GSA news & information

VOLUME 2, NUMBER 7 JULY 1980

Allison R. Palmer joins GSA staff as Centennial Science Coordinator

Allison R. ("Pete") Palmer has been named Centennial Science Coordinator for GSA and has joined the headquarters staff in Boulder as of June 23. He currently is in Paris for the International Geological Congress but will return in mid-July to assume full-time duties.

The position of Centennial Science Coordinator is a new one for GSA, created by the Council for the purpose of organizing and coordinating a special program established by Council in recognition of the first hundred years of the Society. The program, to be referred to as the "Decade of North American Geology," will include preparation of a number of special publications. The climax of the program will be at the annual meeting of the Society in the fall of 1988, although the completion of some of the projects may extend well beyond that date.

Whereas no specific publications have yet been announced, it is envisioned that during the eight-year period, the centennial program will publish a series of books and some maps and charts, focusing on the geology of North America. The program is under the general guidance of the Society's Centennial Steering Committee, which is chaired by the past president of the Society, and includes representatives from Canada, Mexico, and Central America, as well as from the United States. Within the United States, we anticipate that many national and regional groups will participate in the program. The Steering Committee expects the program to make major contributions to the advancement of the geological sciences.

Palmer, a Fellow of GSA since 1972, has served with the State University of New York, in Stony Brook, as Professor of Paleontology since 1966. From 1974 to 1977 he served additionally as chairman of the Department of Earth and Space Sciences. From 1950 to 1966 he was Cambrian paleontologist and stratigrapher with the U.S. Geological Survey. Since 1972 he has concurrently held the position of president of the Cambrian Subcommission of the International Stratigraphic Commission. He also is a member of the Cambrian/Precambrian boundary working group (IGCP Project 29) and was one of an invited group of scientists to visit mainland China in 1978 on behalf of that project. From 1947 to 1948 he served with the Texas Bureau of Economic Geology.

Palmer's undergraduate work was done at Pennsylvania State University and at the University of Minnesota, where he also received his doctorate in geology in 1950. In 1967 he was awarded the Walcott Medal of the National Academy of Science. He also holds membership in American Academy for the Advancement of Science, the Paleontology Society, and the American Association of Petroleum Geologists. He also is a member of the New York Academy of Science and served as chairman of the geology section of that organization for one year.

"Pete" is married to Patricia Richardson Palmer, and the couple has five children. They have moved to Boulder where they recently purchased a home.

UPDATE

Articles in *Bulletin, Part II,* July 1980

Articles in *Bulletin, Part II* are listed below. (Summaries only of these articles are in *Bulletin, Part I.*) Articles in *Part II* are not on the separates subscription.

Paper copies of *Part II* in its entirety are available at cost ($10/month) as a special service to those users (members and nonmember subscribers) who request them. Any such order should be addressed to the Publication Sales Department and be accompanied by advance payment, and no discount can be offered for multiple orders or orders for a sequence of months.

1. Geology of the Pine Hill intrusive complex, a layered gabbroic body in the western Sierra Nevada foothills, California, by Robert K. Springer, Doc. no. M00701. (On microfiche: 91 p., 21 figs., 9 tables)
2. Dynamothermal contact metamorphism superposed on regional metamorphism in the pelitic rocks of the Chiwaukum Mountains area, Washington Cascades, by Charles C. Plummer, Doc. no. M00702. (On microfiche: 42 p., 16 figs.)
3. Precambrian(?) crystallization and Permian(?) metamorphism of hypersolvus granite in the Avalonian terrane of Rhode Island, by Howard W. Day, V. Max Brown, and Kurt Abraham, Doc. no. M00703. (On microfiche: 73 p., 15 figs., 6 tables)

In July *Geology* (separates not available)

1. Lengths of Hawaiian lava flows, by M. C. Malin
2. Reinterpretation of the depositional environment the Yellowstone "fossil forests," by W. J. Fritz
3. Observations on lateral and overbank deposition—Evidence from Holocene terraces, southwestern Alberta, by L. P. Stene
4. Chattermark trails as paleoenvironmental indicators, by P. A. Bull, S. J. Culver, R. Gardner
5. Basement geology in the sedimentary basins of Nigeria, by A. A. Avbovbo
6. Gravity highs and crustal structure, Omineca crystalline belt, northeastern Washington and southeastern British Columbia, by J. W. Cady
7. The Josephine Ophiolite—Remains of a Late Jurassic marginal basin in northwestern California, by G. D. Harper
8. Middle Paleozoic magmatism and orogenesis in the Brooks Range, Alaska, by J. T. Dillon, G. H. Pessel, J. H. Chen, N. C. Veach
9. Cambrian-Ordovician syenites of New Mexico, part of a regional alkalic intrusive episode, by A. K. Loring, D. G. Armstrong
10. Penrose Conference report: The role of pore pressure in deformation in geologic processes, by T. N. Narasimhan, W. N. Houston, A. M. Nur

Annual Bergmann Memorial Grants offered to two young scientists

Bergmann Memorial Grants are special awards made annually by the Binational Science Foundation to two outstanding young scientists, one in the U.S.A. and one in Israel. The grants cover the cost of up to two years of research conducted at an Israeli institution. They are awarded on the basis of cooperative research proposals submitted by candidates. Scientists of either nationality who have completed their doctorates within five years prior to application may submit proposals for consideration.

Cooperative research promoted by the BSF involves collaboration between scientists from both countries. Applicants should therefore prepare their proposals jointly with collaborating investigators of their choice from the opposite country and submit them via accredited institutions where the research will be performed.

HOW TO APPLY. Proposals are submitted in ten copies on standard BSF forms in accordance with guidelines provided in detail in the pamphlet, "Applications for Grants and Guidelines for Recipients." The form and pamphlet can be obtained from

(in the U.S.) National Science Foundation, Div. of International Programs (U.S.-Israel Binational Science Foundation), Washington, DC 20550

(in Israel) U.S.-Israel Binational Science Foundation, P.O.B. 7677, Jerusalem

Applications should reach the BSF by November 1 of each year; the awards will be made by April 1 of the following year.

EVALUATION PROCEDURES. The scientific merit of the proposal is the principal evaluatory consideration. All eligible applications will be sent by the BSF to expert peer reviewers in both countries for evaluation. Final recommendations for the awards are made in Jerusalem by a binational panel of scientists in session with the Executive Director of the BSF.

