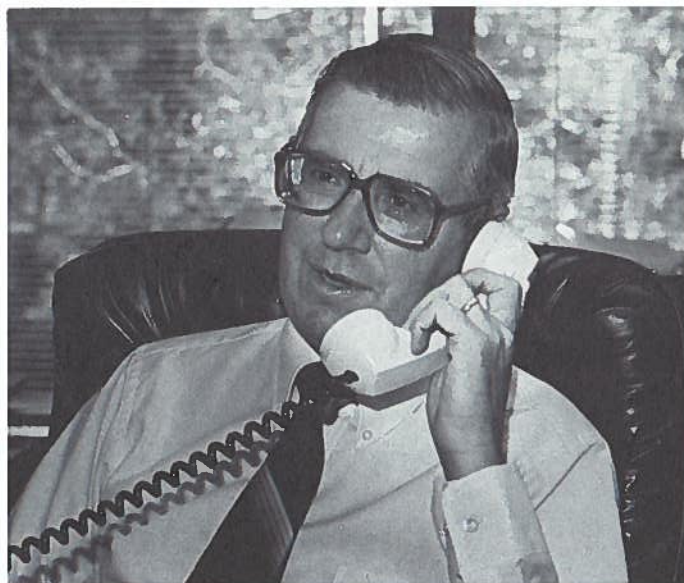
On the financial side, we finished the year below budget and saw a substantial reduction in withdrawals from endowment income in comparison with previous years. On the negative side, in 1983 there was a drop in interest rates, thus reducing the return on our endowment investments. This, however, was countered by an upsurge in the capital appreciation of our securities as market prices rose throughout the year.

### Headquarters Staff

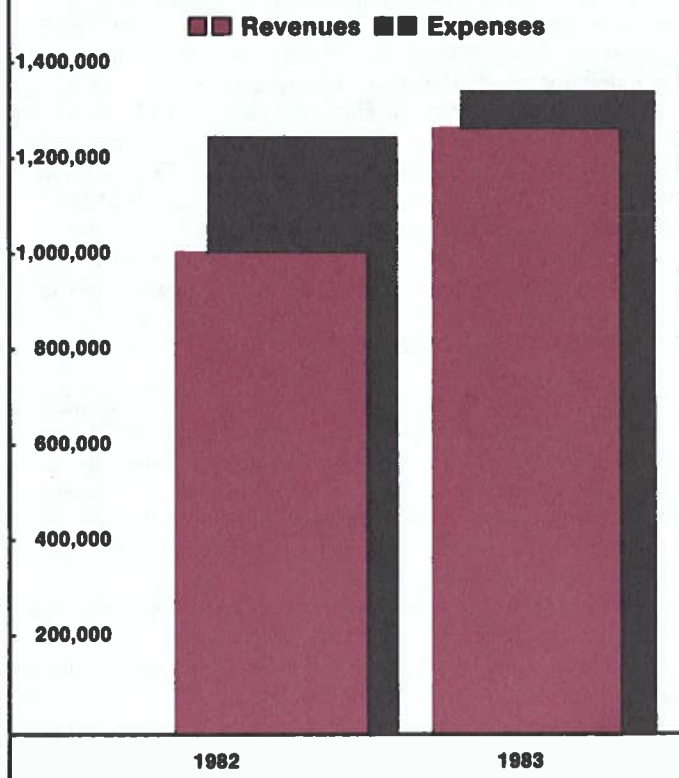
The headquarters employees of the Society are again commended for outstanding service during the year. Following a period of transition and change during the latter part of 1982, they continued to adjust extremely well to the new demands and priorities of 1983. Certainly, the most significant of these was the advent of the computer as part of the Society's daily operations. Systematically throughout the year, the staff was introduced to and trained extensively in the operation and use of computer-assisted processes and techniques. The number of full-time equivalent employees remained the same during 1983, as compared with 1982, but some personnel changes and realignment of duties and responsibilities were effected as the result of reorganization in the production/marketing and sales functions of the Society.

### Publications

The year 1983 was definitely one of significant changes for publications of the Society. The *Bulletin*, *Geology*, and *News & Information* all received new cover layouts and designs, and color was added to the cover of each. Full four-color covers were also used for the first time on a few issues of both the *Bulletin* and *Geology*. Average monthly pressruns for all three publications were increased as the result of increased membership and higher circulation requirements. In addition, publication fulfillment was improved by packaging the *Bulletin* in a shrink-wrap cover, which gives additional protection through postal processing and handling. The number of science pages published in both *Bulletin* and *Geology* was increased during the year, with the *Bulletin* increasing from 1,304 to 1,536, and *Geology* increasing from 672 to 764 pages.



### Publications Revenue and Expense Comparisons 1982 and 1983



**New Books and Maps.** In the category of book publications, Dr. Campbell Craddock served his first full year as editor of our Memoir and Special Paper series, having been appointed late in October of 1982. Series publications during the year included five Memoirs and one Special Paper. In addition, two Special Papers and two Memoirs were reprinted. Four volumes of the *Treatise on Invertebrate Paleontology* were also reprinted, and the new revised volume on Bryozoa was received.

In the Map and Chart series, editor Dr. John (Jack) C. Reed, Jr., supervised the production and printing of a total of 89 new map sheets, plus the reprinting of one map series.

