



GSA news & information

VOLUME 2, NUMBER 8

G.S.A. ARCHIVES

AUGUST 1980

Atlanta, Georgia, hosts 1980 Annual Meeting, November 17–20 Registration forms enclosed

PREREGISTRATION IS IMPORTANT

Preregistration is for your convenience. It saves both time and money. This year, the preregistration deadline has been moved to October 17, only 4 weeks before the meeting. Refunds available to October 30. Avoid long lines and sold-out events. Why not take advantage of this opportunity now?

ATLANTA, capital of the New South and one of America's most beautiful cities, will host the 4-day 1980 Annual Meeting of the Geological Society of America from 0800, November 17, through 1700, November 20. With Atlanta's easy accessibility, excellent facilities, and mild seasonal climate, it is one of the top convention cities. The Georgia World Congress Center (GWCC) will host the Technical Sessions and exhibits. The Atlanta Marriott is the headquarters hotel and location of business meetings, employment service, and social functions.

Atlanta, a relatively young city, has managed successfully to maintain her charm, her culture, her reputation for southern hospitality while keeping up with, and ahead of, the times. Atlanta always has been lucky to be in the right place at the right time. Currently, she presides over the entire southeastern United States as the region's transportation, cultural, commercial, industrial, shopping, and sports center. Almost two million people now reside in the metropolitan area, but Atlanta keeps on growing and so do the reasons for visiting there.

The Society has not met in the Southeast for some time, so this will be an opportunity to experience Atlanta as well as the area of the Southern Appalachian Piedmont. Opportunities are available for informal mini-trips and/or self-guided visits to local outcrops. The Appalachian fold and thrust belt is nearby on the northwest, and not far to the east and south are the Atlantic and Gulf Coastal Plains. These geologic provinces provide the setting for most of the premeeting and postmeeting field trips. Special postmeeting trips are planned to the Galápagos Islands and the Virgin Islands.

The program consists of 9 concurrent technical sessions, poster sessions, 24 premeeting and postmeeting field trips, 4-day science theater, 3-day exhibits, employment service, guest program, and a wide variety of business and social functions.

Seven associated societies will hold concurrent annual meetings with GSA: Cushman Foundation, Geochemical Society, Geoscience Information Society, Mineralogical Society of America, National Association of Geology Teachers, Paleontological Society, and Society of Economic Geologists.

EXHIBITS

The Exhibit Area will be available to all meeting registrants from Monday, November 17, 0800 hours to Wednesday, November 19, 1700 hours.

Exhibits will be located on Level III, the Entrance Level,



of the Georgia World Congress Center (GWCC). All registrants are encouraged to visit with the exhibitors. The show will be of a higher quality than ever before and will include some special items of interest. There will be convenient lounge and eating facilities within this area.

SCIENCE THEATER

The Science Theater will provide registrants with an opportunity to view, during technical-session hours, an absorbing program of geologically oriented films. It will operate at the GWCC during the following hours:

Monday through Wednesday	0900-1600
Thursday	0900-1200

MESSAGE CENTERS

Two separate message centers will be available at the GWCC. Make a note of these numbers:

Main Message Center	(404) 223-8090
Exhibitor Message Center	(404) 223-8055

LOCATOR/INFORMATION/LOST & FOUND

A booklet of all attendees having advance registrations with one of the participating hotels will be included in the meeting packet. In addition, a Locator/Information Desk will be provided in the GWCC lobby to handle inquiries concerning the location of on-site registrants.

A General Information/Lost & Found Desk will be staffed by two local people to provide answers to questions of a general nature. Only from Nov. 16 to 20, call (404) 223-8777.

TRANSPORTATION

GSA shuttle buses will be provided at no extra cost for convenient transportation between the participating hotels in the downtown Atlanta area and the GWCC. You are strongly encouraged to use the shuttle system whenever possible. GSA shuttles will also be available for transportation to and from evening functions. Shuttle service is scheduled from Sunday noon until late Thursday afternoon. **BADGES MUST BE SHOWN TO BOARD THE SHUTTLE BUSES.**

Additional transportation is available from the Metropolitan Atlanta Rapid Transit Authority which runs a loop route with stops near most of the hotels and the GWCC. Hotel limousines make frequent runs to and from the Atlanta International Airport. Costs for this service are approximately \$5. Taxicabs are also available.

Parking is available at each hotel and at the Omni which is directly across the street from the GWCC. Parking fees are \$2 or more.

SPECIAL EVENTS

Sunday, November 16. **WELCOMING PARTY** at the Hyatt-Regency, 1830-2130. Always a great way to meet old and new friends and colleagues. To be held in the Regency Ballroom with plenty of room for seeing everyone and no waiting at the cash bars. Badges are not required for admission. Opening night and southern hospitality.

Monday, November 17. **GSA PRESIDENTIAL ADDRESS** at the GWCC Auditorium, 1600-1700. GSA President, Laurence L. Sloss, will present his address. All meeting participants are invited.

Monday, November 17. **ALUMNI COCKTAIL PARTIES** at the Marriott Hotel, 1830-2030. A special time for old friends of various universities to meet and reminisce.

Tuesday, November 18. **BLUEGRASS NIGHT.** A special evening of bluegrass music and Southern food and drink. This will be one event you'll remember—or really regret missing.

Tuesday night at 1900, after the technical program has been put to rest at the GWCC, the lavish garden atrium of Atlanta's new Apparel Mart will open, just for us.

We'll start with the twang and plucking of Bluegrass Generation, a raggedy bunch who love a hand-clappin' audience. Come over to the Mart by GSA shuttle or a quick walk from your hotel. Drinking starts at 1900 sharp and continues to 2300. Beer is on the house. Also, there'll be one free ticket for the harder stuff. (After the free ticket is gone, though, drinks go for \$1.50.)

... Then on to buffet tables filled with Southern cooking: beef and pork barbecues, fried chicken, plenty of tasty breads and salads, and hot Georgia peach cobbler.

... And the music and informality continue with the Original Ruby Red Band, another hand-picked bunch that offers the best in down home playing. We may even hear some foot-stompin' Dixie before the night is through.

Sit or stand, dance or listen—eat, drink, tap your feet and enjoy a taste of the old South in the heart of new Atlanta. Cost: \$20.

Wednesday, November 19. *NOTE: Changed from (the traditional) Tuesday night.* **GSA COCKTAIL RECEPTION, ANNUAL DINNER, AND MEDAL PRESENTATIONS,** at the Marriott. Reception, 1815 to 1900; dinner, 1915 to 2015; Day and Penrose Medal presentations, 2015 to 2030. Michel C. Halbouty will be the after-dinner speaker, from 2030 to 2100. Cost: \$18.

ATLANTA HAPPENINGS

The metropolitan Atlanta area has many excellent attractions for dining, shopping, and sports as well as cultural events. Many of these events will be open during the week of the GSA meeting, November 17-20. Information about these attractions and events will be provided in the Hospitality Room at the Atlanta Marriott Hotel and at the Information Booth at the World Congress Center. People interested in advance information in order to make reservations may find the following helpful:

Atlanta Civic Center, 396 Piedmont Ave. NE (404) 523-1879.
Theater of the Stars Broadway production (live).

Atlanta Memorial Arts Center, 1280 Peachtree Street NW (404) 892-3600.

Atlanta Symphony, under the direction of Robert Shaw, will perform November 13, 14, and 15 and November 20, 21, and 22. The Arts Center is also the home of the High Museum of Art.

Previews of *The King and I* begin about November 19, one week before the official opening on November 26. Tickets will cost \$4 to \$5.

Atlanta Zoo, 800 Cherokee Ave. SE (404) 658-7059. Open from 1000 to 1700, admission \$1.50.

The Fox Theater, 660 Peachtree Street NE (404) 881-1977. The great Atlanta landmark was built in 1929. A performance of the Atlanta Ballet Company is presently booked into the Fox during the GSA meeting.

Six Flags over Georgia, (404) 948-9290. This amusement park will be open November 15 and 16 and November 22 and 23. Admission is \$10 per person.

The Omni Coliseum, 100 Techwood Drive NW (404) 681-2100. The Omni Coliseum is located next to the World Congress

Center. During the week of the GSA meeting, the Atlanta Hawks, professional basketball team, has a game scheduled. In addition, a concert group (yet to be named) will appear.

Atlanta Fulton County Stadium, 521 Capitol Avenue SW (404) 325-2667. Sunday, November 16, the Atlanta Falcons will host the New Orleans Saints in National Football League competition. This game is traditionally sold out and tickets should be ordered early.