THE RESEARCH GRANT. The BSF is a grant-awarding institution established by the U.S. and Israel governments in 1972 to support collaboration in research between scientists of both countries. In honor of a founding member and former governor of the BSF, Bergmann Memorial Grants for young scientists were established in 1976 and were intended, unlike regular BSF research grants, to cover the recipient's salary as well as the direct research costs of the approved project. Further details of BSF operations are available on request.

GSA News & Information

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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.

1980 Joint Technical Program Committee

The Joint Technical Program Committee (JTPC) will meet at GSA Headquarters in Boulder, Colorado, on July 17 and 18, 1980. JTPC is responsible for final selection and rejection of all abstracts submitted for presentation at the annual meeting. The following list includes representatives and conferees from GSA divisions and associated societies who will participate in the JTPC meeting:

Cochairman . . . . . *Robert D. Hatcher, Jr.*
Cochairman . . . . . *Charles E. Weaver*
General Chairman, Local Committee . *William A. Thomas*
Chairman, 1979 JTPC . . . . . *Richard W. Berry*
Chairman, 1981, JTPC . . . . . *Norman Hester*
President, GSA, ex officio . . . . . *L. L. Sloss*
Executive Director, GSA ex officio . . . . . *John C. Frye*

GSA Representatives-at-Large . . . . . *Tracy Vallier* (sub for Roland E. von Huene)
John T. Whetten
Thomas H. Anderson
Lynn Glover III
Steven S. Oriel

GSA DIVISION REPRESENTATIVES

Archaeological Geology . . . . . *Jack D. Donahue*
Division Secretary, *Diana Kamilli*
Coal Geology . . . . . *Heinz H. Damberger*
Engineering Geology . . . . . *John S. Scott*
Geophysics . . . . *Peter Dehlinger* (sub for Joel S. Watkins)
History of Geology . . . . . *Clifford M. Nelson, Jr.*
Hydrogeology . . . . . *Paul R. Seaber*
Quaternary Geology and Geomorphology . *Marie Morisawa*

ASSOCIATED SOCIETY REPRESENTATIVES

Cushman Foundation . . . . . *Don L. Eicher*
Geochemical Society . . . . . *Carl E. Hedge*
Geoscience Information Society . . . . . *Nancy J. Pruett*
Mineralogical Society of America . . *J. S. Huebner* (sub for Robert M. Hazen)
National Assn. of Geology Teachers . . . . . *O. T. Hayward*
Paleontological Society . . . . . *Roger D. K. Thomas*
Society of Economic Geologists . . . . . *Norman Herz*
Society of Vertebrate Paleontologists . . . . . Not meeting with GSA

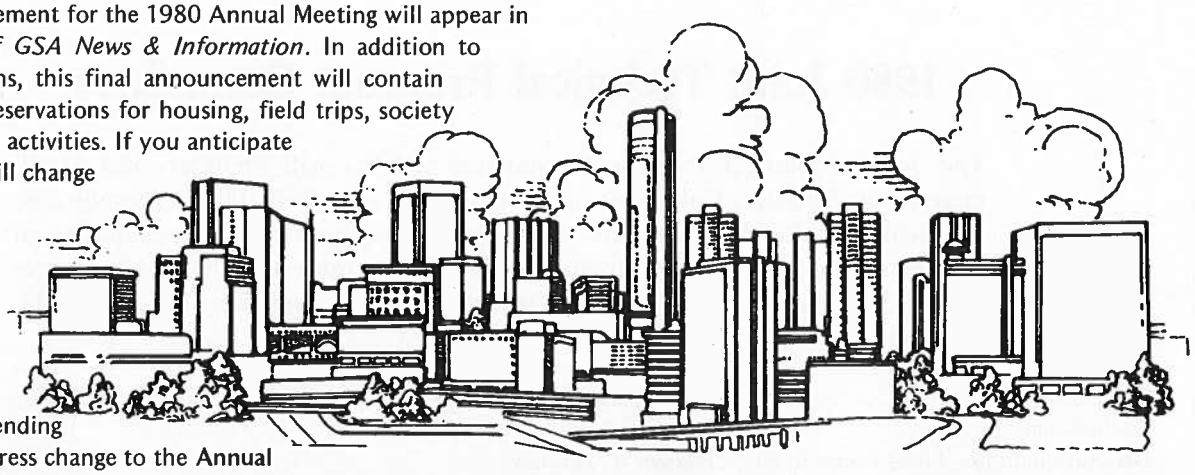
ASSOCIATED SOCIETY CONFEREES

Cushman Foundation . . . . . None appointed
Geochemical Society . . . . . None appointed at this time
Geoscience Information Society . . . . . None appointed
Mineralogical Society of America . . . *Gordon E. Brown, Jr.*
Dean Presnall (sub for J. S. Huebner)
Paleontological Society . . . . . *Robert Linsley* (sub for J. A. Fagerstrom)
Society of Economic Geologists . . . . . *Arnold L. Brokaw*
Society of Vertebrate Paleontologists . . . . . Not meeting with GSA

Necrology

Notice has been received of the following deaths: Frederick A. Burt, Bennington, Vermont; Arthur E. Chambers, Tucson, Arizona; George B. Cooke, Augusta, Georgia; Robert J. W. Douglas, Ottawa, Ontario, Canada; Robert K. Fahnestock, Fredonia, New York; James D. Forrester, Tucson, Arizona; John M. Fouts, Jr., Los Angeles, California; Harry M. Fridley, Morgantown, West Virginia; Margaret S. Griffin, Ft. Myers, Florida; George H. Hayfield, Lock Haven, Pennsylvania; Louis Kehrer, Olten, Switzerland; John Marr, Houston, Texas; Thomas R. McGetchin, Barrington, Rhode Island; Jean V. Molleskog, Wellington, Nevada; Thomas D. Murphy, Palm Coast, Florida; Philip M. Orville, New Haven, Connecticut; Bryan Patterson, Cambridge, Massachusetts; Don Tocher, San Francisco, California; Todd M. Weber, Glen Cove, New York.

