When it was clear that the CSA Foundation was going to be a reality, a search committee, chaired by Caswell Silver, was appointed by the Centennial Development Committee to locate leadership for the Foundation. Ideally, the committee hoped to find a leader with fund-raising experience and a knowledge of geology. Thus, it is with particularly great pleasure that we can announce the achievement of our ideal. Dwight Roberts, the new President of the GSA Foundation, began his duties on March 2.

Dwight graduated with a geology major from the University of Colorado in 1957 and has served with the University of Colorado Foundation, which he created, and with its predecessor, the CU Development Office, since 1961. Since 1975, Dwight has been President of the University of Colorado Foundation, Inc. During his time with the CU Foundation, the endowment was built to $15 million and the flow of funds in and out of the Foundation grew to $10 million annually. Thus, he brings to GSA solid and extensive experience in the operation of a large tax-exempt foundation as well as an appreciation of the profession that the GSA Foundation will serve.

Dwight is a native Missourian, married, has a son, 15, and a daughter, 12, and lives only a few miles from headquarters. When he isn’t traveling in search of funds, he is an avid fly fisherman and bird hunter. In addition to his activities with the CU Foundation, Dwight was one of the founding trustees of CASE, the Council for Advancement and Support of Education, and served as Chairman of the Board of this national organization in 1976–1977. He has also been active in Boy Scouts, the Boulder YMCA, the Boulder Rotary Club, the Mile High United Fund and the Boulder Chamber of Commerce. In 1967 he was named to “Outstanding Young Men in America.”

The GSA Foundation office will be adjacent to the lobby in the Headquarters building, and Dwight will be responsible for guiding the Foundation toward its initial goal of $9 million: $4 million for support of the Decade of North American Geology and other Centennial programs and $5 million to expand GSA’s programs of service to the profession through research grants, publication subsidies, professional conferences, and national geological meetings.

All questions about contributions to the Foundation should be directed to:

Dwight V. Roberts, President
Geological Society of America Foundation
Box 9140
Boulder, CO 80301
(303) 447-2020
Employment distribution of GSA membership

On the recommendation of the Membership Committee, the GSA 1979 dues statement included a questionnaire on the employment status of each member. The committee felt that it would be helpful to them and of interest to all the members to have such information. Although some members failed to answer the questionnaire, the returns were very large, and it was felt that the percentages in each category fairly represented the membership. The results of that survey were published in the March 1979 GSA News & Information.

The Membership Committee felt that the results were revealing and helpful. Last year they again considered the question, and particularly in view of the rapidly changing economic situation, they recommended that a similar canvass be made on the 1981 dues statement. They expanded the list of categories from that used in 1979 and the canvass was included on the 1981 statement.

The results that were in by January 1981 have been tabulated and are presented in the accompanying charts. As in the last canvass, not all members who returned their dues statements answered the questionnaire, but the great majority did, and the results are considered representative of the membership.

The charts were calculated by eliminating the categories students, retired, and other; therefore, they represent employed members only. It appears that since 1979 there has been a decrease in the percentage of the membership employed by government and in academic work and a significant increase in the percentage of the membership employed by all phases of industry.

As a supplement to the employment charts, two more charts show age distribution of the membership, including students. Although the shifts in age distribution are not dramatic, there has been a small shift toward older age. The maximum percentage has shifted from the 26-30 age group to the 31-35 group.
CENTENNIAL NEWS

Serendipity

The Geological Society of America, 1888–1930, published by GSA in 1932 and written by one of the founding fathers, H. L. Fairchild, is a gold mine of interesting information about the early history of the Society. It is clear from reading this book that the Centennial Decade is perhaps more appropriate than the proposers realized. Although GSA officially started with a gathering of 13 eminent, and mostly senior, geologists in the Botanical Lecture Room of one of those new (20 years old) upstart fresh-water colleges “warmly disapproved by the ultra orthodox”—Cornell—its organization actually took much of the 19th-century decade of the ’80s.

