

# Quaternary Geologist and Geomorphologist

NEWSLETTER OF THE QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION

Volume 28, no. 2

August 1988

## RESULTS OF 1988 DIVISION ELECTION

A total of 1,090 ballots were mailed to the Division's voting affiliates for the 1988 election of officers and Panel members, and 334 valid ballots were returned. Division officers and Panel members elected in 1988 are:

Chairman ..... Dale F. Ritter  
 First Vice-Chairman..... Kenneth L. Pierce  
 Second Vice-Chairman ..... Richard F. Madole  
 Secretary ..... John E. Costa

Panel members (1988-90) ..... Julie Brigham-Grette  
 ..... Vance T. Holliday  
 ..... Karen L. Prestegard

## NOMINATIONS FOR 1989-91 PANEL MEMBERS

Clip out and mail this ballot before November 15, 1988, to:

**John E. Costa**  
**U.S. Geological Survey**  
**Cascades Volcano Observatory**  
**5400 MacArthur Blvd.**  
**Vancouver, WA 98661**

All members except Division officers, present or retiring Panel members, and Student Associates are eligible for nomination to the Panel. The six names receiving the highest number of nominations will appear on the annual ballot. Each voting affiliate of the Division (member other than Student Associate) may nominate up to three persons.

(1) \_\_\_\_\_  
 (2) \_\_\_\_\_  
 (3) \_\_\_\_\_  
 \_\_\_\_\_  
 Name of Nominator

## DIVISION FINANCIAL STATEMENT FOR CALENDAR YEAR 1987

Financial condition of the QG&G Division  
as of December 31, 1987

QG&G Division Fund	
Fund Balance 12/31/86	\$ 291.61
Dues Income thru 12/31/87	2664.00
Contribution - R. Madole	147.00
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Total Division Resources	\$3102.61
Division Expenses	\$2532.13
Funds transferred to Mackin Fund 12/31/87	285.24
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Total deductions	(\$2817.37)
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Adjusted Division Fund Balance as of 12/31/87	\$ 285.24
J. Hoover Mackin Appropriated Fund	
Fund Balance 12/31/86	\$8021.82
Earnings and Contrib.	\$ 702.35
Division Fund Transfer	285.24
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Total Income	\$9009.41
Grant Awards	(\$1000.00)
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J. Hoover Mackin Fund Balance as of 12/31/87	\$8009.41

## 1988 MACKIN GRANT WINNERS

The scoring of applications from Ph.D. candidates resulted in a tie. As in the past, the tie will be resolved by dividing the grant money equally between the two applicants, thereby allowing both to share the honor of having been awarded a Mackin Grant. Both candidates were also awarded GSA Grants in amounts of \$900 and \$1,000, respectively, so

the work of neither applicant should be adversely affected by receiving only half of a Mackin Grant.

The two Ph.D. candidates selected to share a Mackin Grant are Jay S. Noller and Donald T. Rodbell, both of whom are at the University of Colorado working under the supervision of Peter W. Birkeland. Noller will study the "History of El Nino in soil chronosequences of the Peruvian desert," and Rodwell will study "Late Quaternary glacial and climatic history of the northern Peruvian Andes based on glacial geology, glaciolacustrine sedimentology, and soils."

The M.S. degree candidate selected to receive a Mackin Grant is Eric A. Oches, Department of Geology, University of Massachusetts. Oches will study "Late Quaternary paleotemperature estimates of the northern Mississippi and Illinois River valleys, U.S.A." under the supervision of William D. McCoy.

#### 1988 MACKIN GRANT COMMITTEE

Applications for Mackin Grants are evaluated by a committee of seven composed of the four members of the Management Board and three At-Large members. The three At-Large Committee members are appointed by the Division Chairman and serve for 1 year.

The At-Large Committee members for 1988 were:

**Edward B. Evenson**  
**Edward A. Keller**  
**Daniel R. Muhs**

The Division is indebted to these three individuals for their good work and their willingness to serve.

#### MACKIN GRANT APPLICATIONS FOR 1989

The deadline for receipt of applications for the Mackin Grant for research in geomorphology or Quaternary geology is February 15, 1989. Two awards will be made, one to a Ph.D. candidate and one to a Master's degree candidate. Winners will be selected by April 15, 1989.

Application forms may be obtained from the Division Secretary, John E. Costa, U.S. Geological Survey, Cascades Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.

