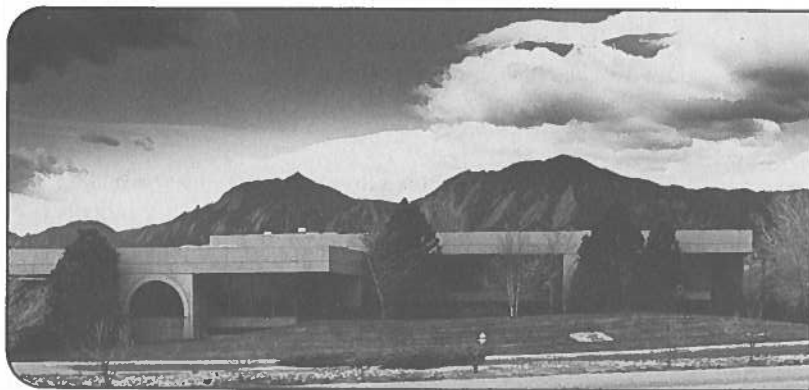


NEWS &
INFORMATIONMonthly Newsletter of
The Geological Society of America

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SEPTEMBER 1983

GSA President's Mid-Year 1983 Report to Members

By Paul Bailly



GSA President Paul Bailly

A year ago, you were advised that the Executive Committee and Council had appointed a new Executive Director and had set up a new publication regime. I now want to report to you what has happened in these areas in the last year and what main decisions were reached by Council during its May 1983 deliberations.

Publications

Because GSA's publications are its main product and the lasting evidence of its service to all members, let's discuss publications first. The cooperative efforts of the external Editors, the headquarters editorial and publication staff, and the Publications Manager (one of the duties of the Executive Director) have resulted in many improvements in the *Bulletin* which have met with applause from the membership. The backlog existing in 1981 has been eliminated, the flow of high-quality manuscripts has accelerated, the number of pages has been increased, and the esthetic aspects have been improved.

Geology is receiving more quality manuscripts on current research and new concepts and has more pages than a year ago. It also has a new cover design. We feel our two main publications are giving GSA the high status the Council set as a goal in 1981. The membership survey in late 1982 indicated there was a strong need within the geological community for a generalist society that publishes material of interest to all earth scientists regardless of their specializations. The GSA *Bulletin* and *Geology* fulfill that role. In addition, *Geology* is now recognized as the best rapid-publication journal for short papers on current research involving new concepts. I think all members can be proud of the

achievements obtained in the past 1½ years under this new publication policy. With the appointment of a new Books Editor, we are looking forward to continued improvement in our book publishing.

The Committee on Publications recommended to Council that an optimum stable level of publication be established for the next few years: 128 pages per issue for the *Bulletin* and 64 pages per issue for *Geology*. This would be achieved by increasing the levels previously approved by Council as follows: 3 signatures (a signature is 32 pages) in 1983 and 9 signatures starting with 1984 for the *Bulletin*, and 1 signature, starting immediately, for *Geology*. In May, the Council, after reviewing the committee's recommendation and evaluating the costs involved, approved the increase for *Geology* and the 1983 increase for the *Bulletin*, but limited the increases in signatures to 6 in 1984 for the *Bulletin*.

New Executive Director

Executive Director Michael Wahl started a year ago. His presence and influence have been felt in a constructive way in all departments of GSA headquarters. Perhaps the most visible effect of his managerial ability is the smooth orchestration of the complex and numerous interactions and coordination of all people involved in our publications. Yet, his most effective contribution to date is the computerization of headquarters; this is being accomplished in a sequential way, department by department, so that by early 1984, all data processing and accounting at GSA will be integrated in a "user friendly" computer system. This will result in prompt handling of many services to members and will allow easy expansion when the need arises.

Three-Year Plan

At the request of Council a year ago, the Executive Director has prepared a conceptual strategic development plan for the three years ahead. The Council approved this three-year plan, which is ambitious yet realistically achievable in a cost-effective way. The outstanding components of great significance to the Society are (1) a communications director to be hired in 1984 to work under the Executive Director and with all departments to enhance the internal and external relations of the Society, (2) a membership drive in late 1984, after all departments involved have become fully capable of handling it efficiently through computerization of their operations, and (3) establishment of a self-funding education department in 1985 for continuing education of members and development of public awareness of geology.

(continued on p. 142)

President's Mid-Year Report (continued from p. 141)

All of you who can visit headquarters in Boulder, Colorado, please do so; you will find a group of dedicated and competent people working harmoniously under the Executive Director to serve the membership and the science.

The survey conducted in late 1982 pointed almost unanimously to the perceived need for a generalist geological society in North America—a need that can best be met by GSA. A large number of professional geologists, especially in industry and universities, could become very interested in joining GSA if they realized that it serves their needs for keeping up with progress in all geological disciplines outside of their own special interest. Thus, a membership drive is a justifiable goal if it can be done without detriment to the quality of the scientific products of the Society.

Costs

The total cost of products and services delivered by GSA to its members in 1983 is about \$102 per member. The annual dues for Members and Fellows is \$54; for Student Associates it is \$28. The difference, \$48 for Members and Fellows, and even more for Student Associates, is obtained from Penrose Endowment income. For the next few years, we can reasonably foresee continued inflation in costs and decrease in endowment income. In 1980, 1981, and 1982, the serious inflation was accompanied by high interest rates, which resulted in very high endowment income; this, by the way, allowed us to fund the beginning of the Decade of North American Geology (DNAG) and the GSA Foundation. Our investment advisers forecast a decrease in endowment income in 1983 to 70% of what it was in 1982 and to 60% in 1984. Thus, a sizable increase in membership without an increase in

dues would result in huge deficits that would place GSA in a precarious position.

Dues

The Council has decided that two goals must be met: (1) the budget and dues for 1984 must accommodate the reduction in endowment income, the increase in expenditures due to inflation, and the increases in the size of the *Bulletin* and *Geology*, and (2) the dues for 1984 must be set at a level that allows addition of members in late 1984 and in 1985 without creating deficits. The Council therefore approved an increase in dues of \$8—from \$54 to \$62—for Members and Fellows and of \$4—from \$28 to \$32—for Student Associates. Yet, the Society will continue to be the best "money's worth" among the general geological societies in the world. Before the Penrose bequest, dues of the Society were \$10 and the membership benefits were meager. In the early 1930s, the dollar's purchasing power was 7.5 times what it is today. Thus, over the years, even with the great increase in membership, the Penrose Endowment has allowed GSA to increase dues at a rate substantially below the inflation rate.

Annual Meeting Awards Luncheon

Finally, a word about the Annual Meeting. For years, the two most prestigious earth sciences awards, the Penrose and Day Medals, have been awarded during the GSA Annual Meeting banquet. Yet, the attendance at the banquet has continuously decreased; it was only 300 in New Orleans. The Council decided that in Indianapolis this fall these two medals will be awarded during an Awards Luncheon on Monday, October 31; it is the Council's belief that as many members as possible should have the opportunity to show as a group the pride we all feel in the scientific achievements of our most prestigious members and of enjoying the wit and humor of the citationists' remarks and the wisdom of the medalists' comments.

That's all. Hope to see you in Indianapolis!

PEOPLE

GSA Fellow **Henry Spall** has been appointed associate chief of the Office of Scientific Publications at the U.S. Geological Survey National Center, Reston, Virginia.

Fellow **Stanley R. Hart**, Massachusetts Institute of Technology, has been elected to membership in the National Academy of Sciences.

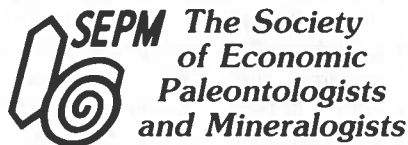
Fellows **Warren Hamilton**, U.S. Geological Survey, and **Patrick Hurley**, Massachusetts Institute of Technology, have been elected honorary members of the Geological Society of London.