It all began with a summer visit by T. C. Chamberlain, of multiple working hypothesis fame, to N. H. Winchell at the University of Minnesota. Winchell suggested to Chamberlain that “the geologists of the western [sic] part of the country ought to be organized into a Mississippi Valley Geological Society.” They agreed to bring this up for discussion at the approaching August meeting of Section E of the AAAS, which was the principal annual gathering of geologists at that time. Conversations with other geologists at that meeting expanded Winchell’s concept and “it was resolved to organize the geologists of America into a general society.” The first informal meeting was convened almost immediately, and a committee of six, with Winchell as chairman, was chosen to draft a constitution for the proposed society. The draft was written up for the committee that evening by S. A. Miller and presented to the organizers for discussion the next day. As a measure of the gravity of the decision to break away from AAAS and have meetings with serious scientific purpose at some other time than the middle of the field season, seven years passed before the concept became a reality.

And where did this all take place?—Cincinnati! And when?—the summer of 1881! And where is the 1981 Annual Meeting of GSA?—Cincinnati! The Centennial Decade is serendipitously underway!

D-NAG Public Workshops—March and early April

Public workshops on “Problems and perspectives in regional geological synthesis,” related to the planning for the synthesis volumes for the Geology of the North American Plate and adjacent areas, will be held at all GSA sectional meetings, at the eastern ACU, AAPG, GAC, and CSPG meetings, and at the meeting of the Lake Superior Institute from March through early June this spring. At each of these workshops, plans for several of the synthesis volumes whose topics will be relevant to the audience at the meetings will be presented for discussion by one or more of the volume planners. Take this opportunity to have some share in the planning process for this unprecedented masterwork on the geology of our continent and attend the workshop of your choice. The first three workshops and the topics to be discussed are listed below.

Friday, March 20, 8:00 to 10:30 a.m., Southeastern Section Meeting, Hattiesburg, Mississippi: Appalachian, Atlantic Coastal Plain, Continental Interior, Gulf, Gulf Region, Precambrian.

Thursday, March 26, 5:00 to 7:00 p.m., Cordilleran Section Meeting, Hermosillo, Sonora, Mexico: Eastern Pacific, Precambrian, United States and Mexican Cordillera.

Wednesday, April 8, 7:30 to 9:30 p.m., Northeastern Section Meeting, Bangor, Maine: Appalachian, Continental Interior, Precambrian, Phanerozoic, Precambrian.
UPDATE

Articles in Bulletin, Part II, March 1981

Articles in Bulletin, Part II are listed below. (Summaries only of these articles are in Bulletin, Part I.)

1. Tectonic elements of the southern part of the Gulf of California, by Jeffrey W. Niemitz and James L. Bischoff. (On microfiche: 48 p., 16 figs.)

2. Late Miocene-Pliocene (Magnetic Epoch 9—Gilbert Magnetic Epoch) calcium-carbonate stratigraphy of the equatorial Pacific Ocean, by Dean A. Dunn and T. C. Moore, Jr. (On microfiche: 44 p., 6 figs., 7 tables)

3. Heat-flow measurements in 17 perialpine lakes, by Peter Finckh. (On microfiche: 63 p., 6 figs., 5 tables)

In March Geology

1. Causes of massive biotic extinctions and explosive evolutionary diversification throughout Phanerzoic time, by Y. Herman


3. Paleomagnetic estimates of temperatures reached in contact metamorphism, by E. McClelland Brown


5. Permo and Triassic rocks near Quinn River Crossing, Humboldt County, Nevada, by K. B. Ketner, B. R. Wardlaw

6. Post-Oligocene tectonic rotation of the Oregon Western Cascade Range and the Klamath Mountains, by J. Magill, A. Cox

7. Weathering before the advent of land plants: Evidence from unaltered detrital K-feldspars in Cambrian-Ordovician arenites, by A. Basu


Timing of orogenic activity in the Appalachian-Caledonian system


Call for science films

The 1981 AAPG National Convention will be held from May 31 to June 3 in San Francisco. As in years past, Tobin Research will sponsor the Convention Theater.

The committee would appreciate hearing from anyone with knowledge of new high-quality earth-science films, either domestic or foreign, which might be available for showing at that time.

Please contact the chairman at the following address:
Richard L. Jones
Convention Theater Chairman
Rt. 1, Box 404-65
Amity, OR 97010
(503) 835-7182.

Association of Engineering Geologists will hold 1981 annual meeting in Portland, Oregon

The 1981 Annual Meeting Association of Engineering Geologists will be held in Portland, Oregon, September 27 through October 4, 1981, at the downtown Hilton Hotel.

Chairman: Mavis D. Kent, L. R. Squier Associates, Inc., P.O. Box 1317, Lake Oswego, OR 97034; phone (503) 635-4419.

