



# Quaternary Geologist and Geomorphologist

NEWSLETTER OF THE QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION

Volume 26, no. 1

March 1986

## MEMBERSHIP

Membership of the Quaternary Geology and Geomorphology Division increased significantly in 1985, from 1191 to 1488. The QG&G Division is the second largest of the ten Divisions of the Society. The Structural Geology and Tectonics Division is the largest having 2400 affiliates and the Hydrogeology Division is the third largest having 1336 affiliates.

	Oct. 31, 1983	Sept. 30, 1984	Oct. 18, 1985
Members	634	616	785
Fellows	223	235	231
Honorary Fellows	1	2	2
Students	240	241	365
Exempt Members	4	5	7
Exempt Fellows	81	92	98
	<hr/> 1183	<hr/> 1191	<hr/> 1488

Exempt Members and Fellows include persons who have reached the age of 70 years and have paid dues for 30 years or who have reached the age of 65 years and have paid dues for 25 years, and specifically request exemption from payment of further dues.

## QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION ELECTIONS

A total of 1085 ballots was mailed to the Division's voting affiliates and 370 valid ballots were returned to headquarters. The results of the election of Division officers and Panel for 1985 are as follows:

Chairman.....	Gail M. Ashley
First Vice-Chairman.....	Victor R. Baker
Second Vice-Chairman.....	James C. Knox
Secretary.....	Richard F. Madole
Panel Members (1985-87).....	Robert F. Fulton Thomas C. Gustavson Louis J. Maher, Jr.

## MEMBERSHIP PARTICIPATION IN ELECTIONS 1982-1985

Year	Ballots Mailed	Ballots Returned	Invalid Ballots	% Membership Participation
1982	890	349	4	39
1983	898	289	0	32
1984	915	279	1	31
1985	1,085	370	0	34

Invalid ballots result from voting for more than three candidates for the Division Panel or for both candidates for Second Vice-Chairman.

## DIVISION FINANCIAL STATEMENT

Financial condition of the QG&G Division as of September 30, 1985:

QG&G Division Fund	
Fund balance 12/31/84	\$1,090.89
Dues income thru 9/30/85	2,064.00
<hr/>	
Total Division resources and income.....	\$3,154.89
Division expenses.....	\$1,904.34
Division Fund balance as of 9/30/85.....	\$1,250.55
J. Hoover Mackin Appropriated Fund	
Fund balance 12/31/84 .....	\$7,857.06
Earnings from 1/1/85 thru.....	\$323.88
9/30/85	
Total resources.....	\$8,180.94
Grant Awards .....	(\$1,000.00)
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J. Hoover Mackin Fund balance as of 9/30/85	\$7,180.94

## PRELIMINARY PLANS FOR DIVISION-SPONSORED SYMPOSIA AND FIELD TRIPS AT THE 1986 ANNUAL MEETING, SAN ANTONIO, TEXAS

The Division will sponsor a symposium entitled "Quaternary evolution of the Mississippi Valley" organized by James C. Knox and others. The Division has also endorsed an At-Large symposium entitled "Late Cenozoic evolution of stream systems in the Western United States" organized by Peter C. Patton and Thomas W. Gardner.

Field trips for the Annual Meeting are selected and scheduled by the Local Organizing Committee. The Division has no role with respect to field trips, except to encourage members to propose them. Field trips of interest to Division members include:

### Premeeting

1. Quaternary Geology and Geomorphology of the Rolling Plains, Texas Panhandle. Thomas C. Gustavson, Robert W. Baumgardner, Jr., Chris Caran, and Edward Collins, Bureau of Economic Geology, University of Texas, Austin, Texas 78713 (512/471-1534) and Walter Dalquest, Midwestern State University, Wichita Falls, Texas 76308 (817/692-6611). Two days.