Fellow and Councilor **Peter J. Wyllie** has been named Chairman of the division of Geological and Planetary Sciences at the California Institute of Technology.



FIRST ANNUAL MIDYEAR MEETING SAN JOSE, CALIFORNIA AUGUST 10-13, 1984

Innovation in Sedimentary Geology . . . a thematic combination of keynote addresses, symposia, technical sessions, and field trips. Plan to participate. For information: SEPM Midyear Meeting, P.O. Box 4756, Tulsa, OK 74159.



GSA News & Information

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CENTENNIAL NEWS

by Allison R. (Pete) Palmer

DNAG Synthesis Volume Outline on *The Innuitian Region* Completed

Nine of the 27 volumes of *The Geology of North America* are being prepared by the Geological Survey of Canada (GSC). These will also constitute the 1980s edition of *The Geology and Economic Minerals of Canada*. The outline for the volume on the Innuitian region, which includes both northern Canada and northern Greenland, is

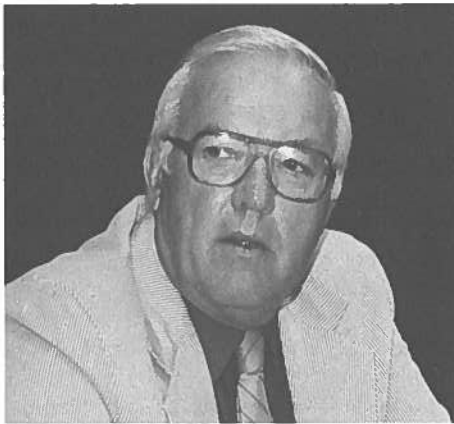
presented below. This volume is being developed under the leadership of H. P. Trettin. Participants represent academia, industry, and government agencies within and outside of Canada. Outlines of other volumes to be produced by the GSC will appear in subsequent issues of *News & Information*.

The Innuitian Region

- I. Introduction—H. P. Trettin
 - II. Physiographic Provinces—R. L. Christie
 - III. History of Geological Exploration—R. L. Christie
 - IV. Tectonic Framework—H. P. Trettin
 - V. Geophysical Characteristics
 - A. Gravity field—L. W. Sobczak
 - B. Aeromagnetic field—R. L. Coles
 - C. Conductivity anomalies—E. R. Niblett
 - D. Seismology and deep structure—L. W. Sobczak, J. F. Sweeney
 - E. Seismicity—A. Stevens
 - F. Heat flow—A. Judge
 - VI. Precambrian
 - A. Basement of Arctic platform—T. O. Frisch
 - B. Proterozoic of Innuitian orogen—H. P. Trettin, T. O. Frisch
 - VII. Cambrian to Devonian Deposition, Franklinian Mobile Belt, and Arctic Platform
 - A. Shelf—Greenland: J. M. Hurst; Canada: U. Mayr
 - B. Trough—Greenland: J. M. Hurst, F. Surlyk; Canada: H. P. Trettin
 - C. Magmatic belt—H. P. Trettin
 - D. Middle-Late Devonian molasse basin—U. Mayr
 - VIII. Ordovician to Early Carboniferous Deformation, Metamorphism, and Plutonism, Franklinian Mobile Belt
 - A. Deformation
 1. Magmatic belt
 - a. Middle-Late Ordovician orogeny—H. P. Trettin
 - b. Late Silurian-Early Carboniferous orogeny—H. P. Trettin
 2. Trough and shelf
 - a. Late Silurian-Early Devonian epeirogenic movements
 - i. Boothia uplift—A. V. Okulitch
 - ii. Bache Peninsula arch—A. V. Okulitch
 - b. Ellesmerian orogeny (Late Devonian or earlier Early Carboniferous)
 - i. Arctic islands—Shelf: A. V. Okulitch, F. G. Fox; Trough: H. P. Trettin
 - ii. Greenland—A. K. Higgins, N. J. Soper
 - B. Metamorphism—Greenland: A. K. Higgins, N. J. Soper; Canada: H. P. Trettin, T. O. Frisch
 - C. Plutonism—H. P. Trettin
- IX. Carboniferous and Permian, Sverdrup Basin
 - A. Deposition—W. W. Nassichuck
 - B. Melvillian Disturbance (Late Carboniferous-Early Permian)—W. W. Nassichuck, F. G. Fox
- X. Mesozoic, Sverdrup Basin and Arctic Platform
 - A. Deposition—A. F. Embry
 - B. Dykes and sills—A. F. Embry
 - C. Evaporite diapirism—A. F. Embry
- XI. Tertiary Deposition, Canada—A. D. Miall
- XII. Carboniferous to Tertiary Deposition, Wandels Sea Basin (Greenland)—E. Hakansson
- XIII. Tertiary Deformations
 - A. Early Tertiary epeirogeny—A. V. Okulitch, F. G. Fox
 - B. Mid-Tertiary orogeny (Eurekan orogeny of Arctic Islands and corresponding events in Greenland)—Greenland: A. K. Higgins, N. J. Soper; Canada: A. V. Okulitch, F. G. Fox
 - C. Late Tertiary epeirogeny and physiographic development—H. P. Trettin
- XIV. Quaternary—W. Blake, Jr., D. A. Hodgson
- XV. Summary of Tectonic History—H. P. Trettin
- XVI. Resources
 - A. Petroleum
 1. Geology: lower Paleozoic—U. Mayr
 2. Geology: upper Paleozoic to Tertiary—A. F. Embry
 3. Geochemical studies—T. G. Powell
 - B. Coal—A. D. Miall, R. M. Bustin
 - C. Mineral Deposits—W. A. Gibbins
- In pocket:
1. Geological map, 1:2,000,000—Canada: A. V. Okulitch, H. P. Trettin; Greenland: Geological Survey of Greenland
 2. Cross sections—A. K. Higgins, U. Mayr, A. V. Okulitch, N. J. Soper, H. P. Trettin
 3. Geotectonic correlation charts—A. F. Embry, E. Hakansson, J. M. Hurst, U. Mayr, A. D. Miall, W. W. Nassichuck, H. P. Trettin



Arthur Mirsky,
General Chairman



Haydn H. Murray,
Technical Program Chairman



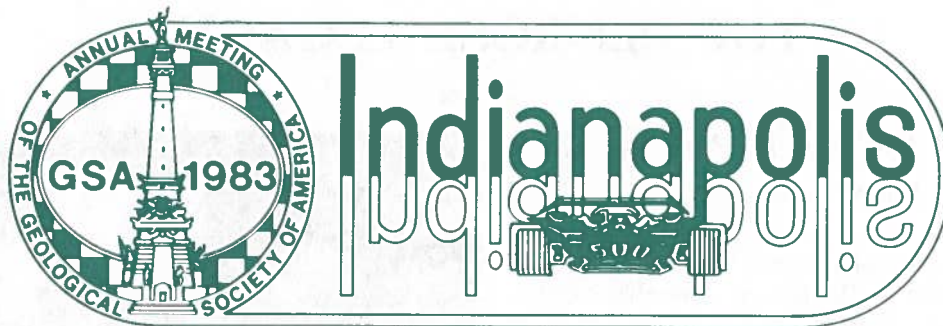
Robert H. Shaver,
Field Trip Chairman

1983 ANNUAL MEETING COMMITTEE

General Chairman	Arthur Mirsky	Indiana/Purdue University
Co-Chairman/Treasurer	Donald Levandowski	Purdue University
Field Trips Chairman	Robert Shaver	Indiana University
Co-Chairman	Jack Sunderman	Indiana/Purdue University
Guest Hospitality Chairman	Pat Mirsky	Speedway Public Schools
Guest/Special Events Chairman	Konrad Banaszak	USGS-Indianapolis
Publicity Chairman	Charles Weir	Amax Coal Company
Science Theater Chairman	Gerald Krockover	Purdue University
Technical Program Chairman	Haydn Murray	Indiana University
Co-Chairman	Herbert Howe	Purdue University
Student Assistants/Technical Services Chairman	Robert Dodd	Indiana University
Co-Chairman	Darrell Leap	Purdue University
Transportation Chairman	Gary Rosenberg	Indiana/Purdue University