#### RECIPIENTS OF THE MACKIN GRANT 1974-88

- 1974 -- **Louis D. Carter**, University of Southern California, "Quaternary geology in Baja, California".
- 1975 -- **Phillip Davis**, University of Colorado, "Cirque glacier fluctuations and lacustrine chronologies".
- 1976 -- Award date changed.
- 1977 -- **Daniel R. Muhs**, University of Colorado, "Marine terraces-soil development, San Clemente Island, California".
- 1978 -- **Lisa Osterman**, University of Colorado, "Quaternary geology of Frobisher Bay, Baffin Island".
- 1979 -- **Donna Marron**, University of California, Berkeley, "Slope processes in Redwood National Park".
- 1980 -- **Lucy L. Foley**, Western Washington University, "Loess and paleosol stratigraphy in eastern Washington".
- 1980 -- **Susan L. Gawarecki**, Lehigh University, "Origin of the Railroad Ridge diamicton".
- 1981 -- **Mary L. Gillam**, University of Colorado, "Age and climate effects on soil development, Colorado and New Mexico".
- 1981 -- **Julie Brigham**, University of Colorado, "Chronology of Pleistocene marine deposits in coastal Alaska".
- 1982 -- **Thomas F. Bullard**, University of New Mexico, "Quaternary geomorphic evolution of a tributary to the Chaco River, northwestern New Mexico".
- 1982 -- **J. Steven Kite**, University of Wisconsin, "Late-glacial and Holocene alluvial chronology, St. Johns drainage basin, northern Maine and southern New Brunswick and Quebec".
- 1983 -- **Jonathan M. Harbor**, University of Colorado, "Chronology of Holocene events, geomorphic response, and eolian influx in alpine lakes in the Front Range, Colorado".
- 1983 -- **David S. Shafer**, University of Tennessee, "Quaternary climatic change, landscape evolution, and paleoecologic history, southern Appalachians, western North Carolina".
- 1983 -- **Carolyn H. Eyles**, University of Toronto, "Scarborough Bluffs, Lake Ontario basin, lithofacies codes and the model of diamict deposition below floating ice".
- 1984 -- **Jim E. O'Connor**, University of Arizona, "Paleohydrology and hydraulics as interpreted from geologic evidence: Boulder Creek, Utah".
- 1984 -- **Leonard H. Thorleifson**, University of Colorado, "The Quaternary stratigraphy of the Hudson Bay lowlands".
- 1985 -- **Karin A. Hoover**, University of Washington, "The relation of fluvial processes to facies--The Holocene stratigraphy and sedimentology of the Wells Reservoir area, eastern Washington".
- 1985 -- **Peter D. Lea**, University of Colorado, "Late--Quaternary stratigraphy and paleoenvironments of the Nushagak region, southwestern Alaska".
- 1986 -- **Mark A. Gonzalez**, University of Wisconsin, "Fluvial geomorphology, geochronology, and paleoclimatology of Paddock Creek, Little Missouri Badlands, southwestern North Dakota".
- 1986 -- **Christopher M. Menges**, University of New Mexico, "Systematic and quantitative analyses of the landforms of a mountain front within a basin and range landscape in the northern Rio Grande rift near Taos, north-central New Mexico".
- 1986 -- **Dorothy L. Sack**, University of Utah, "Geomorphology of alluvial fans in the Bonneville Basin, Utah--Modeling alluvial fan activity".
- 1987 -- **Kevin M. O'Dea**, Humboldt State University, "Quaternary terrace formation and deformation on Yager Creek, Humboldt County, California".
- 1987 -- **Leal A.K. Mertes**, University of Washington, "Morphology and construction of the Solimoes-Amazon River flood plain in Brazil".
- 1987 -- **Jim E. O'Connor**, University of Arizona, "Hydraulics and sediment transport of Pleistocene Lake Bonneville flooding on the Snake River".
- 1988 -- **Jay S. Noller**, University of Colorado, "History of El Nino in soil chronosequences of the Peruvian desert".
- 1988 -- **Donald T. Rodbell**, University of Colorado, "Late Quaternary glacial and climatic history of the northern Peruvian Andes based on glacial geology, glaciolacustrine sedimentology, and soils.".
- 1988 -- **Eric A. Oches**, University of Massachusetts, "Late Quaternary paleotemperature estimates of the northern Mississippi and Illinois River valleys, U.S.A."

