



# Quaternary Geologist and Geomorphologist

NEWSLETTER OF THE QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION

February 1981

## QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION ELECTIONS

Division officers and members of the Panel elected for 1981 by the membership are

Chairman ..... Marie Morisawa  
 First Vice-Chairman ..... Troy Pewe  
 Second Vice-Chairman ..... John Andrews  
 Secretary ..... Don Easterbrook

### New Panel Members (1980-82)

Ed Evenson  
 George I. Smith  
 Allan Schneider

### Returning Panel members (1979-81)

Gail Ashley  
 Dick Goldthwait  
 Dick Janda

### Nominations for 1981 Panel Members

Clip out and mail this ballot before March 15, 1981  
 to ..... Don J. Easterbrook  
 Department of Geology  
 Western Washington University  
 Bellingham, WA 98225

All voting affiliates (dues-paying members) are eligible for nomination to the Panel except officers and present or retiring Panel Members (see listings above). The six names receiving the highest number of votes will appear on the annual ballot. Each voting affiliate of the Division may nominate up to three persons.

- (1) \_\_\_\_\_  
 (2) \_\_\_\_\_  
 (3) \_\_\_\_\_

## MACKIN GRANT

The deadline for receipt of applications for the Mackin Grant for research in geomorphology or Quaternary geology is March 15. A stipend of not less than \$500 will be given as a cash grant to assist promising graduate student research. Announcement of the winner will be made early in the spring and funds made available prior to the 1981 summer field season.

Application forms may be obtained from the Division Secretary, Don J. Easterbrook, Dept. of Geology, Western Washington University, Bellingham, WA 98225. Information required with the application includes (1) a résumé of the applicant, (2) statement of proposed research, and (3) a letter of reference from the thesis advisor. In the event of more than one application from a single department, the department will be asked to screen the applications and indicate priorities. Evaluation of the proposals will be made by the Division Management Board during winter quarter.

## COLE GRANT

The Gladys W. Cole Research Grant has been established by GSA for investigation of geomorphology in arid regions in the U.S. and Mexico. Applicants must be GSA Fellows between 35 and 60 years old and must have published at least one significant paper on geomorphology.

The grant is made possible by funds established by W. Storrs Cole. The first grant is tentatively slated for 1982. The amount of the grant will be determined from interest on the fund. Evaluation of applications will be made by the Management Board of the Division and forwarded to the Committee on Research Grants for final action. Further announcements concerning the grant will be made in the next newsletter.

## CINCINNATI MEETING (1981)

A number of field trips and symposia of interest to Quaternary geologists and geomorphologists are being planned for the 1981 Annual Meeting in Cincinnati. Among the field trips planned are the following:

*Coastal geomorphology and geology of the Ohio shore of Lake Erie* (2 days, premeeting), C. H. Carter, D. E. Guy, Jr., and J. A. Fuller

(Continued next page)

*Hydrogeology of the Mammoth Cave Region, Kentucky* (4 days, premeeting), J. F. Quinland and Ralph Ewers

*Quaternary deposits of the Ohio Valley region in Ohio and Kentucky* (3 days, premeeting), R. P. Goldthwait, W. C. Swadley, D. P. Stewart, and D. A. Franzi

*Geoarcheology of the Flint-Mammoth cave system and the Green River Valley, western Kentucky* (2 days, postmeeting), J. Stein, P. J. Watson, and W. B. White

*Engineering geology of Cincinnati* (1 day, postmeeting), R. W. Fleming, A. M. Johnson, and J. E. Hough

#### ACTIONS OF THE MANAGEMENT BOARD AT THE ATLANTA MEETING

**Geotimes review.** Each year *Geotimes* publishes a summary of various disciplines within geology. The chairman of the Division will hereafter act as coordinator for writing annual 1,000-word reviews of geomorphology and Quaternary geology.

**Centennial activities.** Two approaches to publication of review papers in geomorphology and Quaternary geology were discussed: (1) reviews of specific processes and (2) summaries of physiographic regions. Either or both of these approaches were considered and will be looked into more specifically.

**GSA publications.** With the announcement in Atlanta that the Science Editor will not continue into 1981 until a special panel investigates the present problems in that area, the Management Board sent a resolution to GSA Council expressing serious concern over not having a geologist in charge of publications at headquarters and requested Council to appoint a geologist as interim Science Editor. Council subsequently agreed in principle and an interim editor will be appointed.

**Cole Grant.** At the request of GSA headquarters, the Management Board agreed to evaluate applications for the Cole Grant, beginning about 1982.

#### KIRK BRYAN AWARD FOR 1980

To *James A. Clark, William E. Farrell, and W. Richard Peltier* for their paper "Global changes in postglacial sea level: A numerical calculation," published in 1978 in *Quaternary Research*, volume 9, p. 265-287.