GSA News & Information
Vol. 3, no. 2
February 1981

GSA NEWS & INFORMATION (ISSN 0164-5854) is the monthly newsletter of The Geological Society of America, Inc., P.O. Box 9140, Boulder, Colorado 80301. Second-class postage rates paid at Boulder, Colorado, and at additional mailing office.

Prepared from contributions from the staff and membership by John C. Frye, Executive Director; James R. Clark, Production Manager; and June Thomas and Ann H. Fogel, Production Assistants.
RULE CHANGE FOR ARTICLE LENGTH IN BULLETIN, PART I

By action of the GSA Council at the Atlanta Annual Meeting, the rules governing length of articles that can be accepted for Part I of the Bulletin were changed.

Beginning immediately, manuscripts up to about 60 pages in length will be accepted for publication in Part I, that is, in the traditional paper (hard-copy) format of the Bulletin. Part II on microfiche will continue to be available for longer manuscripts and for supplemental data for articles in Part I.

Fulbrights to lecture in Soviet languages

Academic institutions in the USSR wish to sponsor American lecturers, in any field, who can teach in languages of the constituent republics. Nominations for 1981–82 have already been made, but scholars who wish to teach in the Soviet Union in 1982–83, and who are proficient in one of the following languages, are invited to express that interest at an early date: Armenian, Azerbaijani, Georgian, Latvian, Lithuanian, Russian, or any of the Central Asian languages. For further information, please contact W. A. James, Council for International Exchange of Scholars, Eleven Dupont Circle, N.W., Washington, DC 20036 (202) 833-4990.

Necrology

Notice has been received of the following deaths: William R. Bolton, Thoreau, New Mexico; James Gilluly, Wheatridge, Colorado; W. F. Libby, Los Angeles, California; Helmut G. F. Winkler, West Germany.
GSA EMPLOYMENT SERVICE—GENERAL INFORMATION

Throughout the year, the Membership Department maintains a computer file of geoscientists seeking employment. The information on this file includes the applicant's name, address, phone number, areas of specialty, type of employment desired, degrees held, years of professional experience, and current employment status.

Employers may request printouts of applicant listings within any one, or combination of several, specialty codes by completing the Employers Request form on the following page. The cost of a printout of one to two specialty codes is $50; each additional specialty listing is $15. A printout of the entire applicant listing in all specialties may be purchased for $150.

In addition to offering applicant listings throughout the year, GSA also conducts the Employment Interview Service each fall in conjunction with the Society-wide annual meeting. Interview space is rented to participating employers in half-day increments and our staff schedules all interviews with attending job applicants for every recruiter renting booth space. Additional services available for employer participants include a message service, complete listing of applicants, copies of resumes at no additional charge, and posting of all vacancies.

Geoscientists seeking positions may register with the Employment Service by completing the attached application form and submitting it along with a one-page typed resume and $15 payment to the address given below. Applicant registration is good for one year.

For additional information and submission of forms contact

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

APPLICANT AND EMPLOYER FORMS ARE BACK-TO-BACK ON THE FOLLOWING PAGES

GEODYNAMICS SERIES
Final Reports of the International Geodynamics Project

Co-published by
American Geophysical Union and Geological Society of America

Dynamics of Plate Interiors, Geodynamics Series Volume 1.
A. W. Bally, P. L. Bender, T. R. McGetchin, R. I. Walcott, editors. 1980. viii + 162 pages, 94 figures, 6 tables
$15.00

This is the first volume reporting the findings of the International Geodynamics Project, 1970-1979. It is designed, as all volumes in the series will be, to give specialists an opportunity to evaluate progress in their fields of research; to give students an efficient method of retrieving information to proceed effectively; to give scientists in other disciplines an overview of the scientific progress of the International Geodynamics Project. The 15 papers in Dynamics of Plate Interiors are divided into four parts: Formation and Subsidence of Sedimental Basins, Plateau Uplifts, Glacial Isostasy, and Present Crustal Movements and Instrumental Observations. The authors are an internationally recognized group of geophysicists, geologists, geologists, and geomorphologists.