Evidence for interpretations of geomorphic processes and Quaternary history in parts of the Rolling Plains of the Texas Panhandle will be described. Field stops were selected as examples of geologic phenomena that are widespread in the Texas Panhandle. Particular attention will be paid



to the dissolution of evaporites, primarily salt, and collapse of overlying strata as a process that has had a significant effect on landscape development and Quaternary stratigraphy in this area. A preliminary discussion of the stratigraphy, depositional environments, paleontology, and paleoclimatic history of newly recognized Quaternary deposits covering several hundreds of square miles will be presented. The trip will originate and terminate in Lubbock, Texas, where a pre-trip evening meeting is planned; participants will be responsible for their transportation San Antonio/Lubbock. Estimated costs: \$200. Limit: 45 participants.

2. Archaeological Geology of Classic Paleoindian Sites on the Southern High Plains, Texas and New Mexico. Vance T. Holliday, Department of Geography, Texas A&M University, College Station, Texas 77843 (409/845-3010); Eileen Johnson, The Museum, Texas Tech University, P.O. Box 4499, Lubbock, Texas 79409; Vance Haynes, Department of Anthropology, University of Arizona, Tucson, Arizona 85721; and Glen Evans, 9011 Fairway Hills, Austin, Texas 78759. Two days.

The field trip will focus on the historical significance of the Lubbock Lake, Plainview and Clovis (Blackwater Draw Locality #1) sites, the Paleoindian archaeology and geochronology and the late Quaternary environmental records as related to the entire region. One other late-Quaternary stratigraphic sequence in lower Blackwater Draw, near Lubbock Lake, may also be viewed. Field trip co-leaders and other participants will include individuals representing past and current research at all of these sites. The trip should be of interest to archaeological geologists and Quaternary geologists and also those interested in the history of geology and, perhaps, vertebrate paleontology. The trip will originate and terminate in Lubbock, Texas; participants will be responsible for their transportation San Antonio/Lubbock. Estimated Costs: \$200. Limit: 45 participants.

#### Postmeeting

5. Geologic and Geomorphic History of the Edwards Limestone Aquifer and Surface Drainage System, South-Central Texas. Patrick L. Abbott, Department of Geological Sciences, San Diego State University, San Diego, California 92182 (714/265-5591) and Charles M. Woodruff, Jr., P.O. Box 13252, Austin, Texas 78711. One day.

The field trip will view and discuss the integrated geologic and geomorphic development of the Edwards Aquifer and the evolution of the surface drainage basin. The trip will view the Edwards Limestone outcrop in the Balcones fault zone between San Antonio and New Braunfels. The main message will be the geologic history of the Edwards Aquifer from the Cretaceous to the present and its interdependency with the surface drainage network. Outcrops to be visited will show the Balcones escarpment, Edwards Limestone depositional environments, discharge sites and major springs, collapsed caverns at mega-collapse localities in karstic plains, evidence for stream piracy, and recharge through stream bottoms and fractures. The trip will originate and terminate in San Antonio. Estimated Costs: \$50. Limit: 45 participants.

6. South Texas Modern Depositional Systems. John L. Russell and Jon A. Baskin, Department of Geosciences, Texas A&I University, Kingsville, Texas 78363 (512/595-3310). Three days.

The field trip will examine Holocene depositional systems in Nueces, Kleberg, and Kenedy Counties, Texas. Estuarine, eolian, fluvial, deltaic, lagoonal, and barrier island environments will be investigated. The Nueces Bay-Corpus Christi Bay normal estuarine system will be compared to the Baffin Bay system which commonly has reverse

estuarine circulation. Baffin Bay is unique in the United States because it is commonly hypersaline and contains Holocene carbonate and evaporites. The South Texas Eolian Sand Plain will be examined. Fluvial and bay head delta systems of the Nueces River will be examined as well as lagoonal and barrier island environments on Mustang and North Padre islands. The trip will originate and terminate in San Antonio. Estimated Costs: \$240. Limit: 30 participants.

#### **DIVISION CO-SPONSORED SHORT COURSES AT ANNUAL MEETINGS**

The Geological Society of America has begun a dedicated program of educational courses that will be expanded considerably during 1986 and 1987. GSA has invited the Divisions to co-sponsor short courses to be held in conjunction with Annual Meetings. The role of the Division is to recommend topics and faculty, and the role of GSA is to assist in planning, promotion, registration, and supervision of on-site arrangements.