#### Citation by William C. Bradley

The Kirk Bryan Award has been given annually since 1958 by the Quaternary Geology and Geomorphology Division of the Geological Society of America. The record shows that fluvial geomorphologists have been the strongest competitors for the award. As everyone knows, however, rivers end in the sea. Hence it is appropriate that coastal geology be honored from time to time. What makes this year's award especially interesting is that the recipients are not coastal researchers; they are geophysicists/geologists whose work with Earth models has provided new insight into late Quaternary sea levels, insight important to anyone interested in the elevation of old shorelines and the history of Quaternary glaciations.

The Clark-Farrell-Peltier work is the most sophisticated attempt so far to understand quantitatively how sea level has changed throughout the world with melting of late Quaternary ice sheets in the Northern Hemisphere. Their model makes reasonable assumptions about Earth rheology, extent and thick-

ness of ice sheets, and the deglaciation time table. It is superior to previous models in that it incorporates more factors that influence the position of both sea level and sea bottom: the changing gravitational attraction of ice for sea water, as well as changing ice and water loads.

Their work substantiates the view that the response in sea level to melting of ice has not been uniform throughout the world, and they provide numerical data on shoreline elevations that may easily be tested against dated shorelines. (Indeed, the testing has already begun.) In addition, their work goes a long way toward resolving two decades of conflicting viewpoints as to where the sea has been, relative to today's level, in Holocene time. It makes understandable the occurrence of elevated Holocene shorelines in some areas but not others, and thereby reduces the natural tendency to question the scientific integrity of research that appears to be at odds with other research.

The Clark-Farrell-Peltier paper does not pretend to answer all questions pertaining to late Quaternary sea levels. Rather, it is a progress report on research which continues and which has already produced a half-dozen newer papers by Clark and co-workers. The research is interdisciplinary and first-rate; the paper cited is worthy of the Kirk Bryan Award.

#### NEWS NOTES

GSA Special Paper 183—*The Scientific ideas of G. K. Gilbert*

##### Contents:

- A great engine of research—G. K. Gilbert and the U.S. Geological Survey (S. J. Pyne)
- Contributions of Grove Karl Gilbert to glacial geology east of the Mississippi River (G. W. White)
- G. K. Gilbert, on laccoliths and intrusive structures (C. B. Hunt)
- G. K. Gilbert's studies of faults, scarps, and earthquakes (R. E. Wallace)
- G. K. Gilbert's Lake Bonneville studies (C. B. Hunt)
- Pioneering work of G. K. Gilbert on gravity and isostasy (D. R. Mabey)
- Gilbert and the Moon (F. El-Baz)
- G. K. Gilbert and ground water, or 'I have drawn this map with much reluctance' (A. F. Agnew)
- Gilbert—Bedding rhythms and geochronology (A. G. Fisher)
- Grove Karl Gilbert and the origin of barrier shorelines (J. C. Kraft)
- G. K. Gilbert and the great iceberg-calving glaciers of Alaska (M. P. Meier and A. Post)
- Techniques and interpretation: The sediment studies of G. K. Gilbert (L. B. Leopold)
- G. K. Gilbert's geomorphology (R. J. Chorley and R. P. Beckinsale)
- Analogies of G. K. Gilbert's philosophy of science (D. B. Kitts)

## MEETINGS IN 1981

- Feb. 13-14 . . . . . Cordilleran Section, Geol. Assoc. of Canada, Vancouver, B.C.  
Mar. 2-6 . . . . . Canadian Permafrost Conference, Calgary, Alberta  
Mar. 19-20 . . . . . SE Section, GSA, Hattiesburg, Mississippi  
Mar. 23-27 . . . . . Fundamentals of slope stability, short course, Reno, Nevada  
Mar. 25-27 . . . . . Cordilleran Section, GSA, Hermosillo, Mexico  
Mar. 28-Apr. 5 . . . . . Plio/Pleistocene boundary in Arizona and California Field Conference,  
IGCP Projects 41 and 128  
Mar. 29-Apr. 4 . . . . . Aridic Soils Conference, Jerusalem  
Apr. 9-11 . . . . . NE Section, GSA, Bangor, Maine  
Apr. 13-14 . . . . . South-Central Section, GSA, San Antonio, Texas  
Apr. 16-17 . . . . . Rocky Mt. Section, GSA, Rapid City, South Dakota  
Apr. 30-May 1 . . . . . North-Central Section, GSA, Ames, Iowa  
May 22-24 . . . . . Quaternary Dating Methods Symposium, York Univ., Toronto  
Nov. 2-5 . . . . . GSA Annual Meeting, Cincinnati

## 1982

- May 17-19, 1982 . . . Quaternary history of the Lake Agassiz region symposium, Geol. Assoc. Canada  
Those interested in presenting a paper or helping to plan, contact James T. Teller,  
Department of Earth Sciences, University of Manitoba, Winnipeg, Canada