How to order: GSA members, who are not members of AGU, may buy any volume in the series at 20% discount only through GSA Publication Sales. The ordering procedures that members must follow are set forth on the back of the 1981 GSA membership card and on order forms in the Winter 1980/81 Price List and page 5 of the January 1981 issue of GSA News & Information. GSA will not offer the Geodynamics Series on standing order. The American Geophysical Union, 2000 Florida Avenue NW, Washington, DC 20009, welcomes standing orders. Write for details.
APPLICATION FOR EMPLOYMENT MATCHING SERVICE

(please type or print legibly with black ink)

Name ____________________________ Date ____________

(last name first)

Mailing address ____________________________

City ____________________________ State ____________ Zip code ________

If not U.S. citizen, list Visa ________

Date available ____________ Telephone ________ area code ________ number (for contact during business hours) ________

EXPERIENCE

Must use specialty codes listed below

Choose as many as three that best describe your expertise in order of importance,

MUST have at least one listed

1. _______ 2. _______ 3. _______

*Present specialty (choose one from codes below) ____________________________ Years of experience in this specialty ________

Present employer ____________________________ May he be contacted? Yes [ ] No [ ]

If you do not wish to be listed for employment with a specific organization, check here [ ] and list organization on an attached sheet.

Give number of years experience for any of the following that are applicable:

Administrative _______ Exploration/production _______ Field _______ Research _______ Teaching _______ Total geological working experience ________

Foreign languages ____________________________ Spoken (fluency) ________ Written ________

ACADEMIC TRAINING

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<th>College or University</th>
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Postgraduate work beyond highest degree in (field) ____________________________ Number of years ________

SPECIALTY CODES

Select those that best describe your ability. Use codes in bold face only when other breakdowns are inadequate.

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<td>metamorphic</td>
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* Résumé must be attached. Only one page typewritten on one side will be accepted for reproduction to employers. Include concise detail of work experience and college majors and minors on degrees.

* Fee—$15.00. Payment must accompany form. Make check payable to the Geological Society of America.

I agree to release GSA or their representatives from responsibility for errors that may occur in processing or distributing this data. I understand that GSA makes no guarantee of contact by an employer in this service. I agree to notify GSA Employment Service immediately of (1) change of address, (2) acceptance of a position.

I will attend the 19____ GSA Annual Meeting in ____________

This application will be active for 1 year.

Signature (required)

* THESE ITEMS ARE ABSOLUTELY NECESSARY TO PROCESS THIS APPLICATION

1/81
EMPLOYER'S REQUEST FOR EARTH SCIENCE APPLICANTS

(Please type or print legibly with Black Ink)

Name ____________________________ Date ____________________________

Organization ____________________________

Mailing address ____________________________

City ____________________________ State ______ Zip code ______ Telephone number ________

Area code _______ Number ________

SPECIALTY CODES (see list below)

List the specialty code numbers that you wish to order, or □ check here if you want entire file of applicants in ALL specialties.

1. ________ 2. ________ 3. ________ 4. ________ 5. ________ 6. ________

SPECIALTY CODES

100. Economic Geology 222. inorganic 350. Mathematical Geology 453. micropaleontology 621. photogeology
101. coal geology 223. stable isotopes 351. computer science 454. paleobotany 622. photogrammetry
102. geotherm, etc. 224. unstable isotopes 352. statistical geology 455. paleoecology 630. Science Editing
104. nonmetallic deposits 251. Pleistocene geology 401. crystallography 501. exploration 700. Seismology
105. mining geology 300. Geophysics 402. clay mineralogy 502. subsurface stratigraphy 720. Stratigraphy
150. Environmental Geology 303. theoretical 421. marine geology 522. metamorphic 723. Cenozoic
151. public education and communication 320. Hydrogeology 422. coastal geology 523. sedimentary 724. Precambrian
220. Geochemistry 322. groundwater 451. invertebrate 575. Geotechnics 752. Tectonophysics
221. organic 330. library 452. vertebrate 600. Regional Geology 800. Volcanology

Applicants seeking employment in:

□ Academic
□ Government:
□ Industry
□ Other ____________________________

Minimum degree required:

□ None
□ B.A. or B.S.
□ M.A. or M.S.
□ Ph.D.

Minimum professional experience:

□ None
□ 1-5 yrs
□ 6-plus

Experience desired (yrs):

□ Administrative
□ Exploration/Production
□ Field
□ Research
□ Teaching

I am interested in interviewing applicants through the GSA Employment Service at the 19____ Annual Meeting in ____________________________

See attached sheet for current fee schedule.

1. I agree to use this service for valid recruiting purposes.
2. I agree that no placement charges will be assessed to any applicant participating in the GSA Employment Matching Service.

