

GSA NEWS & INFORMATION

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Should GSA Provide Child Care at Annual Meetings?

by Sue Beggs
GSA Meetings Manager

We appreciate the special needs of parents bringing children to an annual meeting. Each year we consider setting up a child-care center, and each year we abandon the idea in favor of a cooperative system that leaves the responsibility for child care with the parents instead of with GSA. Some parents believe, however, that GSA should provide child care at either no cost or at low cost to parents. Even though we would like to make the meeting more convenient for these parents, the issue is more complicated than most people realize. There is more to be considered than hiring a recommended babysitter and providing a room.

Our first concern is for the well-being of the children. GSA would want to have credible, proven child-care providers. To set up a five-day program we would be hiring personnel who, although highly recommended, would be unknown directly to GSA staff. Our preference would be to take the same route chosen by other associations, such as AAPG. Associations with large guest memberships usually hire the services of a day-care center.

Typical of a center's requirements:

- 100-child minimum
- Hourly rate, such as \$2 per child
- \$15 per day per child under 3 years old
- \$10 per day per child between 3 and 7 years old
- Rental of cribs, playpens, and toys
- Snacks and meals
- 1 staff person for every 7 children
- Parking and meals for staff

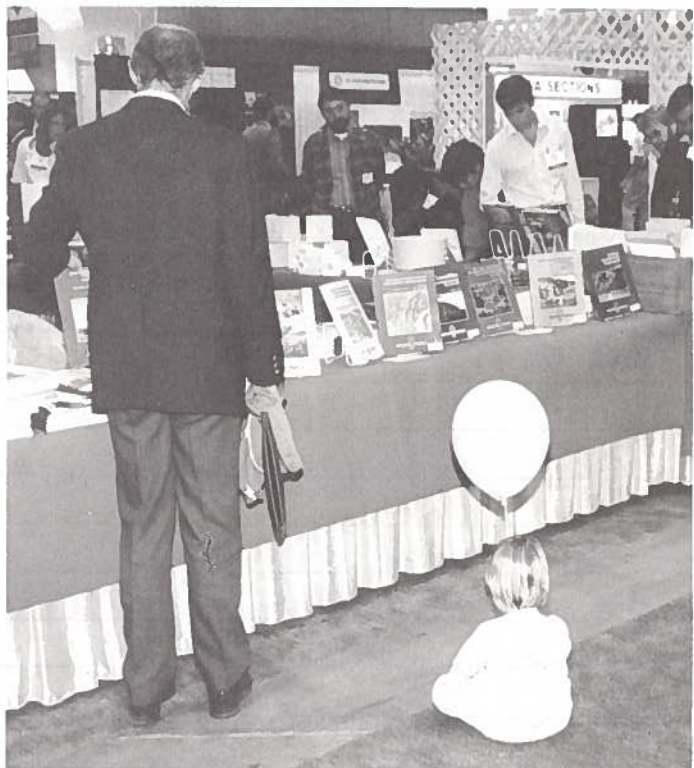
In addition to staffing and equipment, insurance and health-care permits must be acquired. Due to the unfortunate abuses at some child-care centers and the legal hazards of accidents related to children, the insurance costs, as you can imagine, are substantial. Good day-care services are not low-cost day-care services.

As a comparison, AAPG has a guest attendance base of 25%-30%, whereas GSA's guest attendance is typically 7%. We estimate that between 20 and 30 families brought young children to the Denver meeting.

Even with a broader guest base to work with, AAPG has had less than one-third of the required number of participants. On one occasion, parents who signed up in advance did not use the service. Prior to the AAPG Los Angeles meeting, for example, the child-care center was canceled because of insufficient participation. If GSA were to provide such a service, we would require advance payment with registration.

We hope this helps to explain why we have chosen to recommend a cooperative child-care system rather than sponsoring a child-care center. We inform parents about how to contact a babysitter through either the hotels or through the convention bureau. These organizations maintain lists of qualified sitters. We encourage parents to contact each other from the list of parents coordinated through the GSA Meetings Department. Parents can hire a sitter together and share the costs.

Each year we see a few more very young faces peering over someone's shoulder or being strolled through the exhibit hall. Children certainly can be part of a convention setting. Unless someone can suggest a system less fraught with problems, however, the responsibility for child care will remain with the parents. Please write to Vanessa George, GSA Meetings Coordinator, with your comments and ideas. We'd be glad to hear from you.



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Prepared from contributions from the staff and membership. Executive Director: F. Michael Wahl; Managing Editor: Faith Rogers; Associate Editor: Lee Gladish; Production and Advertising Manager: James R. Clark; Marketing/Advertising Assistant: Ann H. Crawford; Production Assistants: Mona T. Gonzales and Joan E. Manly.

*Advertising: Contact James R. Clark or Ann H. Crawford (303) 447-2020.

YOUR VOTE COUNTS: ABSTRACTS BY SESSION OR BY AUTHOR?

For 1988, the abstracts section of GSA 1988 Annual Meeting *Abstracts with Programs* is organized differently from previous years. The abstracts appear in *session order*. Previously the abstracts appeared in alphabetical order by senior author's last name.

Many found that this change made use of the abstracts book during the Denver meeting more convenient. For referencing a particular author, however, you must first turn to the author index to locate the page.

We are interested in how members feel about this change. We are now planning the 1989 abstracts volume and would like to hear from you as soon as possible. How about today?

Clip and send to: ABSTRACTS
GSA Meetings Department
P.O. Box 9140
Boulder, CO 80301

- I like the change. Please keep the abstracts in session order for all future meetings.
- I am mildly opposed to abstracts being listed in session order. I prefer the alphabetical listing, but am willing to use the new system.
- I am strongly opposed to abstracts being listed in session order. I want GSA to return to the alphabetical listing.

Comments _____

Name and Institution (optional) _____

An Inside Look at the Congressional Fellowship Program

by Beth Robinson
GSA Congressional Science Fellow



The number of scientific issues brought before Congress has increased dramatically over the past few decades. Environmental issues, global warming, defense contracting items, and biotechnology applications form only part of this burgeoning trend. The need for Congressional staff with scientific training consequently has grown, although it has always existed because scientists do not often choose a career in public policy. At present, the actual numbers of scientists on the Hill are very small, in the low tens out of the thousands of staff, and the number of earth scientists is a tiny fraction of that number.

The GSA Congressional Science Fellowship places earth scientists into staff positions in Congress for one year. Since many fellows stay on the Hill, the program adds to the number of scientists over the long term. It runs from September to September and is supported and administered by GSA. Awardees are expected to work in the United States Congress (the choice of office is left to the fellow) and to participate in orientation and follow-up programs. In all, twelve societies, including such diverse groups as the American Association for the Advancement of Science (AAAS), the Society for Research in Child Development, the Institute for Electrical and Electronics Engineers, and the American Society of Microbiology, sponsor anywhere from one to four fellows.