The financial position of our publications program for the year is worthy of comment. Revenue received from dues for member periodicals continued to fall short of actual membership periodical publication costs. However, revenue received from subscriptions by nonmembers and from page charges increased substantially in comparison with 1982. Revenue from sales in our "other publications" category, which includes books, maps and charts, and abstracts, also increased substantially. The accompanying graphic illustration compares revenue and expense for all publications for 1983 and 1982. The difference between publication revenue and expense continued to be balanced by a subsidy of periodical costs for the membership from endowment investment income.

### Membership

The membership of the Society increased approximately 4½% during 1983. This increase was about the same as that in 1982. Most of this growth was in the number of Student Associate members, with a modest increase in the number of regular Members. The number of Fellows again decreased in 1983, reflecting the continuation of a trend that has existed since 1975. The comparison of membership statistics by category and year is in the accompanying table.

**Membership Services.** A low-cost group life insurance plan in cooperation with Smith-Sternau, Inc., became available to

### MEMBERSHIP STATISTICS SINCE 1972

Year	Fellows	Members	Students	Honorary Fellows	Totals
1972	3,293	5,289	873	49	9,504
1973	3,332	5,452	1,871	46	10,701
1974	3,327	5,975	2,917	44	12,263
1975	3,347	6,438	2,224	45	12,054
1976	3,334	6,771	2,377	45	12,527
1977	3,282	6,972	2,095	42	12,391
1978	3,251	7,208	1,903	42	12,404
1979	3,237	7,306	1,874	42	12,459
1980	3,229	7,500	1,834	40	12,603
1981	3,214	7,633	1,828	43	12,718
1982	3,199	7,901	2,243	43	13,386
1983	3,164	7,922	2,871	44	14,001

members in November. It is still too early to determine how widely this program is being accepted by the membership, but we do know that many members have already subscribed and many others have indicated interest in participating.

### Employment Service Program

The Employment Service Program for 1983 operated at a level below that of 1982 (See the accompanying three-year statistical comparison). The program operated at a slight loss during the year, but this loss had been anticipated in the 1983 budget and was, in effect, less than projected. A continued low level of employment opportunities, especially in the energy sector, was largely responsible for the reduced level of activity in this program.

### EMPLOYMENT SERVICE STATISTICS

	1981	1982	1983
<b>Employers</b>			
No. of year-round employers	57	43	32
No. of Annual Meeting employers	77	41	42
Total employers	134	84	74
<b>Positions</b>			
No. of positions from year-round employers	57	43	32
No. of positions from Annual Meeting employers	165	70	71
Total positions	222	113	103
<b>Types of Positions</b>			
Academic—year-round	19	33	17
—Annual Meeting	95	54	50
Industry—year-round	32	8	12
—Annual Meeting	58	10	8
Government and other			
—year-round	6	2	3
—Annual Meeting	12	6	13
Total number of applicants at Annual Meeting	309	263	231
Total number of applicants	474	527	406

### Meetings

The 1983 Annual Meeting in Indianapolis was a success, both programmatically and financially. The convention facility in Indianapolis proved to be ideal for our type of meeting and permitted the offering of a technical-program format that was well accepted by those who attended. The holding of a GSA awards luncheon, instead of an annual dinner, was also well received. The total registration of 4,153 for the meeting included 2,420 professionals, 1,569 students, and 164 guests. The technical program included



the presentation of 1,223 papers during 81 half-day symposia and technical sessions. There were also six half-day poster sessions.

A total of 5,461 registrants attended GSA Section Meetings during 1983, at which 1,858 papers were presented in 188 half-day sessions. When compared with 1982, this represented an increase of 494 in the number of papers presented, and a 54% increase in the number of half-day scientific sessions.

#### 1983 GSA SECTION MEETING STATISTICS

Section/Location	Reported registration	No. of papers presented	No. of half-day sessions
Cordilleran/Rocky Mountain (joint) Salt Lake City, Utah	2,416	750	57
North-Central Madison, Wisconsin	772	263	34
South-Central College Station, Texas	352	162	25
Northeastern Monticello, New York	1,239	386	40
Southeastern Tallahassee, Florida	682	297	32

#### Research Grants

GSA's Committee on Research Grants awarded a total of \$96,816 for support of research during 1983. This sum included \$80,000 from the Penrose Endowment, as well as industrial donations (\$10,500), contributions to the GSA Foundation (\$2,053), and earnings from the Harold T. Stearns Fund (\$3,663), and the Arthur L. Day Fund (\$600). The 147 proposals supported were chosen from 510 proposals received, compared to 391 received for 1982. Of the 147 proposals funded, 76 were for Doctoral research and 71 were for Master's research. The average grant was \$663, and the award rate was 29% of the proposals received.