**GLADYS W. COLE MEMORIAL RESEARCH AWARD  
FOR 1988**

Dr. Richard A. Young, State University of New York at Geneseo, is the 1988 recipient of the Gladys W. Cole Memorial Research Award. The award of \$3,000 will support continuing field studies of the Late Cretaceous-Eocene fluvial geomorphology of the southwest Colorado Plateau in Arizona. The objective of these studies is to better constrain the interval of Laramide erosion and the Eocene(?) extended weathering episode that shaped the Tertiary landscape of the western Grand Canyon region.

**COLE MEMORIAL RESEARCH AWARD APPLICATIONS  
FOR 1989**

The Gladys W. Cole Memorial Research Award is for investigations of the geomorphology of semiarid and arid terrains in the United States and Mexico. It will be given each year to a GSA Fellow between 30 and 65 years old who has published one or more significant papers in geomorphology. Funds cannot be used for work already accomplished, but recipients of a previous award may reapply if additional support is needed to complete their work. The minimum amount of the award has been increased to \$3,000.

Application forms for the Cole Award may be obtained from the Research Grants Administrator, The Geological Society of America, P.O. Box 9140, Boulder, CO 80301; phone (303) 447-2020. Applications must be postmarked by February 15, 1989.

**KIRK BRYAN AWARD FOR 1988**

Six publications were considered for the Kirk Bryan Award for 1988. The winning publication is Peter W. Birkeland's book entitled "Soils and geomorphology," New York, Oxford University Press, 372 p., published in 1984.

Birkeland's work is a unique and original contribution to the Quaternary geology/geomorphology field, and it serves as an indispensable guide to professionals and graduate students alike. There are very few comprehensive studies of soils from a geologic perspective and Birkeland's is by far the best, becoming a standard reference among geomorphologists and Quaternary geologists, and related disciplines of geoarchaeology and pedology. (Nominated by J.W. Hawley and V.T. Holliday.)

Dr. Birkeland will receive the Kirk Bryan Award at the 1988 Annual Meeting of the Geological Society of America.

**NOMINATIONS FOR THE KIRK BRYAN AWARD FOR 1989**

Nominations for the Kirk Bryan Award for 1989 will be accepted until December 1, 1988. The Kirk Bryan Award is for a specific work published within the past 5 years. The work may be by a single author or several authors. Nominations are made by writing a letter that identifies and provides a statement about its significance. Send nominations to the Division Secretary, John E. Costa, U.S. Geological Survey, Cascades Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.

**1988 DISTINGUISHED CAREER AWARD:  
A. LINCOLN WASHBURN**

The Quaternary Geology and Geomorphology Division is pleased to announce that A. Lincoln (Linc) Washburn is the 1988 recipient of the Distinguished Career Award. Linc has had a career of extraordinary variety and influence in Periglacial Geomorphology. In a number of arctic expeditions beginning in the 1930's, he explored, interpreted, classified, and measured periglacial forms and processes. Later, at the University of Washington he established a laboratory for experimental investigations of frozen ground. Thus, he was a member of the small group who founded Periglacial Geomorphology, and at the age of 77 he continues fieldwork using state-of-the-art recorders of freezing conditions and ground motion.

Linc has published the results of these studies and of his experience, accumulated in many periglacial regions, in influential textbooks, and journal articles. He taught and increased the visibility of periglacial studies among students of geology and other sciences at Dartmouth, Yale, and the University of Washington, and he helped establish Quaternary Studies as an interdisciplinary field of study, founding Quaternary Research as a focus for publication of research. In addition to his fieldwork, Linc fostered research in periglacial geomorphology and in other circumpolar studies through several important positions of leadership and administration.

The importance and breadth of his contributions have been recognized by many scientific societies, and the Distinguished Career Award is a fitting sequel to his Kirk Bryan Award in 1971. (Nomination by Thomas Dunne.)

**ACKNOWLEDGMENTS TO PANEL MEMBERS RETIRING  
IN 1988**

As Division Secretary and Chairman of the Panel, Richard Madole, on behalf of the Division, wishes to acknowledge the service of those Panel members whose terms expire in 1988. They are:

**Parker E. Calkin  
William L. Graf  
Paul F. Karrow**

These individuals devoted considerable time and energy in selecting the Kirk Bryan Award for 1987 and 1988, helped evaluate nominations for the Distinguished Career Award for 1987 and 1988, served on committees appointed by the Division Chairman, and provided counsel to the Management Board. Our thanks to you for jobs well done.