The 1983 Local Committee during an early planning session. Clockwise from left: Adviser John Patton, Joint Technical Program Committee Chairman Haydn Murray, Transportation Chairman Gary Rosenberg, Field Trip Chairman Robert Shaver, Publicity Chairman Charles Wier, Guest/Special Events Chairman Konrad Banaszak, General Chairman Arthur Mirsky, Technical Services Chairman Robert Dodd, Technical Services Co-Chairman Darrell Leap, Joint Technical Program Committee Co-Chairman Herbert Howe, Co-Chairman and Treasurer Donald Levandowski, Science Theater Chairman Gerald Krockover. Not present were Field Trip Co-Chairman Jack Sunderman and Guest Hospitality Chairman Pat Mirsky.



1983 Annual Meeting — Indianapolis

A message from the General Chairman, 1983 Annual Meeting

GSA is off to Indy!

Welcome to Indianapolis for the 1983 Annual Meeting. Metropolitan Indianapolis is a bustling, thriving community with more than a million people, making it the 12th largest city in the nation. The city is large enough to be able to offer a variety of cultural and sight-seeing activities and feeding places amid the continual construction of towering office buildings, shopping centers, residential areas, and, most recently, a domed stadium. Yet, the city has retained its small-town charm of a friendly place.

The four co-hosts for the 1983 Annual Meeting are the Department of Geology, Indiana University-Purdue University at Indianapolis; the Department of Geology, Indiana University, Bloomington; the Department of Geosciences, Purdue University, West Lafayette; and the Indiana Geological Survey, Bloomington.

We have arranged for all meetings to be held in the Convention Center adjacent to the headquarters hotel and within a few blocks of the hotel cluster in downtown Indianapolis. A free shuttle bus, running on a 15- to 30-minute schedule, depending on the time of day, links a second cluster of hotels in the airport area to the headquarters hotel downtown.

The Local Committee includes geologists from industry and the U.S. Geological Survey, as well as the four host organizations. The individual committees have worked to ensure a meeting that you will be glad you attended. In addition to the four days of technical papers, there will be 22 symposia, and 11 premeeting and 5 postmeeting field trips. The special event on Tuesday

evening is A Night at the Market; the City Market in downtown Indianapolis will be open for GSA and will feature free Indiana wine with cheese and Indiana music, with three bands playing jazz, bluegrass, and chamber music.

The Guest Program will include tours to the Indianapolis 500 Motor Speedway Museum; the Connor Prairie Pioneer Settlement, at which costumed people portray the everyday lives of an 1836 frontier settlement; the home of Benjamin Harrison, 23rd President of the United States, and the Indianapolis Museum of Art; the Children's Museum, the largest in the world, with its excellent exhibits in history, ethnology, paleontology, geology, natural history, and archaeology; and the architecture of Columbus, Indiana, which is so distinctive that the city has been called the "Athens of the Plains."

Of course, there are also the standard, routine but very important, collateral events, such as the exhibits, the science theater, the employment service and interviews, the short courses, and the Hospitality Room. Also, a self-guided walking tour is planned of selected building materials in the vicinity of the headquarters hotel.

There should be something for everybody. So plan to be in Indianapolis for the 1983 Annual Meeting, and say "hello."

Arthur Mirsky
General Chairman
GSA—1983, Indianapolis

CALL FOR NOMINATION OF CANDIDATES FOR HONORARY FELLOWSHIP IN THE SOCIETY

Honorary Fellows of the Geological Society of America are selected from geologists throughout the world who have distinguished themselves as geological investigators or who have rendered special service to the Society. The candidates are usually residents outside North America.

The following information is required for each candidate:

- Biographical data similar to that found in *American Men and Women of Science* and *Who's Who in America*;
- 200-word-or-less summary of the candidate's contributions to geology;
- Selected bibliography of no more than 20 titles

Forms are available from:

- Executive Director
- Geological Society of America
- P.O. Box 9140
- Boulder, CO 80301
- (303) 447-2020

Deadline for receipt of nominations at headquarters: February 1, 1984

THE PENROSE LEGACY

GSA's Benefactor, R.A.F. Penrose, Jr.

by John M. Guilbert

It was a starshell over the world of science when shortly after the death of Richard Alexander Fullerton Penrose, Jr., on July 31, 1931, it was announced that his fortune of ten million dollars had been divided equally between the Geological Society of America and the American Philosophical Society. Penrose, a scholar, scientist, financier, and philanthropist, wanted to further activity in the two scientific areas that occupied most of his lifetime, specifically geology and the geosciences and more broadly the advancement of science in general.

Family and Education

R.A.F. Penrose, Jr., was born on December 17, 1863, in Philadelphia, the seventh generation of Penrose family stock that immigrated to the United States from Cornwall, England, in 1700. The family settled in Philadelphia. Through the years, the Penroses developed a reputation in their community for astute and honest activity. Penrose's father was a prominent professor of medicine at the University of Pennsylvania, but there was little real wealth in the family until Richard—also known to his friends as "Dick" or "Penny"—became financially successful. A scholarly and athletic young man, Penrose enrolled at Harvard, where he was so impressed by Nathaniel Shaler that he studied geology under him and began a lifelong friendship. Under Shaler's guidance, Penrose earned a Ph.D. degree in natural history in 1886, when he was 23 (the first Harvard Ph.D. degree in geology was not awarded until 1897). Penrose was always a careful observer and a lucid and expressive writer. He was a member of Phi Beta Kappa, and for his dissertation he wrote a paper that was to develop into one of his relatively few publications, "The Nature and Origin of Deposits of Phosphate of Lime" (U.S. Geological Survey Professional Paper 46, 1888). Contacts made while working on his dissertation resulted in his first professional job, as a mine manager in the phosphate fields of Ontario, Canada, in 1886.

Mining in the West

But adventure called. He found himself eager to attempt new situations and to expand his horizons into the burgeoning mining industry of the western United States. With that in mind, he accepted a position in 1888—a brash but competent 25-year-old—as Texas State Geologist, East Texas Division, a position that he correctly hoped would afford him exposure to a broad variety of geologic settings and teach him many of the practical skills to which he had not been exposed at Harvard. He served in that position until another lifelong friend and powerful influence, John C. Branner, later to become the first president of Stanford University and to introduce Penrose to another friend named Herbert C. Hoover, induced him to become State Geologist of Arkansas, a position he accepted in part because of his friendship with Branner. He served there from 1889 until the summer of 1891, at which time he took a long exploratory trip to the northwestern United States with his three brothers. They traveled



R.A.F. Penrose

to Yellowstone Park, the Butte district, and Philipsburg, Montana, all the while observing and absorbing geologic and economic information. In 1892, Penrose went to Cripple Creek, the newly discovered gold telluride camp in Colorado. There he met S. F. Emmons, then the Director of the U.S. Geological Survey, and engaged in a study of that district for Emmons. This effort resulted in Penrose's second publication, an apt and definitive description of the Cripple Creek district, which was published in 1898 as U.S. Geological Survey Annual Report 16.