Recipients of specialized Society awards in 1983 were as follows:

Robert K. Fahnestock Memorial Research Award

Gary A. Smith  
Oregon State University

Harold T. Stearns Fellowship Award

Bradley G. Erskine  
University of California, Berkeley  
David M. Harwood  
Ohio State University  
Peter L.K. Knuepfer  
University of Arizona  
Joshua E. Lieberman  
University of Oregon

Gladys W. Cole Memorial Research Award  
(Not awarded in 1983)

## ANNUAL MEETING

### Revenue

#### Source

Registration Fees	63%
Exhibits	20%
Social Programs	10%
Field Trips	6%
Other	1%



#### Category

Meeting Organization and Development	30%
Administrative Services	16%
Social Programs	10%
Exhibits	10%
Technical Program	9%
Field Trips	7%
Registration	7%
Shuttle	3%
Meeting Space	3%
Publicity	3%
Student Help	2%

### Expenses

#### Decade of North American Geology

The organizational phase of the Decade of North American Geology (DNAG) was largely completed in 1983. Twenty-one volumes of *The Geology of North America* are now in development, and one, *The Western North Atlantic Region* is now in production. Editorial committees for all six Centennial Field Guides are now in the final stages of selecting the one hundred best geological sites within the area of each of GSA's Sections. Four new 1:5 million wall maps covering seismicity, stress, thermal aspects, and neotectonics for North America were approved as a joint Centennial project for GSA's Geophysics and Structural Geology and Tectonics Divisions. *Development of North American Geology: 1881 to Present*, the Centennial project for the History of Geology Division, is under way. Compilation of on-shore and offshore geology for the new Centennial Geologic Map of North America continued throughout the year.

The 1983 *Decade of North American Geology Time Scale* was published in September, and demand for it, in both full-page and wallet-card sizes, has been great.

Funding for the DNAG project continued to grow in 1983 and is approaching \$4 million. Well over 700 persons are now engaged in DNAG-related activities. Program expenditures for 1983 totaled \$210,244.



### Medal and Award Winners for 1983

Penrose Medal: *G. Arthur Cooper*

Day Medal: *Harmon Craig*

Archaeological Geology Division Award: *George R. Rapp, Jr.*

Gilbert H. Cady Award: *Paul Averitt*

E. B. Burwell Award: *Peter W. Lipman* and *Donal R. Mullineaux*

George P. Woollard Award: *George A. Thompson*

History of Geology Division Award: *Claude C. Albritton, Jr.*

O. E. Meinzer Award: *Edwin P. Weeks*

G. K. Gilbert Award: *Eugene M. Shoemaker*

Kirk Bryan Award: *Leland H. Gile, John W. Hawley, and Robert B. Grossman*

### Honorary Fellowships for 1983

*Harry Blackford Whittington*

Sedgick Museum, Downing Street

Cambridge University, England

*Douglas Saxon Coombs*

University of Otago

Dunedin, South Island, New Zealand

*Boris Sergeevich Sokolov*

USSR Academy of Sciences

Moscow, USSR

### Penrose Conferences for 1983

The Society sponsored three Penrose Conferences in 1983:

*Tectonic Geomorphology*

Conveners: *William B. Bull, Robert E. Wallace*

April 22-27, 1983

Winnemucca, Nevada

*Blueschists and Related Eclogites*

Conveners: *Edwin H. Brown, Bernard W. Evans, Robert B.*

*Forbes, Peter Misch*

September 5-9, 1983

Bellingham, Washington

*Cretaceous Climates*

Conveners: *Eric J. Barron, William W. Hay, Erle G. Kauffman*

October 2-7, 1983

Florissant, Colorado

## GSA STANDING COMMITTEES, 1983

### Audit Committee

*Hubert Gabrielse, Chairman, Thornton L. Neathery, George A. Thompson; Conferee: Robert L. Fuchs*

### Committee on the Budget

*Haydn H. Murray, Chairman, Paul A. Bailly, M. Gordon Wolman, Digby J. McLaren, Robert L. Fuchs; Ex Officio: William B. Heroy, Jr.*

### Committee on Committees

*Brian J. Skinner, Chairman, Edward D. Ghent, Susan W. Kieffer, William A. Thomas, Albert W. Bally*

### Committee on Geology & Public Policy

*Charles G. Groat, Chairman, Larry J. Doyle, Geoffrey G. Snow, Priscilla C. Grew, James W. Skehan, Harry W. Smedes, Thomas J. Joiner, Terry W. Offield, Arthur A. Socolow*

### Headquarters Advisory Committee

*John D. Haun, Chairman, William R. Keefer, James A. Drahovzal, Richard F. Mast, Steven S. Oriel*

### Subcommittee on the Penrose Medal Award

*George A. Thompson, Chairman, Peter A. Rona, Donald, L. Everhart, Ursula B. Marvin, Amos Salvador, Hugh P. Taylor, Jr., A. L. Washburn*

### Subcommittee on the Arthur L. Day Medal Award

*Peter J. Wyllie, Chairman, Amos M. Nur, Charles B. Sclar, Susan W. Kieffer, Neil D. Opdyke, Joseph V. Smith, David R. Wones*

### Subcommittee on Honorary Fellows

*Burrell C. Burchfiel, Chairman, John M. Guilbert, E. H. Timothy Whitten, Reuben J. Ross, Jr., Campbell Craddock, Troy L. Péwé*

### Committee on Membership

*William A. Thomas, Chairman, Patrick K. Sutherland, Aural T. Cross, Eric W. Mountjoy, Marcus E. Milling, Henri E. Gaudette*