At the beginning of the fellowship, the orientation program gathers the fellows together for two to three weeks in September. Our orientation took us to the State Department, the Pentagon, and many other places on and off Capitol Hill. The General Accounting Office (GAO), the Office of Technology Assessment (OTA), and the Congressional Research Service (CRS) in the Library of Congress are particularly important agencies for the fellows because they are Congressional agencies that can provide crucial information. GAO evaluates the effectiveness and management of programs; OTA performs 1-3-year studies of technical topics; and CRS supplies information on a quick-call basis. CRS is staffed by experts with advanced law, business, or technical degrees who follow the issues in Congress. They will respond with whatever they can in the time frame that you set, which can be as short as HELP, PLEASE, RIGHT NOW!!

The bulk of Congressional staff falls into two categories: staff people who work directly for a member and staff who work for a committee or a subcommittee at the discretion of the chairman. We heard from staff members in both categories, some of whom had been fellows. For the most part they were quite frank and very informative. The past fellows also gave tips on the dos and don'ts of the Congressional environment, and advice on how to make the year work well. This introduction to the Congressional office is perhaps the most important function of the orientation program, but past fellows will admit that you *have* to experience a Congressional office for yourself.

After the orientation program, the placement period begins. During the late summer, member offices and committees contact the AAAS fellowship office to be included on the list of openings for fellowship positions. Each office specifies the type of position (e.g.,

energy, arms control, farming, or a combination) and their ability to provide space for a fellow. Space considerations are important, because many offices do not have room to add another desk, much less a phone.

The number of available placements for the fellows who begin during the Presidential election year traditionally has been smaller than in other years. Nevertheless there were still more than three times as many placements as there were fellows. Like most of the other fellows, I interviewed in 10-15 offices in an exhausting few weeks.

Each office organization is different, but most members' offices have an administrative assistant who is head of all aspects of the office for the legislator. The legislative staff is headed by a legislative director and under him/her are legislative assistants who cover specific issue areas. There is also a press secretary, a scheduler for the legislator, perhaps a staff assistant for political affairs, a senior receptionist, a case worker who handles specific case work such as lost Social Security checks, and any number of interns. In the legislator's district, there will also be a small staff of five or more people. The Congressional office also answers mail from constituents, and offices either designate one person to respond to the mail with the help of interns or share the responsibility among the legislative staff.

A committee staff is simpler in structure. The full committee and each of the subcommittees has a staff director or chief counsel. However, the professional staff and support staff are distributed at the discretion of the chairman.

I decided to work in the Office of Rep. Richard A. Gephardt (D-Missouri) as the legislative assistant for environmental, science, and technology issues. A legislative assistant's responsibilities include advising the legislator on issues, monitoring the movement of legislation, writing bills and amendments to bills, and writing speeches for the legislator. Along with reading background material on an issue, one must also talk with many people who are close to it. These people can be from Congress itself or from its agencies, but the most important contacts are often from outside Congress, including from academia. One thing that is learned quickly in Washington is that almost nothing can be accomplished by a solitary person. Policies take teamwork.

One further note about the fellowship in presidential election years: although there are fewer placements and some fellows do not get their first choice of office, it is a great time to be in Washington. At the beginning of the fellowship, the offices are frantically trying to finish the session and are buzzing with news from the campaign. In the middle of October, Congress breaks for

(continued on p. 68)



GSA Employment Service

Searching for a New Geoscientist?

When was the last time you hired a new employee? Did you waste time and effort in your search for a qualified geoscientist? Let the GSA computerized search file make your job easier.

How does it work? Complete the Employer's Request for Earth Science Applicants form on the following page. Remember to specify educational and professional experience requirements as well as the specialty area or areas of expertise your applicant should have. The GSA computer will take it from there.

You will receive a printout that includes the applicants' names, addresses, phone numbers, areas of specialty, type of employment desired, degrees held, years of professional experience, and current employment status. Resumés for each applicant are sent with each printout at no additional charge. In 1989, the cost of a printout of one or two specialty codes is \$150. (For example, in a recent job search for an analyst of inorganic materials, the employer requested the specialty codes of geochemistry and petrology.) Each additional specialty is \$50. A printout of the entire applicant listing in *all* specialties is available for \$350. (Specialty codes printed in boldface type are considered major headings. If you select a specialty code printed in boldface type, your listing will contain applicants within the related subspecialties as well. If you request a listing of one of the subspecialties, applicants coded under the major category will be included but not those coded under the other related subspecialties.) If you have any questions about your personalized computerized search, GSA Membership Services will assist you.

The GSA Employment Service is available year long. However, GSA also conducts the Employment Interview Service each fall in conjunction with the Society's Annual Meeting (this year in St. Louis, Missouri, Nov. 6-9). You may rent interview space in half-day increments from GSA. Our staff will schedule all interviews with applicants for you, the recruiter. In addition, GSA offers a message service, complete listing of applicants, copies of resumés at no additional charge, and a posting of all job openings.

Report from Washington

(continued from p. 67)

the elections until the swearing-in of new members of Congress in early January. Many offices take this time to prepare for the upcoming Congress. In presidential election years, they prepare with extra zest because changes in the administration can lead to new avenues in policy. In fact, what didn't have a prayer a few months before may now become distinctly possible. For a fellow, it is a great opportunity to see the creation of a legislative agenda and to get in on the ground level of issues. However, it can also be frustrating at times because Congress does not begin until late January, nearly halfway through the fellowship year.

During the past few months, I have come to respect the Congressional staff. They work hard and are very bright and dedicated. The amount of information that they process and use every day is astounding. Many develop a practical perspective on

Looking for a New Job?

Are you looking for a new position in the field of geology? The GSA Employment Service offers an economical way to find one. Potential employers use the service to find the qualified individuals they need.

You may register any time throughout the year. Your name will be provided to all participating employers who seek individuals with your qualifications. If possible, take advantage of GSA's Employment Interview Service, which is conducted each fall in conjunction with the Society's Annual Meeting. The service brings potential employers and employees together for face-to-face interviews. Mark your calendar for Nov. 6-9 for the 1989 GSA Annual Meeting in St. Louis, Missouri.

To register, complete the application form on the following page, prepare a one- to two-page resumé, and mail it with your payment to the address given below. One-year listing for GSA Members and Student Associates in good standing: \$30, non-members: \$60.

NOTE: If you plan to interview at the GSA Annual Meeting, GSA *must* receive your material **no later than August 11, 1989**. If we receive your materials by August 11, your record will be included in the information the employers receive prior to the meeting. Submit your forms early to receive maximum exposure! Don't forget to indicate on your application form that you would like to interview in November. Good luck with your job search!