The Final Announcement for the 1980 Annual Meeting will appear in the August issue of *GSA News & Information*. In addition to preregistration forms, this final announcement will contain forms for making reservations for housing, field trips, society functions, and guest activities. If you anticipate that your address will change due to summer fieldwork or for other reasons, you can be assured timely receipt of your copy of the second announcement by sending your temporary address change to the **Annual Meeting Secretary, Geological Society of America, P.O. Box 9140, Boulder, CO 80301.** Additional copies of the final announcement and more information may be obtained by writing to the above address.



1980 ANNUAL MEETING ATLANTA, GEORGIA

NOVEMBER 17–20

ATLANTA, Capitol 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 8:00 a.m., November 17, through 5:00 p.m., November 20, 1980. With Atlanta's easy accessibility, excellent facilities, and mild seasonal climate, it is one of the top convention cities.

Atlanta, a relatively young city, has managed successfully to maintain her charm, culture, and reputation for Southern hospitality while keeping up with—and ahead of—the times. Atlanta has always been lucky to be in the right place at the right time. Currently, Atlanta presides over the entire southeastern United States as the region's transportation, cultural, commercial, industrial, shopping, and sports center. Almost two million reside in the metro area, but Atlanta keeps on growing, as do the reasons for visiting there. You'll be rubbing shoulders with people enjoying themselves in a city of unending pleasures and possibilities, from hoedown to highbrow, country chic to haute coutre, crepes to cocktails, and neon to candlelight.

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 Galapagos Islands and the Virgin Islands. The program consists of 9 concurrent technical sessions, poster sessions, 25 premeeting and postmeeting field trips, 4-day science theatre, 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. They are: Cushman Foundation, Geochemical Society, Geoscience Information Society, Mineralogical Society of America, National Association of Geology Teachers, Paleontological Society, and Society of Economic Geologists.

REGISTRATION

Conferees are urged to preregister in order to avoid delays on site. This year we have extended the deadline to **October 17.** Cancellations will be accepted in writing through October 30. We hope this will make preregistration more convenient than in the past. Registration fees and forms will appear in the August issue of *GSA News & Information.* You may also receive a copy by contacting the Meetings Secretary in Boulder. **Meeting and field trip preregistration must be received no later than October 17.**

HOUSING

Sleeping accommodations are reserved for GSA in 9 downtown hotels. Room rates will range from $23–27 for singles and $28–68 for doubles/twins. Student housing in quad and triple rooms is available in two of the participating hotels. All rates are subject to city and state taxes totaling 7%. Housing reservations will be through the Atlanta Housing Bureau.

The Headquarters Hotel will be the **Atlanta Marriott,** a gracious, older, luxury hotel. It combines the old and new beautifully; its famed "Courtyard" is an acre of living plants, antique brick, wrought iron, and secluded gazebos surrounding a luxurious pool; 650 rooms are available at $44-single and $56-double.

TRANSPORTATION

All-day free shuttle service will be provided between GSA hotels and the Georgia World Congress Center from Sunday through Thursday. This service will be available for all GSA meeting registrants.

SOCIAL EVENTS (for your calendar)

Welcoming Party, Sunday evening, November 16,
Hyatt-Regency Ballroom

Alumni Receptions, Monday evening, November 17,
Atlanta Marriott

Annual Dinner, Tuesday evening, November 18,
Atlanta Marriott

Bluegrass Night, Wednesday evening, November 19,
location to be announced

For those looking to enjoy Atlanta's evenings a full array of activities will be listed in the August *News & Information.* The Falcons, Hawks, and Flames have home games that week. The Symphony and Ballet are also on the schedule. Restaurants that will require advance bookings will also be listed.

GUEST PROGRAM

We especially welcome our guests who will be treated to a fine variety of tours highlighting the old and new south. Hospitality and tour center for guests will be at the Marriott.

The tour program includes formal and informal full- and half-day excursions to cultural attractions, parks, restaurants, shops, and entertainment. Included in the trips are visits to historic Civil War sites, ante-bellum homes, Franklin D. Roosevelt's home in Warm Springs, and some of Atlanta's sophisticated shopping plazas.

SHORT COURSES

AAPG– "The Art of Technical Presentations"
AGI– "Geo-Writing: Quickly. Clearly. Concisely."
AGI-WOMEN GEOSCIENTISTS–Seminar: "Management Skills"
MSA– "Pyroxenes"
SEPM– "Principles and Applications of Coal Petrology"

Details on Short Courses will be described in the August issue of *News & Information.*

FIELD TRIPS

Twenty-four outstanding trips–14 premeeting and 10 post-meeting–will be detailed in August's *News & Information.* A series of mini-trips will also be available.

Premeeting trips include: Geology Related to the Construction of the Rocky Mountain Pump Storage Project; Multiple Deformation in the Area Southeast and South of Atlanta; Petrology and Structure of the Stone Mountain Granite and the Mount Arabia Migmatite, Lithonia, Georgia; Archaeological Geology of Georgia; Ductile and Brittle Faulting in the Eastern Piedmont, South Carolina and Eastern Georgia; A Transect of the Southern Appalachians; Depositional Environments of a Part of the Southern Appalachian Coal Fields; Volcanogenic Sulfides of the Carolina Slate Belt; Cenozoic Biostratigraphy of the Carolina Outer Coastal Plain; Middle Ordovician Carbonate Shelf to Deep-Water Basin Deposition in the Southern Appalachians; Coastal Sedimentary Environments Mississippi-Alabama; Geohydrology of the Chattahoochee River; Blue Ridge-Piedmont Traverse in North Georgia; and Paleo-depositional Environments in Carboniferous in the Chattanooga Area.

Postmeeting trips include: Coastal Environments of South Carolina and Georgia; Kaolin Deposits and Cretaceous-Tertiary Boundary in Central Georgia; Stratigraphy and Sedimentary Environments in Middle Ordovician-Silurian Rocks of the Southern Appalachians; Petrology and Structure of the Stone Mountain Granite and the Mount Arabia Migmatite, Lithonia, Georgia; Petrology and Structural Setting of Post-Metamorphic Granites of Georgia; Barite Mining in the Cartersville District, Georgia; The Upper Cretaceous and Lower Tertiary Geology of the Chattahoochee Valley, Western Georgia and Eastern Alabama; Tectonic Framework of the Appalachian Orogen in Alabama; Surficial Deposits, Weathering Processes, and the Evolution of an Inner Coastal-Plain Landscape, Augusta, Georgia; Structural and Stratigraphic Setting of Arc Volcanism in the Talladega Slate Belt of Alabama; and a special postmeeting trip, Coral World of the Virgin Islands.