Professor and Investor

The year 1892 was a critical one for Penrose, one in which he decided that his interests would best be served with a blend of academic and industrial activity. He was pleased in that year to accept a position as a member of the first faculty of the University of Chicago under T. C. Chamberlain. He gave lectures at Stanford in 1893 but lectured primarily in Chicago, between frequent trips to the western U.S., especially to many of the mining camps, including Globe, Bisbee, and Black Canyon, Arizona, in 1893. In 1895, he was named full professor of economic geology at the University of Chicago, and in that year he also embarked on what was to be his first important financial triumph. He, along with John Brockman and Daniel Barringer, and with financial backing from his own family, and from T. C. Chamberlain, C. R. Van Hise, and others, purchased a silver mine near Pearce, Arizona, which he prophetically named "The Commonwealth," a name reflecting an attitude toward philanthropy that was to pervade his professional life. The Commonwealth Mine flourished. Its considerable financial success permitted Penrose to continue his affiliation with the University of Chicago on a part-time basis, to travel widely, and even to enter into politics briefly. He permitted submission of his name for candidacy to the appointive post of Governor of the Territory of Arizona in 1897; the position was not offered to him, however. In 1901 and 1902, he traveled extensively in Europe, then across the Asian continent through the USSR, Manchuria, and Japan, re-entering China and traveling through Malaya and Ceylon, and back through Italy, Spain, and France. Throughout, he inspected mines and developed his investment and economic skills.

Note: Most of the information in these biographical notes is attributable to the exhaustive *Life and Letters of R.A.F. Penrose, Jr.*, by Helen R. Fairbanks and Charles P. Berkey, Geological Society of America, New York, 1952.

In 1903, at the age of 40, having become convinced of the economic potential of the major "low-grade" copper deposits of the western U.S., Penrose resigned as president of Commonwealth Mining and Milling Company, sold his interest in the mine, and invested in a company that he, his brother Spencer, Daniel Jackling, and Charles McNeil founded. They named it the Utah Copper Corporation, and it controlled the fabulous Bingham Canyon deposit. Here began a period of Penrose's life during which he spent much of his time sitting on boards of directors of various mining and railroad companies, consulting, and advising in mining ventures and management. His business and investments took more and more of his time. He never lost his enthusiasm for travel, inspection of mineral deposits, and geology, however, nor for the intellectual sides of all of these activities. He made it a point to correspond copiously, to remain in touch with his friends and colleagues in both science and business, and to maintain an intellectual environment that must have been exciting. His collected letters are models of eloquence, style, wit, and gentility. For reasons known only to himself, he never married, showed no evidence in his correspondence of any interest in connubial matters, and is not known to have broken any hearts.

Travel

During the years 1903 until 1920, Penrose traveled widely while guiding the Utah Copper Corporation and other important companies through their early years. In 1903 he visited Alaska, and the following year he journeyed to the southwest Pacific. Two years later, a long-awaited trip to the gold fields of South Africa became a reality. In 1907 he traveled extensively in South America, including a trip around Cape Horn. Each trip resulted in notebooks full of geologic information, economic data, and notes that must have served his commercial, educational, and scientific uses magnificently. His travels and corporate duties absorbed increasing amounts of time, and he felt it necessary to resign his full professorship at the University of Chicago in 1911.

Wealth and Philanthropy

Through those early years of the century, Penrose's business involvements were ascendant. As a member of the Board of Directors of his Utah Copper Corporation, and then of Kennecott Copper, of the Nevada Consolidated Copper Company, and of the Braden Copper Company of Chile, to list but a few, his personal fortune from mining, transportation, and several corporate positions in Philadelphia grew faster than anybody might have expected. His counsel was eagerly sought by many of his friends. His influence and advice were especially significant and time-consuming during the years of World War I.

During this time and later, the nature of his philanthropy also became evident. He was clearly a traditionalist, a member of the socially, intellectually, and financially elite society of Philadelphia and the U.S. His willingness to support the dozens of professional and social clubs, societies, and organizations of which he was a staunch member was widely recognized. As C. P. Berkey wrote, he was like a magnet that held on to worthwhile projects, and he held these with unflagging generosity and tenacity. Through the purchase of life memberships and with unsolicited donations, he generously supported a score or more of elite establishment societies. He appears to have been as interested in the welfare of those around him, in the development of intellectual and scientific interests, and in the preservation of the gentlemanly lifestyle of Victorian Philadelphia as in advancing his own interests. He became concerned about the ultimate distribution of his wealth and how it might do the most good as much as 10 years before

his death. He took a realistic but unannounced interest in determining the ultimate directions of his philanthropy.

It would appear that his having resigned his academic duties in 1911 either created in him, or was in part the result of, a growing investment of his time and interests in organized science. He clearly became impressed with the need for a Society of Economic Geologists, and he worked actively with several academic and scientific societies, including the Geological Society of America. Penrose was deeply honored by his election in 1920 as first president of the newborn Society of Economic Geologists, and he worked diligently to establish many of the early directions of that society. He was also president of the Academy of Natural Sciences of Philadelphia at that time, and he sat on innumerable committees involving Harvard University, the University of Pennsylvania, and other institutions. As Berkey noted, Penrose in 1923 was a member of at least twenty committees and boards of the American Philosophical Society, GSA, AIME, SEG, and the National Research Council, many involving posts of responsibility that he maintained until his death. One of the honors of which he was proudest came most fittingly shortly before his death. He was elected president of the Geological Society of America for the year 1930, having served long and illustriously on its Council and on various committees. He had long since established funds to perpetuate the awarding of the Penrose Medals of the Society of Economic Geologists and of the Geological Society of America.

Penrose had fulfilled many of his ambitions when death claimed him at the age of 67 on July 31, 1931, after a long siege with influenza. The bequests that he left to the Geological Society of America and the American Philosophical Society, almost \$4 million, after settlement of the estate, for each, took the financial and scientific communities by pleasant surprise; they were among the largest private donations to scientific societies to that date. Penrose was to the end a philanthropist, financier, educator, scientist, geologist, and gentleman. And he would indeed have been proud to have been witness to the style of science and progress that has been accomplished in the past 50 years to which his early support of the Geological Society of America contributed so much.

Penrose's Endowment Benefits All GSA Members

By Paul Bailly

The life and accomplishments of R.A.F. Penrose, Jr., are described above by John M. Guilbert. What his bequest to GSA has done for the members of the Society deserves special comment.

Immediate Effect

In the early 1930s when GSA received the corpus of the Penrose Bequest—\$3,884,000 in 1931 dollars—GSA was only 47 years old and had just 645 members. The annual dues were \$10, new members paid a \$10 initiation fee, the annual budget was \$7,000, and yet a savings fund of \$50,000 had been accumulated. It is to the credit of the executive secretary, officers, and councilors at that time that they reacted constructively to this very large and unexpected donation and reorganized the efforts of the Society to benefit geology and GSA members through a much-increased publication program. To put things in perspective, the bequest was greater than if all members had each suddenly given one year's salary to the Society; in 1931 alone the

(continued on p. 148)

Penrose's Endowment (continued from p. 147)

endowment income per member was \$155, or fifteen times the annual dues. Expressed in 1982 dollars, this income per member becomes \$1,007.

Uses of Endowment Income

Not all the endowment income has been used for expenditures that have benefited each member directly and immediately. It allowed substantial gifts to worthy geological causes or events such as the 1933 International Geological Congress, and seed funds for the Decade of North American Geology (DNAG) and the GSA Foundation. The Council traditionally approved the use of the Penrose income for GSA headquarters and administrative costs, but more than half of the income has been regularly used to support directly the cost of members' publications. Thus, it is reasonable to study the evolution of the Penrose endowment income in terms of dollars/member/year.