### Committee on Investments

*William B. Heroy, Jr., Chairman, James A. Anderson, C. Harry Burgess, Walter E. Seibert, Jr., Thomas W. Stern; Ex Officio: Robert L. Fuchs, Haydn H. Murray*

### Committee on Nominations

*Hubert Gabrielse, Chairman, Samuel S. Adams, Gordon P. Eaton, Arthur W. Snoke, Peter J. Wyllie*

### Committee on Penrose Conferences

*Daniel R. Shawe, Chairman, Elwood R. Brooks, J. Wright Horton, Jr., George W. Viele, Jr.*

### Program Review Committee

*Bruce B. Hanshaw, Chairman, William A. Craig, Haydn H. Murray, David B. Slemmons, John S. Schlee*

### Committee on Publications

*Robert D. Hatcher, Jr., Chairman, Charles L. Pillmore, John W. Rold, Maria Luisa B. Crawford, William A. Thomas, Eldridge M. Moores, Campbell Craddock, John C. Reed, Jr.; Conferee: F. Michael Wahl*

### Committee on Research Grants

*Donn S. Gorsline, Chairman, Robert E. Riecker, Clifford A. Hopson; Conferee: James F. Hays*

### Treatise on Invertebrate Paleontology Advisory Committee

*Robert F. Lundin, Chairman, James T. Sprinkle, F. Michael Wahl*

### GSA Steering Committee on "Decade of North American Geology"

*Digby J. McLaren, Chairman, Albert W. Bally, Robert G. Blackadar, Gabriel Dengo, Charles L. Drake, Jose C. Guerrero, James F. Hays, Raymond A. Price, John C. Reed, Jr., Leon T. Silver, Laurence L. Sloss, John O. Wheeler; Ex Officio: Paul A. Bailly, M. Gordon Wolman, F. Michael Wahl, A. R. "Pete" Palmer, Dwight V. Roberts*



## Report of the

### Treasurer

By Robert L. Fuchs

To the Council and Membership of the Geological Society of America:

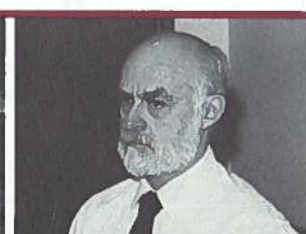
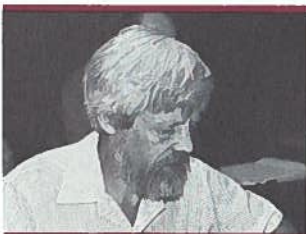
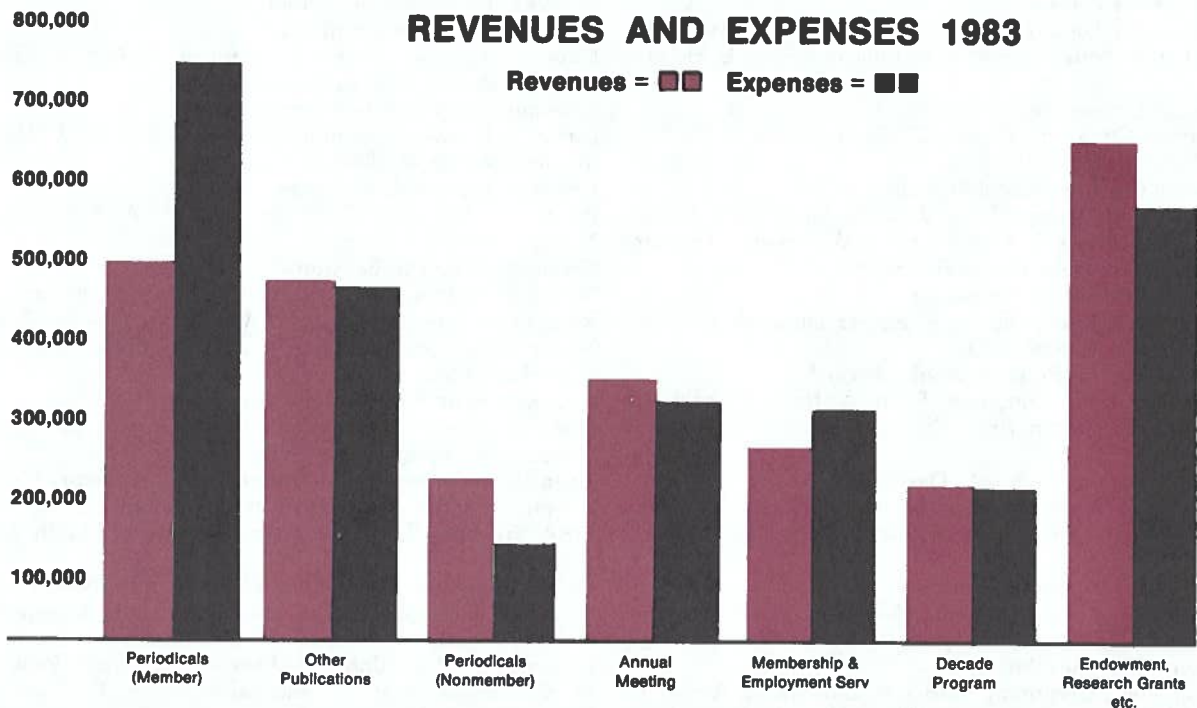
Financially, the GSA experienced a very successful year in 1983. The report of the Society's independent auditors, Touche, Ross & Co., including financials for the six GSA Sections, indicates total assets as of December 31, 1983, of \$12,788,368, up 6.7% from 1982's \$11,979,244. Liabilities at the end of 1983 were \$1,154,641, resulting in net worth of \$11,633,727, an increase of 6.4% over 1982's net worth of \$10,931,100. The Society's working capital (current assets less current liabilities) increased dramatically, from \$107,000 at the end of 1982 to \$982,620 at the end of 1983.