TECHNICAL PROGRAM

The deadline for receipt of volunteer abstracts was June 13. All technical sessions will be located at the Georgia World Congress Center, one of the country's finest convention facilities. You will be able to attend all Poster and Oral sessions, Science Theatre, and Exhibits at this one site.

ANNOUNCEMENTS FOR 1981

PAPERS for all section meetings of the Geological Society of America are invited from GSA Fellows, Members, Student Associates, and nonmembers. Accepted abstracts will be published in the appropriate issue of *Abstracts with Programs*, which will be distributed as a formal publication prior to the section meeting. Depending on limitations set by the individual sections, any author may submit as many abstracts as he or she wishes; however, no more than two from any author or coauthor will be accepted for publication.

Abstracts will be selected on the basis of geologic significance, amount of new information, broad interest, and relevance to the section's geographic coverage.

GSA members are encouraged to order their section meeting book(s) on their dues statement at the member price of $3. Nonmember price is $5.

Abstracts, which are limited to 250 words, must be submitted camera-ready on official 1981 GSA forms that may be obtained from the local committee officers listed on the facing page or from the

Abstracts Coordinator
Geological Society of America
P.O. Box 9140
Boulder, Colorado 80301

If the typing of the original copy will not reproduce satisfactorily, accepted abstracts will be retyped at GSA headquarters; the senior author will be charged $15. There will be no opportunity for authors to review or revise the retyped material. *Abstracts submitted on other than the GSA form will be returned without consideration for the meeting.*

PLEASE NOTE ABSTRACT DEADLINES. Acceptance or rejection of abstracts will be based on the abstracts as submitted by the author. There will be no opportunity to revise or withdraw them. Final decisions on acceptance or rejection of abstracts are the responsibility of the Program Committee.

POSTER SESSIONS. Some sections will have space for poster sessions during their 1981 meetings. It will be necessary to submit the usual 250-word abstract explaining the material on display. Even though a formal paper is not read, the abstract is printed in *Abstracts with Programs.* Decisions on whether papers are accepted for oral presentations or poster sessions will be made by the Program Committee. The authors, however, may indicate their preference if they so desire.

STUDENT PAPERS are welcomed and encouraged. Some sections give a Best Student Paper award. To be considered for the award, the paper must be by an individual student author, and it must be identified as being a student paper.

ALL SLIDES must be in a 2" x 2" frame and of a thickness that will fit comfortably in a standard Kodak carousel projection magazine. Slides should be designed for easy reading on 10-foot-wide screens by viewers who are as far away as 70 feet. Overhead projectors and chalkboards may be available on request.

DETAILED INFORMATION for registration, housing, field trips, short courses, guest activities, welcoming parties, business meetings and luncheons, annual dinners, and other events will be announced in future issues of *GSA News & Information*, as well as being included in the appropriate issues of *Abstracts with Programs.*

EXHIBIT SPACE may be made available at some section meetings. For information, please write or call the local committee officers listed on the facing page.

SPECIAL NOTE
TO MEMBERS LIVING OUTSIDE CONTERMINOUS UNITED STATES

Those who live outside the conterminous United States may receive copies of the 1981 *Abstracts with Programs* for the section meetings too late to take advantage of the preregistration and housing forms.

Therefore, those who are planning to attend any of the section meetings are urged to write to the appropriate local committee officers listed on the facing page for copies of the preregistration forms, housing applications, and field-trip information.

GSA SECTION MEETINGS

Southeastern

University of Southern Mississippi
Hattiesburg, Mississippi
March 19-20, 1981

ABSTRACT DEADLINE: October 28, 1980

Submit completed abstracts to
Daniel A. Sundeen, Program Committee Chmn.
Department of Geology
University of Southern Mississippi
Southern Station, Box 8196
Hattiesburg, Mississippi 39401
(601) 266-7195

South-Central

Trinity University
San Antonio, Texas
April 13-14, 1981

ABSTRACT DEADLINE: December 1, 1980

Submit completed abstracts to
Donald E. McGannon, Jr., Program Committee Chmn.
Department of Geology
Trinity University
San Antonio, Texas
(512) 736-7606

Cordilleran

Valle Grande Hotel
Hermossillo, Sonora, Mexico
March 25-27, 1981

ABSTRACT DEADLINE: October 15, 1980

Submit completed abstracts to
J. Francisco Longoria, Program Committee Co-chmn.
Department of Geology
University of Sonora
Hermosillo, Sonora, Mexico
21045, Ext. 149

or

Peter Coney, Program Committee Co-chmn.
Department of Geosciences
University of Arizona
Tucson, Arizona 85721
(602) 884-1335

Rocky Mountain

Rapid City Civic Center
Rapid City, South Dakota
April 16-17, 1981

ABSTRACT DEADLINE: November 17, 1980

Submit completed abstracts to
Philip R. Bjork, Program Committee Co-Chmn.
Museum of Geology
South Dakota School of Mines and Technology
Rapid City, South Dakota 57701
(605) 394-2467

or

Fred Steece, Program Committee Co-Chmn.
South Dakota Geological Survey
308 West Boulevard
Rapid City, South Dakota 57701
(605) 394-2229

Northeastern

Bangor Civic Center
Bangor, Maine
April 9-11, 1981

ABSTRACT DEADLINE: October 31, 1980

Submit completed abstracts to
Arthur M. Hussey II
Department of Geology
Bowdoin College
Brunswick, Maine 04011
(207) 725-8731, Ext. 219

North-Central

Iowa State University
Ames, Iowa
April 30-May 1, 1981

ABSTRACT DEADLINE: November 27, 1980

Submit completed abstracts to
Carl F. Vondra, Program Committee Chmn.
Department of Earth Sciences
Iowa State University
Ames, Iowa 50010
(515) 294-4477 or (515) 294-5867

NEW FELLOWS, MEMBERS, AND STUDENTS

NEW MEMBERS The following 411 Members have been elected to Membership by Council action during the period from October 1, 1979, through February 29, 1980. (*indicates a transfer from Student Associate to Member.)