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

For additional information and submission of forms, please contact

Terry Moreland
Manager, Membership Services
Geological Society of America
P.O. Box 9140
Boulder, CO 80301
(303) 447-2020

the progress of issues that amazes newcomers. It's Washington know-how, and it's invaluable in making policy that will last and make a difference. A year in Washington gives the fellow an opportunity to participate in the making of policy, and it's an experience that you can get nowhere else. I would highly recommend the fellowship program to any member of GSA; feel free to call me at (202) 225-2671 or GSA headquarters, (303) 447-2020, if you would like information about the program.

REMINDER: The application deadline for the next Congressional Science Fellow term (1989-1990) is **MARCH 15, 1989**. Procedures for application and detailed requirements are available on request from GSA headquarters.



**THE
GEOLOGICAL SOCIETY
OF AMERICA**

3300 Penrose Place, P.O. Box 9140
Boulder, Colorado 80301
(303) 447-2020

N&I 0389
FOR ACCTG. USE ONLY
Rec. \$30 \$60
Ck # _____
Ltr. _____
GSA _____
Add. _____

APPLICATION FOR EMPLOYMENT MATCHING SERVICE (Please type or print legibly with black ink)

(Mr.) (Miss
NAME (Mrs.) (Ms.
(Dr.) (last name first) _____ **Date** _____

Mailing Address _____
City _____ **State** _____ **Zip Code** _____

Date Available _____ **Telephone (** _____ **)** _____ **Business** _____ **Home** _____ **Visa** _____
_____ **area code** _____ **If not U.S. citizen, list visa** _____

Members of GSA ONLY: Check here if you **DO NOT WISH** to have this number included in the Membership Directory

EXPERIENCE

Must use specialty codes listed below. Choose three that best describe your expertise in order of importance.

* 1. _____ 2. _____ 3. _____

TYPE OF POSITION DESIRED

Interested in

- Academic
- Government
- Industry
- Other

Specific interest

- Administration
- Exploration/Production
- Field
- Research
- Teaching

Will accept employment in

- U.S. only
- U.S. with foreign assignments
- Either

* **PRESENT SPECIALTY**

Choose one from codes listed below _____ **YEARS EXPERIENCE IN THIS SPECIALTY** _____

PRESENT EMPLOYER _____

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

Administrative _____ Exploration/Production _____ Field _____ Research _____ Teaching _____ Total geological working experience _____

KNOWLEDGE OF FOREIGN LANGUAGES: French _____ ; German _____ ; Russian _____ ; Spanish _____ ; Other _____

ACADEMIC TRAINING

College or University	Degree (rec'd or expected)	Year	Major	Minor

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.

- | | | | | |
|--|----------------------------------|-------------------------------|--------------------------------|--------------------------------|
| 100. Economic Geology | 224. stable isotopes | 352. statistical geology | 501. exploration | 630. Science Editing |
| 101. coal geology | 225. geochronology | 400. Mineralogy | 502. subsurface stratigraphy | 650. Sedimentology |
| 102. geothermal, etc. | 250. Geomorphology | 401. crystallography | | 651. sedimentary processes |
| 103. metallic deposits | 300. Geophysics | 402. clay mineralogy | 520. Petrology | 652. sedimentary environments |
| 104. nonmetallic deposits | 301. seismic | 410. Museum (curator) | 521. igneous | 720. Stratigraphy |
| 105. mining geology | 302. gravity/magnetics | 420. Oceanography | 522. metamorphic | 750. Structural Geology |
| 120. Engineering Geology | 303. seismicity | 421. marine geology | 523. sedimentary (clastic) | 751. tectonics |
| 150. Environmental Geology | 304. paleomagnetism | 422. coastal geology | 524. sedimentary (carbonate) | 752. tectonophysics |
| 180. Public Education & Communication | 320. Hydrogeology | 450. Paleontology | 525. experimental | 753. rock mechanics |
| 200. General Geology | 321. hydrochemistry | 451. invertebrate | 550. Planetology | 800. Volcanology |
| 220. Geochemistry | 322. ground water | 452. vertebrate | 575. Quaternary Geology | |
| 221. organic | 323. surface water | 453. micropaleontology | 600. Regional Geology | |
| 222. high temperature | 330. Library | 454. paleobotany | 620. Remote Sensing | |
| 223. low temperature | 350. Mathematical Geology | 455. paleoecology | 621. photogeology | |
| | 351. computer science | 500. Petroleum Geology | 622. photogrammetry | |

- * **Résumé must be attached, LIMITED TO TWO PAGES, typewritten on one side only, to be acceptable for reproduction to employers. Include your name, address, and phone number; concise details of work experience; and majors/minors on degrees.**
- * **Fee: \$30 if you are a Member or Student Associate of GSA in good standing (Member # _____) \$60 if you are not a member of GSA. Payment in U.S. funds (check, money order, or charge information MUST ACCOMPANY FORM). MAKE CHECK PAYABLE TO THE GEOLOGICAL SOCIETY OF AMERICA.**

Check or Money Order
 MasterCard VISA
 American Exp. Diners Club
 CHOICE Carte Bleue
 Barclay Card Access
 EuroCard Standard Bank Card

Card Expires Mo Yr _____
 Card Number _____
 Signature _____ (Required for credit card payment)

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 guarantees** 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 _____

* **SIGNATURE (required)**

* **THESE ITEMS ARE ABSOLUTELY NECESSARY TO PROCESS THIS APPLICATION**

This application will be active for 1 year

1/88



THE GEOLOGICAL SOCIETY OF AMERICA

3300 Penrose Place, P.O. Box 9140
Boulder, Colorado 80301
(303) 447-2020

EMPLOYER'S REQUEST FOR EARTH SCIENCE APPLICANTS

(Please type or print legibly)

Name _____ Date _____

Organization _____

Mailing address _____

City _____ State _____ Zip _____ Telephone _____
code _____ 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. _____

POSITION DATA: What position(s) do you expect to fill? _____

In what area(s)? _____

Degree requirements _____ Number of positions available _____

SPECIALTY CODES

100. Economic Geology	224. stable isotopes	352. statistical geology	501. exploration	630. Science Editing
101. coal geology	225. geochronology	400. Mineralogy	502. subsurface	650. Sedimentology
102. geothermal, etc.	250. Geomorphology	401. crystallography	stratigraphy	651. sedimentary processes
103. metallic deposits	300. Geophysics	402. clay mineralogy	520. Petrology	652. sedimentary environments
104. nonmetallic deposits	301. seismic	410. Museum (curator)	521. igneous	720. Stratigraphy
105. mining geology	302. gravity/magnetics	420. Oceanography	522. metamorphic	750. Structural Geology
120. Engineering Geology	303. seismicity	421. marine geology	523. sedimentary (clastic)	751. tectonics
150. Environmental Geology	304. paleomagnetism	422. coastal geology	524. sedimentary (carbonate)	752. tectonophysics
160. Public Education & Communication	320. Hydrogeology	450. Paleontology	525. experimental	753. rock mechanics
	321. hydrochemistry	451. invertebrate	550. Planetology	800. Volcanology
200. General Geology	322. ground water	452. vertebrate	575. Quaternary Geology	
220. Geochemistry	323. surface water	453. micropaleontology	600. Regional Geology	
221. organic	330. Library	454. paleobotany	620. Remote Sensing	
222. high temperature	350. Mathematical Geology	455. paleoecology	621. photogeology	
223. low temperature	351. computer science	500. Petroleum Geology	622. photogrammetry	

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.)