Co-sponsorship of short courses offers a unique opportunity for the Division. In order to take advantage of this opportunity, however, help is needed from the membership in identifying educational needs and/or topics of interest and in identifying potential faculty. The Division Management Board will make its recommendations to GSA regarding co-sponsored short courses for 1987 after the annual meeting in San Antonio. Members wishing to provide input to this program are urged to contact the Division Secretary, Richard F. Madole, U. S. Geological Survey MS 966, Box 25046 Federal Center, Denver, CO 80225. Members interested in obtaining more information about GSA's educational program or in obtaining guidelines for submitting short course proposals should write or call Sue Beggs, Meetings Manager, The Geological Society of America, P.O. Box 9140, Boulder, CO 80301 (303) 447-2020.

#### **1987 ANNUAL MEETING, PHOENIX, ARIZONA, OCTOBER 26-29**

Planning has begun for the 1987 Geological Society of America Meeting, to be held in Phoenix, Arizona. The theme selected for this meeting is "The Southern Cordillera: Insights and Problems". "The geologic wonderland of the Southern Cordillera includes the southern Rocky Mountains, the Colorado Plateau, much of the Basin and Range province, the Cordilleras of Mexico, and the Rio Grande rift. Recent research efforts have gained fresh insights and raised new questions about crustal origins and structure, ore provinces, regional facies, magmatism and volcanism, intracontinental deformation, plateau uplift, and landscape evolution within this fascinating region. The Phoenix meeting of the Geological Society of America provides an ideal forum to air these and related topics from all standpoints of our science. Symposia and contributions directed toward this theme are especially encouraged." Proposals for field trips are also being solicited by Dr. George H. Davis, Chairman, Department of Geosciences, University of Arizona, Tucson, AZ 85721, who is serving as chairman of Field Trips for the meeting. Those interested in leading field trips for this meeting should contact Dr. Davis. A twenty-member steering committee will review the field trips suggested and make final recommendations for the twenty or more trips to be offered.

#### **CLASSIFICATION OF DIVISION EXPERTISE**

Periodically, the Division Chairman is asked to suggest the names of people who are knowledgeable in various areas of geomorphology and Quaternary geology. These requests come from both within and outside of the Division. It would be helpful,



therefore, to have ready access to information about the composition of the Division membership by special interest or subdiscipline. A classification of Division expertise was begun in 1985 but is far from complete; hence, this second call for information. It was decided at the Management Board Meeting at Orlando, Florida, that this information will be for QG&G Division use only and that it would not be released to other organizations. This decision, however, will need to be reviewed, if and when the International Geomorphology Organization is formed, because the IGO will ask each member organization for a list of its members and their specialties.

One or more specialties may be listed on the clip out form provided below. Classification is left to individual members. Possible classifications include geomorphology (fluvial, periglacial, desert, etc.), stratigraphy (regional, glacial, marine, lacustrine, fluvial, etc.), geochronology (radiometric dating, tephrochronology, magnetostratigraphy, aminostratigraphy, etc.), soil science, paleontology and biostratigraphy, sedimentology, nonglacial Quaternary stratigraphy, physical processes (sediment transport, landslides, mass movement, etc.), glacial geology or geomorphology, climatology, and marine geology. Many members are affiliated with more than one Division and may want to list specialties in engineering geology, hydrogeology, archeological geology, and planetary geology.

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Clip out and mail by May 15, 1986, to:

Richard F. Madole, Secretary  
U.S. Geological Survey  
Box 25046, MS 966  
Denver, CO 80225

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE DURING

WORKING HOURS: \_\_\_\_\_

**QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION  
DISTINGUISHED CAREER AWARD**

Following the 1984 Annual meeting in Reno, Dave Mickelson proposed that a new award be created that would annually honor an individual for a distinguished career in Quaternary Geology and Geomorphology. This award would complement the Kirk Bryan Award, which is for a single paper, by recognizing many years of distinguished contributions. The new award will be called the Distinguished Career Award, because the Geological Society of America bylaws allow for only one named award per Division, and the Kirk Bryan award is our named award.

The Distinguished Career Award will be open to all Quaternary geologists and geomorphologists who have demonstrated excellence in their contributions to science. The recipient need not be a member of the Geological Society of America or the QG&G Division.