Marianna C. Abashian
Constance M. Absalom
Roy D. Adams*
Wayne S. Akiyama
Mahmood Alam*
Regina L. Albert
John N. Aleinikoff*
Richard W. Allmendinger*
Haytham A. Al-Tayyar
Peter C. Anderson*
Jamie Andres*
Richard B. Aram*
Nicholas P. Arcaro*
Michel H. Arthaud
Allan C. Ashworth
William W. Atkinson, Jr.
James A. Austin, Jr.*
Steven A. Austin*

L. Joseph Bachman*
Steven Bachman*
Margaret J. Baldwin
George A. Ballard*
Peter M. Barber
David L. Becka
David A. Bedsun
Michael S. Bell
Kathleen M. Benedetto
James A. Berg
Dale E. Bergquist*
Raymond Beullac*
Henry G. Bienkowski*
Eric A. Bikis*
William L. Bilodeau*
William J. Bippus*
Reed K. Bitter
Thomas Ford Blake*
Rene Blanchet
Richard F. Bly*
Mary Louise Bopp*
David J. Borns*
Robert J. Bouchard*
Scott Brande*
Wayne M. Brewer*
Lee A. Brouillard
Michael P. Bruen*
Charlotte A. Brunner*
Michael A. Bryant
Barbara K. Buckley
Raymond Burke*
Edward L. Burks
James A. Bush
Nancy J. Butkovich*
Todd F. Butler*
Charles E. Buzby, IV*

Gerard E. Capps
Louis J. Caruso
Ronald R. Charpentier*
Don R. Chesnut, Jr.
Nicholas H. Christie-Blick*
Edward O. Church
Gary P. Citron*
Donald D. Clarke
Arthur W. Cleaves II
Curtis R. Cohen*
Donald L. Colson*
Roland A. Connors
Billy Charles Cook
Jennifer L. Cook
James W. Cooksley
John D. Cooper
Kevin J. Coppersmith*
Hamilton A. Costa
Spencer J. Cotkin*
Pierre A. Cousineau
Frederick S. Crafts
G. Allan Crawford*
Brian Kim Cross
Peter L. Croswell*
Kevin D. Crowley*
Mary Cubanski
Timothy R. Cullen*
Carol M. Cutforth

Thomas V. Dagenhart, Jr.
Edward J. Daly*
H. M. Corinne Danielli*
Gary T. Dannemiller
George R. Dasher
Karleen E. Davis*
Holly J. Delaney
Helen L. Delano*
Marie Del Toro
Brant A. Dennis
William J. Deutsh*
Janet L. DeVries*
David S. Diamond
F. D. Didier, Jr.
Kayti Didricksen*
Joseph A. Dixon
Mary Elizabeth Doull
Michael D. Dresen
Wallace W. Drexler
Richard E. Drumheller*
George E. Duchossois*
Donald R. Duncan
Jeffrey L. Dunn*
Cynthia Dusel-Bacon

Dorland E. Edgar
Thrasos Eftaxiadis*
Judy Ehlen
William C. Ehler*
Jennifer L. English
Edward E. Erb, Jr.*
Mark A. Evans*

Kathryn M. Fiess*
Lorraine H. Filipek*
Conrad G. Fischer*
Lynn B. Fischer
Dorothy L. Fisher
Kevin M. Foster
Ulrich A. Franz
Daniel A. Freiberg*
Arthur B. French, Jr.*
William B. French*
Philip N. Froelich

M. Virginia Gabaldo*
Lynnette A. Gandl
James R. Garrison, Jr.*
David E. Germer
Allan K. Gibbs*
Billy E. Giles*
Beverly J. Giza*
Robert D. Goldman
Debra Knox Gomez*
Elizabeth A. Gordon*
Siegfried F. Grabs*
Edward J. Graham*
Jeffrey A. Grambling*
Walter E. Granlund
Raymond W. Grant
William J. Gregg*
Donald M. Gwinner

Blaine R. Hall*
Daniel W. Hall
Robert M. Hamilton
Peter M. Hansen
Michael Harris*
James N. Hartwell*
Chris T. Hayward*
Paul V. Heinrich*
David R. Hembree
David W. Henderson*
Michael D. Higgins*
Rick T. Hildebrand*
Bruce R. Hilton*
David H. Hinton*
Jill A. Hobbs
Paul E. Holm*
Kurt Q. Holmes*
Mee Len Hom*
W. Frank Huber
Margery A. Hulburt*
Rex B. Humphrey
Kim S. Hutchinson*
Amy Hutsinpiller

Christine M. Iversen
William M. Iversen

Kevin C. Jackson
Robert D. Jacobi*
Stephen L. Jacobson*
Mary Clare K. Jakes*
William R. Jamison
Nancy O. Jannik*
Raymond F. Jeanloz*
Gordon A. Jenner*
Jean-Peirre Jenni
Lawrence W. Jensen*
Frederic C. Johnson III
Gary D. Johnson*
Jeffrey M. Jordan*
Teresa E. Jordan*
Allan P. Juhas

John F. Kalvels
Michael C. Karas
Lawrence P. Karasevich*
Barry J. Katz*
Lloyd D. Keigwin*
Joseph T. Kelley*
Dennis R. Kerr*
Wilburn C. Kilgore
Peter G. Kimmel*
Joseph L. Kirschvink*
Robert B. Kistler
Joseph A. Kizis, Jr.*
Conrad S. Klepadlo*
Franklyn G. Koch*
William F. Koch II*
Dimitrios Koutsomitis*
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Annual Report for 1979 — Committee on Research Grants

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

The Committee on Research Grants, consisting of Emile A. Pessagno; Walter Alvarez; Robin Brett, NSF conferee; and Peter R. Vail, chairman, met at Society headquarters in Boulder on April 6 and 7, 1979. Committee members had evaluated proposals prior to the meeting.

The committee had at its disposal $84,692, which included donations by past recipients and from dues statements check-offs, funds provided from the Society's endowment income and from the Harold T. Stearns Fund, and $2,000 from the Mobil Oil Corporation. The total budget was slightly below the $85,000 disbursed the previous year.

The total number of applications was 254 or approximately the same as in 1978, and the overall quality of proposals remained high. Support was recommended for 154, or sixty percent of the total, an average award being $551 (compared to $686 in 1978). Awards ranged from $200 to $1,500 each. The total amount requested was $255,771, of which the amount awarded represented thirty percent.