Restaurants. Atlanta has some of the best restaurants and dinner theaters. A complete list will be posted in the Hospitality Room of the Marriott Hotel. The hostesses will provide additional information and suggestions. The following "top-of-the-line" restaurants require reservations 3 to 6 months in advance:

The Abbey (404) 876-8532	Country-French Cuisine
The Midnight Sun (404) 577-5050	Scandinavian Cuisine
The French Restaurant (404) 659-0000	French Cuisine
Gene & Gabes (404) 874-6145	Italian Cuisine
Nikolai's Roof (404) 659-2000	Russian Cuisine
Toulouse (404) 892-7911	French Cuisine

A meal for two will be in the range of \$60 and up. Of course, numerous excellent, moderately priced restaurants are available without long-range reservations.

GUEST PROGRAM

Atlanta offers the variety of a dynamic, contemporary city together with the flavor of the Old South. The Guest activities are planned to provide an opportunity to explore these attractions both formally and informally.

Please note that registration as a Guest at the Annual Meeting is a prerequisite for participation in the Guest Program and for the use of the Hospitality Center. However, Guest registration does not include admission to Technical Programs.

The **HOSPITALITY CENTER** will be located in the Plantation Room of the Atlanta Marriott (headquarters). Relaxation and light refreshments will be provided to those registered as Guests. **Badges must be worn.** The Hospitality Center will be open from Sunday morning, November 16, through Thursday afternoon, November 20. Hostesses will help plan individual activities and arrange for the scheduled tours. Restaurant and shopping guides will be displayed along with local and regional maps showing points of interest. Members of the Guest Committee are looking forward to welcoming and introducing you to Atlanta.

GUEST TOURS

Note: All tours leave from LEVEL I of the Atlanta Marriott Hotel.

Monday, November 17 (full-day tour)

Stone Mountain Park. Depart hotel 1000, drive through towering Atlanta and see Peachtree Center, Omni Complex, Georgia World Congress Center, City Hall, State Capitol Complex, Atlanta Stadium, Georgia Archives Building, Underground Atlanta site, Georgia State University, Dr. Martin Luther King, Jr. Memorial, and much more. Arrive at Stone Mountain Park, 3,200 acres of scenic beauty and attractions. Visit Memorial Hall for a close-up view of and brief narration on the world's largest sculptured work of art. Hear a concert on the world's largest carillon (732 bells). Enjoy lunch, a traditional southern buffet at the Stone Mountain Inn. Ride a skylift, an enclosed cable car, to the top of the mountain for a breathtaking view of the countryside or walk through the Plantation, a complex of 19 authentic

ante-bellum buildings. End your visit to the park with a relaxing ride on the *Henry W. Grady*, a paddle-wheel riverboat. Return to the hotel at 1700. The cost: \$16 (children under 11, \$13).

Monday, November 17 (half-day tour)

A Bird's Eye View of Atlanta. Depart hotel 1330. Drive along famous Peachtree Street and see the fabulous Fox Theater, Colony Square, and the Atlanta Memorial Arts Center. Continue your drive to the elegant residential Northside, noted for beautiful homes and sweeping lawns. Ride through towering downtown Atlanta and see Peachtree Center, City Hall, State Capitol Complex, Atlanta Stadium, Georgia Archives Building, Underground Atlanta, Georgia State University, Dr. Martin Luther King, Jr. Memorial, and more. Stop and tour the Omni Complex and view the adjacent World Congress Center. Enjoy browsing in the specialty shops of the International Bazaar where you will find designer apparel, jewelry, leather goods, brassware, and shells. Return to the hotel at 1630. The cost: \$7.

Tuesday, November 18 (full-day tour)

Scenic Residential and Shopping. Depart hotel 1000. Drive along famous Peachtree Street and see the fabulous Fox Theater, Colony Square, and the Atlanta Memorial Arts Center which houses the Alliance Theatre, Symphony Hall, and the High Museum of Art. Continue your drive to the elegant residential Northside. Stop and tour the Governor's Mansion (if available). Stop and tour the Swan House, a magnificent villa, formerly a private residence and now maintained by the Atlanta Historical Society. Visit Anthony's Restaurant where you will enjoy lunch at one of Atlanta's most elegant restaurants which is situated in a circa 1797 plantation house that has been moved from near Washington, Georgia, to its present site. Shop at Lenox Square, home of Rich's, Davison's, and Neiman-Marcus as well as an additional 130 services and shops or Phipps Plaza, Atlanta's answer to Fifth Avenue and home of Saks, Lord and Taylor, and Tiffany's. Return to hotel at 1500. The cost: \$18.

Tuesday, November 18 (half-day tour)

Best of Yesterday, Today. Depart hotel 1330. Enjoy a driving tour through Ansley Park, a renowned close-in living area dating from the early 1900s. Small, landscaped parks create a peaceful atmosphere for the neighborhood. Then on to Inman Park, Atlanta's first residential subdivision, in a beautiful garden setting. This first suburb was developed in the 1880s and 1890s. Inman Park is listed in the *National Register of Historic Places*. We will visit two outstanding examples of homes that have been restored. Return to hotel at 1600. The cost is \$9.

Wednesday, November 19 (full-day tour)

Ante-Bellum and Aunt Fanny's. Depart hotel 1000. Drive to Marietta, a suburb north of Atlanta, steeped in Civil War history. Visit two vintage homes that have been carefully restored to the classic elegance befitting that period. These homes offer a wealth of history and are filled with beautiful furnishings and antiques. Continuing in the ante-bellum vein, enjoy lunch at Aunt Fanny's Cabin, a 150-year-old structure, formerly a slave cabin which has been converted into a restaurant where southern food is served family style. The decor is interesting, and the food is delicious (opens for lunch for a minimum of 100 people). After lunch shop at Cumberland Mall, which features four major department stores and over 100 additional shops and services. Return to hotel at 1500. The cost is \$18.

(Guest tours continued on p. 119)

HOUSING INFORMATION

To reserve hotel accommodations, completely fill out the reservation form on the opposite page, remove the page from the booklet, and mail to the address listed.

The Atlanta Convention & Visitors Housing Bureau will coordinate ALL hotel reservations. Your choice of hotel accommodations and rate will be honored, if possible, although rooms will be confirmed on a first-come, first-served basis. Telephone requests will not be honored. All reservations must be submitted on the GSA Housing Form. Cancellations should be made in writing directly to the Housing Bureau.

Confirmation of your reservation will come directly from the hotel to which your reservation has been sent. Changes in arrival/departure times are to be made directly with the hotel.

Some Atlanta hotels require a total of one night's charges as a room deposit to hold a reservation. Arrange for deposit by check or major charge card directly with the hotel after you have received your confirmation. Reservations will not be held past 1800 unless arrangements are made.