The award will consist of a plaque or engrossed certificate inscribed with the name of the recipient, the name of the award, and the name of the Division. The award will be presented at the Annual Luncheon and Business meeting of the Quaternary Geology and Geomorphology Division. A program will be printed that describes the Distinguished Career Award and the Kirk Bryan Award, and will include a brief biography of the recipients of each award.

Nominations for the award will be accepted at any time during the year, but a request for nominations

will be published annually in the Division newsletter. Nominations should be submitted to the Division Secretary. The nominator should assemble the following for the candidate: (1) a brief biographical sketch, which may be xeroxed from American Men and Women of Science, (2) a statement of no more than 200 words describing the candidate's scientific contributions to Quaternary geology and geomorphology, and (3) a selected bibliography of no more than 20 titles. The names of unsuccessful candidates proposed for this award will remain open to consideration without renomination for three years. Further consideration after this period will require renomination.

This award would be given annually when deemed appropriate by the Division Management Board upon recommendation of the members of the Award Committee. The first Distinguished Career Award will be made no later than the 1987 Annual Meeting in Phoenix, but may possibly be made as early as the 1986 Annual Meeting in San Antonio. Nominations will be accepted now.

**1985 CONTRIBUTIONS TO THE J. HOOVER MACKIN FUND**  
Contributions to the J. Hoover Mackin Fund in 1985:

**Dr. and Mrs. Dwight L. Schmidt \$100**

The thanks of the Quaternary Geology and Geomorphology Division go to the Schmidts for their continued support of this very beneficial program.

Contributions to the J. Hoover Mackin Fund may be made in any amount and sent to the Executive Director, The Geological Society of American, P.O. Box 9140, Boulder, CO 80301.

**IN MEMORIAM**

Lore R. David May 10, 1985	George W. White February 19, 1985
Esther Aberdeen Holm May 4, 1984	J. Stewart Williams July 19, 1984
Frank A. Melton, May 11, 1985	Horace G. Richards November 19, 1984
Jorge Munoz-Reyes September, 1984	Francis P. Shepard April 25, 1985

**DEADLINE FOR RECEIPT OF NEWSLETTER NEWS**

Members wishing to use the Newsletter to communicate with the Division membership must provide the information to the Division Secretary by July 20 for inclusion in the September Newsletter and by January 15 for inclusion in the March Newsletter.

**ABSTRACTS DEADLINE FOR THE 1986 ANNUAL MEETING**

The deadline for receipt of abstracts at GSA headquarters for the Annual Meeting in San Antonio is June 13, 1986. Abstract forms are available from Abstracts Secretary, Geological Society of America, P.O. Box 9140, Boulder, CO 80301. Volunteered abstracts should be mailed to the same address in time to arrive on or before June 13. Members intending to submit abstracts should obtain the 1986 forms.

**REPORT ON THE FIRST INTERNATIONAL CONFERENCE ON  
GEOMORPHOLOGY, UNIVERSITY OF MANCHESTER, 15-21  
SEPTEMBER 1985**

The British Geomorphological Research Group (BGRG), which organized this conference, gambled on calling it the "First". This gamble paid off; the conference was so solidly successful that a second one is now scheduled for 1989 in Frankfurt.

Altogether there were almost 700 participants from more than 50 countries to present 713 titles, either orally (in 25 subject areas, arranged in 6 concurrent sessions each day) or as posters (in 18 areas, coordinated with the oral presentations), during the five days of formal sessions. Although a substantial



number of papers concerned theoretical aspects of geomorphology, the majority dealt with applied aspects or in other ways emphasized the overall theme, "Geomorphology, Environmental Management and the Developing World". This theme was not only reflected in the subject category, "Applied Geomorphology and Land Conservation", which attracted the largest number of oral presentations and ran through nine sessions, but may also have prompted the attendance of a large number of geomorphologists from Third-World nations. The second largest delegation, after the UK, was that from China. Many countries were represented by only a single person, but the geographical breadth of coverage was most impressive. It was a truly international gathering.