The committee singled out fifteen young scientists and their proposals for special mention. Philip W. Signor III, Johns Hopkins University, and Doris Sloan, University of California, Berkeley, were recipients of the 1979 Harold T. Stearns Fellowship Award for research on one or more aspects of the circum-Pacific region. Joseph Anthony Curiale, University of Oklahoma, Norman; Neil D. Skilton, University of Missouri, Columbia; and Stephen W. Snyder, University of North Carolina, Chapel Hill, were recipients of the Mobil Oil Corporation donation. The following young scientists received outstanding mention in the belief that they should be brought to the attention of the membership of the Society: Stuart William Fagin, University of Texas, Austin; Allen F. Glazner, University of California, Los Angeles; Judith Louise Hannah, University of California, Davis; Allan G. Krill, Yale University; Helen M. Lang, University of Oregon, Eugene; Ross David Powell, Ohio State University, Columbus; Jeanine M. Schmidt, Stanford University; Neil D. Skilton, University of Missouri, Columbia; and Stephen W. Snyder, University of North Carolina, Chapel Hill.

The Penrose Research Grant program represents a remarkably efficient use of money in the support of research and a major stimulus to many students in the geological sciences. The quality of applications for 1979 was so high that a number of worthy proposals could not be funded, and others were underfunded. The committee expressed hope that the level of funding could be increased in future years.

Respectfully submitted,
Peter R. Vail, Chairman; *Emile A. Pessagno, Jr.*;
Walter Alvarez; Robin Brett, Conferee

1979 RESEARCH GRANTS SUMMARY OF COMMITTEE RECOMMENDATIONS

	Number of Applicants	Requested by Applicants	Recommended for Support
CATEGORY I (Recommended for support)			
M.S. Student applicants....	53	$ 51,658	$24,975
Ph.D. Student applicants...	101	108,038	59,893
Subtotal.....	154	$159,699	$84,868
CATEGORY II (Alternates)			
M.S. Student applicants...	6	$ 4,814	
Ph.D. Student applicants..	2	1,867	
Subtotal.....	8	$ 6,681	
CATEGORY III (Not recommended for support)			
M.S. Student applicants...	44	$ 38,584	
Ph.D. Student applicants..	40	40,956	
Post Ph.D. applicants.....	8	9,851	
Subtotal.....	92	$ 89,391	
GRAND TOTAL.....	254	$255,771	$84,868
COUNCIL ACTION			
Support all Category I projects	154	$159,699	$84,868
Funding declined (Cancellations)	10	10,187	(5,863)
Alternates awarded	3	2,604	1,225
YEAR END TOTAL	147	$152,116	$80,230

MORE UPDATE

Third International Congress on the History of Oceanography

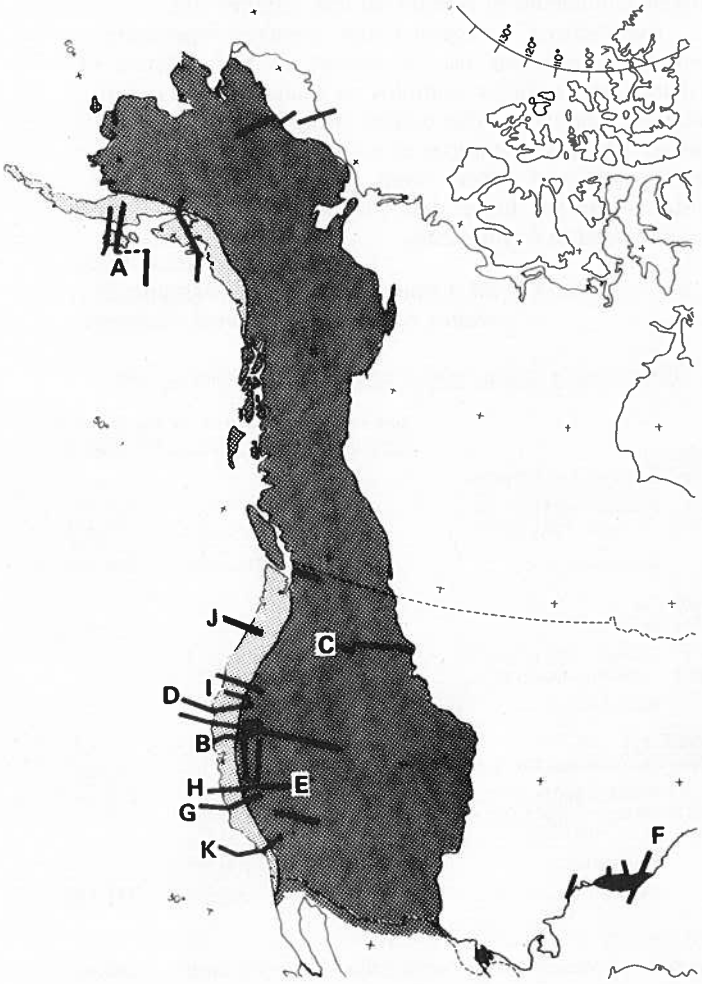
The Third International Congress on the History of Oceanography will be held at Woods Hole, Massachusetts, September 22–26, 1980. It will be followed by an assembly, September 29–October 2, entitled "Will we use the oceans wisely? The next 50 years in oceanography." These events are planned as integral parts of the celebration of the 50th anniversary of the Woods Hole Oceanographic Institution.

The congress will open with addresses by Drs. Paul M. Fye and Roger Revelle and Sir George Deacon. There will be morning symposia on the histories of American oceanography, instrumentation, pollution, and plate tectonics. The afternoon sessions will include some 55 papers representing contributions from 18 countries. There will also be special exhibitions and evening lectures.

The assembly will consist of morning and afternoon sessions in which invited speakers will present papers on the current status and future trends of all aspects of marine science and policy. The sessions will cover scientific problems on the small and local scales, the oceanic regional scale, the global scale, and the human scale. Each session will conclude with a panel paper and discussion on important policy questions raised by the preceding subject matter.

For further information about these meetings, write John H. Steele, Director, Woods Hole Oceanographic Institution, Woods Hole, MA 02543, U.S.A.