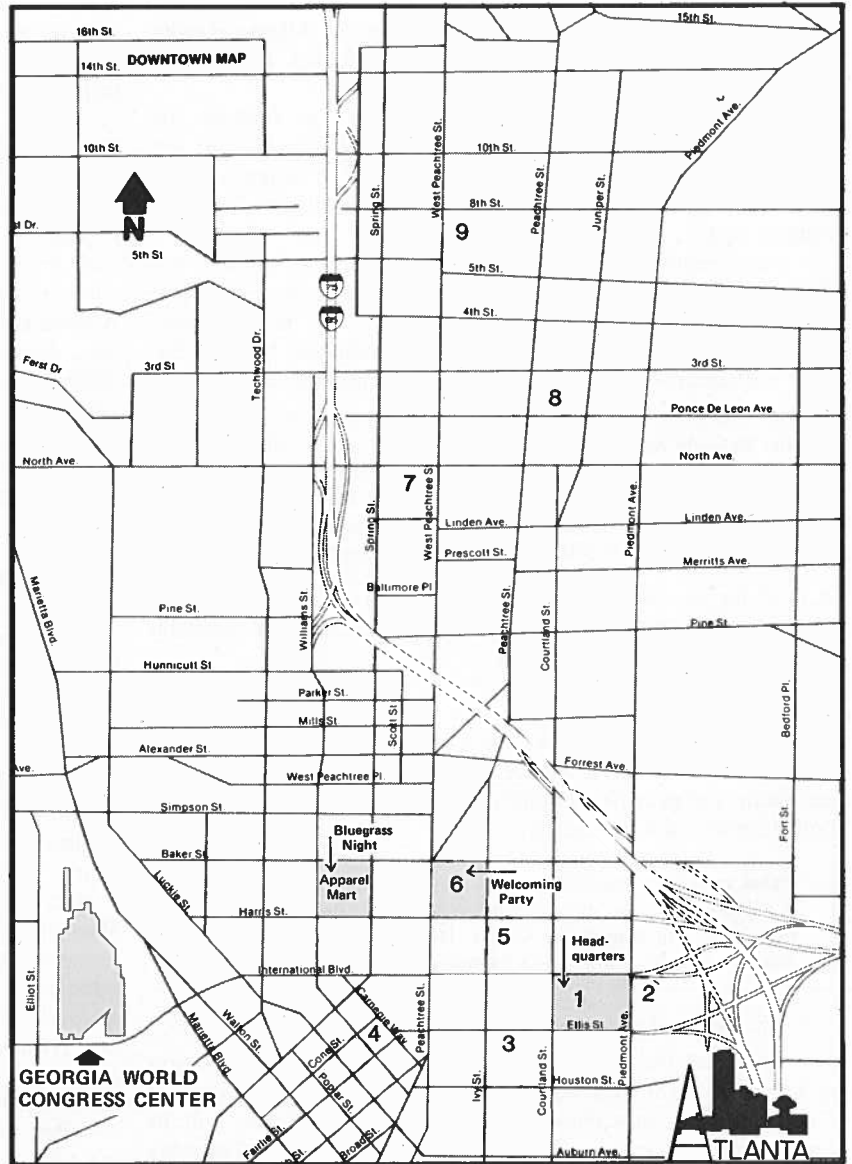
Check-out time is 1300. If you plan later departure, notify the hotel as soon as possible. Hotels are not required to hold a room in your name after the check-out time. An alternative is to check out and have the bellman hold your luggage until actual departure time.

DEADLINE FOR RECEIPT OF HOTEL RESERVATIONS IS OCTOBER 17

Rates apply only to this date. Reservations after this date will be on a space-available basis only.

STUDENT HOUSING

Downtown housing is available at a reduced rate for those who will accept basic accommodations. The Atlantan and the Georgian Terrace offer the standard single and double rooms with either twin or double beds. In addition, they both offer accommodations for three and four persons per room. The range for triple or quad occupancy is \$29 to \$45 per room. (Three persons in a \$45 room pay \$15 each plus 7% room tax.) Some rooms have 4 twin beds; some have 2 double beds and a couch; a few have kitchenettes. Specify the type of



arrangement you will need, and the Housing Bureau will make the hotel assignment. However, the Bureau will not assign roommates. If you want to share a triple or quad, you are responsible for locating roommates.

HOTEL/MOTEL RATES

A free shuttle service will operate daily between the hotels listed and the GWCC.

HOTEL	SINGLES	DOUBLE/TWIN	TRIPLES/QUADS	SUITES	NUMBER IN ROOM BLOCK
1. ATLANTA MARRIOTT (Headquarters)	\$44	\$56		\$150-up	650
2. Holiday Inn-Downtown	\$35	\$39		\$100-up	350
3. Ladha-Downtown (formerly Best Western White House)	\$36	\$42-46		\$125	125
4. Atlantan (student housing only)	\$20	\$22-26	\$29-38	—	150
5. Downtowner	\$37	\$47		—	125
6. Hyatt Regency	\$57	\$68		\$145-up	125
7. Sheraton Atlanta	\$49-52	\$59-62		\$80-up	150
8. Georgian Terrace (student housing only)	\$23	\$28	\$34-45	—	75
9. Atlanta Biltmore	\$32	\$38	\$42-48	\$70-150	400

PLEASE COMPLETE & RETURN TO:

GSA Housing Bureau
233 Peachtree Street, NE, Suite 200
Atlanta, GA 30043



GSA
OFFICIAL HOUSING FORM
GSA Annual Meeting, Atlanta, Georgia, November 17-20, 1980

(send one reservation form per room)

PLEASE PRINT OR TYPE:

HOTEL/MOTEL PREFERENCE

1. _____ 2. _____ 3. _____

TYPE OF ACCOMMODATIONS

NUMBER OF ROOMS REQUESTED

RATE REQUESTED*

_____	Single (1 bed, 1 person)	_____
_____	Double (1 bed, 2 persons)	_____
_____	Twin (2 beds, 2 persons)	_____
_____	1 Bedroom Suite	_____
_____	2 Bedroom Suite	_____
_____	Triple (Number of beds _____, 3 persons)	_____
_____	Quad (Number of beds _____, 4 persons)	_____

*Subject to 7% Room tax.

ARRIVAL DATE/DAY _____ TIME _____ a.m./p.m.

DEPARTURE DATE/DAY _____ TIME _____ a.m./p.m.

NAMES OF OCCUPANTS (Please bracket those sharing same room.)

1. _____
2. _____
3. _____
4. _____

MAIL CONFIRMATION TO:

Name _____

University or Company _____

Street _____

City _____ State _____ Zip _____

Phone _____ / _____
Area

SPECIAL NOTES

1. Please make reservations by October 17. Reservations after this date are on a space-available basis only.
2. Room assignments will be made in order received. If hotels of your choice are filled, the Housing Bureau will make the best arrangements elsewhere.
3. Be sure to list definite arrival and departure date and time.
4. Inform GSA Housing Bureau of cancellations in writing. Notify hotel directly for changes in arrival/departure or type of accommodations.

GSA News & Information

Vol. 2, No. 8

August 1980

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, Publications Manager; and June Thomas, Judy Hall, and Ann Fogel, Production Assistants.

(Guest tours continued from p. 115)

Wednesday, November 19 (half-day tour)

Bird's Eye View and Arts Center. Depart hotel 1330. Drive along famous Peachtree Street and see the fabulous Fox Theater, Colony Square, and the Atlanta Memorial Arts Center. Stop and tour the Arts Center. Continue your drive to the elegant residential Northside, noted for beautiful homes and sweeping lawns. Then ride through towering downtown Atlanta and see Peachtree Center, City Hall, State Capitol Complex, Atlanta Stadium, Georgia Archives Building, Underground Atlanta site, Georgia State University, Dr. Martin Luther King, Jr. Memorial, and more. Return to hotel at 1630. The cost is \$7.

TECHNICAL PROGRAM HIGH LIGHTS

David Johnston Symposium on Mount St. Helens: Samuel E. Swanson and E. Wesley Hildreth. This special program is dedicated to David Johnston, USGS geologist, who was killed during the initial large eruption at Mount St. Helens on May 18. The most recent data on the volcanic activity at Mount St. Helens will be presented. Abstracts available at press time will be in *Abstracts with Programs*, but the most recently gathered information will be included in the symposium. Additional abstracts may be handed out at that time.

Centennial Decade Symposium Series, 1980. *Tectonics and Geophysics of the Appalachians:* Geophysics Division, GSA; Isidore Zietz, Harold Williams, and Robert D. Hatcher, Jr. The symposium is to focus on the geological and geophysical aspects of the Appalachians, but considerable emphasis will be placed on comparisons with other terrains. Geophysical data of various kinds will be interpreted.

Distinguished SEG lecturer, Dr. Jan Hoeve. Lecture on *Uranium Metallogenesis in Saskatchewan—Reflections on the Role of Basement, Unconformity, and Athabasca Formation.*

1980 SYMPOSIUM PROGRAM

1. *Landscape Interpretations for Archaeological Sites:* Archaeological Geology Division, GSA; Jack Donahue
2. *Lignites of the Gulf Coast:* Coal Geology Division, GSA; Charles G. Groat
3. *Geologic Hazards in Founding Offshore Structures:* Joint ASCE-GSA-AEG Committee on Engineering Geology; Robert L. Schuster
4. *Tectonics and Geophysics of the Appalachians:* Geophysics Division, GSA; Isidore Zietz, Harold Williams, and Robert D. Hatcher, Jr.
5. *Geology and Other Disciplines: Historical Perspectives:* History of Geology Division, GSA; Michele L. Aldrich
6. *The V. T. Stringfield Symposium: Processes in Karst Hydrology:* Hydrogeology Division, GSA; Philip E. LaMoreaux and William Back
7. *Accelerated Erosion:* Quaternary Geology and Geomorphology Division, GSA; Neil E. Salisbury and John D. Vitek
8. *Quaternary Benthic Foraminifera of North American Continental Margins:* Cushman Foundation; Barun K. Sen Gupta and Martin A. Buzas
9. *Petroleum Geochemistry and Source Rock Potential of Carbonate Rocks:* Organic Geochemistry Division of the Geochemical Society; James G. Palacas (full day)
10. *Keeping Current with Geoscience Literature:* Geoscience Information Society; Nancy J. Pruett