	None	1-5	6-plus
Administrative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exploration/Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employment in: U.S. only U.S. with foreign assignments Either

Foreign Languages: French German Russian Other _____ Not required

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)

Penrose Conference on Late Eocene–Oligocene Biotic and Climatic Change to Meet in August

A GSA Penrose Conference "Late Eocene–Oligocene Climatic and Biotic Evolution" will be held July 31–August 6, 1989, in Rapid City, South Dakota. Conveners are Donald R. Prothero, Department of Geology, Occidental College, Los Angeles, CA 90041; Philip R. Bjork, Museum of Geology, South Dakota School of Mines, Rapid City, SD 57701; and William A. Berggren, Department of Geology and Geophysics, Woods Hole Oceanographic Institution, Woods Hole, MA 02543.

The later Eocene (Lutetian–Priabonian) and Oligocene was one of the most significant and dramatic periods of climatic and biotic change in Earth history. During this time, Earth made the transition between the tropical climates of the Cretaceous and early Paleogene to the modern temperate glaciated world. In the past five years, important discoveries from both the marine and terrestrial record have generated new hypotheses about the causes and mechanism of this change. The Ocean Drilling Program has generated data on Antarctic glaciation and an improved isotopic record for the late Paleogene. The terrestrial record of land animals and plants has been intensely studied, and its correlation has improved with much new unpublished magnetostratigraphic and radiometric dating. Both marine and terrestrial paleontologists have begun to look at diversity changes and extinction patterns and their possible correlation with climatic changes. Yet many terrestrial geologists are unaware of much of this unpublished research in the marine realm, and many marine geologists are unfamiliar with unpublished work in terrestrial geology.

We hope that the format of the Penrose Conference will promote lively discussion, debate, and exchange of ideas between scientists in these different disciplines. Two days of the conference will focus on the marine record and the global climatic story. Two days of the conference will focus on terrestrial sections and their record of plants, animals, and isotopes. In the middle, we will take a field trip to the classic Oligocene exposures of Badlands National Park and vicinity. Technical sessions will cover the following topics:

- The timescale, including the controversies over calibration
- The global climatic story, emphasizing recent isotopic, glacial, and sea-level data
- The marine record of microfossils, emphasizing the timing and severity of major extinctions and diversity changes
- The marine record of megafossils, their diversity and extinctions

Private Grants Available for Field Research

The Center for Field Research has identified geological field research as a priority for EARTHWATCH support and invites proposals for funding consideration.

Over \$5 million will be awarded in 1988 and 1989 to 200 projects in the sciences and humanities throughout the world; grants range from \$7500 to \$100,000. All funds are derived from the contributions of participating volunteers selected from the EARTHWATCH membership (40,000); all projects supported must therefore need both funds and direct field assistance to be eligible.

Application procedure: Preliminary proposals should be submitted 18 months before intended project date; exceptions will be made in some cases. Upon favorable review, a Full Proposal will be promptly invited. Decisions for funding are made on a monthly basis.

For further information, contact Dede Robbins, Associate Director, Center for Field Research, 680 Mount Auburn Street, P.O. Box 403, Watertown, MA 02272, (617) 926-8200.

- Dating and correlation of terrestrial sections from North and South America, Europe, and China
- Changes in diversity and extinction patterns in terrestrial mammals, lower vertebrates, molluscs, floras, and paleosols.

The conference will be limited to 60–70 participants, including students and foreign scholars. Interested persons should write to Donald R. Prothero at the above address and state reasons for wanting to attend the conference. Include a brief description of past or present research relevant to any of the conference sessions.

Deadline for application is April 28, 1989.

We hope to have available limited support for a few qualified graduate students and foreign scholars. The registration fee has yet to be determined.

National Arctic Research Consortium Inaugurated

The Arctic Research Consortium of the United States (ARCUS), a new organization of universities and nonprofit organizations created to strengthen and advance arctic research, was inaugurated at a meeting in Fairbanks, Alaska, on October 9, 1988.

Representatives of 31 universities and other institutions with direct interests in arctic research and education attended the meeting. Members hope to improve the exchange of information and ideas with federal, state, and regional agencies that support arctic research.

The consortium was formed to provide agencies and policy makers with specific information about arctic problems, to improve educational opportunities in arctic science, and to develop cooperative research partnerships. The new consortium is expected to help further the understanding of the arctic as a unique area for research, including global change studies.

Luis Proenza, vice-chancellor of research at the University of Alaska—Fairbanks, has been named the consortium's president. Donald (Chris) Shepherd, formerly of the Solar Energy Research Institute, will serve as Executive Director. Mark Meier, an ARCUS executive committee member and director of the Institute of Arctic and Alpine Research at the University of Colorado at Boulder, said ARCUS operations will be supported by dues contributed by member institutions, as well as through grants.

For more information contact Proenza at (907) 474-7314 or Shepherd at (303) 492-8830.

Report on Urbanized Desert Forum Published

GSA has published a report by its Committee on Geology and Public Policy, "The Urbanized Desert; A Challenge for the Geosciences." The 10-page publication summarizes a forum, sponsored by the committee, which was held at the 1987 GSA Annual Meeting in Phoenix, Arizona. Panelists for the forum were Victor Baker, Department of Geosciences, University of Arizona; Debra Daniel, Arizona Department of Environmental Quality; Martin Karpiscak, Office of Arid Lands Studies, University of Arizona; Greg Lunn, Arizona State Senate; Dick Raymond, consulting geologist; Charles Sargent, Department of Geography, Arizona State University; Gary Small, Salt River Project; Jerry Stabley, City of Scottsdale Planning and Economic Development Department; Greg Wallace, Arizona Department of Water Resources.

Copies of the report are available on request from the Geological Society of America, Membership Department, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020.