**DEADLINE FOR RECEIPT OF ITEMS FOR  
THE QG&G NEWSLETTER**

Newsletters are mailed in March and September of each year. Members wishing to use the Newsletter as a means of communicating with the Division membership must provide the information to the Division Secretary or Newsletter Editor by January 15 for inclusion in the March Newsletter and by July 20 for inclusion in the September Newsletter.

THE GEOLOGICAL SOCIETY OF AMERICA  
CENTENNIAL MEETING, DENVER, COLORADO  
OCTOBER 31-NOVEMBER 3, 1988

The upcoming Annual GSA meeting has scheduled several symposia, short courses and field trips that may be of special interest to members of the Quaternary Geology and Geomorphology Division. In addition, listed below are scheduled times for the Division's Awards Banquet, Business Luncheon, and Cocktail Party.

SYMPOSIA

Sunday Morning and Afternoon, October 30

No. 17—Last Interglaciation/Glaciation Transition (122-64 ka) in North America—P.U. Clark. P.D. Lea

No. 21—Seismicity, Quaternary Faulting, and Earthquake Hazards in the Rocky Mountain Region—I.G. Wong.

Monday Afternoon, October 31

No. 25—The Dynamics of Climate Change—D.K. Rea and M. Leinen

Tuesday Morning, November 1

No. 4—Hazard Reduction in the 21st Century (Sponsored by Engineering Geology Division)—T.L. Holzer and F.B. Leighton.

No. 6—Modern Glaciomarine Deposits: Polar Versus Temperate Environments (Sponsored by Quaternary Geology and Geomorphology Division)—G.M. Ashley J.V. Anderson.

No. 8—History of the Establishment of a Geologic Framework for Human Evolution—L.F. Laporte.

Tuesday Afternoon, November 1

No. 7—Ancient Glaciomarine Deposits: Polar Versus Temperate Environments (Sponsored by Quaternary Geology and Geomorphology Division)—J.M.G. Miller and C. Eyles.

No. 9—New World Geoarchaeology (Sponsored by Archaeological Geology Division)—Fekri Hassan and C. Reid Ferring.

Thursday Morning, November 3

No. 26—Productivity, Accumulation, and Preservation of Organic Matter: Recent and Ancient Sedimentary Records—J.W. Farrington and J.K. Whelan

SHORT COURSES

**Geographic Information Systems: A Tool for Geological Data Analysis and Interpretation.** Saturday, October 29, 8 a.m. to 5 p.m. U.S. Geological Survey, Denver Federal Center. Classroom facility provided by USGS. Limit: 30. Fee: \$194; includes course manual.

**Glacial Facies Models.** Saturday, October 29, and Sunday, October 30, 8 a.m. to 5 p.m. Marriott City Center. Cosponsors: Quaternary Geology and Geomorphology Division and Sedimentary Geology Division. Limit: 50. Fee: \$146; includes course manuals and a reception Saturday evening.

FIELD TRIPS

No. 5—Geology and Hydrogeology of the Nebraska Sandhills.

Leaders: James Swinehart, Thomas Winter, and James Goeke. Oct. 28 (morning) to Oct. 30; cost \$235; limit 40.

The trip will examine the geologic framework and hydraulic characteristics of the Nebraska Sandhills, the largest dune field in North America. The hydrogeology of the Crescent Lake National Wildlife Refuge will be emphasized on the first day. A variety of studies will be discussed, such as infiltration, groundwater recharge, and related flow systems in a dune-lake system. The second day will focus on the morphology, internal stratification, and chronology of the dune field with a lengthy stop at Merritt Reservoir. Here a mile of lakeshore exposures allows inspection of the internal structure of 50-m-high barchanoid ridge dunes. Primary eolian stratification, both high- and low-angle deposits, and secondary structures, such as bioturbation, will be examined. The pre-dune stratigraphic sequence and the interaction of modern and ancient fluvial systems with the dune field will be covered on the third day. Trip may also be run postmeeting.

No. 9—Archaeological Geology in the Colorado Piedmont and High Plains of Southeastern Wyoming.

Leaders: Vance Holliday, George Frison, and Adrienne Anderson. Oct. 28 (evening) to Oct. 30; cost \$175; limit 40.