Inflation, Membership Increase

Table 1A summarizes for the past 52 years the endowment income in current dollars. It shows that in spite of an increase in endowment income, the increase in membership resulted in a decrease in weighted average annual income per member from \$251 during the 1931-1945 period to \$48 during the past seven years. Table 1B shows the same data as 1A but expressed in 1982

**TABLE 1A. PENROSE ENDOWMENT INCOME
IN CURRENT DOLLARS**

Period	Total income/year (\$1,000s)			Membership		Income/member/year (weighted average) (in \$)		
	Low	High	Avg	Low	High	Low	High	Avg
1931-1945	100	228	185	630	930	155	270	251
1946-1960	182	277	233	1,053	5,565	50	214	75
1961-1975	275	466	382	5,739	11,954	31	60	47
1976-1982	407	851	608	12,191	13,386	33	63	48

TABLE 1B. PENROSE ENDOWMENT INCOME IN 1982 DOLLARS

Period	Total income/year (\$1,000s)			Membership		Income/member/year (weighted average) (in \$)		
	Low	High	Avg	Low	High	Low	High	Avg
1931-1945	650	1,407	1,233	630	930	1,007	1,890	1,668
1946-1960	746	1,125	815	1,053	5,565	177	1,070	283
1961-1975	746	1,259	1,031	5,739	11,954	56	171	126
1976-1982	692	880	786	12,191	13,386	52	67	63

dollars; it dramatically illustrates the combined effect of inflation and membership increase. The weighted average annual endowment income per member in 1931-1945 was \$1,668 (1982 dollars); it has decreased to \$63 for the past seven years.

1984 Dues Include *Bulletin* and *Geology*

Dues Statements Coming This Month

by Clara Hodgson

The 1984 GSA membership dues statements will be mailed about mid-September. All dues-paying Fellows, Members, and Student Associates receive three monthly publications, *Geological Society of America Bulletin*, *Geology*, and *GSA News & Information* as part of their membership package.

The annual dues for a Fellow or Member for 1984 will be \$62 for the entire package, including membership and 12 issues each of the *Bulletin*, *Geology*, and *GSA News & Information*. The required dues for Student Associates for the same package will be \$32. Dues-exempt members who wish to receive the two journals for 1984 may do so for \$32 also (they already receive *GSA News & Information*).

Married couples who are both currently GSA members can request the married couple dues of \$62 for the first member (\$32 for Student Associates) and \$26 for the second. They will receive a single subscription to the *Bulletin* and *Geology*, but both members will continue to receive *GSA News & Information*, ballots, and other miscellaneous mailings. Please identify your spouse and which one is requesting the reduced dues in the spaces provided on the back of your dues statement. Please submit separate dues statements. We can activate the policy for married couples only upon specific instructions from you.

Please inform us as soon as possible of any address change, as it usually takes 6 to 8 weeks to correct the files. Meanwhile, publications will continue to go to your former address. They are sent second class; therefore, the Postal Service will not forward them without special instructions from you and added expense.

We must receive your 1984 dues payment no later than November 30, 1983, to avoid delay in receipt of your 1984 GSA publications. If you have any questions or do not receive your 1984 dues statement, please contact the Membership Department, GSA, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020.

Income and Dues

Penrose's original bequest of \$3,884,000 as of year end 1982 had a market value of \$13,883,000, including the estimated value of GSA headquarters land and building. In the past 52 years, it has delivered income of \$16,263,000 in current dollars or \$52,742,000 in 1982 dollars. Thus, in the past 20 years the total contribution of the Penrose endowment income per member amounted to \$965 in current dollars, or \$2,124 in 1982 dollars. Indeed, Penrose has done more than any other member to benefit all GSA members.

Penrose's bequest has allowed GSA to increase dues at a rate lower than inflation while increasing the size and number of publications. Yet, it is evident that the proportion of such benefits that endowment income can cover is rapidly decreasing. The Council is taking this into account in formulating its future plans for the Society.

In Memoriam

J. Karen Felmlee
Denver, Colorado
May 25, 1983

Terry J. Shackelford
Findlay, Ohio
February 11, 1983

Earl M. Irving
Los Angeles, California
May 10, 1983

George M. Wilson
Urbana, Illinois
May 18, 1983

Caspar A. Rappenecker
Gainesville, Florida
January 2, 1983

Penrose Conferences Scheduled

Melanges of the Appalachian Orogen

A GSA Penrose Conference, Melanges of the Appalachian Orogen, will be held June 23-30, 1984, in Newfoundland. Conveners are Brenna E. Lorenz, Department of Earth Sciences, Memorial University of Newfoundland, St. John's, Newfoundland; Nicholas Rast, Department of Geology, University of Kentucky, Lexington, Kentucky; and Harold Williams, Department of Earth Sciences, Memorial University of Newfoundland, St. John's, Newfoundland.

The conference will focus on the origin, significance, and characteristics of melanges in distinct geologic settings, with particular emphasis on the importance of careful field observations in deciphering melange terranes. Much of the conference will be in situ field discussions.

The island of Newfoundland offers an excellent cross section of the Appalachian orogen and its melanges. The conference will begin on Newfoundland's west coast, with excursions to melanges associated with the assembly and emplacement of Ordovician allochthons onto the ancient continental margin of North America. It will then move to the Burlington Peninsula to examine the polydeformed and metamorphosed melanges associated with the deformed easterly edge of the ancient continent, the melange of imbricated ophiolite that comprises the suture zone between continental and oceanic terranes, and associated olistostromes deposited immediately after the destruction of the margin. The final field area will be the controversial Cambrian-Ordovician Dunnage melange located in the easternmost part of the ancient oceanic terrane, and the Silurian olistostromes of New World Island.

Interspersed with the field trips will be formal and informal discussion sessions on origin, significance, and correlation of melanges along the Appalachian orogen; comparisons of Appalachian melanges with those of other orogens, and general topics such as modes of origin and structural and stratigraphic characteristics of melanges.

The registration fee is expected to be about \$400 per person. Those who wish to attend the conference should write to Brenna E. Lorenz, Department of Earth Sciences, Memorial University of Newfoundland, St. John's, Newfoundland A1B 3X5, Canada, by February 1, 1984.

Structural Styles and Deformational Fabrics of Accretionary Complexes

A Penrose Conference on Structural Styles and Deformational Fabrics of Accretionary Complexes will convene in the Eureka, California, area from April 30 to May 4, 1984. Recent seismic reflection studies have revealed thrust-belt-style geometry in some modern accretionary complexes, whereas drilling results have documented a range of small-scale structures, thrust faults, and abnormal fluid pressures in this environment. Analyses of subduction complexes on land have defined the systematic aspects of their fabrics from macroscopic to microscopic scales, clarified deformation mechanisms active in their continuing evolution, and resulted in provocative models for their development. Currently, critical gaps exist in understanding how mega- to micro-scale fabrics of modern subduction zones evolve to fabrics of ancient subaerially exposed accretionary complexes, and how both of these may be explained experimentally.

This Penrose Conference will assemble earth scientists currently working on both marine and subaerial accretionary com-

plexes at all scales, plus a complement of geotechnical specialists who are knowledgeable in deformation of partially lithified sediment. The conference will synergistically connect expertise from the modern, ancient, and experimental areas to provide new perspectives on structural development. Participants will consider how fabrics form and evolve, including microstructures, seismically imaged features, and large-scale structures mapped on land. They will explore the intrinsic geomechanical processes that form fabrics in sediments undergoing large changes in physical properties. Structural evolution will also be considered in the context of the parallel diagenetic and metamorphic processes. The conveners hope to connect the physical and geochemical significance of fluids and their expulsion to structural features at all scales in accretionary complexes. On a one-day field excursion participants will study the fabrics of the Franciscan Complex in the Eureka to Crescent City area. The conference is not to be focused necessarily on blueschists nor melanges, and it will be topical, not regional in scope.