1989 ANNUAL MEETING
Frontiers in Geoscience
St. Louis, Missouri
November 6-9, 1989
 Cervantes Convention Center



First Call for Papers and Theme Session Announcement <i>GSA News & Information</i>	April 1	Joint Technical Program Committee GSA division, associated society, and at-large representatives meet in Boulder	August 17-18
Short Course Listing and Registration <i>GSA News & Information</i>	May 1	Abstract Notices Mailed (First Class)	August 25
Group Event Requests Due to GSA Event Coordinator	May 1	Speaker Kits Mailed (First Class)	August 30
Abstracts Deadline Abstract forms available in geology departments, or contact GSA Abstracts Coordinator	July 19	Technical Program Schedule Available <i>GSA News & Information</i>	September 1
Preregistration and Housing Forms and Event Information <i>GSA News & Information</i>	August 1	Preregistration Deadline Information available from GSA Meetings Coordinator	October 6
		Abstracts Volume Mailed to Subscribers (First Class)	October 12

Call today for more information: GSA Meetings Coordinator (303) 447-2020, or write P.O. BOX 9140, BOULDER, CO 80301

explore unusual and interesting geologic views from around the world in

THE ART OF GEOLOGY

edited by E. M. Moores and F. Michael Wahl, 1988

Inspired by the beautiful geologic photos on the covers of GSA's monthly journal, *Geology*, this volume reproduces many of those cover photos, augmented by numerous fine new additions. Some 250 full-color photos are presented in 70 photo essays that explore unusual and interesting geologic views from around the world. These pictures, taken by dozens of earth scientists while they work, were selected from among hundreds submitted. Photos are accompanied by brief texts edited for nonscientists, although scientists will certainly find the volume interesting—especially for explaining geologic forms and concepts to friends and family. Each photo essay features one or more large-format pictures accompanied by smaller, supplementary views. *The Art of Geology* is a deluxe hardbound edition, full color throughout, 9" X 12", on fine paper, complete with a colorful dust jacket. Volume editor E. M. Moores also edited the journal *Geology* for six years; F. Michael Wahl is Executive Director of GSA.

SPE225, 140 p., hardbound, ISBN 0-8137-2225-X, list price \$37.50

1990 GSA Annual Meeting—Dallas, Texas

October 29–November 1
Dallas Convention Center

**General Chairman: David E. Dunn,
University of Texas at Dallas**

Field Trips Deadline August 15, 1989
If you would like to lead a trip or have an idea for a trip, please contact one of the chairmen immediately.

By working with a division or associated society, you may be able to focus in depth on a topic by coordinating a technical session, short course, and field trip. Plans must be made early because theme session, symposia, and short course deadlines occur by the end of this year.

Field Trip Chairmen

Robert T. Clarke (Chairman), Mobil Research & Development Corp., DRD—P.O. Box 819047, Dallas, TX 75381, (214) 851-8481

Kent C. Nielsen (Co-Chairman), Program in Geosciences, University of Texas at Dallas, Richardson, TX 75083-6088, (214) 690-2401 (dept.), (214) 690-2448 (direct)

Short Course Deadline December 15, 1989
Proposals are encouraged from members and nonmembers. Pro-

posals will be reviewed by GSA's Short Course Committee no later than January 31, 1990.

For short course proposal guidelines contact:

Short Course Coordinator
Edna Collis, GSA, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020

Theme Session and Symposia Deadline . . . January 2, 1990

For 1990 program specifics contact:

Technical Program Chairman
Richard M. Mitterer, Program in Geosciences, University of Texas at Dallas, Richardson, TX 75083-6088, (214) 690-2401 (dept.), (214) 690-2462 (direct)

For general information on program participation (1990 and future years) contact:

GSA Meetings Manager
Sue Beggs, GSA, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020

1989 Abstracts Deadline Changed to July 19

For many years GSA has received requests for the abstracts deadline to be closer to the annual meeting. For 1989 GSA has revised its production and mailing procedures to accomplish this goal, while still protecting the integrity of the review system.

The change affects several key dates. These are highlighted in the schedule on page 72. Note that the Joint Technical Program Committee will be making its decisions on abstracts on August 18. Data entry will occur between August 19 and August 24, with a first class mail date for speaker notices of August 25. Speakers will not receive notification, therefore, until just before or after Labor Day.

The technical program schedule will appear in September and October issues of *GSA News & Information*, instead of with the registration information that traditionally appears in the August

issue. Likewise, speaker instructions on poster and oral sessions will be received in early September.

The abstracts volume will be mailed first class on October 12 and should be received in approximately the same interval as in previous years when it was mailed earlier but at the second class rate. This change in the mail rate has affected the price of the volume, which is \$15.00 for member subscribers plus \$3.50 for first class mailing. The nonmember purchase price will be \$18.75 plus \$3.50 for first class mailing.

Although all abstracts will go through the review process at the same time, for those who like an earlier abstract deadline,

Abstracts may be sent in at any time prior to July 19.

GSA Centennial 5K/10K Race Results



The fifth annual fun run, at City Park in Denver on Wednesday, November 2, during the 1988 GSA Annual Meeting, produced the following winners:

	5K				10K				
	Female	Time	Male	Time	Female	Time	Male	Time	
First	Kathy Hansen	0:21:05	Richard Stern	0:16:39	First	Sue Compton	0:42:17	Ronald Hershey	0:33:44
Second	Patricia Turner	0:23:52	Todd Feeley	0:18:19	Second	Charlotte Allen	0:46:32	Chris Way Thomas	0:35:25
Third	Sara Haines	0:23:52	Brian Whiting	0:18:59	Third	Kathy Tegtmeyer	0:47:44	M. Russell	0:36:27

FOUNDATION NEWS

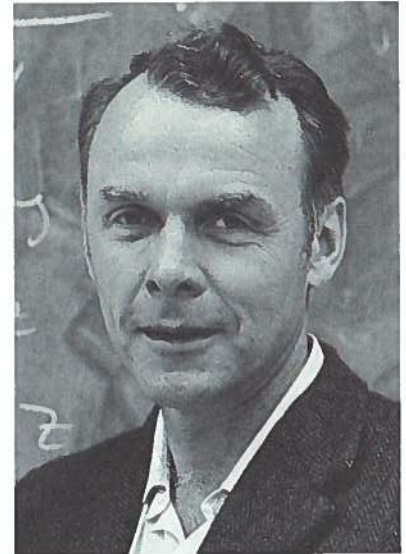
by Robert L. Fuchs

COX FUND HONORS 1975 DAY MEDALIST

A 1988 addition to GEOSTAR's growing group of dedicated or special-purpose funds was the Allan V. Cox Student Research Award. Established by GSA's Geophysics Division, the Cox fund will provide an annual research grant to the graduate student—M.S. or Ph.D.—submitting the year's outstanding research proposal in geophysics.

Allan V. Cox died in January 1987 at the age of 60, after a productive career in geophysics. A California native, Allan Cox obtained B.A., M.A., and Ph.D. degrees from the University of California at Berkeley. Although he started as a chemistry student, he was soon attracted to geophysics, and by the conclusion of his university studies he had become deeply involved in the then newly emerging field of paleomagnetism. In later years this early interest led to the important discovery of geomagnetic reversals. He and fellow workers proved conclusively that Earth's magnetic field had reversed many times in the past. This knowledge provided a basis for the theory of plate tectonics.