Each day's formal sessions were held in lecture rooms on the campus of the University. Evening plenary sessions were held at Owens Park, a University residence about 2 km distant, where most of the participants were billeted. The evening sessions consisted of lectures, forums, discussions, and celebrations. One such session was devoted to the question of international collaboration in Geomorphology, and aimed to address "ways in which national organizations might work more closely together", possibly within the framework of an international organization. It was decided that there is indeed a need for such an organization, and a committee was created to propose the form that it should take. This committee is to report its findings at the next conference.

Owens Park has its own private bar, which is not restricted by the closing hours of public houses. Hence, it could open early in the evening and remain open long after the plenary sessions upstairs had ended. This bar thus provided an inviting setting and opportunity for participants to meet and talk shop, and in fact promoted the sort of international communication that the conference had aimed for. Much of the success of this conference can be attributed to the housing of most of the participants at one self-contained site, where they slept, ate meals together, and had the maximum opportunity to meet informally. I believe this contributed greatly to "the high level of comradeship" that resulted.

Accompanying the formal sessions at the University were exhibitions of books and equipment of interest to geomorphologists, including a variety of remote-sensing tools. At the University Museum, students and faculty had mounted a handsome display that attempted, quite effectively, to explain to the general public what geomorphological research is and why one does it.

In addition, there were field excursions to English, Welsh, Scottish, and Irish sites of geomorphological interest, before, during, and after the conference, as well as a series of post-conference workshops on field and laboratory geomorphological techniques. During the conference there were business meetings or symposia of interdisciplinary working groups, mostly IGU or INQUA related, and afterward there was a three-day symposium and field meeting sponsored by the QRA/IGU Periglacial Commission and devoted to "Periglacial processes and landforms in the British Isles".

None of this could have been brought off successfully without the excellent organization and attention to detail, both before and during the conference, of the local organizing committee, a large and hardworking group headed by the indefatigable Ian Douglas. Their good efforts produced a truly memorable meeting.

Charles G. Higgins  
University of California, Davis

#### INTERNATIONAL GEOMORPHOLOGY ORGANIZATION

The First International Conference on Geomorphology was held in Manchester on September 15-21, 1985. At this conference the first moves were made toward the formation of an International Geomorphology Organization (IGO).

The results of the questionnaire circulated by the BGRG (British Geomorphological Research Group) with respect to the formation of an international geomorphology organization were reported. The main points were as follows:

1. More than 99 percent of the geomorphologists represented by the responses favored the formation of an IGO.

2. Of those in favor of an IGO, 34 percent preferred that it take the form of a committee charged with holding a conference every four years, 34 percent preferred that it be affiliated with the International Council of Scientific Unions (ICSU), and 32 percent preferred that it be an independent society. Many of those who indicated support for a conference committee viewed such a committee as a temporary arrangement only. There were no strong objections to the conference committee format by any individual or group. Consequently, the first recommendation of the BGRG was that a large national geomorphological organization be asked to organize the Second International Geomorphological Conference in four years.

3. There were strong differences of opinion over the ultimate format of an IGO. Many geomorphologists, especially those in the eastern block (Comecon countries) favored affiliation with ICSU. In theory this can be done directly by forming a new scientific union or indirectly by affiliating with one of the existing unions: the International Geographical Union (IGU) or the International Union of Geological Sciences (IUGS). In practice, there are severe impediments. Firstly, it is extremely unlikely that an IGO would be accepted into ICSU as a separate union because it would weaken the existing unions (IGU and IUGS), who must give their blessing, and it would mean dividing ICSU's funds up one more way. Second, if an IGO were to join ICSU indirectly by affiliating with either IGU or IUGS, it would alienate the geological geomorphologists in the first instance and the geographical geomorphologists in the second.

4. The alternative final format for an IGO was for it to become a completely independent society. The principal argument against this option was that it seemed unlikely that geomorphologists in Comecon countries would be able to participate in such an organization, as it is often impossible for them to pay individual subscriptions to an international body. Also there is the question of such bodies being recognized within the Comecon countries as legitimate international scientific organizations.

5. Thus on the basis of the evidence available, it seemed that whichever format an IGO decided to adopt, some group of geomorphologists would be effectively excluded. Obviously not wishing to do this, the BGRG recommended that an international committee be set up to investigate and solve the problems associated with the two formats outlined above. This committee is to produce positive proposals at the Second International Geomorphological Congress.