Revenue, support, expenses, and capital additions are shown in the accompanying graph. Revenue and support exceeded expenses during the year by the amount of \$289,998. The GSA investments generated gains of \$406,454, and there were contributions to the GSA of \$6,175. As a result, during 1983 there was an excess of capital additions, revenue and support over expenses that amounted to \$702,627. This explains the strong improvement in the Society's balance sheet as compared to the end of 1982.

The application of revenues to expenses is demonstrated in the accompanying diagram, showing the major sectors in which



the GSA spends its money. Member periodicals continue to be strongly subsidized by other GSA functions, with the most significant support coming from surpluses generated in nonmember publications subscriptions and endowments. The categories of annual meeting, membership and employment, and Decade of North American Geology are about in balance, revenues to expenses. Careful management of the GSA's revenues and expenses, particularly in the nonmember categories, plus the benefits of a strong Endowment Fund and a new Foundation made membership in the GSA in 1983 one of the better scientific bargains available.



PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS  
**CORDILLERAN SECTION, GSA, 81st Annual Meeting**  
**Vancouver, British Columbia**  
**May 8-10, 1985**

The Cordilleran Section of the Geological Society of America will meet at the University of British Columbia, Vancouver, hosted by the university's Department of Geological Sciences and the Cordilleran Section of the Geological Association of Canada. The meeting will be held jointly with the Paleontological Society, Pacific Coast Section.

### REGISTRATION

Preregistration will be by mail on or before April 15, 1985. On-site registration will take place on Tuesday, May 7, from 1700 to 2000 hours and during the meetings that follow.

### SYMPOSIA

- A. **DNAG—Western Canada Preview.** H. Gabrielse, J. O. Wheeler.
- B. **Mesozoic-Cenozoic Subduction Complexes, Northeast Pacific Margin.** J. C. Moore, Terry Pavlis.
- C. **Geology and Tectonics of the Exotic Terranes of the Insular Belt, and Coast Mountains, British Columbia to Alaska.** G. Gehrels, A. Sutherland-Brown, R. B. Campbell.
- D. **Northern Cascades and Southern Coast Mountains, Washington and British Columbia.** E. H. Brown, G. J. Woodsworth.
- E. **Tethyan Exotic Terranes in Western North America.** W. R. Danner.
- F. **Metamorphic Core Complexes, from Okanagan to Yukon.** R. R. Parrish, D. J. Tempelman-Kluit.
- G. **Mass Wasting in Mountain Watersheds.** J. V. DeGraff, J. W. Williams.

### PLENARY LECTURE

**The Canadian Lithoprobe Project.** R. M. Clowes et al.

### FIELD TRIPS

#### Premeeting

1. **Mineral Deposits of Vancouver Island.** R. Walker.
2. **Porphyry Deposits of Southern British Columbia.** W. J. McMillan.
3. **Structural Cross Section—Calgary to Vancouver.** J. Monger.
4. **Debris Flows in Southwestern British Columbia.** L. Jackson, J. Clague, M. Church.
5. **Volcanology and Structure of Tertiary Outliers in South-Central British Columbia.** B. N. Church.
6. **Day Cruise from Vancouver Harbor—Scenery and Geology.** C. J. Yorath.
7. **Stratigraphy and Sedimentology of the Eocene Chuckanut Formation on Bellingham Bay, Washington.** S. Y. Johnson.

#### Postmeeting

8. **Stratabound Base Metal Deposits of Southeastern British Columbia.** T. Hy.
9. **Extensional Tectonics in Shuswap-Okanagan Core Complexes.** R. Parris.
10. **Tethyan Exotic Terranes in Southern British Columbia—Cherts and Limestones.** W. R. Danner.
11. **Lithoprobe Profile across Southern Vancouver Island.** A. Sutherland-Brown.

12. **Character and Relationships of Cariboo-Barkerville Terrane.** L. C. Struik.
13. **Late Quaternary Geology of Southwestern British Columbia.** J. E. Armstrong, S. R. Hicock.

### ABSTRACTS

Abstracts for talks and poster sessions are limited to 250 words and **MUST** be submitted camera-ready on official abstract forms available from

Abstracts Coordinator Geological Society of America P.O. Box 9140 Boulder, CO 80301	or GSA Abstracts Dept. Geological Sciences University of British Columbia Vancouver, B.C., Canada V6T 2B4
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### ABSTRACTS ARE DUE DECEMBER 11, 1984

Send one original and five copies to

M. L. Stout (U.S. abstracts) Department of Geology California State University 5151 State University Drive Los Angeles, CA 90032	or W. R. Danner (Canadian abstracts) Dept. Geological Sciences University of British Columbia Vancouver, B.C., Canada V6T 2B4
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All papers in ordinary sessions will be 15 minutes, plus 5 minutes for discussion. Poster presentations will be on display for one-half day.