11. *Pyroxene Research—Today and Tomorrow:* Mineralogical Society of America; J. Stephen Huebner
12. *History of Geologic Education in the U.S.:* National Association of Geology Teachers; John R. Coash
13. *The Faunal Significance of the Central American Land Bridge/Oceanic Barrier:* Paleontological Society; Robert E. Sloan
14. *Ancient Island Arc Host for Strata-bound Massive Sulfide Deposits with Emphasis on the Southern United States Piedmont:* Society of Economic Geologists; Norman Herz
15. *Geological Investigations Related to Disposal of High-Level Radioactive Waste:* Robert B. Laughon
16. *Cenozoic Correlations of North America—The Paleogene:* John M. Armentrout
17. *Challenges of Future Resources:* Brian J. Skinner; co-sponsored by the Society of Economic Geologists
18. *Atolls and Reefs: Recorders of Vertical Tectonics—*In appreciation of Harry S. Ladd: Edward L. Winterer and Seymour O. Schlanger
19. *Joseph F. Poland Land Subsidence Symposium: State of the Art:* Thomas L. Holzer
20. *Trace Fossils in Argillaceous Sediments:* Robert W. Frey and Richard G. Osgood (Sunday, Nov. 16)
21. *Engineering Geology Applied to Environmental Planning:* Engineering Geology Division, GSA; Theodore C. Smith (Sunday, Nov. 16)
22. *David Johnston Symposium on Mount St. Helens:* Samuel E. Swanson and E. Wesley Hildreth

SHORT COURSES

MSA. A Short Course on Pyroxenes to be held at Emory University from Thursday, November 13 (evening) to Sunday, November 16 (noon). Will include an intensive review of the crystal chemistry, spectroscopy, subsolidus phenomena, phase equilibria, thermodynamics, and field relations of pyroxenes. Outstanding lecturers have been selected who will also participate in preparation of Volume 7 of the MSA Short Course Note series. In connection with the Short Course, the MSA will sponsor a symposium that will present the latest pyroxene research results. For further information, write: Pyroxene Short Course, Mineralogical Society of America, 2000 Florida Avenue NW, Washington, DC 20009.

AGI. *Geo-Writing: Quickly. Clearly. Concisely.* Workshop held Saturday, November 15, 0800 to 1700 and Sunday, November 16, 0800 to 1200. Will include how to break writer's block; how to write for different situations and publications; how to write easily and clearly. Instructed by AGI's Mary Hill and Wendall Cochran. Enrollment limit of 30. Fee: \$95. For information, contact: William Matthews III, Director of Education, AGI, Box 10031, Lamar University Station, Beaumont, TX 77710.

AAPG. *The Art of Technical Presentations.* Emphasis on the intent and design of slides for speakers, students, and professors. The instructor is Lev Ropes. He is an ex-oceanographer, chemist, and hydrologist and cofounder of graphics for Technical Communications, a firm that specializes in research and consultation on 35-mm slides for technical presentations. Sunday, November 16, from 1330 to 1630 at the Atlanta Marriott. The enrollment will be limited to 100. Fee: \$25. Fee includes coffee break and syllabus. To enroll, contact: AAPG Education Department, P.O. Box 979, Tulsa, OK 74101 (918) 584-2555.

AGI. *Jobs: How and Where to Find Them.* To be held November 16. Enrollment limited to 40. Fee: \$20. Fee includes all course materials. For information: William H. Matthews III,

REGISTRATION INFORMATION

WHO SHOULD REGISTER? Registration will be required for all meeting attendees, including all field trip participants and guests.

Badges will be required for admission to all events. Student IDs will be required for those receiving student registration. IDs will be required at both the on-site and the preregistration counters.

PREREGISTRATION DEADLINE: October 17, 1980.

REGISTRATION FEES:

	Advance	On-Site	One-day (available on-site only)
Professional	\$60	\$70	\$32
Student	\$30	\$35	\$16
Guest	\$20	\$30	N/A

REGISTRATION SCHEDULE

(Abstracts, guidebooks, and tickets available at GWCC only.)

	PREREGISTRATION			ON-SITE REGISTRATION
	Marriott*	GWCC	Hyatt	GWCC
Fri., Nov. 14	0800-1600			
Sat., Nov. 15	0800-1600			
Sun., Nov. 16		1030-1700	1830-2100**	1030-1700
Mon., Nov. 17		0700-1700		0700-1700
Tues., Nov. 18		0800-1700		0800-1700
Wed., Nov. 19		0800-1700		0800-1700
Thurs., Nov. 20		0800-1200		0800-1200

* at Field Trip Desk, Level I

** during Welcoming Party

REFUNDS. GSA will refund advance registration fees for all cancellations received in writing by October 30, 1980. **NO REFUNDS WILL BE MADE ON CANCELLATION NOTICES RECEIVED AFTER THIS DATE.** Refunds will be mailed from GSA after the annual meeting. **ALL REFUNDS WILL BE SUBJECT TO A \$10 PROCESSING FEE.**

(Continued from p. 119)

Director of Education, AGI, Box 10031, Lamar University Station, Beaumont, TX 77710 (713) 838-7724.

AGI-WOMEN GEOSCIENTISTS. Seminar: *Management Skills*. To be held Sunday, November 16. Enrollment limited to 50. Fee: \$30 for professionals and \$20 for students. Fee includes all course materials. For information: William Matthews III, Director of Education, AGI, Box 10031, Lamar University Station, Beaumont, TX 77710.

PALEONTOLOGICAL SOCIETY. A one-day Short Course on fossil echinoderms to be held on November 16. Fifteen participants will summarize aspects of evolution, ecology, diversity and distribution through time of extinct and extant echinoderm groups. A set of short course notes will be published and will be available at the meeting or from the Department of Geology, University of Tennessee, Knoxville, TN 37916. For more information, please contact either of the co-conveners listed: Johnny A. Waters, Department of Geology, West Georgia College, Carrollton, GA 30118; or Thomas W. Broadhead, Department of Geology, University of Tennessee, Knoxville, TN 37916.

SEPM. The SEPM will offer a one-day postmeeting Short Course on the principles and applications of coal petrology. The course will be conducted by Russell R. Dutcher and John C. Crelling of Southern Illinois University, Carbondale, and it will be held Friday, November 21, in the Marriott Hotel, Atlanta, Georgia. Fees are \$50 for professionals and \$40 for students. Persons wishing further information should contact the SEPM business office, P.O. Box 4756, Tulsa OK 74104 (918) 932-5729.

EMPLOYMENT INTERVIEWS

Organizations seeking qualified earth scientists to fill staff needs and persons seeking employment in the earth sciences fields

are invited to participate in the GSA Employment Interview Service to be held in conjunction with the Annual Meeting in Atlanta this year. The Employment Interview Service will be conducted in the Hall of Nations of the Marriott Hotel (Lower Level).

All interested organizations are urged to submit their requests for computer listings of applicants, along with notices of the vacancies suitable for posting. The minimum fee for a printout of two specialty listings is \$50. Interview booths may be rented in half-day increments during the meeting (Monday through Thursday noon) at a nominal fee. GSA staff will handle all interview scheduling with employment service applicants. Request forms may be obtained from the March, June, or September issues of *GSA News & Information*, or by contacting the Membership Department.

Job-seeking participants who have attended past annual meetings have found the Employment Interview Service very helpful in their search for positions. The applicant fee is \$15 for a one-year registration including the interview service at the Annual Meeting. Employment Service forms may be obtained from the March, June, or September issues of *GSA News & Information*, or contact Joan Heckman, Membership Coordinator, Geological Society of America, P.O. Box 9140, Boulder, CO 80301 (303) 447-2020.

Note to Applicants: Completed application forms, a one-page resume, and your \$15 payment must be received at GSA headquarters *no later than September 30, 1980*, in order for your record to be included on the computer printouts of the applicant listing during October and November. Get the maximum exposure by getting your forms in early and don't forget to indicate whether you are attending the meeting for interviewing purposes!

(Continued on p. 123)

GSA PREREGISTRATION FORM

1980 ANNUAL MEETING, ATLANTA, GEORGIA, NOVEMBER 17-20

IMPORTANT

1. Full payment should accompany registration.
2. One professional or student per form.
3. Your check will be your receipt.
Copy this form for your records.