CONTRIBUTIONS FROM PLATE MARGINS WORKING GROUP, U.S. GEODYNAMICS COMMITTEE



MC-28G *Geologic Cross Section of the Continental Margin off San Luis Obispo, the Southern Coast Ranges, and the San Joaquin Valley, California.* B. M. Page, H. C. Wagner, D. S. McCulloch, E. A. Silver, and J. H. Spotts. 1979. In color, 58" x 42". Scale, 1:250,000. With 12-page text . . . . . Folded: $10.00
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MC-28H *Cross Section of the Southern Coast Ranges and San Joaquin Valley from Off-shore of Point Sur to Madera, California.* Donald C. Ross and David S. McCulloch. 1979. In color, 49" x 41". Scale, 1:250,000. With 4-page text . . . . . Folded: $9.50
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MC-28I *Cross Section of the Central Klamath Mountains, California.* Gregory A. Davis, Clifford J. Ando, Patricia H. Cashman, Lee Goullaud. 1979. In color, 50" x 30". Scale, 1:250,000. With 6-page text . . . . . Folded: $10.00
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MC-28J *Geologic Cross Section of the Central Oregon Continental Margin.* P. D. Snavely, Jr., H. C. Wagner, and D. L. Lander. 1980. In color, 30" x 40". Scale, 1:250,000. With 8-page text. . . . . Folded $10.00
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MC-28K *Geologic Cross Sections from Patton Ridge to the Mojave Desert, across the Los Angeles Basin, Southern California.* J. C. Crowell, L. A. Beyer, Shawn Biehler, P. L. Ehlig, E. A. Hall, Arne Junger, and J. G. Vedder. 1980. In color, 46" x 37". Scale, 1:250,000. Explanation included on map . . . . . Folded: $7.50
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JULY BULLETIN SEPARATES

Summaries

At the request of members, the Summaries section may be ordered as one separate by those who have purchased the separates option. To order, write "July Summaries" on coupon.

• S00701—Geology of the Pine Hill intrusive complex, a layered gabbroic body in the western Sierra Nevada foothills, California: Summary.

Robert K. Springer, Department of Geology, Brandon University, Brandon, Manitoba R7A 6A9, Canada. (5 p., 3 figs.)

• S00702—Dynamothermal contact metamorphism superposed on regional metamorphism in the pelitic rocks of the Chiwaukum Mountains area, Washington Cascades: Summary.

Charles C. Plummer, Geology Department, California State University, Sacramento, California 95819. (3 p., 1 fig.)

• S00703—Precambrian(?) crystallization and Permian(?) metamorphism of hypersolvus granite in the Avalonian terrane of Rhode Island: Summary.

Howard W. Day, Department of Geology, University of California, Davis, California 95616; V. Max Brown, Department of Geology, University of Missouri, Rolla, Missouri 65401; Kurt Abraham, Institut fur Mineralogie, Ruhr Universitat-Bochum, Bochum, Federal Republic of Germany (3 p., 2 figs.)

Bulletin Briefs

Titles and abstracts of conventional articles in the July 1980 GSA Bulletin, Part I *are provided on the following pages to aid members who have purchased the separates option to select* Bulletin, Part I *separates of their choice.* *See instructions for ordering on page 111.*

• 00704—Cretaceous volcanism, Excelsior Mountains, Nevada.

R. C. Speed, Department of Geological Sciences, Northwestern University, Evanston, Illinois 60201; R. W. Kistler, U.S. Geological Survey, Menlo Park, California 94025. (7 p., 4 figs., 2 tbls.)

Rb-Sr isochrons obtained for locally extruded siliceous volcanic rocks in units in the Excelsior and Pilot Mountains, western Nevada, indicate ages, respectively, of 103 ± 5.7 m.y. and 142 ± 17 m.y. Both dated units occur in a complex of terrigenous and volcanic rocks previously thought to be entirely of early Mesozoic age. K-Ar ages of granitic rocks of the Excelsior Mountains region indicate that plutonism occurred mainly between about 70 and 100 m.y. B.P.

The newly dated volcanic rocks of the Excelsior Mountains provide the first recognition of a volcanic center of Cretaceous age in the Great Basin and evidence that at least some of the thrusting and folding in the Excelsior Mountains region occurred in the Cretaceous or later time. Together, the two new Rb-Sr ages indicate a more prolonged history of Mesozoic sedimentation and extrusion than previously realized. The dated volcanic rocks of the Excelsior Mountains are generally contemporaneous with recently discovered Cretaceous extrusive rocks in the central Sierra Nevada, suggesting that volcanism may have been widespread in the Cretaceous in eastern California and western Nevada between 37° and 38°N. K-Ar ages of granitic plutons in the Excelsior Mountains region suggest that the Cretaceous volcanic rocks vented near the beginning of a 20-m.y.-long pulse of intrusion. Moreover, the pluton ages indicate a time lag between Cretaceous volcanism and plutonism similar to that in the Sierra Nevada.

• 00705—Late Foxe glaciation of southern Baffin Island, N.W.T., Canada.

Gifford H. Miller, Geologisk Institutt, Avd. B, University of Bergen, N-5014 Bergen, Norway (permanent address: Institute of Arctic and Alpine Research, University of Colorado, Boulder, Colorado 80309). (7 p., 5 figs., 2 tbls.)

A continental outlet glacier terminating in outer Frobisher Bay, southern Baffin Island, Arctic Canada, deposited the Hall moraine immediately prior to 10,760 yr B.P. (dated by C^{14}). This moraine and associated C^{14} dates provide the first documentation of a pre-Holocene, late Foxe (late Wisconsin) ice advance from the eastern Canadian Arctic. A second

moraine system deposited near the head of the bay is of Cockburn age (8,000 to 9,000 yr), and it correlates with the maximum late Foxe advance farther north on Baffin Island. A compilation of C^{14} dates related to the maximum late Foxe advance and marine paleoclimatology along 2,500 km of eastern Arctic coastline suggests a parallel but time-transgressive latitudinal relationship. There is considerable evidence for dominantly local ice accumulation centers and a prominent glacial advance between 11,000 and 10,000 yr B.P. from widely scattered sites surrounding the North Atlantic Ocean.

• 00706—Crustal structure of the North Atlantic on the basis of large-airgun–sonobuoy data.

R. E. Houtz, Lamont-Doherty Geological Observatory of Columbia University, Palisades, New York 10964. (8 p., 7 figs., 1 tbl.)