All abstracts will be reviewed for information content, correct structure, reliability of data, appropriate geographic coverage, and originality. Those interested in participating in a particular symposium should contact the conveners and submit abstracts through them.

Any individual is limited to one oral presentation at the meeting but may also present a poster paper or be co-author of papers presented by others.

Authors will be notified of acceptance well in advance of the meeting.

### PROJECTION EQUIPMENT

All slides must be 2" x 2" (35mm) only. Talks should be prepared for presentation with a single projector.

### BUSINESS MEETING

The Cordilleran Section will hold a business meeting luncheon at 1215 hours on Thursday, May 9, 1985, in the Faculty Club, University of British Columbia.

### EXHIBITS

Educational and commercial organizations will display exhibits at the University of British Columbia. Exhibit space must be reserved by *February 15, 1985*.

(continued on p. 172)

## SOCIAL ACTIVITIES

A no-host reception will be held from 1930 to 2300 hours on Tuesday, May 7, at the Student Union Building, University of British Columbia.

## HOUSING

The headquarters for the meeting will be at Gage Towers on the University of British Columbia campus. Housing will be available at Gage Towers, or in downtown Vancouver, 6 miles from the campus, at Holiday Inn—Broadway, or at the Centennial Motor Hotel.

## ADDITIONAL INFORMATION

Further information on registration, accommodations, and activities will be published in a future issue of *GSA News & Information* and as part of *Abstracts with Programs* for 1985. More information may also be obtained by contacting the appropriate symposium or field-trip coordinator, or the chairman of the organizing committee:

W. H. Mathews  
Dept. Geological Sciences  
University of British Columbia  
Vancouver, B.C., Canada V6T 2B4  
(604) 228-2624

## PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS

# ROCKY MOUNTAIN SECTION, GSA, 38th Annual Meeting Boise, Idaho April 22-24, 1985

The Rocky Mountain Section of the Geological Society of America will meet Monday, Tuesday, and Wednesday, April 22, 23, and 24, 1985, at the Red Lion Inn, Riverside, Boise, Idaho. The meeting will be sponsored by the Department of Geology and Geophysics, Boise State University; Agricultural Research Service, USDA; U.S. Geological Survey Water Resources Division; and Idaho Association of Professional Geologists.

## CALL FOR PAPERS

Papers are invited for presentation at technical and poster sessions and symposia. Fifteen minutes for presentation and five minutes for discussion will be the format for the technical sessions. Papers of local and regional interest to geologists in the Rocky Mountain area will be considered for the program. Symposia and conveners are listed below. Ideas for additional symposia are welcome and may be submitted to the General Chairman.

## SYMPOSIA

1. **Geology of the Idaho Batholith.** \*Earl Bennett, (208) 885-7991; Thor Kiilsgaard.
2. **Structure and Stratigraphy of the Snake River Plain.** Harold E. Malde, \*S. H. Wood, (208) 385-3629.
3. **Volcanic Geology of the Western Snake River Plain and Adjacent Areas.** \*William K. Hart, (513) 529-3216; William P. Leeman.
4. **Western Phosphate Deposits. A: Geology and Mining.** \*Peter Oberlindacher, (208) 334-1189, FTS 554-1189; R. David Hovland, Steven M. Moore. **B: Stratigraphy and Paleontology;** \*Ernest H. Gilmour, (509) 359-2286; Bruce Wardlaw.
5. **Idaho-Wyoming-Northern Utah Thrust Belt: Stratigraphy, Structural and Economic Geology.** \*Paul K. Link, (208) 236-3846; Ronald L. Bruhn.
6. **Geothermal Resources and Occurrences of the Snake River Plain and Adjacent Areas.** \*L. L. Mink, (208) 386-5031; Clayton R. Nichols.
7. **Epithermal Silver and Gold Deposits.** \*Dave Giles, (303) 989-3879; B. Berger.
8. **Late Cretaceous Dinosaur Faunas of the Rocky Mountain American Interior.** \*David D. Gillette, (505) 841-8830.
9. **Molybdenum and Associated Ore Deposits.** \*Bill Threlkeld, (303) 988-6434; Art Bookstrom.
10. **Paleozoic and Proterozoic Rocks of Central Idaho.** \*Betty Skipp, (303) 236-1242; Peter Isaacson.
11. **Intermountain Seismic Belt.** \*Jack Pelton, (208) 385-3640.

12. **Hydrogeologic Investigations for Hazardous Waste Disposal.** \*G. Stephenson, (208) 334-1363; C. Duffey.