4. Preregistration deadline:
Must be postmarked no later than October 17.
5. Refund policy: Written request must be received at GSA headquarters no later than **October 30**. No refunds after October 30. Refunds subject to \$10 processing fee.

(Please type or print)

NAME										
	(first)		(last)		(nickname for badge)					
Institution/Employer										
	(abbreviate for badge)									
Mailing address				Phone, business: ()						
				home: ()						
City				State/Country						
					Zip					
Please circle all affiliations:	GSA 1	GIS 2	GS 3	MSA 4	NAGT 5	PS 6	SEG 7	AAPG 8	AGU 9	SEPM 10

PREREGISTRATION FEES:

		Fee per person	No.	Amount
Professional	(1)	\$60	1	\$ _____
Student (ID required for badge pick-up)	(2)	\$30	1	_____
Guest (fee does not include admission to technical sessions)	(3)	\$20	_____	_____

For badge	Guest name _____
	City _____ State _____

GUEST ACTIVITIES (Guest registration is required)

Stone Mountain Park	Nov. 17		(4)	\$16	_____	_____
A Bird's Eye View of Atlanta	Nov. 17		(5)	\$ 7	_____	_____
Scenic Residential & Shopping	Nov. 18		(6)	\$18	_____	_____
Best of Yesterday, Today	Nov. 18		(7)	\$ 9	_____	_____
Ante-Bellum, Aunt Fanny's	Nov. 19		(8)	\$18	_____	_____
Bird's Eye View, Arts Center	Nov. 19		(9)	\$ 7	_____	_____

SPECIAL EVENTS (registration is required)

History of Geology Division Luncheon	Nov. 17		(10)	\$10	_____	_____
Association of Women Geoscientists Breakfast	Nov. 18		(11)	\$ 7	_____	_____
Engineering Geology Division Luncheon	Nov. 18		(12)	\$10	_____	_____
Hydrogeology Division Luncheon	Nov. 18		(13)	\$10	_____	_____
Mineralogical Society of America Luncheon	Nov. 18		(14)	\$10	_____	_____
National Association of Geology Teachers Luncheon	Nov. 18		(15)	\$10	_____	_____
Paleontological Society Luncheon	Nov. 18		(16)	\$10	_____	_____
Bluegrass Night	Nov. 18		(17)	\$20	_____	_____
Coal Geology Division Luncheon	Nov. 19		(18)	\$10	_____	_____
Geophysics Division Luncheon	Nov. 19		(19)	\$10	_____	_____
Quaternary Geology & Geomorphology Division Luncheon	Nov. 19		(20)	\$10	_____	_____
Society of Economic Geologists Luncheon	Nov. 19		(21)	\$10	_____	_____
GSA Annual Dinner	Nov. 19		(22)	\$18	_____	_____

TOTAL \$ _____

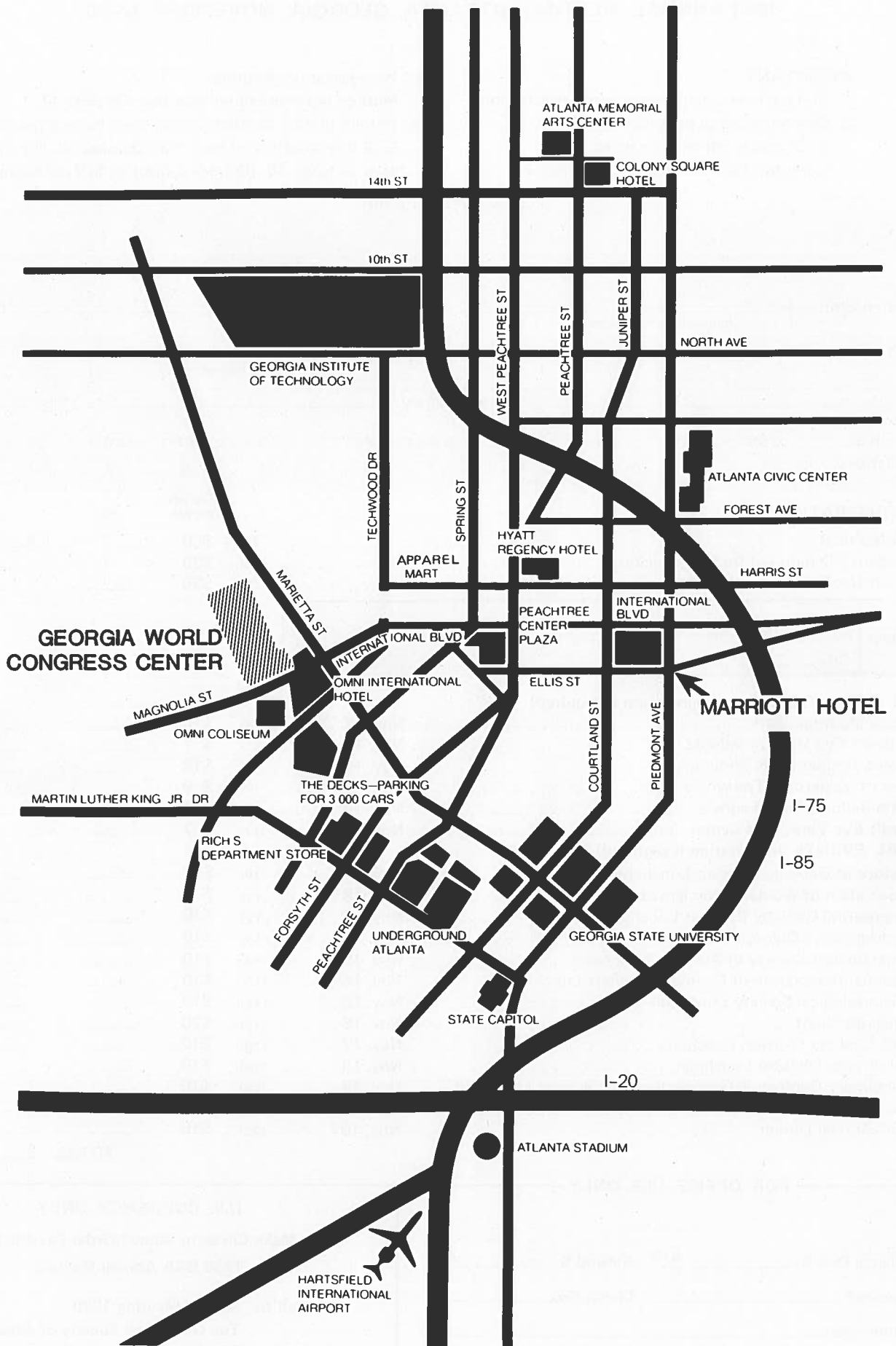
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Balance Due \$ _____ A/R	Refund \$ _____ A/P
Received _____	Check No. _____
Comments _____	

U.S. CURRENCY ONLY

Make Check or Money Order Payable to
1980 GSA Annual Meeting

Mail to: Annual Meeting 1980
The Geological Society of America
P.O. Box 9140
Boulder, CO 80301



(Continued from p. 120)

FORUM: FUTURE EMPLOYMENT OPPORTUNITIES IN THE GEOLOGICAL SCIENCES

Anyone interested in an overview of employment opportunities, salary scales, and current trends in academia, government, industry, and opportunities for women geoscientists is cordially invited to attend this forum. Six highly qualified panel members will speak briefly on the outlook in their special areas and then answer questions from the audience. Richard A. Paull will chair the session to be held Monday, November 17, from 1300 to 1500 at the Georgia World Congress Center. For further information, contact Joan Heckman, Geological Society of America, P.O. Box 9140, Boulder, CO 80301 (303) 447-2020.

COMMITTEE ON MINORITIES

The Committee on Minorities in the Geosciences will sponsor a one-day program on Tuesday, November 18, on career opportunities in the geosciences for secondary school teachers, career counselors, and minority students from the Atlanta area. The program will consist of a field trip followed by informal discussion groups led mainly by minority geoscientists.

MINI FIELD TRIPS

Several short, local field trips are planned. These trips will run concurrently with the meeting and will visit several points of geologic interest in the Atlanta area. As planned, the Mini Field Trips will last approximately 3 to 4 hours and will operate November 17 through 19, 1980. Registration for the Mini Field Trips will be held *during the meeting at the field-trip desk*. Trip locations, costs, and departure times will be announced in the registration packet.

FIELD TRIPS

NOTE: ALL FIELD TRIP REGISTRANTS MUST ALSO REGISTER FOR THE ANNUAL MEETING.