After receiving his Ph.D. degree, Allan Cox began work with the U.S. Geological Survey at Menlo Park. He was instrumental in establishing there a foremost paleomagnetism laboratory. In 1967 he joined the faculty at Stanford University and remained there for the next 20 years. During his tenure at Stanford, he created the Masters Program in Exploration Geophysics. He held the Cecil and Ida Green endowed chair in geophysics and was Dean of the Earth Sciences Department until his death. His research in later years focused almost exclusively on tectonics, and he published two



Allan Cox

important textbooks, *Plate Tectonics and Geomagnetic Reversals* in 1973 and *Plate Tectonics: How it Works* in 1986.

Allan Cox received the premier awards of science. In addition to GSA's Arthur L. Day Medal in 1975, he was awarded the American Geophysical Union's Fleming Medal in 1969 and the Vetlesen Prize in 1971. He was president of AGU and a member of the National Academy of Sciences, the American Association for the Advancement of Science, the American Philosophical Society, the Society of Exploration Geophysicists, and the California Academy of Sciences. He served as a GSA Councilor from 1967 to 1971, during which time he played an important role in guiding the future direction of the Society. In 1968, the ad hoc Committee for the Promotion of the Science of Geology, which Allan Cox chaired, made sweeping recommendations that had profound effects upon GSA's meetings and publications and provided the framework for the popular and effective Penrose Conference.

Research grants from the Allan V. Cox Student Award fund will be administered by GSA's Research Grants Committee. The Cox fund was started by the Geophysics Division with a contribution of \$5000 to the Foundation from the Division funds. Additional contributions are being solicited by the Geophysics Division and the Foundation to increase this endowment, thereby expanding the size of the annual award. Friends and associates of Allan Cox and geoscientists wishing to honor and perpetuate the landmark work done by this noted geophysicist and educator may make contributions to the GSA Foundation for the Allan V. Cox Student Award Fund.

FOUNDATION TO FUND MATCHING STUDENT-TRAVEL GRANTS

The GSA Foundation will award matching grants in the amount of \$2000 each to the six GSA Sections. The money, when combined with equal funds from the Sections, will be used to assist students traveling to 1989 Section meetings and the GSA Annual Meeting in St. Louis in November.

Travel grants will be awarded and administered by the Sections, whose officers should be contacted for further information.

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MEETINGS

(Asterisk indicates new or changed information)

1989

International Symposium on Natural Catastrophes and Their Impact, March 1989, Ankara, Turkey. Information: Tevfik Erkal, Türkiye Jeomorfoloğlar Dernəgi, P.K. 652 Kizilay, 06425 Ankara, Turkey.

Prospectors and Developers Association of Canada 57th Annual Convention, March 5-8, 1989, Toronto, Ontario, Canada. Information: Cary McLeod, PDAC, 74 Victoria St., Suite 1002, Toronto, Ontario M5C 2A5, Canada; (416) 362-1969.

Symposium on Energy and Mineral Potential of the Central America-Caribbean Region, March 5-9, 1989, San Jose, Costa Rica. Information: Mary Stewart, Circum-Pacific Council for Energy and Mineral Resources, 5100 Westheimer Road, Houston, TX 77056.

Symposium on the Afro-Arabian Rift System, March 6-8, 1989, Karlsruhe, Federal Republic of Germany. Information: U. Achauer, Geophysical Institute, Karlsruhe University, Herzstr. 16, 7500 Karlsruhe 21, Federal Republic of Germany; phone 0049-721-6084545; Telex 7825740 GEOK D; Fax 0049/721/71173.

Workshop on Drilling the Oceanic Lower Crust and Upper Mantle, March 7-9, 1989, Woods Hole, Massachusetts. Information: Janet Johnson, Dept. Geology and Geophysics, Woods Hole Oceanographic Institution, Woods Hole, MA 02543; (508) 548-1400, ext. 2623.

Geological Society of America South-Central Section Annual Meeting, March 12-14, 1989, Arlington, Texas. Information: Charles I. Smith, Dept. of Geology, University of Texas, Box 19049, Arlington, TX 76019; (817) 273-2987.

Second Symposium on the Application of Geophysics to Engineering and Environmental Problems, March 13-16, 1989, Golden, Colorado. Information: Ron Bell, SEMEG, c/o BellWest Geoservices, P.O. Box 10845, Edgemont Branch, Golden, CO 80401.

European Geophysical Society XIV General Assembly, March 13-17, 1989, Barcelona, Spain. Information: EGS Office, Max-Planck-Str. 1, Postfach 49, D-3411 Katlenburg-Lindau, Federal Republic of Germany; phone (49)-5556-1440; Telex 965564 zil d; Fax (49)-5556-4709.

American Institute of Professional Geologists Nevada Section Field Trip—Nevada Test Site and Mines, March 19-21, 1989, central-southern Nevada. Information: Ellen Hodos, P.O. Box 665, Carson City, NV 89702; (702) 885-1717. (*Application deadline: February 16, 1989.*)

Engineering Geology and Geotechnical Engineering 25th Anniversary Symposium, March 20-23, 1989, Reno, Nevada. Information: Engineering Symposium, Division of Continuing Education, University of Nevada, Reno, NV 89557-0024; (702) 784-4046.

Geological Society of America Northeastern Section Annual Meeting, March 23-25, 1989, New Brunswick, New Jersey. Information: Gail M. Ashley, Dept. of Geological Sciences, Rutgers University, New Brunswick, NJ 08903; (201) 932-2221.

International Symposium on the Silurian System (Murchison Symposium), March 28-April 9, 1989, Keele, England. Information: M. G. Bassett, Dept. of Geology, National Museum of Wales, Cardiff CF1 3NP, Wales; phone 02222-397951.

Economic Geology and Geotechnics of Active Tectonic Regions, April 3-7, 1989, London, England. Information: Conference Manager, Economic Geology and Geotechnics Conference, Dept. of Geological Sciences, University College, Gower St., London WC1E 6BT, England.

Geological Society of America Southeastern Section Annual Meeting, April 6-7, Atlanta, Georgia. Information: Earl A. Shapiro, Georgia Geologic Survey, 19 MLK Jr. Dr., SW, Atlanta, GA 30334; (404) 656-3214.

South-Central Friends of the Pleistocene, April 7-9, 1989, Central Texas. Information: Stephen A. Hall, Dept. of Geography, University of Texas, Austin, Texas 78712; (512) 471-5116.

Shallow Gas and Leaky Reservoirs, April 10-11, 1989, Stavanger, Norway. Information: Norwegian Petroleum Society, P.O. Box 1897 - Vika, 0124 Oslo 1, Norway; phone 47-2-207025; Telex 77 322 nopet n.