Total fee enclosed . . . $ ______

or invoice requested . . . $ ______

Signature (required)

1/81
For special discounts

The Avis Rent A Car System now offers special discounts on car rentals to all GSA members. The discounts are as follows:

**UNITED STATES**
Normal “Time and Mileage” Rates ..................... 25%*

**CANADA** ......................................................... 10%

**EUROPE, ASIA** ............................................... 10%

*Except Florida and Hawaii at 10%. AVIS Super Saver Rates are non-discountable, but you should still use your discount card . . . the WIZARD computer will compare rates!

Just clip out the attached card and present it and your current GSA Membership card at the rental counter each time you rent. The special code number alerts Avis to the proper discount.
MARCH BULLETIN BRIEFS

By Council action, the Bulletin Separates program is being discontinued. Effective with the January 1981 issue of Bulletin, GSA will no longer publish Separates. Members who hold coupons for Bulletin Separates PUBLISHED DURING 1980 may redeem those coupons any time during 1981; however, no new orders for the Separates program will be accepted.

GSA will continue to publish Bulletin Briefs in GSA News & Information each month for the convenience of the membership.

Article Summaries

- Tectonic elements of the southern part of the Gulf of California: Summary.

- Late Miocene–Pliocene (Magnetic Epoch 9—Gilbert Magnetic Epoch) calcium-carbonate stratigraphy of the equatorial Pacific Ocean: Summary.
  Dean A. Dunn, T. C. Moore, Jr., Graduate School of Oceanography, University of Rhode Island, Kingston, Rhode Island 02881. (4 p., 2 figs., 1 table)

  Peter Finckh, Geological Institute, ETH, Zurich, Switzerland (present address: Institute for Geophysics, ETH, 8093 Zurich, Switzerland). (4 p., 1 fig., 1 table)

Articles Complete in the March Issue of Part 1

- San Andreas fault: History of concepts.
  Mason L. Hill, 14067 E. Summit Drive, Whittier, California 90602. (20 p., 1 fig.)

The long and active San Andreas fault was revealed by the San Francisco earthquake of 1906. Strike-slip movement on a major crustal fracture was first established by that event. The elastic rebound theory was developed in an analysis of this earthquake. It was proposed in 1926 that cumulative horizontal movement on the San Andreas amounted to several miles, but such a great displacement was generally agreed to be unreasonable. In 1953, new evidence of cross-fault stratigraphic correlations of Pleistocene to Cretaceous rocks was presented which seemed to require tens to hundreds of miles of strike-slip displacement. Controversy and additional studies ensued, resulting in general acceptance of such movements by 1968. Since the 1965 proposal that the San Andreas is a transform fault, within a plate-tectonics mechanism, reservations about great horizontal movements of the Earth’s crust have been essentially eliminated. The single most important factor in delaying acceptance of miles of strike-slip on the San Andreas has been the long-continued confusion between fault separation and fault slip. Lawson, Noble, Talafilerro, Hill and Dibblee, Wilson, and a few others played the more leading roles in interpretations of the fault. Post-earthquake studies by Gilbert again confirmed his reputation as a great geologist. The San Francisco earthquake was the chief contributor to knowledge about the San Andreas, but now there are more questions than ever regarding the nature, geologic history, and significance of this important crustal structure. The present consensus about the role of the fault in local and global tectonics surely will be modified by revolutionary new conceptual models.

- Foreshore topography, tides, and beach cusps, Delaware.
  Roger N. Dubois, Department of Geography, University of Maryland Baltimore County, Catonsville, Maryland 21228. (7 p., 8 figs., 1 table)

The development and maintenance of beach cusps were studied along a shore segment of the Delaware coast from June 5 through June 28, 1979. On three occasions, a berm and a series of beach cusps developed together on the foreshore as part of rebuilding processes following an erosional event. After the beach was rebuilt and cusps were established, the spacing between horns and the elevation of horns remain fixed. Although the processes which govern the spacing between cusps are still in question, the elevation of cusps was controlled by the elevation of swash runup. When wave dimensions were fairly constant, the elevation of the runup, and thus of the cusps, was determined by the water level of the spring high tide. As processes fluctuated back and forth from depositional to erosional events, the horns, as compared to the bays, responded to a greater extent. For example, when sediments were being deposited on the cusps, the rate of deposition on the horn crest was greater than in the bays. When waves eroded the seaward
portion of a berm with cusps, however, most of the sediments lost from the cusps came from the horns; the results
to frequently left beach scarps at former positions of horns
and no scarps at bays. After an erosional event had left
beach scarps at former positions of horns, the remnant
topography of beach cusps controlled the action of the swash
so as to reconstruct horns at their former positions. As the
beach was being rebuilt, the swash was diverted sideways by
the beach scarps, and the energy of the swash was suffi-
ciently decreased to cause deposition in front of the scarps.
In turn, horns were rebuilt, and a new set of cusps was con-
structed at approximately the same position as of the old
set of cusps.