Earth scientists wishing to participate should contact Casey Moore or Dan Karig before December 15, 1983, and include a brief summary of their research relevant to the conference. Those inclined to give an oral presentation or poster session should submit a title and description of their topic. The conveners plan to schedule a mixture of presentation of new results, overview, and discussion. Participants will be encouraged to bring material for informal display, including thin sections, seismic profiles, and geologic maps. We anticipate a registration fee of about \$400 per person, which will cover food, lodging, and field trip expenses.

CONVENERS: J. Casey Moore, Department of Earth Sciences, University of California, Santa Cruz, CA 95064, (408) 429-2574; from 9/83 to 6/84, contact Moore at Department of Geological Sciences, Cornell University, Ithaca, NY 14850, (607) 256-3679; Daniel E. Karig, Department of Geological Sciences, Cornell University, Ithaca, NY 14850, (607) 256-3679; Darrel S. Cowan, Department of Geological Sciences, University of Washington, Seattle, WA 98195, (206) 543-4033.



THE
GEOLOGICAL SOCIETY
OF AMERICA

APPLICATION FOR PARTICIPATION IN A PENROSE CONFERENCE

Title of Penrose Conference _____

Your name and title _____
Organization _____
Mailing address _____
Street or P. O. Box _____
City and State _____ Zip Code _____
Telephone number _____
Area Code _____ Number _____
Field of interest _____

Please state briefly what your interest and experience have been with regard to the conference topic

PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS
NORTHEASTERN SECTION, GSA, Annual Meeting
Providence, Rhode Island, March 15-17, 1984

The **Northeastern Section** of the Geological Society of America will hold its 19th Annual Meeting Thursday morning through Saturday noon, March 15-17, 1984, at the Biltmore Plaza and Holiday Inn in Providence, Rhode Island. The section will meet 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.

CALL FOR PAPERS

Papers are invited for presentation at traditional technical poster sessions and symposia. Fifteen minutes for presentation and five minutes for discussion is the prescribed format for the technical sessions. Papers of regional interest to geologists in the northeast, as well as those of general geologic interest, will be considered for the program. Technical and poster sessions will be arranged on the basis of the abstracts received and accepted. Abstracts for symposia should be submitted directly to the appropriate convener.

SYMPOSIA

The following symposia have been organized or are in the final stages of organization. For further information, contact the convener(s) of individual 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 08E, Canada.
4. **Comparison of Modern and Ancient Convergent Plate Boundaries with Evolutionary Aspects of the Appalachian Orogenic Belt.** Tim Byrne, Department of Geological Sciences, Brown University, Providence, RI 02912; Rolfe S. Stanley, University of Vermont, Burlington, VT 05401.
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. Recent Advances in the Avalonian Geology of Southeastern New England.** Daniel Murray, Department of Geology, University of Rhode Island, Kingston, RI 02881.
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.

For further and general information on the symposia, contact symposia Chairman Richard A. F. Grieve, Department of Geological Sciences, Brown University, Providence, RI 02912, (401) 863-2417.

SHORT COURSE

Mechanics of Sediment Movement. John B. Southard, Massachusetts Institute of Technology, Cambridge, MA 02139; Gerard V. Middleton, McMaster University, Hamilton, Ontario L8S 4M1, Canada. Sponsored by the Eastern Section of the Society of Economic Paleontologists and Mineralogists.

ABSTRACTS

Be sure to use the 1984 abstract form.

Abstracts are limited to 250 words and must be submitted camera-ready on an official 1984 abstract form, available from

NEGSA Abstracts	OR	Abstracts Coordinator
Department of Geological Sciences		Geological Society of America
Brown University		P.O. Box 9140
Providence, RI 02912		Boulder, CO 80301
(401) 863-3338		(303) 447-8850

ALL ABSTRACTS ARE DUE OCTOBER 19, 1983

Send one original and five copies of abstracts to be considered for **Technical Sessions** and **Poster Sessions** to

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

Send one original and five copies of abstracts for symposia directly to the convener (first name following the symposium topic or title of the Symposia section). Acceptance or rejection of abstracts will be based on review by the Technical Program Committee. Abstracts will be judged on the basis of scientific merit, informative content, readability, and relevance to geologic problems of the northeastern U.S. There is no limit to the number of abstracts that may be submitted, but no more than two abstracts bearing an individual's name as first author will be accepted for the program. Authors will be notified of acceptance during December 1983.

STUDENT PAPERS

Students are encouraged to submit abstracts. Awards will be made for outstanding student papers presented in the technical

sessions. To be eligible and judged, abstracts must be authored exclusively by students and must be designated on the abstract form as a student paper.

PROJECTION EQUIPMENT

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

EXHIBITS

Exhibit space will be located adjacent to technical session rooms in the Biltmore Plaza. Standard and double booths will be available. The cost of booths for educational and nonprofit institutions will be reduced. For additional information, contact

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

WELCOMING PARTY

A welcoming party will be held on Thursday evening in the

Grand Ballroom of the Biltmore Plaza. Admission will be by registration badge only.

SPOUSE ACTIVITIES

Planned spouse 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.

DETAILED INFORMATION

Information concerning registration, accommodations, and activities will appear in a future issue of *GSA News & Information* and as part of *Abstracts with Programs* for 1984.

Requests for additional information or suggestions may be addressed to the General Chairman:

L. Peter Gromet
Department of Geological Sciences
Brown University
Providence, RI 02912
(401) 863-1920

PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS

SOUTHEASTERN AND NORTH-CENTRAL SECTIONS, GSA Combined Annual Meetings, Lexington, Kentucky, April 4-6, 1984

The Southeastern and North-Central Sections of the Geological Society of America will meet April 4-6, 1984, at the Hyatt Regency Hotel in Lexington, Kentucky, together with the Southeastern and North-Central Sections of the Paleontological Society, the Southeastern and East-Central Sections of NAGT, the Pander Society, and the Great Lakes Section of SEPM. The meeting is sponsored by the Kentucky Geological Survey, the University of Kentucky, and Eastern Kentucky University.

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 allowed for the technical sessions. Papers of regional interest to geologists in the Southeastern and North-Central areas, as well as those of general geologic interest, will be considered for the program. Abstracts not accepted for symposia will be considered for regular technical sessions.

SYMPOSIA

- 1. Carboniferous Paleontology, Paleocology, and Biostratigraphy.** Johnny A. Waters, Department of Geology, West Georgia College, Carrollton, GA 30117; Robert A. Gastaldo, Department of Geology, Auburn University, Auburn, AL 36830. Sponsored by the Southeastern Section of the Paleontological Society.
- 2. Coal Geophysics.** Paul J. Wolfe and Benjamin H. Richard, Department of Geology, Wright State University, Dayton, OH 45435.
- 3. Crustal Structure of the Central Stable Platform.** Ronald L. Street, Department of Geology, University of Kentucky, Lexington, KY 40506; William J. Hinze, Department of Geosciences, Purdue University, West Lafayette, IN 47907.
- 4. Geological Implications of Coal Resources.** Russell A. Brant, Kentucky Geological Survey, University of Kentucky, Lexington, KY 40506; M. Deveraux Carter, Coal Resources Branch, U.S. Geological Survey, National Center, Mail Stop 956, Reston, VA 22092. Sponsored by the Coal Geology Division.
- 5. The Positive Aspects of Taphonomy.** David L. Meyer, University

of Cincinnati, Cincinnati, OH 45221; Carlton E. Brett, University of Rochester, Rochester, NY 14627. Sponsored by the North-Central Section of the Paleontological Society.