National Fossil Exposition XI, April 14-16, 1989, Macomb, Illinois. Information: Karl A. Stuekerjuergen, Rte. 1, Box 28A, West Point, IA 52656; (319) 837-6690.

Geological Society of America North-Central Section Annual Meeting, April 20-21, 1989, Notre Dame, Indiana. Information: Michael J. Murphy, Dept. of Earth Sciences, University of Notre Dame, Notre Dame, IN 46556; (219) 239-7205.

American Association of Petroleum Geologists Annual Meeting, April 23-26, 1989, San Antonio, Texas. Information: AAPG, P.O. Box 979, Tulsa, OK 74101; (918) 584-2555.

Third Annual Conference on Undergraduate Research, April 27-29, 1989, Trinity University, San Antonio, Texas. Information: Ann Knoebel, EUREKA, Trinity University, Holt Center, 106 Oakmont, San Antonio, TX 78212.

The Earth: Planet in Transition, University of Michigan Department of Geological Sciences Sesquicentennial Symposium, May 4-5, 1989, Ann Arbor, Michigan. Information: J.C.G. Walker, Dept. Geological Sciences, 1006 C. C. Little Building, University of Michigan, Ann Arbor, MI 48109-1063; (313) 764-2466; Telex 258 869 JCGW UR; GTE mail: JWALKER/KOSMOS/EDUNET.

Geological Society of America Cordilleran and Rocky Mountain Sections Annual Meeting, May 8-10, 1989, Spokane, Washington. Information: Ernest H. Gilmour, Eastern Washington University, Cheney, WA 99004; (509) 359-2406.

American Geophysical Union Spring Meeting, May 8-12, 1989, Baltimore, Maryland. Information: AGU, Convention Director, 2000 Florida Ave., N.W., Washington, DC 20009; (202) 462-6903.

Pacific Sections of American Association of Petroleum Geologists, Society of Economic Paleontologists and Mineralogists, Society of Exploration Geophysicists, and Society of Professional Well Log Analysts Annual Meeting, May 10-12, 1989, Palm Springs, California. Information: 1989 AAPG/SEPM/SED/SPWLA Pacific Sections, AAPG Convention Dept., P.O. Box 979, Tulsa, OK 74101-0979.

12th Annual Spring Systematics Symposium, History and Evolution, May 13, 1989, Chicago, Illinois. Information: Kristine L. Bradof, Symposium Coordinator, Dept. of Geology, Field Museum

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Meetings (continued from p. 77)

of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605-2496; (312) 922-9410, ext. 298.

Geological Association of Canada-Mineralogical Association of Canada Joint Annual Meeting, May 14-17, 1989, Montreal, Quebec, Canada. Information: Colin Stearn, Rm. 238, 3450 University St., Montreal, Quebec H3A 2A7, Canada; (514) 398-4082.

40th Annual Highway Geology Symposium, May 17-19, 1989, Birmingham, Alabama. Information: Kathy Keller, Alabama Highway Department, Bureau of Materials and Tests, 1409 Coliseum Blvd., Montgomery, AL 36130; (205) 261-5788.

Gold '89 in Europe, May 23-25, 1989, Toulouse, France. Information: F. Tollon, Lab. de Minéralogie, Université Paul Sabatier, 39 Allées Jules Guesde, 31400 Toulouse, France.

Engineering Geology in Tropical Terrains, June 26-29, 1989, Selangor Darul Ehsan, Malaysia. Information: Organising Secretary, Conference on Engineering Geology in Tropical Terrains, Dept. of Geology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor Darul Ehsan, Malaysia.

IGCP Project 257, Mafic Dyke Swarms, Annual Meeting, July 1, 1989, Santa Fe, New Mexico. Information: John W. Geissman, Dept. of Geology, University of New Mexico, Albuquerque, NM 87131; (505) 277-2644 or (505) 277-0887 (lab).

28th International Geological Congress, July 9-19, 1989, Washington, D.C. Information: 28th International Geological Congress, P.O. Box 1001, Herndon, VA 22070-1001; (703) 648-6053; Telex 248418.

6th International Symposium on Water-Rock Interaction, August 3-8, 1989, Malvern, England. Information: W. M. Edmunds, Hydrogeology Research Group, British Geological Survey, Wallingford, Oxon OX10 8BB, England; phone (0) 491-38800, ext. 2293; Telex 849365 HYDROL G; Fax (0) 491-32256.

12th Caribbean Geological Conference, August 7-11, 1989, Christiansted, St. Croix, Virgin Islands. Information: Frederick Nagle, 12th Caribbean Geological Conference, c/o Dept. of Geological Sciences, P.O. Box 249176, University of Miami, Coral Gables, FL 33124.

Dunes '89: Geomorphology and Ecology of Desert and Coastal Sand Dunes, August 14-17, 1989, Swakopmund, Namibia. Information: Dunes '89, c/o J. D. Ward, P.O. Box 2168, Windhoek 9000, Namibia.

14th International Cartographic Conference, August 17-24, 1989, Budapest, Hungary. Information: Conference Secretary, Institute of Geodesy, Cartography and Remote Sensing, POB 546, H-1373 Budapest, Hungary.

Second International Research Symposium on Clastic Tidal Deposits, August 22-25, 1989, Calgary, Alberta. Information: Ray Rahmani, Canadian Hunter Exploration Ltd., 435-4th Ave., S.W., Calgary, Alberta T2P 3A8, Canada; (403) 260-1818.

9th International Clay Conference, August 28-September 2, 1989, Strasbourg, France. Information: Hélène Paquet, Inst. de Géologie, 1, rue Blessig, 67084 Strasbourg, France.

Montana Geological Society Centennial Field Conference: Geologic Resources of Montana, August 31-September 3, 1989, Bozeman, Montana. Information: MGS Field Symposium, P.O. Box 844, Billings, MT 59103; (406) 256-3034.

New Frontiers for Hazardous Waste Management Third International Conference, September 10-13, 1989, Pittsburgh, Pennsylvania. Information: NUS Corporation, Park West Two, Pittsburgh, PA 15275.

3rd International Conference on Palaeoceanography, September 10-16, 1989, Cambridge, England. Information: I. N. McCave or N. J. Shackleton, Dept. of Earth Sciences, University of Cambridge, Downing St., Cambridge CB2 3EQ, England; phone 223-333422/334876.

Focus '89, Nuclear Waste Isolation in the Unsaturated Zone, September 18-21, 1989, Las Vegas, Nevada. Information: D. Burton Slemmons, School of Mines, Center for Neotectonic Studies, University of Nevada, LME 400 Reno, NV 89557-0047.

SIAM Conference on Mathematics of Geophysical Sciences, September 18-21, 1989, Houston, Texas. Information: SIAM Conference Coordinator, 1400 Architects Bldg., 117 S. 17th St., Philadelphia, PA 19103-5052; (215) 564-2929.