The two recommendations of the BGRG were discussed at a meeting of national delegates and, with the support of the delegates, put to the entire assembly. The recommendations were adopted unanimously.

West Germany offered to host the Second International Geomorphological Conference in 1989. As there were no other offers, their invitation was accepted. The probable venue is Frankfurt and the probable organizer is Professor A. Semmel. Initial correspondence should be addressed to either Professor Dr. D. Barsch of the University of Heidelberg or Professor Dr. Hanna Bremer of the University of Koln.

An International Working Committee was established to solve the problems alluded to above. This will be chaired by Professor Denys Brunsden of Kings College, University of London, and will include Professor Jesse Walker of Louisiana State University, who will act as Secretary. For the time being, I am serving as a Corresponding Member of this committee, but I suggest



that you address any inquiries, comments, or suggestions directly to Jesse Walker.

The BGRG has agreed to shoulder the burden of launching an International Newsletter on Geomorphology. We will see that Denys Brunsten, who has taken responsibility for this venture, receives a mailing list of our membership so that each member of the specialty group receives the newsletter.

Athol D. Abrahams  
SUNY-**Buffalo**

#### **INTERNATIONAL COLLABORATION IN GEOMORPHOLOGY**

The First International Conference on Geomorphology was held September 15-21, 1985, in Manchester, England. The conference was organized by the British Geomorphological Research Group. The meeting was an immense success. Over 700 participants submitted abstracts. Sixty countries were represented, and an especially large delegation came from the People's Republic of China. A stimulating program of technical sessions, evening lectures, and field excursions showed that geomorphology is a healthy, exciting science throughout the world.

A major accomplishment of the conference was an agreement by national delegates that geomorphology needs its own international organization. An international committee was established to develop the appropriate organizational structure and produce positive proposals at the Second International Geomorphological Conference (to be held in West Germany, probably Frankfurt, in 1989). Professor D. Brunsten (Department of Geography, Kings College, Strand, London WC2R 2LS, U.K.) is chairman of the working committee and Professor H. J. Walker (Department of Geography, Louisiana State University, Baton Rouge, Louisiana 70803) is secretary. Other members include Professor S. Korzarski (Poland), Professor J. Soons (New Zealand), Professor H. Bremer (W. Germany), Professor Wang Nailing (People's Republic of China), and Professor H. Th. Verstappen (Netherlands).

The Working Party on International Collaboration in Geomorphology also has about 11 advisory associates to represent continental groupings and specialist interests. In addition, all countries are represented by corresponding members. Dr. Athol Abrahams, representing the Geomorphology Specialty Group of the Association of American Geographers, served as a corresponding member at the Manchester meeting.

Future plans include the creation of an International Newsletter on Geomorphology. There appears to be considerable excitement on the international scene for cooperation and to enhance the visibility of geomorphology as a significant scientific endeavor.

Victor R. Baker  
The University of Arizona

#### **NINTH BIENNIAL AMQUA MEETING, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILLINOIS, JUNE 2-4, 1986**

The American Quaternary Association will hold its Ninth Biennial meeting on the University of Illinois-Champaign campus, 2-4 June 1986, entitled: Environments at Glacier Margins--Past and Present. Field trips to nearby type sections and archeological sites will be held both before and after the meetings. For information, contact Wayne M. Wendland, AMQUA Local Arrangements Committee, Illinois State Water Survey, 2204 Griffith Dr., Champaign IL 61820 (217-333-0729).

#### **AMQUA PROGRAM, June 2-4, 1986**

##### **GLACIER MARGINS: PROCESSES AND ENVIRONMENTS**

The Ninth Biennial AMQUA meeting will be about glacier margins. Processes and environments at a variety of present and past glacier margins will be described and compared. Coastal glaciers, the southern and northern margins of the Laurentide ice sheet, and montane glaciers will be considered from the point of view of glacial dynamics, sedimentation, ecology, and

archaeology. The Program Committee consists of Ray Bradley, Tom Hamilton, Dick Morlan and Ken Pierce (chair).