The trip will focus primarily on the late Quaternary stratigraphy and geomorphology at several of classic archaeological sites including, in Wyoming, the Hell Gap paleo-indian site and some stone-tool quarry sites in the same area and, in Colorado, the famous Lindemeier Folsom site and, along the South Platte River, the Jurgens, Frazier, and Dent sites. All of these localities were the sites of pioneering research in archaeological geology as well as being outstanding archaeological sites. The tour should be of interest to archaeological geologists, Quaternary geologists, and geomorphologists.

No. 11—Geomorphology and Quaternary Geology of Canyonlands, Utah.

Leaders: Deborah Harden and Steven Colman. Oct. 28 (noon) to Oct. 30; cost \$190; limit 40.

This trip will emphasize the spectacular erosional landscape of the Canyonlands area and the Quaternary history of the region. We will examine incised meanders and terraces of the Colorado River system, Quaternary salt deformation, calcic soils, and the pediments, arches cliffs and canyons that characterize the region. Stops will include Fisher Valley, Needles Overlook, Colorado River terraces, Spanish Valley, Arches National Park, and abandoned meanders of the Green River.

No. 12—In the Footsteps of G. K. Gilbert—Lake Bonneville and Neotectonics of the Eastern Basin and Range Province.

Leaders: Michael Machette, Donald Currey and others. Oct. 27 (7 pm) to Oct. 30 (late afternoon); cost \$195 (Salt Lake City residents, \$105); limit 40.

In keeping with the 1988 Centennial theme, the field trip will emphasize three topics studied by G. K. Gilbert 100 years ago: Lake Bonneville geomorphology (shorelines, bars, spits, deltas), stratigraphy of the Bonneville lacustrine cycles, and neotectonics of the eastern Basin and Range province, especially the Wasatch fault zone. The trip will visit some of

Gilbert's classic stratigraphic localities and photographic sites, mix in data from several new sites which have modified his original work, and generally examine his work in the modern stratigraphic and tectonic framework. A considerable body of research has been generated in the past 35 years regarding Lake Bonneville and neotectonics of the eastern Basin and Range. Although the trip will draw from this body of research, the main focus will be on G. K. Gilbert, his pioneering studies of 100 years ago, and his legacy to contemporary earth scientists.

**No. 19—Glacial-Marine Sedimentation, Mineral Fork Formation (Proterozoic III), Utah.**

Leaders: Nicholas Christie-Blick and Paul Karl Link.  
Nov. 3 (5 p.m.) to Nov. 5; cost \$190, limit 30.

Glacial-marine strata of the Mineral Fork Formation were deposited in erosional valleys as much as 850 m deep at the edge of an extensional intracratonic basin. This excursion will focus on the interpretation in a stratigraphic context of processes of sedimentation in a temperate glacial-marine environment at varying distances from the grounding line of the ice sheet, especially ice-rafting, suspension deposition, sediment gravity flow and sliding, and bottom-current activity. The trip will consist of two day-long traverses over spectacular exposures in the central Wasatch Range near Salt Lake City. Consult with the field-trip leaders if you have any questions about the degree of physical difficulty.

**No. 24—Pleistocene and Recent Floods of the Big Thompson River Drainage, Northern Colorado Front Range.**

Leaders: William Hoyt and Robert Jarrett. Nov. 4; cost \$35, limit 36.

Recent floods in the Big Thompson River drainage of the northern Colorado Front Range have provided excellent opportunities for the hydrologic and geomorphic study of life-threatening, catastrophic floods. Good evidence of floods starts just east of the canyon mouth at an elevation of about 1,650 m and continues west to Horseshoe Park area in Rocky Mountain National Park at an elevation of about 2,550 m. Of particular interest to sedimentologists, geomorphologists, and hydrologists is the debris fan deposited during the draining of Lawn Lake in the 1982 event. If time and weather conditions allow, we will run a transect across this interesting fan from the proximal to the distal ends.

**QG&G DIVISION MANAGEMENT BOARD MEETING  
1988 ANNUAL MEETING, DENVER, COLORADO**

The Division Management Board Meeting will be held on Monday, October 31st from 9:00 a.m. to 12:00 noon in the Matchless Room of the Marriott City Center.

**DIVISION COCKTAIL PARTY  
1988 ANNUAL MEETING DENVER, COLORADO**

The Fifth Annual QG&G Division Cocktail Party will be held Tuesday evening, November 1st from 7:30-10:30 p.m. in the Colorado Rooms A/B/C of the Marriott City Center. This event provides a unique opportunity for QG&G members to gather and socialize leisurely in a congenial atmosphere and have a couple of kegs on the Division. The 1987 party was a huge success; let's make this years get together the same.