## ABSTRACTS

Abstracts are limited to 250 words and must be submitted camera-ready on official abstract forms. Contributors to symposia should submit their abstracts to the symposium coordinator whose name above has an asterisk. One original and five copies should be submitted on or before December 3, 1984. Obtain abstract forms from

Claude Spinosa  
Chairman, Department of  
Geology and Geophysics  
Boise State University  
Boise, Idaho 83725  
(208) 385-3660

or Abstracts Coordinator  
Geological Society of America  
P.O. Box 9140  
Boulder, CO 80301  
(303) 447-2020

Submit abstracts to  
Gordon Stephenson  
Technical Program Committee Chairman  
c/o Department of Geology and Geophysics  
Boise State University  
Boise, ID 83725  
(208) 385-3660

## ABSTRACTS ARE DUE DECEMBER 3, 1984

## STUDENT AWARDS

Student papers are encouraged, and awards will be made to students presenting outstanding papers. To be eligible for student awards, abstracts should be clearly identified and should be authored exclusively by students.

## PROJECTION EQUIPMENT

Equipment will be provided for 2" x 2" slides and single projectors only. Please bring your own loaded carousel trays.



Special audio/visual media equipment such as movie projectors, video players, personal computers, and data/video projectors are available but limited. Direct inquiries for these services to Dick Graybeal, Educational Media Services Department, Boise State University, (208) 385-1694.

## FIELD TRIPS

### Premeeting

1. **Canyon-filling Volcanics and Lake Beds of the Pleistocene Snake River** (float trip through the National Birds of Prey Natural Area). Harold E. Malde, Morlan Nelson.
2. **Tertiary Volcanics and Epithermal Mineralization in the Owyhee Mountains, Southwestern Idaho.** E. B. Ekren, Matt Beebe.
3. **Late Cenozoic Volcanic Geology of the Jordan Valley-Owyhee River Region, Southeastern Oregon.** W. K. Hart, S. A. Mertzman, R. W. Carlson.
4. **The Borah Peak Earthquake of October 28, 1983: Surface Faulting, Mass Movements and Quaternary Tectonic Setting.** A. J. Crone, E. L. Harp, M. N. Machette, R. L. Pierce, C. J. Waag.
5. **Structures of Paleozoic Rocks in the Fish Creek Window, South-Central Idaho.** Betty Skipp.

### Postmeeting

6. Repeat of trip 1.

7. **Geology and Geohydrology of the Boise Geothermal System.** W. L. Burnham, S. H. Wood.
8. **Ancestral Canyons of the Snake River: Geology and Hydrology of Canyon Fill Deposits in the Thousand Springs Area, South-Central Snake River Plain, Idaho.** H. R. Covington, R. L. Whitehead, J. N. Weaver.

## SPECIAL EVENTS

A Welcoming Party will be held Sunday evening, April 21. The annual banquet will be Tuesday evening, April 23.

## EXHIBITS

Space will be available for education, research, and industry exhibits.

## DETAILED INFORMATION

Information concerning registration, accommodations, and other activities will appear in *GSA News & Information* and as part of *Abstracts with Programs* for 1985.

Inquiries, additional information, requests, or suggestions should be directed to

Claude Spinoso  
General Chairman  
Department of Geology and Geophysics  
Boise State University  
Boise, ID 83725  
(208) 385-3660.

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## THE GEOLOGICAL SOCIETY OF AMERICA

## U.S. Working Group Forming for IGCP Project on Precambrian Geologic Evolution of the Amazonian Region

Geologists from Brazil, the three Guianas, Venezuela, the northern Andean countries, North America, and Europe are participating in a new project of the International Geological Correlation Program, concentrating on the Precambrian geologic evolution of the Amazonian region. Project 204 of the IGCP was officially formed in February 1983, with Wilson Texeira and Colombo Tassinari of the University of Sao Paulo, Brazil, as coordinators. An organizational meeting of geologists from Brazil, Colombia, Guyana, Venezuela, and the Netherlands took place in November 1983 in Manaus. A second meeting of the project was held in conjunction with the Second Amazonian Symposium in Manaus in April 1984. Geologists from Brazil, Venezuela, Guyana, French Guiana, the United States, and the Netherlands attended and presented papers.

A United States Working Group for this IGCP project was organized in late 1983 and formally approved by the U.S. National Committee for the IGCP at its December 1983 meeting. About a

dozen geologists who have previously done research in either the Amazonian region or the correlatable rocks in West Africa have indicated their interest in the project and in the U.S. Working Group.

Allan Gibbs of Cornell University is coordinating the U.S. Working Group. Any geoscientists interested in research on the Precambrian geology of the region are welcome. Address correspondence to: Allan Gibbs, Department of Geological Sciences, Cornell University, Ithaca, NY 14853. The telephone number is (607) 256-5282.

### November 30 Is 1985 Dues Deadline

Last year you sent your dues payment in before the November 30 deadline. As a result, you received your GSA publications without delay. This year the timing is even more critical because all section meeting *Abstracts with Programs* will be mailed to members early in the year. If we do not receive your dues payment before the November 30 deadline, you may not get that much-needed *Abstracts with Programs* in time for the section meeting you plan to attend. Remember, back orders take 6 to 8 weeks to reach you!

### SPECIMEN OF THE MONTH INFORMATION CORRECTED

The November 1983 issue of *GSA News & Information* included a photo of one of the slabs of orbicular biotite syenodiorite that decorate the walls inside the front doors of GSA headquarters. The caption attributed the cutting of the slabs to Francis G. Koopman's "bicycle-operated wire saw." Not so! The saw, technically a mud saw, does use four bicycle wheels in Koopman's Rube Goldberg-like design, but the saw is powered by an electric clothes dryer motor. Also, Florence Koopman did not discover the Precambrian granite and schist along the Sandia Mountains, but she was the first to find the five-foot dike of orbicular rock. Thanks to Frank A. Swenson for contacting Francis Koopman for an explanation of his mud saw and for setting us straight.