- 6. Sedimentation within Coal-Forming Environments.** James C. Cobb, Kentucky Geological Survey, University of Kentucky, Lexington, KY 40506; John C. Crelling, Department of Geology, Southern Illinois University, Carbondale, IL 62901. Sponsored by the Great Lakes Section of the Society of Economic Paleontologists and Mineralogists.
- 7. Tectonics and Sedimentation of the Eastern North American Craton.** William A. Thomas, University of Alabama, University, AL 35486; Lawrence L. Sloss, Department of Geological Sciences, Northwestern University, Evanston, IL 60201.
- 8. Tectonics and Sedimentation of the Southern Appalachians.** William A. Thomas, University of Alabama, University, AL 35486; Wallace D. Lowry, Department of Geological Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.

FIELD TRIPS

- 1. Stratigraphy and Structure in the Pine Mountain Thrust Area.** D. Coskren and A. Lacazette.
- 2. Stratigraphy and Structure along a Traverse from Corbin, Kentucky, to Newport, Tennessee.** N. Rast, J. Fouts, K. Kohles, D. Trimble, and K. Neavel.
- 3. Fossil Soil and Subaerial Crust in the Mississippian of Eastern Kentucky.** F. Ettensohn and J. Grow.
- 4. Hydrogeology and Environmental Geology of the Inner Bluegrass Karst Region, Kentucky.** J. Thraikill.

(continued on p. 152)

Southeastern-North-Central Sections (continued from p. 151)

5. **Lithostratigraphy and Depositional Environments of the Middle Ordovician Limestone in Central Kentucky.** W. MacQuown.
6. **Coal and Coal-bearing Rocks of Eastern Kentucky.** J. Cobb, D. Chesnut, N. Hester, and J. Hower.
7. **Silurian Stratigraphy of East-Central Kentucky and Adjacent Ohio.** C. Rexroad and M. Kleffner.
8. **Stratigraphy of the Silurian and Devonian of Southern Indiana and Northwestern Kentucky with Emphasis on Microfossils and Macrofossils, Boundaries, Disconformities, and Pyroclastics.** J. Conkin and B. Conkin.
9. **Examination of Depositional Environments of the Middle Ordovician High Bridge Group of Central Kentucky.** G. Kuhnhenh.

ABSTRACTS

Abstracts are limited to 250 words and must be submitted camera-ready on official 1984 abstract forms available from

Abstracts Coordinator
Geological Society of America
P.O. Box 9140
Boulder, CO 80301
(303) 447-8850

ABSTRACTS ARE DUE NOVEMBER 9, 1983

Symposium abstracts should be sent to the appropriate coordinator. Technical and poster session abstracts (one original and five copies) should be submitted to

John Thrailkill
Department of Geology
323 Bowman Hall
University of Kentucky
Lexington, KY 40506-0059

PROJECTION EQUIPMENT

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

EXHIBITS

Exhibits representing education, research, and industry will be on display at the meeting site. For further information contact

Donald Hutcheson
Kentucky Geological Survey
311 Breckinridge Hall
University of Kentucky
Lexington, KY 40506-0056
(606) 257-5863

SPOUSE ACTIVITIES

A full schedule of activities is being organized.

DETAILED INFORMATION

Information concerning registration, accommodations, and activities will appear in a future issue of *GSA News & Information* and as part of *Abstracts with Programs* for 1984.

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

Donald C. Haney
Local Committee Chairman
Kentucky Geological Survey
311 Breckinridge Hall
University of Kentucky
Lexington, KY 40506-0056
(606) 257-5863

PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS SOUTH-CENTRAL SECTION, GSA, 18th Annual Meeting Dallas, Texas, March 26-27, 1984

The **South-Central Section** of the Geological Society of America will hold its 18th Annual Meeting at The University of Texas at Dallas, Richardson, Texas. The host will be the Geosciences Program of the University. Affiliated sponsor will be the Texas Section of the National Association of Geology Teachers.

TECHNICAL SESSIONS

Two days of technical sessions will be held on March 26 and 27, 1984, in the Conference Center at The University of Texas at Dallas. The sessions will consist of both volunteered papers and invited symposia.

CALL FOR PAPERS

Technical sessions of voluntary papers will be arranged into appropriate sections after abstracts have been reviewed by the program committee. Papers on any subject in geology relevant to the Southern Midcontinent and Gulf Coast regions are appropriate, and papers on geophysical topics are especially welcome and encouraged.

All papers in ordinary technical sessions are to be a maximum of 15 minutes. An additional 5 minutes can be devoted to discussion.

SYMPOSIA

Any communication concerning symposia abstracts should be

addressed to the General Chairman, who will forward it to the convener. The following symposia are tentatively scheduled.

1. **Mesozoic Tectonics and Stratigraphy in the Circum-Gulf: Bearing on the Origin of the Gulf of Mexico**
2. **Tectonics and Stratigraphy of the Caribbean Region**
3. **Cretaceous-Tertiary Boundary in the Gulf Coastal Plain and Terminal Cretaceous Extinction Event**
4. **Paleozoic Crustal Evolution in the Southern Midcontinent**
5. **Paleozoic Biostratigraphy and Chronostratigraphy in Ouachita-Arbuckle-Marathon Trends**
6. **Subsurface Diagenesis—Rock-Water Interaction**
7. **Geophysical Crustal Studies of the Southern Midcontinent Region**
8. **Geologic Education: Industrial and Academic Viewpoints**
9. **Quantitative Techniques in Structural Geology**

(continued on p. 153)

FIELD TRIPS

Trips are tentatively scheduled for the Ouachita-Arbuckle Mountains of Oklahoma, the urban geology of Dallas, and the geology of northeastern Mexico. The trip to Mexico (est. \$600) will visit outstanding exposures of Paleozoic and Mesozoic units associated with the Gulf Coast. This three-day trip will include airfare and hotel accommodations south of the border.

ABSTRACTS

Use of the new revised GSA abstract form for 1984 is required. Forms can be obtained from

Richard Mitterer
Geosciences Program
The University of Texas at Dallas
P.O. Box 688
Richardson, TX 75080

OR Abstracts Coordinator
Geological Society of America
P.O. Box 9140
Boulder, CO 80301
(303) 447-8850

ABSTRACTS ARE DUE NOVEMBER 7, 1983

Send one original and five copies to

Richard Mitterer
GSA General Chairman
Geosciences Program
The University of Texas at Dallas
P.O. Box 688
Richardson, TX 75080

Acceptance or rejection of an abstract will be based upon the abstract as submitted by the author. Authors will be notified of acceptance well in advance of the meeting.

STUDENT PAPERS

Student papers are encouraged, and awards will be made to students presenting the most outstanding papers. Student papers should be clearly identified as such and should be authored exclusively by students.

PROJECTION EQUIPMENT

Equipment will be provided only for 2" x 2" (35mm) slides. Only one projector will be available in each room.

SPECIAL EVENTS

A Welcoming Party will be held Sunday evening (March 25), and the annual banquet will be held Monday evening (March 26).

ACCOMMODATIONS

Headquarters will be the Hilton Inn in Richardson. A list of other motels in the area will be included in a later announcement.

DETAILED INFORMATION

Registration, accommodations, and other information and announcements will appear in a future issue of *GSA News & Information* and as part of *Abstracts with Programs* for 1984.

For additional information contact the General Chairman:

Richard M. Mitterer
Geosciences Program
The University of Texas at Dallas
P.O. Box 688
Richardson, TX 75080

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

Check, money order in U.S. funds, or MasterCard or VISA accepted. Colorado residents add sales tax.

Order your copy today from:
Publication Sales, Geological Society of America,
P.O. Box 9140, Boulder, CO 80301

Call for Nominations for 1984 Penrose and Day Medals

Nominations for GSA's two most prestigious awards, the Penrose and Day Medals, are due at headquarters by February 1, 1984.