- Dating of Archean basement in northeastern Wyoming
and southern Montana.

Zell E. Peterman, U.S. Geological Survey, MS963, Den-
ver Federal Center, Box 25046, Denver, Colorado 80225.
(8 p., 5 figs., 5 tables)

Rb-Sr whole-rock and U-Pb zircon ages of granite and gneiss
cores from three deep drill holes extend known occurrences
of Archean rocks in the subsurface of northeastern Wyoming
and southern Montana. Rb-Sr and K-Ar mineral ages are
discordant and reflect early or middle Proterozoic distur-
banee. Highly altered rocks occur in a thin zone immediately
below the sub-Cambrian unconformity. Samples from a few
metres deeper in the basement are much fresher but show
the effects of this alteration in filled fractures and thin adja-
cent alteration haloes. Whole-rock Rb-Sr systems have re-
tained a fair degree of integrity in spite of increased suscep-
tibility to modification because of the disturbed mineral
systems. Interaction of the rocks with water a few metres
below the sub-Cambrian unconformity probably occurred
for only a relatively short time. Fractures filled rapidly with
secondary minerals such as chlorite, anhydrite, and carbon-
ate to maintain a relatively impermeable crystalline basement
in which the silicates and their contained isotopic systems
were preserved.

Ages of cores from two wells extend the Archean base-
ment to the NACP anomaly—a possible suture related to
early Proterozoic tectonism. These and published ages limit
a possible ensimatic mobile belt to a zone ~300 km wide
beneath the Williston basin. However, the possibility re-
mains that Archean crust was continuous between the Wy-
ming age province and the Superior Province.

- Bacterial oxidation of manganese and iron in a modern
cold spring.

G. E. Mustoe, Geology Department, Western Wash-
ton University, Bellingham, Washington 98225. (7 p., 7 figs.,
2 tables)

A marshy cold spring occurs in late Pleistocene glacial out-
wash exposed on the floor of the Squalicum Creek valley
near Bellingham, Washington. A 5-m by 25-m zone of black
soil with an average depth of 30 cm surrounds the spring.
This soil contains about 43% MnO₂ and 20% to 30% iron
oxide calculated as Fe₂O₃; the oxidized material appears
amorphous when analyzed by X-ray diffraction. Field ob-
servations and laboratory studies indicate Mn and Fe are
accumulated due to bacterial oxidation of trace amounts of
these metals supplied by ground water. Two strains of
 pseudomonad bacteria isolated from the black soil rapidly
oxidize Fe and Mn when grown on a culture medium con-
taining soil organic matter as a nutrient. Both bacteria can
be cultured on tryptone-glycerol agar but are unable to
oxidize Mn or Fe added to this synthetic medium. Although
the composition of the culture medium is important in con-
trolling whether oxidation occurs, the reaction is not merely
due to the catalytic effect of hydroxy acids contained within
the nutrient mixture. Optical microscopy and X-ray fluo-
rescence analysis using a scanning electron microscope equipped
with an energy-dispersive detector reveal that Fe and Mn
oxides, precipitated by the microbes occur as extracellu-
lar deposits, and these metals are not accumulated within the
bacterial cells.

Although microbiologists have shown that several genera
of bacteria are able to oxidize Mn in laboratory cultures,
these studies are of uncertain value when used to explain the
role microbes play in sedimentary Mn-oxide deposits, be-
cause most studies have involved microbes isolated from
ordinary soil rather than from Mn-rich environments. This
locality demonstrates the ability of soil bacteria to accumu-
late high concentrations of Fe and Mn under natural
conditions.
1981 ANNUAL MEETING
GSAS and ASSOCIATED SOCIETIES
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CINCINNATI
Headquarters Hotel — Stouffers Cincinnati Towers
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ABSTRACTS DEADLINE — JUNE 5
PREREGRISTRATION DEADLINE — OCTOBER 2, 1981

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