**QG&G DIVISION LUNCHEON  
1988 ANNUAL MEETING DENVER, COLORADO**

The Division luncheon and presentations of the Kirk Bryan Award and the Distinguished Career Award will be held on Wednesday, November 2nd from 12:00 noon to 1:30 p.m. in the Denver Rooms 4/5/6 of the Marriott City Center.

**GEOLOGY AND GEOMORPHOLOGY DIVISION  
MANAGEMENT BOARD MEETING, 1987  
ABRIDGED MINUTES**

The annual meeting of the QG&G Division Management Board was held Monday, October 26, 1987, from 10:00 a.m. to 1:00 p.m., during the Annual Meeting in Phoenix, Chairman Victor R. Baker presiding. The meeting agenda contained the following items: (1) minutes of the 1986 meeting; (2) verification of 1987 election results; (3) a proposal to raise Division dues; (4) progress report on funding statistics of research in Quaternary geology and geomorphology; (5) report on the International Geomorphology Organization; (6) response to an inquiry about reorganizing American geomorphologists; (7) review of planning for the 1987 annual meeting, including the role of the JTTC representative, the abstract review process, and Division response to the theme sessions concept; (8) Division plans for the Denver meeting, (9) 1988 *Geotimes* review of "Geomorphology and Quaternary Geology"; (10) schedule for the Division luncheon; and (11) new business. The decisions reached with respect to some items are summarized in the following paragraphs.

Proposal to raise Division dues

It was proposed that QG&G Division dues for members and fellows be raised to \$5 per year, thereby matching the dues of four other Divisions (Coal Geology, Engineering Geology, Hydrogeology, and Sedimentary Geology), but that dues for students be retained at \$2 per year. The proposed dues increase and the reasons for the increase were explained at the Division luncheon. Members present at the luncheon indicated unanimous approval for the proposed increase in dues to begin in 1989.

Progress report on funding statistics of research in Quaternary geology and geomorphology

It was decided that the inquiry into the statistics of research funding should be an ongoing effort and should be reviewed by the Management Board annually.

Other continuing Division interests

The Division has a continuing interest in helping the Editors of the *Bulletin* and *Geology* identify candidates for Associate Editor. The Division can serve by (1) identifying topical areas within Quaternary geology and geomorphology that require special expertise, and (2) identifying groups of people who have the needed expertise. It was also noted that members have expressed interest in knowing the number of QG&G papers submitted to and published by GSA, the way Associate Editors are selected, and the way these editors assign and monitor manuscript reviews.

James C. Knox was appointed as the first U.S. Delegate (officially called Corresponding Member) to the International Geomorphology Organization, and will serve a 4-year term from 1987 to 1991. The procedure for selecting the U.S. delegate was developed in collaboration with the Geomorphology Specialty Group of the Association of American Geographers. Each member country has been asked to compile a brief history (10-12 pages) of geomorphology in their country for the Second Conference on International Geomorphology, to be held in Frankfurt, Federal Republic of Germany, September 3-9, 1989. Jack Vitek and Dusty Ritter have agreed to collaborate on this project for the United States.

Reorganization of American geomorphologists

The QG&G Management Board was asked to serve as a sounding board for a proposal for reorganizing American geomorphologists. Members present at the Management Board meeting were unanimous in concluding that the Division is interested in the activities of all geomorphological associations, but that it is not the role of the QG&G Division to either encourage or discourage various groups in their efforts to organize American geomorphologists. The QG&G Division cannot join or participate in the formation of an umbrella organization because the Division is part of the Geological Society of America, and the activities of the Division are formally established and governed by the policies and bylaws of that Society.

Review of 1987 Annual meeting planning process

The review of the planning process for the 1987 Annual meeting focused on the Joint Technical Program Committee meeting and the increasing demands on the Division JTPC Representative. Also discussed were abstracts--review process, rejection rate, and organization of technical sessions--and Division-sponsored symposia versus "theme sessions". Although the Division Management Board sees merit in theme sessions, the Board is opposed to abandoning the traditional Division-sponsored symposium. The Division has tended to use its half-day symposium to achieve objectives sought by the theme session, namely to examine new research trends and to interact with other Divisions. For example, the QG&G Division cosponsored one-day symposia with the Engineering Geology Division in 1984 and 1985, with the Planetary Geology Division in 1987, and had planned to cosponsor a symposium with the Sedimentary Geology Division in 1988.