Registration

Preregistration for field trip participation is very important. Use the official field trip preregistration form included in this announcement. Field trip preregistration forms must be received at Boulder postmarked no later than October 17, 1980. On-site registration for field trips originating in Atlanta *may* be possible for those trips not fully subscribed. For trips originating outside of Atlanta prior to the meeting, late registrations may be possible by contacting the General Field Trip Chairman.

Participants will be selected on a first-come, first-served basis. The trips are technical in nature and can be physically rigorous.

Participants should be prepared to make their own arrangements for transportation, lodging, and meals not specified in the field trip description. **UNLESS OTHERWISE NOTED, ALL TRIPS BEGIN AND END IN ATLANTA. All premeeting trips depart at approximately 0730.*** For trips originating outside of Atlanta, participants must make arrangements to arrive at the designated departure point in time for scheduled departure of the field trip. Each preregistrant will receive an information notice outlining the itinerary of the selected trip. Additional information on trips is available upon request to the Field Trip Coordinator, GSA Headquarters, Boulder (303) 447-2020; or to

the General Field Trip Chairman, Thornton L. Neathery, Geological Survey of Alabama, P.O. Drawer O, University, AL 35486 (205) 349-2852.

Cancellations

Cancellations for field trip reservations must be made in writing and must be received by the Field Trip Coordinator at headquarters in Boulder no later than October 30, 1980, to be eligible for refund. Refunds will be subject to a \$10 processing fee. There will be no refunds for premeeting trips after this date. Refunds may be possible for postmeeting trips if the reserved place is filled by on-site registration.

Weather and Clothing

Mid-November weather in the southeast United States ranges from moderate to cold. Rain from early winter storms is possible. In the higher elevations, snow and sleet are possible. Participants are urged to bring suitable field clothes for moderate inclement weather conditions. Where individual field trips may encounter unusual weather conditions, appropriate comments will be included in the individual trip information sheet. For most of the trips, medium-weather multipurpose jackets should provide suitable protection. Rain gear and umbrellas are desirable.

1980 FIELD TRIPS

Each field trip provides a different array of services. In order to inform a prospective participant as to what is included in each trip, a service code has been included at the end of each narrative. Explanation of the service code follows. Number with letter indicates number of units provided.

- T = Transportation
- H = Hotel
- B = Breakfast
- L = Lunch
- D = Dinner
- C = Coffee-snacks
- G = Guidebook

PREMEETING TRIPS

1. **Geology Related to the Construction of the Rocky Mountain Pump Storage Project.** *G. S. Grainger, Southern Services, Birmingham, AL (Engineering Geology Division).*

The Rocky Mountain Pump Storage facility is a unique hydro-construction project in the southeast. This trip will inspect geologic conditions related to tunnel and shaft design as well as treatment of exposed lithology at various plant structures. (Limit 40; 1 day; T, L-1, C, G). Sun., Nov. 16. Cost: \$43

2. **Multiple Deformation in the Area Southeast and South of Atlanta.** *R. L. Atkins, Georgia Geologic Survey, and M. W. Higgins, U.S. Geological Survey, Atlanta, GA.*

Complex fold structures have been recognized in the area southeast of Atlanta. This trip will look at five generations of folds where the first and second generations are separated by an unconformity and will discuss their effects on map patterns. (Limit 80; 1 day; T, L-1, C, G). Sun., Nov. 16. Cost: \$60

3. **Petrology and Structure of the Stone Mountain Granite and the Mount Arabia Migmatite, Lithonia, Georgia.** *W. H. Grant and W. B. Size, Emory University; and Bruce O'Connor, Georgia State University.*

A comparison of the composition and structure of the Stone Mountain intrusion to the folded Lithonia migmatite gneiss will be

*Trips originating in Atlanta will depart from Level I (First Floor) of the Atlanta Marriott.

studied in the context of a possible anatectic relationship between the two rock types. New petrographic, chemical, paragenetic, and structural data will be presented. (Limit 80; 1 day; T, L-1, C, G; also, postmeeting trip no. 17). Sun., Nov. 16. Cost: \$44.

4. Archaeological Geology of Georgia. *J. D. Howard, Skidaway Institute of Oceanography, Savannah, GA, and C. dePratter, University of Georgia (Archaeological Geology Division).*

This trip visits some of the principal sites where archaeological geology is being carried out on the Georgia coast. Visits will be made to coastal archaeological sites that have been used to date shoreline progradations and sea-level changes. Demonstrations of the use of archaeology to date geological formations will be included. (Limit 20; 3 days; T, H-3, B-3, D-2, G. *Trip originates in Savannah; fee does not include air fare from Savannah to Atlanta at end of trip.*) Fri., Nov. 14 to Sun., Nov. 16. Cost: \$93

5. Ductile and Brittle Faulting in the Eastern Piedmont, South Carolina and Eastern Georgia. *A. W. Snoke, University of South Carolina; D. C. Prowell, U.S. Geological Survey, Reston, VA; D. T. Secor and K. W. Bramlett, University of South Carolina.*

The first day of the trip will emphasize the nature of the Modoc zone between Columbia and Johnston, South Carolina. On the second day, fault-related rocks associated with the Augusta zone and Belair faults will be examined. Emphasis throughout the trip will be focused on the types of ductile and brittle deformation that influence the evolution of the eastern Piedmont from Paleozoic to Cenozoic time. As an important aspect of this history, critical exposures that in part document widespread Hercynian penetrative deformation and metamorphism in the eastern Piedmont, South Carolina, will be visited. (Limit 80; 2 days; T, H-2, L-2, C, G. *Trip originates in Columbia, SC.*) Sat., Nov. 15 to Sun., Nov. 16. Cost: \$119

6. A Transect of the Southern Appalachians. *R. D. Hatcher, Jr., Florida State University; J. R. Butler, University of North Carolina; L. D. Harris, U.S. Geological Survey, Reston, VA; R. C. Milici and M. J. Bartholomew, Virginia Division of Mineral Resources; and A. P. Shultz, Virginia Tech.*

Structural and stratigraphic relationships will be reviewed from the Cumberland Plateau and Valley and Ridge into the Blue Ridge and Inner Piedmont. Stops include exposures of the Max Meadows fault breccia in Virginia; faulting in Greendale Syncline, along major Appalachian thrusts, in the Cumberland Plateau and the Ocoee Gorge of Tennessee. Deformational models are proposed and key concepts are presented in field exposures. (Limit 40; 5 days; T, H-5, B-5, L-5, D-4, C, G. *Trip originates in Blacksburg, VA.*) Tues., Nov. 11 to Sun., Nov. 16. Cost: \$369

7. Depositional Environments of a Part of the Southern Appalachian Coal Fields. *E. T. Luther, Tennessee Division of Geology, Nashville; and G. E. Smith, Center for Energy Research Laboratory, Lexington, KY (Coal Geology Division).*

The twofold depositional character of the southern part of the Appalachian coal basin—the strandline and shallow-water off-shore environments and the fluvial and deltaic environments will be contrasted. Major coal beds will be studied. (Limit 40; 3 days; T, H-3, B-3, L-3, D-2, C, G. *Trip originates in Lexington, KY.*) Thurs., Nov. 13, to Sun., Nov. 16. Cost: \$189

8. Volcanogenic Sulfides of the Carolina Slate Belt. *H. Bell III, U.S. Geological Survey, Reston, VA; R. H. Carpenter, University of Georgia; and P. G. Feiss, University of North Carolina (Society of Economic Geologists).*

This trip is a field study of the setting of sulfide deposits in the southern Piedmont, especially those in the Carolina Slate Belt. These deposits are interpreted as being of volcanogenic origin of an ancient island arc environment. The trip will visit some of the major mines of the

area and observe sections of the volcanogenic rock sequence. (Limit 40; 4 days; T, H-4, B-4, L-4, D-3, C, G. *Trip originates in Winston-Salem, NC.*) Wed., Nov. 12 to Sun., Nov. 16. Cost: \$334

9. Cenozoic Biostratigraphy of the Carolina Outer Coastal Plain. *J. R. DuBar, Morehead State University.*

Thirty-five miles of essentially continuous exposures 10 to 35 feet high, occur along the Intracoastal Waterway between Nixons Crossroads and the 501 Bridge at Myrtle Beach, South Carolina. The occurrence in these exposures of nearly all Neogene formations, identified elsewhere beneath the Lower Coastal Plain, affords unparalleled opportunity for detailed study of the stratigraphic relationships, facies, and fossils of these units. The group will be put ashore at several localities where tides and outcrop conditions permit. (Limit 40; 2 days; T, H-3, L-3, C, G. *Trip originates in Myrtle Beach, SC.*) Fri., Nov. 14 to Sat., Nov. 15. Cost: \$218