Owing to improvement of the signal/noise ratio, large airgun arrays consisting of 2 to 4 × 466 in.^{3} (7.64 ℓ) guns fired at 12- to 18-s intervals provide more refracted arrivals from the upper crust than can be obtained with a small 25 in.^{3} (.41 ℓ) airgun. In particular, sonobuoy data obtained previously with small airguns indicated a 1.5-km-thick layer with a refraction velocity of 3.6 km/s overlying a major refractor with a velocity of about 5.1 km/s near the Mid-Atlantic Ridge. However, large-airgun–sonobuoy results reveal intermediate velocities between the 3.6 and 5.1 km/s refractors and commonly achieve penetration down to the mantle.

Large-airgun data have been used to contour acoustic basement refraction velocities in the North Atlantic; these show a clear increase of velocity with age. A contour map of mantle depths is shown for the North Atlantic; it is based on 100 measurements, more than half of which are from high-quality, two-ship refraction data (solutions that include layers 2 and 3). A comparison between mantle depths determined from sonobuoy and two-ship solutions shows that the two-ship solutions have three times the variation of sonobuoys from the same geographical region.

Solutions are plotted as velocity-depth points to show variations in the entire crust as a function of age. As the crust ages, the uppermost basement velocity increases and total crustal rock thickness increases rather abruptly on Upper Jurassic crust. These effects combine to decrease the gross crustal velocity gradient (exclusive of water and sediment) from about 1.0 sec^{-1} near the Mid-Atlantic Ridge to about 0.5 sec^{-1} near the continental margins.

• 00707—Paleomagnetic evidence for oroclinal bending of the southern Antarctic Peninsula.

Karl S. Kellogg, U.S. Geological Survey, Box 25046, Federal Center, Denver, Colorado 80225. (7 p., 5 figs., 1 tbl.)

Paleomagnetic results from the investigation of 13 magnetically stable units (92 oriented rock samples) of Upper Cretaceous ("Andean") plutons and dikes from the Orville Coast and eastern Ellsworth Land, Antarctica, define a mean direction of magnetization of $I = -77°$, $D = 51°$ ($\alpha_{95} = 5.9°$), with a paleomagnetic pole at 71°S, 165°W. The sampled units were emplaced after the Late Jurassic to Early Cretaceous intense folding associated with subduction along the western side of the Antarctic Peninsula. In addition, all sampled intrusive rocks are normally magnetized and are believed to have been emplaced during the Late Cretaceous period of predominantly normal polarity. There is no evidence of postemplacement remagnetization. Unlike rocks from other Andean paleomagnetic collecting localities on the Antarctic Peninsula, whose mean declinations are oriented approximately north, the mean declination of samples from the Orville Coast and eastern Ellsworth Land is rotated 51° clockwise from north. Uncertainty in declination at the 95% confidence level (δ_{95}) is ±27°. The data support the conclusion that the southern bend of the S-shaped Antarctic Peninsula was formed after Late Cretaceous time. Early Tertiary right-lateral transform faulting across the base of the Antarctic Peninsula may have produced this major oroclinal bend.

Data from four localities (21 samples; $I = -79°$, $D = 30°$, $\alpha_{95} = 4.3°$) in Upper Jurassic(?) massive rhyodacite porphyry lava flows in the northern part of the area are similar to those of the Andean igneous rocks. Although the evidence is not conclusive, it seems most probable that the porphyry was magnetically reset by Late Cretaceous plutonism.

• 00708—Leg 67: The Deep Sea Drilling Project Mid-America Trench transect off Guatemala.

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Drill cores from a transect of the Mid-America Trench off Guatemala were obtained at three sites on the oceanic Cocos plate, and at four sites on the continental Caribbean plate. An ocean sub-bottom seismometer was successfully emplaced in the deepest hole in the trench landward slope where it was left to record data after departure of the drill ship. Drilling on the Cocos plate recovered a basal chalk sequence deposited during early and mid-Miocene time, a short interval of abyssal red clay, and an upper sequence of late Miocene and younger sediment deposited within an area influenced by a terrigenous source. In the trench, a mud and sand fill less than 400,000 yr old overlies the oceanic sequence. The entire section shows no evidence of compressive deformation even at holes drilled against the trench's landward slope. In contrast, the section cored on the trench's landward slope 3 km from the trench axis is affected by tectonism. The section contains a Cretaceous to Pliocene claystone sequence, broken by hiatuses but in a normal stratigraphic succession that is capped by Pliocene to Quaternary hemipelagic slope deposits. Seismic records show that the section overlies probable igneous oceanic crust from which it is separated by a few hundred metres. That thickness of undrilled section is insufficient to accommodate the potential offscraped volume of oceanic sediment carried into the trench during Neogene plate convergence. At the estimated 10 cm/yr rate of convergence, much of the oceanic sediment must have been subducted rather than tectonically accreted to the Guatemalan margin. Current models for convergent margin tectonics do not satisfactorily explain the surprising occurrence of Cretaceous to Miocene mudstone at the base of this trench slope. The recovery of gas hydrates prevented drilling to some landward-dipping reflections presumed to be imbricate thrust slices at two sites near the middle of the trench landward slope.

• 00709—Hydraulic piston coring of late Neogene and Quaternary sections in the Caribbean and equatorial Pacific: Preliminary results of Deep Sea Drilling Project Leg 68.

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Leg 68 of the Deep Sea Drilling Project used the newly developed Hydraulic Piston Corer (HPC) to recover two virtually continuous, undisturbed sections of late Neogene and Quaternary sediment. The sites are located in the western Caribbean (Site 502, 4 holes) and in the eastern equatorial Pacific (Site 503, 2 holes). The sediment of Site 502 is primarily foram-bearing nanno marl which accumulated at about 3 to 4 cm/thousand yr. The bottom of Site 502 (228.7 m) is ~ 8 m.y. old. The sediment of Site 503 is primarily siliceous calcareous ooze which accumulated at about 2 to 3 cm/thousand yr. The bottom of Site 503 (235.0 m) is ~ 8 m.y. old.

The magnetostratigraphy of both sites was determined on the R. V. *Glomar Challenger* with a long-core spinner magnetometer. All paleomagnetic boundaries through the Gilbert were identified in Site 502; most of them were identified in Site 503. The sediment at both sites shows a distinct cyclicity of calcium carbonate content. These relatively high accumulation rate, continuous, undistrubed HPC cores will enable a wide variety of high-resolution biostratigraphic, paleoclimatic, and paleoceanographic studies heretofore not feasible.

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