Division-sponsored short course, symposium, and field trip for the 1988 Annual meeting

The Division will sponsor and/or co-sponsor a series of related activities that includes a pre-meeting Short Course, a two-session symposium, and a post-meeting field trip (see separate news item). The Short Course is about "Glacial Facies Models"; the symposium is entitled "Modern and Ancient Glaciomarine Deposits: Polar versus Temperate Environments," and is in two parts (the first part is the half-day Division-sponsored symposium and the second part is a half-day At-Large symposium); and the post-meeting field trip will examine Precambrian glacial-marine sedimentation in the Mineral Fork Formation in the Wasatch Range of Utah.

For the past several years, the review of "Geomorphology and Quaternary Geology" for Geotimes has been co-authored by representatives of the Geomorphology Specialty Group of the Association of American Geographers and the QG&G Division. The Geotimes review article for 1988 will be written by Victor R. Baker in collaboration with John C. Dixon, Chairman of the Geomorphology Specialty Group.

**FRIENDS OF THE PLEISTOCENE  
1988 FIELD TRIPS**

All six of the U.S. Cells are active and healthy. The South-Central, Midwest, and Northeastern cells conducted successful spring field trips, and the Pacific, Rocky Mountain, and Southeastern Cells will conduct field trips this fall. The editor requests that notices of future (1989) FOP field trips be sent to him before January 15th of the calendar year. In addition, this newsletter may be the appropriate place for discussions concerning the history of the FOP, methods for selecting field trip sites and leaders, field trip leader's liability (insurance, tax, and financial), and the legal question of FOP as a nonentity. Here is the schedule for the remaining FOP trips this year; remember that these are some of America's cheapest and best field excursions.

**PACIFIC FRIENDS OF THE PLEISTOCENE  
September 9-11, 1988  
Three Sisters-Mount Bachelor-Bend, Oregon**

This three day camping trip will concentrate on topics that include the eruptive history of the late- and postglacial Mount Bachelor volcanic chain, late Quaternary glaciation of the central High Cascades, Holocene rhyolite eruptions near South Sister, and middle Pleistocene tephra-fall and pyroclastic-flow deposits near Bend and their correlation with tephra deposits in southern Oregon and northern California. The trip starts and ends near Bend, Oregon. Cost is \$16. For more information, contact W.E. Scott, USGS, D.A. Johnston Cascades Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661; phone (206) 696-7909.

**ROCKY MOUNTAIN FRIENDS OF THE PLEISTOCENE  
October 14-15, 1988  
Cenozoic evolution of the Tonto Basin**

This trip will spend two days examining the late Cenozoic evolution of the Tonto Basin in central Arizona, about 85 km northeast of Phoenix. Interesting facets of the basin to be examined include a sequence of 12 terraces and pediments, soils, basin-fill deposits, paleofloods on the Salt River, archaeology in the basin, and engineering geology of Theodore Roosevelt Dam.

The first day will focus on geomorphic surfaces and upper Cenozoic deposits in the northern and central parts of Tonto Basin. Leaders will discuss the impacts of basin and range faulting, drainage integration, regional uplift, Quaternary climatic change, and soil development. If time permits, we will visit the ruins of a platform mound that was built by people of the Salado culture between A.D. 1200 and 1400.

The second day will cover a variety of topics, including upper Cenozoic deposits southeast of the Tonto Basin; upper Cenozoic deposits and surfaces in the southern part of the Tonto Basin; paleofloods of the upper Salt River; archaeology in the basin at a cliff dwelling of the Salado culture preserved in Tonto National Monument; and engineering geology of Theodore Roosevelt Dam, a masonry arch dam built in 1911.

Trip leaders will be Larry Anderson and Lucy Piety (Bureau of Reclamation, Denver); Dale Nations (Northern Arizona University); Joel Sturm, Cathy Wellendorf, and Lloyd Crutchfield (Bureau of Reclamation, Phoenix); Scott Wood (Forest Service, Tonto National Forest); Lisa Ely and Jim O'Connor (University of Arizona); and Jim Faulds (University of New Mexico).