Penrose Medal

The Penrose Medal was established in 1927 by Dr. R.A.F. Penrose, Jr., to be awarded in recognition of eminent research in pure geology, for outstanding original contributions or achievements which mark a major advance in the science of geology. The award is made only at such time as the Council may decide. Nominees are selected by the Council, may or may not be members of the Society, and may be from any nation or any race of people. Penrose's sole object in making the gift was to encourage original work in purely scientific geology.

Day Medal

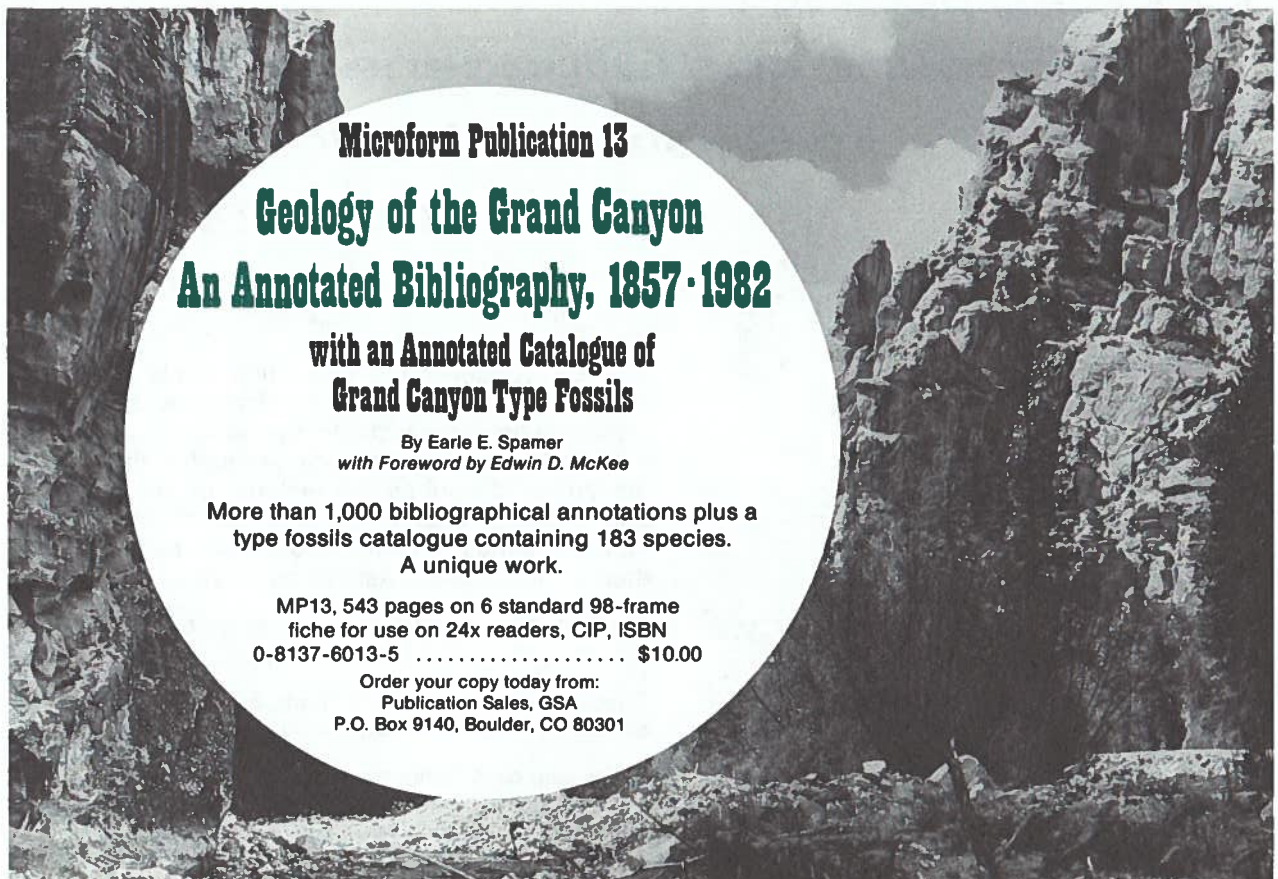
The Day Medal was established in 1948 by Professor Arthur L. Day to be awarded annually, or less frequently, at the discretion of the Council, for outstanding distinction in contributing to geologic knowledge through the application of physics and chemistry to the solution of geologic problems. Day's intent was to recognize outstanding achievement and inspire further effort, rather than to reward a distinguished career.

How to Nominate

To ensure thorough consideration by the respective subcommittees, submit for each candidate a brief biographical sketch, such as used in *American Men and Women of Science*, a summary of the candidate's scientific contributions to geology, and a selected bibliography of no more than 20 titles. In choosing candidates, scientific achievements should be considered rather than contributions in administration and service.

Forms for submitting the names of candidates for the Penrose and Day Medals are available from Executive Director, GSA, P.O. Box 9140, Boulder, CO 80301. Completed forms should be sent to the same address.

Note: In November 1981, Council established the policy that the names of unsuccessful candidates proposed to Council will remain for consideration by the respective subcommittee for three years (unless the candidate was again selected as one of the three sent to Council, at which time the three-year eligibility period would recommence). The nominators of such candidates will be invited to renominate their candidates by letter and to update their documentation each year that their candidates remain on the eligible list.



Microform Publication 13
Geology of the Grand Canyon
An Annotated Bibliography, 1857-1982
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By Earle E. Spamer
with Foreword by Edwin D. McKee

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Did a 10 kilometer asteroid
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What caused the 100-times-
plus enrichment of iridium at
the Cretaceous/Tertiary
boundary?

Could It Happen Again?

NOW AVAILABLE — GSA SPECIAL PAPER 190

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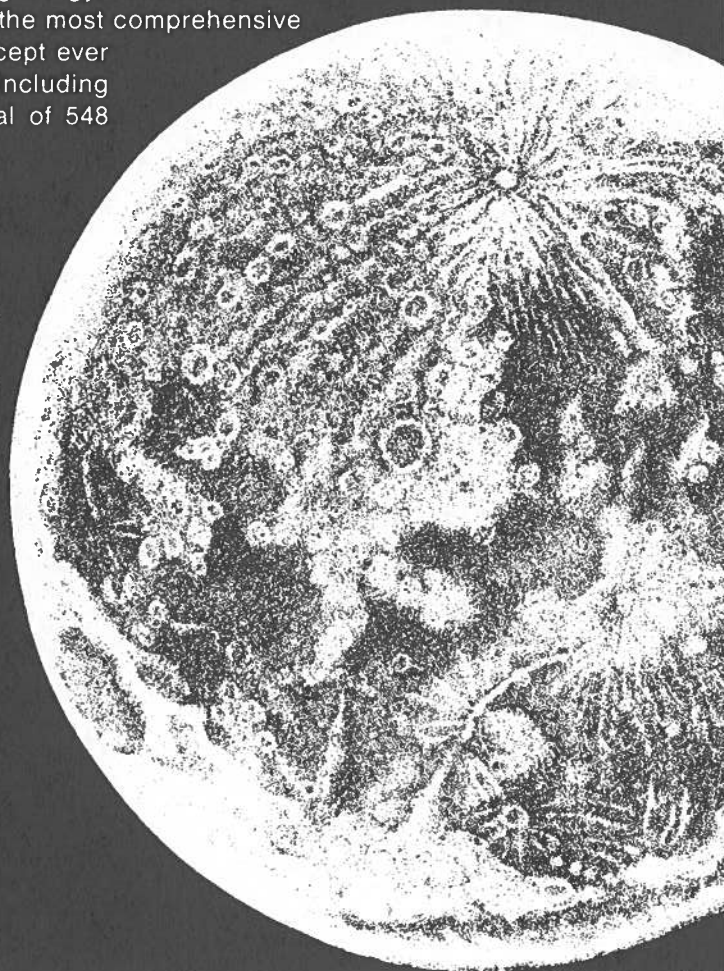
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