**KEYNOTE SPEECH**--Present and past glacier margins: character and contrasts in glacial dynamics, sedimentation, and climate--**Geoffrey Boulton**.

**I. COASTAL GLACIERS**, chair--Tom Hamilton  
Dynamics of grounded and floating glaciers--**Mark Meir**

Glacial-marine sedimentation--**John Anderson**  
Ecology and Paleocology:  
Bering Sea--**Connie Sancetta**  
Palynology on land, Alaska--**Tom Ager**  
Yakataga area, Alaska--**Dot Peteet**

**II. COASTAL GLACIERS (cont.)**  
Alaskan Coastal Glaciers:  
Overview, and offshore sedimentation--**Bruce Molina**  
Fiord environments--**Ross Powell**  
Very high latitude Canadian Arctic islands--**John England**  
The Pleistocene Puget Lobe:  
Glacial geology and glaciology--**Bob Thorson**  
Vegetation during glacial advance and retreat--**Cathy Barnosky**

**POSTER SESSIONS:** later afternoon and evening

**III. SOUTHERN & NORTHERN MARGINS, LAURENTIDE ICE SHEET**, chair--George Hallberg  
Southern Laurentide Ice Sheet--Landforms, Deposits, Bed, and Dynamics:  
High Plains to New England--**Dave Mickelson, Lee Clayton, and Ernie Muller**  
Coastal Atlantic and offshore--**Bob Oldale**  
Glaciology of some mid-continent glacial lobes--**Roger Hooke and H. Mooers**  
Permafrost features in Illinois, environmental significance--**Hilt Johnson**  
Northern margin, Laurentide ice sheet--**John Andrews**

**IV. PALEOECOLOGY, MOSTLY SOUTHERN MARGIN, LAURENTIDE ICE SHEET**, chair--Dick Morlan  
Vegetation and vertebrates--**Jim King and Russ Graham**  
Fossil beetle record--**Alan Ashworth and Don Schwert**  
The Habitability of the Margins of the Laurentide Ice Sheet:  
Overview, & the Munsungun Lake site, Maine--**Rob Bonnicksen**  
Great Lakes beach sites--**Peter Storck**  
The Meadowcroft Rock Shelter, Pa.--**Jim Adovasio**  
Northern Yukon--**Jacques Cing-Mars and Dick Morlan**

**V. MONTANE GLACIAL MARGINS**, chair--Ken Pierce  
Montane glaciers during and since the last glaciation--**Steve Porter**  
Sedimentary environments, Matanuska Glacier--**Dan Lawson**  
Mass-balance models & temperature-precipitation interrelations--**Bill McCoy**  
Pleistocene permafrost, Wyoming basins--**Nip Mears**  
Importance of water in transport of "glacial" detritus--**Ed Evenson**  
Man and Holocene glacier margins, Colorado Front Range--**Jim Benedict**

**VI. CONCLUDING SESSION**, chair--Margaret Davis  
AMQUA business meeting  
What if Pleistocene glaciations had not occurred? Contrasts in soils and modern economics for the State of Wisconsin--**Francis Hole**  
Synoptic climatology of extreme climatic patterns, mid-continent full-glacial through recessional time--**Wayne Wendland**  
Analogue problems, modern and Pleistocene glacial margins--**panel discussion**



#### 49th FRIENDS OF THE PLEISTOCENE FIELD TRIP

Tom Lowell (Department of Geological Sciences, SUNY-Buffalo) and Steve Kite (Department of Geology and Geography, West Virginia University) will be leading the 49th Friends of the Pleistocene field trip on 23-25 May 1986, in Fort Kent, Maine. The trip will focus on the nature and style of deglaciation of northernmost New England, and will examine evidence of a late-glacial ice cap isolated from the main body of the Laurentide Ice Sheet. The field trip area is ideally located for relating the dissimilar late Wisconsin glacial sequences of New England and the Atlantic provinces. The preliminary estimated cost for the trip is \$100.00 (U.S.). Shuttles will be available from both the Presque Isle and Bangor airports. For additional information contact Steve Kite, Department of Geology and Geography, West Virginia University, Morgantown, WV 26506.