14th International Conference of Organic Geochemistry, September 18-22, 1989, Paris, France. Information: Yolande Rondot, Institut Français du Pétrole, BP 311, 92506 Rueil-Malmaison cedex, France; phone 33(1) 47.49.02.14; Telex A 203050 F.

3rd Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, October 1-4, 1989, St. Petersburg, Florida. Information: 3rd Multidisciplinary Conference, Florida Sinkhole Research Institute, University of Central Florida, Orlando, FL 32816. (Abstracts deadline: April 17, 1989.)

Association of Engineering Geologists 32nd Annual Meeting, October 1-6, 1989, Vail, Colorado. Information: Michael W. West, Michael W. West & Associates, Inc., 290 Bank Western Bldg., 8906 West Bowles Ave., Littleton, CO 80123; (303) 972-1537. (Abstracts deadline: May 1, 1989.)

XIII International Geochemical Exploration Symposium and II Brazilian Geochemical Congress, October 1-6, 1989, Rio de Janeiro, Brazil. Information: RIO '89 (XIII IGES-II CBGq), A/C CPRM-LAMIN, Av. Pasteur, 404 - Urca, CEP 22292 - Rio de Janeiro, RJ, Brazil; phone (55-21) 295-5297; Telex (55-21) 22685.

Seventh Thematic Conference on Remote Sensing for Exploration Geology, October 2-6, 1989, Calgary, Alberta, Canada. Information: Robert H. Rogers, ERIM, P.O. Box 8618, Ann Arbor, MI 48107-8618; (313) 994-1200, ext. 3382.

American Institute of Professional Geologists 26th Annual Meeting, October 4-7, 1989, Arlington, Virginia. Information: Stan Johnson, Virginia Division of Mineral Resources, Box 3667, Charlottesville, VA 22903; (804) 293-5121.

18th Geochautauqua: Mineral-Resource Assessment, October 13-14, 1989, Newark, Delaware. Information: J. H. Schuenemeyer, Dept. of Mathematical Sciences, University of Delaware, Newark, DE 19716; (302) 451-1883.

New York State Geological Association 61st Annual Meeting and Field Trips, October 13-15, 1989, Middletown, New York. Information: Lawrence E. O'Brien, Orange County Community College, Middletown, NY 10940; (914) 343-6222, ext. 2570.

Structural and Tectonic Modelling and Its Application to Petroleum Geology, October 18-20, 1989, Stavanger, Norway. Information: Norwegian Petroleum Society, P.O. Box 1897 - Vika, 0124 Oslo 1, Norway; phone 47-2-207025; Telex 77 322 nopet n.

(continued on p. 79)

CLASSIFIED ADVERTISING

Ads (or cancellations) for the May issue must reach the GSA office by March 15. Contact Advertising Department (303) 447-2020.

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The Department of Geology and Planetary Science at the University of Pittsburgh, Pittsburgh, Pennsylvania, invites applications for a one-half time tenure track faculty position in Quaternary/Tertiary palynology and paleoclimatology beginning in

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Applicants should demonstrate a research focus in vegetational, environmental and climatic variability on short and long time scales. Research experience in Quaternary and Tertiary palynology of North America would be welcomed. The successful applicant will be expected to develop an active research program, direct graduate student research, and teach courses in terrestrial paleoecology, paleoclimatology and vegetation history as well as participate in teaching introductory geology courses.

Applicants, who must have completed the Ph.D., should submit a letter of application, vitae and names and addresses of 3 references to Thomas H. Anderson, Department of Geology and Planetary Science, University of Pittsburgh, Pittsburgh, Pennsylvania 15260. Applications should be received by April 1, 1989, for initial screening. Women and members of minorities are especially encouraged to apply. University of Pittsburgh is an equal opportunity employer.

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DR. J.W. SCHROEDER, Geologist, since 1939, 2, Rue des Granges, GENEVA, Switzerland.

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LEATHER FIELD CASES. Free brochure. SHERER CUSTOM SADDLES, INC., P.O. Box 385, Dept. GN, Franktown, CO 80116.

Meetings (continued from p. 78)

Supercomputing World conference and exposition, October 18-20, 1989, San Francisco, California. Information: Carol Y. Hurlay, Meeting Brokers International, Inc., 5 Science Park, New Haven, CT 06511; (203) 786-5132.

20th Annual Geomorphology Symposium: Geomorphic Evolution of the Appalachians, October 20-22, 1989, Dickinson College, Carlisle, Pennsylvania. Information: W. D. Sevon, Pennsylvania Geological Survey, P.O. Box 2357, Harrisburg, PA 17120; (717) 787-6029.

World Gold '89, November 5-8, 1989, Reno, Nevada. Information: Meetings Dept., World Gold '89, Society of Mining Engineers, P.O. Box 625002, Littleton, CO 80162; (303) 973-9550; Telex 881988.

Geological Society of America Annual Meeting, November 6-9, 1989, St. Louis, Missouri. Information: Meetings Department, GSA, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020.

Penrose Conferences

***Late Eocene-Oligocene Climatic and Biotic Evolution**, July 31-August 6, 1989, Rapid City, South Dakota. Information: Donald R. Prothero, Dept. of Geology, Occidental College, Los Angeles, CA 90041; (213) 259-2823; Philip R. Bjork, Museum of Geology, South Dakota School of Mines, Rapid City, SD 57701; (605) 394-2461.

The Eocene Tectonic Transition: Oregon to Alaska, September 4-10, 1989, Penticton, British Columbia. Information: Ralph A. Hagerud, U.S. Geological Survey, MS 975, 345 Middlefield Rd., Menlo Park, CA 94025; (415) 329-4910.

***Large Lake Systems and Their Stratigraphic Record**, September 1990, Lake Tahoe area. Information: Andrew S. Cohen, Dept. of Geosciences, University of Arizona, Tucson, AZ 85721; (602) 621-4691 (direct), (602) 621-6024 (dept.).

Future GSA Annual Meeting Sites

Dallas	October 29-November 1	1990
San Diego	October 21-24	1991
Cincinnati	October 26-29	1992
Boston	October 25-28	1993

GSA Legislative Guide Published

The GSA Geology and Public Policy Committee has prepared a "Guide to USA Legislative Information and Contacts." The purpose of this eight-page guide is to assist individuals in communicating with legislators and government officials in the United States on matters relating the geosciences to issues of public policy.

Copies of the guide are available on request from the Geological Society of America, Membership Department, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020.

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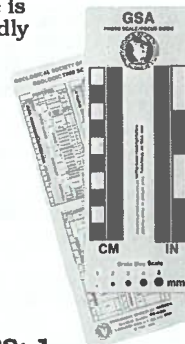


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