## PAST PANELS

### 1957-59

S. Judson  
J. C. Frye  
W. D. Thornbury  
J. T. Hack  
A. N. Strahler  
A. D. Howard

### 1959-61

L. B. Leopold  
J. P. Miller  
G. M. Richmond  
R. P. Sharp  
M. G. Wolman  
J. M. Zumberge

### 1961-62

R. F. Black  
R. P. Goldthwait  
H. E. Wright, Jr.  
C. S. Denny  
R. L. Nichols  
A. N. Strahler

### 1962-63

E. H. Muller  
P. R. Shaffer  
C. A. Wahrhaftig  
R. F. Black  
R. P. Goldthwait  
H. E. Wright, Jr.

### 1963-64

W. C. Bradley  
D. R. Crandell  
D. F. Eschman  
E. H. Muller  
P. R. Shaffer  
C. A. Wahrhaftig

### 1964-65

S. A. Schumm  
A. N. Strahler  
S. E. White  
\*W. C. Bradley  
J. H. Mackin  
D. R. Crandell  
D. F. Eschman

### 1965-66

A. L. Bloom  
J. T. Hack  
C. A. Wahrhaftig  
S. A. Schumm  
A. N. Strahler  
S. E. White

### 1966-67

W. C. Bradley  
D. F. Eschman  
E. H. Muller  
A. L. Bloom  
J. T. Hack  
C. A. Wahrhaftig

### 1967-68

J. H. Hartshorn  
T. L. Pewe  
M. G. Wolman  
W. C. Bradley  
D. F. Eschman  
E. H. Muller

### 1968-69

D. R. Crandell  
S. C. Porter  
A. L. Washburn  
J. H. Hartshorn  
T. L. Pewe  
M. G. Wolman

### 1969-70 (Jan.)

W. C. Bradley  
A. L. Bloom  
R. L. Shreve  
D. R. Crandell  
S. C. Porter  
A. L. Washburn

### 1969-70 (Nov.)

P. W. Birkeland  
H. W. Borns, Jr.  
D. J. Easterbrook  
W. C. Bradley  
A. L. Bloom  
R. L. Shreve

### 1970-71

P. W. Birkeland  
H. W. Borns, Jr.  
\*D. J. Easterbrook  
M. Morisawa  
J. H. Hartshorn  
R. V. Ruhe  
S. E. White

### 1971-72

J. H. Hartshorn  
R. V. Ruhe  
S. E. White  
R. R. Curry  
R. J. Janda  
S. C. Porter

### 1972-73

P. W. Birkeland  
L. Clayton  
M. Morisawa  
R. R. Curry  
R. J. Janda  
S. C. Porter

### 1973-74

J. T. Andrews  
W. B. Bull  
J. H. Hartshorn  
P. W. Birkeland  
L. Clayton  
M. Morisawa

### 1974-75

J. T. Andrews  
W. B. Bull  
J. H. Hartshorn  
W. H. Johnson  
K. L. Pierce  
J. W. Hawley

### 1975-76

W. H. Johnson  
K. L. Pierce  
J. W. Hawley  
P. W. Birkeland  
E. H. Muller  
S. C. Porter

### 1976-77

P. W. Birkeland  
E. H. Muller  
S. C. Porter  
J. T. Andrews  
V. R. Baker  
M. Morisawa

### 1977-78

J. T. Andrews  
V. R. Baker  
M. Morisawa  
J. B. Benedict  
W. R. Farrand  
S. E. White

### 1978-79

J. B. Benedict  
W. R. Farrand  
S. E. White  
J. E. Armstrong  
P. W. Birkeland  
K. L. Pierce

### 1979-80

J. E. Armstrong  
P. W. Birkeland  
K. L. Pierce  
G. M. Ashley  
R. P. Goldthwait  
R. J. Janda

### 1980-81

G. M. Ashley  
R. P. Goldthwait  
R. J. Janda  
E. B. Evenson  
A. F. Schneider  
G. I. Smith

\*resigned to accept office

**PAST CHAIRMEN OF THE DIVISION**

1981	M. Morisawa	1972	R. F. Flint	1963	L. B. Leopold
1980	S. A. Schumm	1971	R. P. Goldthwait	1962	J. G. Fyles
1979	W. B. Bull	1970	D. M. Hopkins	1961	J. T. Hack
1978	A. L. Bloom	1969	A. D. Howard	1960	C. S. Denny
1977	W. C. Bradley	1968	W. D. Thornbury	1959	G. W. White
1976	L. H. Lattman	1967	H. E. Wright, Jr.	1958	G. W. White
1975	R. L. Nichols	1966	R. F. Black	1957	J. H. Mackin
1974	D. R. Crandell	1965	G. M. Richmond	1956	J. H. Mackin
1973	H. E. Malde	1964	A. L. Washburn	1955	E. Blackwelder



**THE  
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OF AMERICA**

P.O. Box 9140 • 3300 Penrose Place  
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