10. Middle Ordovician Carbonate Shelf to Deep-Water Basin Deposition in the Southern Appalachians. *K. Walker, F. B. Keller, and T. W. Broadhead, University of Tennessee.*

This trip is designed to show in detail the paleoenvironments and biotas of a carbonate-shelf to shelf-edge and slope to deep-water basin transect in the Southern Appalachians. The paleoceanography of this environmental complex will be emphasized. In particular, the principles of paleobathymetric analysis will be demonstrated. Rock types examined will range from thin-bedded, fossil-rich, very shallow water carbonates (some peritidal) through deeper-water slope carbonates, to thin-laminated pelagic basinal shales and basinal coarse turbidites. A wide spectrum of paleocommunities will also be examined. (Limit 80; 4½ days; T, H-4, L-4, C, G. *Trip originates in Knoxville, TN.*) Thurs., Nov. 13, to Sun., Nov. 16. Cost: \$228

11. Geohydrology of the Chattahoochee River. *H. Gill, C. Cressler, R. Faye, M. W. Higgins, U.S. Geological Survey, Atlanta, GA; and R. Cherry, U.S. Geological Survey, Columbia, SC.*

The Chattahoochee River near Atlanta, Georgia, flows parallel to the Brevard Fault Zone and then cuts across the geologic structure. Flow in this reach of the river is dynamic with rapid changes in stage and discharge resulting from hydropower production at Buford Dam. This trip is a 6½-mile raft excursion on the river and will highlight geology, hydrology, good food, and lots of fresh air. (Limit 100; 1 day; T, L-1, C, G.) Sun., Nov. 16. Cost: \$59

12. Blue Ridge–Piedmont Traverse in North Georgia. *K. I. McConnell and J. Costello, Georgia Geologic Survey; M. W. Higgins, U.S. Geological Survey, Atlanta, GA.*

Major stratigraphic and structural features in the northern Piedmont and southwestern Blue Ridge will be examined. This trip includes the southeastern termination of the Blue Ridge Belt and the controversial zone where the rocks of the northern Piedmont come in contact with the Ocoee and Talladega Series. Stops will be made at the Brevard Fault Zone and cataclastic zones in the billion-year-old Corbin gneiss and at the Great Smoky Fault in northwest Georgia. These areas are crucial in any regional hypothesis or developmental model of the southern Appalachians. (Limit 40; 2 days; T, H-2, L-2, C, G.) Thurs., Nov. 15 to Sun., Nov. 16. Cost: \$155

13. Paleodepositional Environments in Carboniferous in the Chattanooga Area. *R. E. Bergenback, University of Tennessee at Chattanooga; M. Rich, University of Georgia; and R. L. Wilson, University of Tennessee at Chattanooga.*

Carboniferous stratigraphy and depositional environments on Look-out, Sand, and Monteagle Mountains in northwest Georgia, northeastern Alabama, and southeastern Tennessee will be examined in strip mines and road cuts in the area. (Limit 40; 2 days; T, H-1, B-1, L-2, D-1, C, G.) Thurs., Nov. 15 to Sun., Nov. 16. Cost: \$158

continued on page 127

GSA FIELD TRIP REGISTRATION FORM
1980 ANNUAL MEETING, ATLANTA, GEORGIA, NOVEMBER 17-20

FIELD TRIPS

IMPORTANT:

1. Field trip registrants must register for meeting.
2. Each registrant should use a separate form.
3. Full payment must accompany registration.
4. Field trip preregistration deadline — must be postmarked no later than October 17.
5. Refund policy: Written request must be received at GSA headquarters no later than October 30. No refunds after October 30. Refunds subject to \$10 processing fee.

Registered as

- Professional
 Student

(PLEASE TYPE OR PRINT)

Name _____ Mailing Address _____ _____ _____	Employer _____ (abbreviate for badge) Phone _____ / _____ (business) _____ / _____ (home)
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FIELD TRIPS

FOR OFFICE USE ONLY

			Amount	Accpt'd	Standby	Filled	Cancel'd
Preregistration			\$				
1. Rocky Mountain Pump Storage Project	Nov. 16	(1)	\$ 43				
2. Multiple Deformation	Nov. 16	(2)	60				
3. Stone Mountain Granite	Nov. 16	(3)	44				
4. Archaeological Geology	Nov. 14-16	(4)	93				
5. Faulting, Eastern Piedmont	Nov. 15-16	(5)	119				
6. Transect, Southern Appalachians	Nov. 11-16	(6)	369				
7. Southern Appalachian Coal Fields	Nov. 13-16	(7)	189				
8. Volcanogenic Sulfides	Nov. 12-16	(8)	334				
9. Carolina Outer Coastal Plain	Nov. 14-15	(9)	218				
10. Middle Ordovician Carbonates	Nov. 13-16	(10)	228				
11. Chattahoochee River	Nov. 16	(11)	59				
12. Blue Ridge--Piedmont Traverse	Nov. 15-16	(12)	155				
13. Carboniferous Rocks	Nov. 15-16	(13)	158				
During Meeting							
Atlanta (mini-trips) Nov. 17, 18, 19							
on-site registration only. Indicate interest	Yes <input type="checkbox"/>	No <input type="checkbox"/>					
Postmeeting							
14. Coastal Environments, GA, SC	Nov. 20-22	(14)	293				
15. Kaolin Deposits--Tertiary Boundary	Nov. 21	(15)	48				
16. Middle Ordovician--Silurian Rocks	Nov. 21-23	(16)	125				
17. Stone Mountain Granite	Nov. 21	(17)	44				
18. Post Metamorphic Granites	Nov. 21-22	(18)	120				
19. Barite Mining District	Nov. 21	(19)	58				
20. Upper Cretaceous, Chattahoochee Valley	Nov. 20-22	(20)	166				
21. Tectonic Framework, AL	Nov. 20-23	(21)	244				
22. Surficial Deposits	Nov. 20-22	(22)	112				
23. Arc Volcanism, Talladega Slate Belt	Nov. 20-22	(23)	145				
Special Postmeeting							
24. Virgin Islands	Nov. 20-24	(24)	425				

TOTAL \$ _____

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<p><input type="checkbox"/> Preregistered</p> <p>Balance Due \$ _____ A/R Refund \$ _____ A/P</p> <p>Received _____ Check No. _____</p> <p>Comments _____</p> <p>_____</p>	<p>U.S. CURRENCY ONLY</p> <p>Make Check or Money Order Payable to</p> <p>1980 GSA Annual Meeting</p> <p>Mail to: Annual Meeting 1980</p> <p>The Geological Society of America</p> <p>P.O. Box 9140</p> <p>Boulder, CO 80301</p>
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STATE OF TEXAS
 DEPARTMENT OF TRANSPORTATION

Section 1. The Department of Transportation is authorized to acquire, construct, maintain, and operate the following project:

Project Name: _____

Location: _____

Estimated Cost: _____

Section 2. The Department of Transportation is authorized to acquire, construct, maintain, and operate the following project:

Project Name: _____

Location: _____

Estimated Cost: _____

Item	Quantity	Unit	Price	Total
1. Construction of road	100	feet	100.00	10,000.00
2. Construction of bridge	1	span	1,000,000.00	1,000,000.00
3. Construction of interchange	1	unit	500,000.00	500,000.00
4. Construction of overpass	1	unit	200,000.00	200,000.00
5. Construction of underpass	1	unit	150,000.00	150,000.00
6. Construction of drainage system	1	unit	100,000.00	100,000.00
7. Construction of lighting system	1	unit	80,000.00	80,000.00
8. Construction of sound barrier	1	unit	60,000.00	60,000.00
9. Construction of rest area	1	unit	40,000.00	40,000.00
10. Construction of parking area	1	unit	30,000.00	30,000.00
11. Construction of utility system	1	unit	20,000.00	20,000.00
12. Construction of signage	1	unit	15,000.00	15,000.00
13. Construction of safety features	1	unit	10,000.00	10,000.00
14. Construction of landscaping	1	unit	5,000.00	5,000.00
15. Construction of other features	1	unit	5,000.00	5,000.00
Total				12,000,000.00

Section 3. The Department of Transportation is authorized to acquire, construct, maintain, and operate the following project:

Project Name: _____

Location: _____

Estimated Cost: _____

POSTMEETING TRIPS

14. Coastal Environments of South Carolina and Georgia. *M. O. Hayes, T. F. Muslow, and A. M. Wojtal, University of South Carolina; V. J. Henry, University of Georgia and Skidaway Institute of Oceanography, Savannah, GA; and L. F. Lens, Amoco, Houston, TX.*

The Atlantic coast of the southeastern United States offers an excellent outdoor laboratory to study a wide variety of coastal environments. This trip will look at barrier-island and back-barrier depositional environments. An overflight will provide an opportunity to see the inter-relationship of all coastal depositional environments. (Limit, 30; 3 days; T, L-3, C, G. Hotel costs not included). Thurs., Nov. 20 to Sat., Nov. 22. Cost: \$293

15. Kaolin Deposits and Cretaceous-Tertiary Boundary in Central Georgia. *B. F. Buie, Florida State University.*

The Upper Cretaceous to upper Eocene deposits in the central and eastern Georgia Coastal Plain will be examined on this trip. Their relationship to the extensive occurrences of commercial kaolin in this region will be discussed. The long-standing error in maps of this part of the Coastal Plain, caused by misinterpretation of updip Paleocene-middle Eocene strata as Cretaceous, will also be discussed and outcrops will be visited. (Limit 40; 1 day, T, L-1, C, G). Fri., Nov. 21. Cost: \$48

16. Stratigraphy and Sedimentary Environments in Middle Ordovician-Silurian Rocks of the Southern Appalachians. *T. M. Chown, West Georgia College; F. McKinney, Appalachian State University; and D. N. Bearce, University of Alabama at Birmingham.*

Different facies of Middle and Upper Ordovician strata in the Southern Appalachians including skeletal carbonates, black graptolitic shales, and red beds will be examined, including depositional environments in the Silurian Red Mountain Formation which contains the famous Birmingham iron ores. Special attention will be focused on the chamosite-hematite ironstones that occur in the section. (Limit 40; 2 days; T, H-2, L-2, C, G). Fri., Nov. 21 to Sun., Nov. 23. Cost: \$125

17. Petrology and Structure of the Stone Mountain Granite and the Mount Arabia Migmatite, Lithonia, Georgia. *W. H. Grant and W. B. Size, Emory University; and B. O'Connor, Georgia State University.*

A comparison of the composition and structure of the Stone Mountain intrusion to the folded Lithonia migmatite gneiss will be studied in the context of a possible anatectic relationship between the two rock types. New petrographic, chemical, paragenetic, and structural data will be presented. (Limit 80; 1 day; T, L-1, C, G; also, premeeting trip no. 3). Fri., Nov. 21. Cost: \$44

18. Petrology and Structural Setting of Post-Metamorphic Granites of Georgia. *J. A. Whitney and D. B. Wenner, University of Georgia.*

This trip is a study of the petrology and tectonic setting of the main granitic intrusives of north Georgia. Mineralogy, petrology, geochemistry, paleomagnetism, and isotopic comparisons of the various intrusive bodies will be discussed. Plutons visited will include Stone Mountain, Elberton, Danburg, and Sparta. (Limit 40; 2 days; T, H-1, B-1, L-2, D-1, C, G). Fri., Nov. 21 to Sat., Nov. 22. Cost: \$120

19. Barite Deposits in the Cartersville District, Georgia. *E. Reed, Thompson-Weidman Corporation; R. Power, Georgia State University; M. J. Keener, Paga Mining Co.; and D. H. White, U.S. Bureau of Mines, Atlanta, GA (Society of Economic Geologists).*

The Cartersville District has been an important mining area since 1840. Barite mining from residual deposits has been a major industry in the region. This trip will visit a typical barite mining operation and review the stratigraphy controlling mineralization. (Limit 40; 1 day; T, L, C, G). Fri., Nov. 21. Cost: \$58

20. The Upper Cretaceous and Lower Tertiary Geology of the Chattahoochee Valley, Western Georgia and Eastern Alabama. *J. Reinhardt, U.S. Geological Survey, Reston, VA; and T. G. Gibson, U.S. Geological Survey, U.S. National Museum, Washington, D.C.*

The trip will examine the lithostratigraphy and biostratigraphy of Upper Cretaceous to middle Eocene strata exposed in the Chattahoochee Valley. The sedimentary and biostratigraphic characteristics of barrier, back-barrier, and inner-shelf deposits will be discussed relative to patterns of transgression and regression. The interplay of carbonate and clastic environments and the level of biostratigraphic control in updip-down dip sections will be emphasized. (Limit 40; 2½ days; T, H-2, B-2, L-2, D-3, C, G). Thurs., Nov. 20 to Sat., Nov. 22. Cost: \$166

21. Tectonic Framework of the Appalachian Orogen in Alabama. *W. A. Thomas, University of Alabama; and T. L. Neathery, Geological Survey of Alabama.*

The setting of the trip is at the southwest limit of the exposed Appalachian orogen just northeast of the edge of the postorogenic Mesozoic-Cenozoic cover of the Gulf Coastal Plain. A traverse from the ancient craton on the northwest to the ancient continental margin on the southeast will emphasize changes in stratigraphy and structural style across the orogen. Stops will be made to observe major structural boundaries and selected stratigraphic sequences. (Limit 80; 3½ days; T, H-3, B-3, L-3, D-3, C, G). Thurs., Nov. 20 to Sun., Nov. 23. Cost: \$244

22. Surficial Deposits, Weathering Processes, and the Evolution of an Inner Coastal-Plain Landscape, Augusta, Georgia. *W. L. Newell, D. C. Prowell, M. J. Pravich, and H. W. Markewich, U.S. Geological Survey, Reston, VA.*

Late Tertiary and Quaternary deposits on the Inner Coastal Plain are well exposed in the Augusta, Georgia area and reveal an intricate history of landscape evolution involving weathering, mass wasting, fluvial, and aeolian processes. Multiple weathering horizons have developed upon and are interposed between the sequences of surficial deposits. In comparison, the adjacent Piedmont terrain is lower, less dissected, and mantled with thin, discontinuous surficial deposits. The varying complexity of surficial deposits on the Inner Coastal Plain may indicate subtle, regional tectonic effects if other independent variables can be isolated. (Limit 40; 2½ days; T, H-2, L-2, C, G). Thurs., Nov. 20 to Sat., Nov. 22. Cost: \$112

23. Structural and Stratigraphic Setting of Arc Volcanism in the Talladega Slate Belt of Alabama. *J. F. Tull, University of Alabama; and S. H. Stow, Oak Ridge National Laboratory, Oak Ridge, TN.*

The purposes of the trip are to examine the regional stratigraphy and structure, to inspect the contact relationships of the greenstone sequence, to view the internal stratigraphy and lithologic variation, and to investigate zones of volcanogenic sulfide mineralization of the arc volcanics and associated metasediments in the Talladega Slate Belt of Alabama. Stops will include Hillabee metabasalts and metaquartz dacites, the Devonian sequences (Jemison Chert and its equivalents), Hollins Line thrust fault, Pyriton Sulfide Mines, basal Hillabee contact zones, and the Lay Dam bouldery mudstone. (Limit 40; 2 days; T, H-1, B-1, L-2, D-2, C, G). Thurs., Nov. 20 to Sat., Nov. 22. Cost: \$145

SPECIAL POSTMEETING TRIP

24. Coral World of the Virgin Islands. *R. L. Wilson, University of Tennessee at Chattanooga.*

After the technical sessions are over, plan to relax and enjoy the coral world of the Virgin Islands. Spouses and guests are welcome. Fly to St. Thomas, V.I., on Thursday, November 20, then by boat to Maho Bay on St. John. Nearly one-half of the island and most of the offshore waters are set aside as a U.S. National Park. Enjoy white coral sand beaches, scenic mountain roads, bush-covered ruins of the eighteenth and nineteenth century sugar plantations. The rocky shorelines and sandy carbonate beaches display a wide variety of fringing, patch, and barrier reefs. See the underwater coral trail at Trunk Bay and the Tertiary granites of the Virgin Gorda Batholith. The bedrock geology of St. John consists of a Lower Cretaceous sequence of keratophyre flows, flow breccias, and spillites which is overlain unconformably by a thick sequence of megabreccias and tuff. (Limit 40; 4 days; T, H-4, excludes meals). Thurs., Nov. 20 to Mon., Nov. 24. Cost: \$425

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