#### 17th ANNUAL BINGHAMTON GEOMORPHOLOGY SYMPOSIUM

The 17th Annual Binghamton Geomorphology Symposium will be held September 27-28, 1986, in Guelph, Ontario. The symposium will focus on aeolian geomorphology. For information contact William G. Nickling, Department of Geography, University of Guelph; Guelph, Ontario, Canada N1G 2W1; (519) 824-4120.

#### FOP SOUTH-CENTRAL CELL FIELD TRIP, APRIL 18-20, 1986-- QUATERNARY GEOMORPHOLOGY AND STRATIGRAPHY OF THE "FLORIDA PARISHES", SOUTHEASTERN LOUISIANA

The Fourth Annual Field Trip of the South-Central Cell of the Friends of the Pleistocene, entitled "Quaternary Geomorphology and Stratigraphy of the 'Florida Parishes', Southeastern Louisiana", will be led by Joann Mossa and Whitney J. Autin of the Louisiana Geological Survey. Landscape development and stratigraphy of soils and sedimentary sequences of Early Pleistocene to Holocene age will be examined. Regional sea level changes, adjustments of fluvial systems, neotectonics, and climatic influences will be discussed in relationship to surfaces that at one time were called "marine terraces of the Gulf Coast." The Florida parishes are located north of Baton Rouge and New Orleans.

The trip will begin in Baton Rouge on Friday, April 18, and will terminate about noon on Sunday, April 20. The trip format will be similar to that of the 1985 trip. More details will be outlined in the second circular, which will be mailed in early February. Participants will again enjoy the fun Cajun Evening dinner that was so popular last year! Dru Trahan of the Louisiana Geological Survey has volunteered to cook up a dinner of his famous jambalaya!

Scott Burns, Department of Geosciences, Louisiana

Tech University, Ruston, LA 71272 is again coordinating organization and planning for the trip leaders. If you are interested in receiving a second circular that will include more information on the trip content, scheduling, accommodations, transportation, or if you cannot go on the trip this year, but wish to keep your name on the FOP mailing list for the future, contact Scott Burns.

#### TO FRIENDS OF THE PLEISTOCENE OF THE SOUTHEAST U.S.

Bob Behling and Steve Kite (Department of Geology and Geography, West Virginia University) are compiling a mailing list for a Friends of the Pleistocene cell located in the southeastern U.S. A planning questionnaire was recently mailed to about 300 individuals residing or working south of the glacial limit and east of the Mississippi River. Response to date has been very good, and it is probable that the group will be able to sponsor a field trip in 1987. Anyone wanting to receive a planning questionnaire or to have their name added to the mailing list should contact either Bob Behling or Steve Kite, Department of Geology and Geography, West Virginia University, Morgantown, WV 26506.

#### INSTITUTE OF ARCTIC AND ALPINE RESEARCH FIELD COURSES 1986-1987

The Mountain Research Station of the Institute of Arctic and Alpine Research will offer field courses in Mountain Geomorphology and Remote Sensing in the summer of 1986 and a course in Snow Science in January 1987. Dr. Tom Davis of Mount Holyoke College will teach Mountain Geomorphology from 13 June through 12 July 1986. An intensive course in field applications of remote sensing will be taught by Dr. Ray Lougeay of the State University of New York from 21 July through 1 August 1986. Snow Science will be taught from 5 to 16 January 1987 by Dr. Jeff Dozier of the University of California and Dr. Ron Perla of the National Hydrology Research Institute.

Other courses offered by the Station include Lichenology, Forest Ecology, Mathematical Ecology, Rocky Mountain Flora, Fish Biology and Ecology, American Wildland Management, Isozyme Genetics in Field Biology, Field Studies in Evolutionary Ecology, Field Techniques in Environmental Science, Pollination Biology, Mosses and Liverworts of Southeastern Alaska, Tropical Mountain Ecology and Resource Management in Hawaii, Winter Ecology, Winter Limnology, and Mountain Geomorphology and Ecology in Tasmania. Information concerning these courses and research opportunities at the Mountain Research Station is available from Dr. Mark Noble, Mountain Research Station, University of Colorado, Nederland, CO 80466, (303) 492-8841.



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