Herman W. Pfefferkorn corrected us on the identification of fossil plants in a black shale (Specimen of the Month for May 1984). We listed the plants as in the description that came with this fascinating specimen, but Pfefferkorn writes that only two species are visible: *Neuropteris ovata* and *Alethopteris serlii*. Both are seed ferns (pteridosperms). The species of *Pecopteris* and *Sphenophyllum* that we said were shown do occur in this flora but are not visible in the specimen.

Come see these and the many other specimens on display at GSA headquarters when you are in or near Boulder, Colorado.

#### In Memoriam

Gerald W. Book  
Hobbs, New Mexico  
December 23, 1983

William A. Fowler, Jr.  
Bartlesville, Oklahoma  
April 18, 1984

Daniel J. Jones  
Bakersfield, California  
June 9, 1984

Helen P. Withers  
Bethesda, Maryland  
June 25, 1984

Joseph P. Leonard  
Bellaire, Texas  
April 24, 1984

Edwin D. McKee  
Denver, Colorado  
July 23, 1984

H. B. Willman  
Tucson, Arizona  
July 4, 1984

### Call for Symposia Proposals 1985 GSA Annual Meeting Orlando, Florida October 28-31, 1985

Include title, conveners, purpose, content, speakers  
Submit questions and/or proposals to  
James F. Tull, Technical Program Chairman  
Dept. of Geology, Florida State University  
Tallahassee, FL 32306  
(904) 644-5860

**DEADLINE: JANUARY 1, 1985**

### Memorial Preprints

The following memorial preprints are now available, free of charge, by writing to GSA, P.O. Box 9140, Boulder, CO 80301.

Allan W.H. Bé, by O. R. Anderson  
Jules Braunstein, by Doris Malkin Curtis  
Allen S. Cary, by Richard W. Galster  
Edward Huntington Cobb, by Robert M. Chapman  
Joseph John Fahey, by Michael Fleischer  
Leonard D. Harris, by Robert C. Milici  
Charles T. Holland, by R. V. Dietrich  
Earl Montgomery Irving, by John Van N. Dorr II  
Richard H. Jahns, by Lauren A. Wright  
Fred Oscar Jones, by Frank C. Armstrong  
Paul Francis Kerr, by Philip M. Bethke  
Richard E. Koch, by W. A. Mohler  
Katherine Greacen Nelson, by Rachel K. Paull and  
Richard A. Paull  
Donald L. Smith, by John Montagne  
Howel Williams, by Alexander R. McBirney

# CLASSIFIED ADVERTISING

Ads (or cancellations) for the December issue must reach the GSA office by October 15.

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## Positions Open

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**Engineering geology, Hydrogeology.** Leighton & Associates, Inc., will interview MA or MS scientists at the Employment Interview Service in Reno.

Or write: Leighton & Associates, Attn: Jim Carr, 1151 Duryea Ave., Irvine, CA 92714.

**Engineering geology, Hydrogeology.** Texas A&M University will interview MA, MS or PhD scientists at the Employment Interview Service in Reno. Or write: Texas A&M University, Dept. of Geology, College Station, TX 77843-3115.

**Petroleum and/or inorganic & organic geochemists, sedimentologists.** Cities Service Oil & Gas Corporation will interview PhD scientists at the Employment Interview Service in Reno. Or write: Cities Service Oil & Gas Corp., Box 3908, Tulsa, OK 74102.

**Geomorphology, Hydrogeology.** Emory University will interview PhD scientists at the Employment Interview Service in Reno. Or write: Emory University, Geology Dept., Attn: Mr. R.J. Martin, Atlanta, GA 30322.

**Paleontology: invertebrate, paleoecology; Stratigraphy.** Michigan State University will interview PhD scientists at the Employment Interview Service in Reno. Or write: Michigan State University, Dept. of Geological Sciences, East Lansing, MI 48824-1115.

**Economic geology: ore deposits; Mineralogy.** Southern Illinois University will interview PhD scientists at the Employment Interview Service in Reno. Or write: Southern Illinois University, Dept. of Geology, Parkinson 102, Carbondale, IL 62901.

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**Paleontology, Stratigraphy.** University of Tennessee will interview PhD scientists at the Employment Interview Service in Reno. Or write: University of Tennessee, Dept. of Geological Sciences, Knoxville, TN 37996.

**Sedimentology/Stratigraphy, Structural/Tectonics, Geophysics/Tectonics.** The University of Kansas will interview PhD scientists at the Employment Interview Service in Reno. Or write: University of Kansas, Dept. of Geology, Attn: M.E. Bickford, Lawrence, KS 66045.

**Sedimentology, Stratigraphy.** The College of Wooster will interview PhD scientists at the Employment Interview Service in Reno. Or write: College of Wooster, Dept. of Geology, Attn: James Roche, Wooster, OH 44691.

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## GSA SPECIAL PAPER 193 Late Eocene & 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.

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