We will camp Thursday, Friday, and Saturday nights on the shores of beautiful Theodore Roosevelt Lake. There are a few motels in relatively close proximity to the field-trip area. Part of the trip will be on dirt roads, which should be passable by two-wheel-drive vehicles at this time of year. The cost will be \$10, which will cover registration, a guidebook, and refreshments. Guidebooks can be purchased separately for \$8. Deadline for registration is September 15, 1988. Detailed information concerning campground location, meeting place for the trip, and the location of stores, motels, etc. in Tonto Basin will be mailed to all registrants beginning about September 1. Contact Larry Anderson or Lucy Piety, U.S. Bureau of Reclamation, D-3611, Box 25007, Denver, Colorado 80225; phone (303) 236-4195.

**SOUTHEAST FRIENDS OF THE PLEISTOCENE**  
**Second Annual Field Conference—Nov. 11-13, 1988**  
**Upper Cenozoic Geology and Geomorphology of**  
**Southern New Jersey**

The field conference will examine the geology and geomorphology currently being developed as part of a Cooperative Geologic Mapping Program between the U.S. Geological Survey (USGS) and the New Jersey Geological Survey. The new State geologic map is being compiled as the product of this Coop. This is the first time since the original mapping of the State (1911-12) that Miocene and post-Miocene deposits have been re-evaluated and mapped using modern concepts of sedimentary depositional basins, neotectonics, geomorphic systems, and climate change. The field trip leaders are John Wycoff (USGS), Jim Owens (USGS), John Farnsworth (NJGS), and Wayne Newell (USGS). We look forward to demonstrating an exciting, complex geologic framework interpreted in the context of the regional geology of the middle Atlantic Coastal Plain.

Remember, SEFOP has a license to look at the entire Cenozoic if necessary. In south Jersey, it is necessary to have an understanding of the Miocene and Pliocene foundations of the landscape before a comprehensive view of changing Quaternary geomorphic systems can be appreciated. We will examine Miocene nearshore marine and marine deltaic deposits, evidence for a world class fluvial system including an extensive blanket or upper delta-plain deposits. Following deposition, those materials were uplifted and subjected to a prolonged period of weathering and erosion. Atlantic Coast marine and Delaware Bay estuarine Quaternary terrace deposits rim the upland core of weathered Miocene and Pliocene materials. Locally, windblown deposits from the terraces are extensive. At all stops, we will

examine distinctive late Pleistocene deposits and geomorphic features formed during the glacial maxima. Holocene features and deposits of the ongoing marine transgression complete the smorgasbord. For more information contact John Wycoff, USGS, MS 926 National Center, Reston, VA 22092; phone 648-6951.

**OTHER FRIENDS OF THE PLEISTOCENE NEWS**

Copies of the guidebook from the Spring 1988 South-eastern Cell FOP field trip (Research on the late Cenozoic of the Potomac Highlands) are available as OF-88-2. Send your request to the following address:

Publications Department  
 West Virginia Geological and Economic Survey  
 P.O. Box 879  
 Morgantown, WV 26507  
 Phone: (304) 594-2331

**WORLD DIRECTORY OF GEOMORPHOLOGISTS**

The number of names of geomorphologists submitted for the International Directory now totals about 3,000. The directory will be published in time for the Second International Conference on Geomorphology, scheduled for Frankfurt, Germany, in September 1988. Thus, this is the last chance for your name to be included. If you have not yet completed one of these forms, please do it now and send it in.

At Manchester on 15-21 September 1985, it was agreed to investigate the possibility of organizing an International Geomorphological Organization and to initiate an international newsletter. As a first step, we wish to develop a World Directory of Geomorphologists. If you would like to receive the newsletter and to be a member of any organization that may be developed, please fill in the details below.

FAMILY NAME: \_\_\_\_\_ TELEPHONE: \_\_\_\_\_

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

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

RESEARCH INTEREST: \_\_\_\_\_

TECHNIQUE INTEREST: \_\_\_\_\_

AREA/REGION INTEREST: \_\_\_\_\_

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 Louisiana State University  
 Baton Rouge, LA 70803

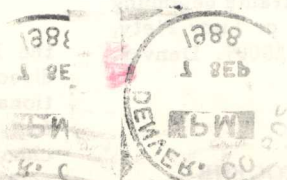
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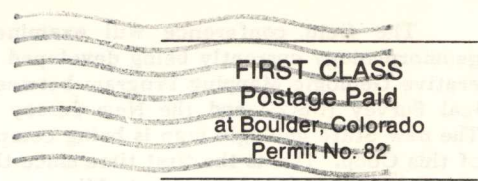
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