Quaternary Geologist and Geomorphologist

NEWSLETTER OF THE QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION

Volume 41, Number 1

THE 1999-2000 OFFICERS AND COMMITTEE MEMBERS

Chair: Peter Clark
First Vice-Chair: R. Craig Kochel
Second Vice-Chair: Deborah R. Harden
Secretary: Alan Nelson
Treasurer: Scott Burns

Panel Members: Marith Reheis, Arthur E. Bettis, III, Donald Rodbell, Jim O'Connor, Julie Brigham-Grette, and Peter Knuepfer.

Mackin-Howard Grant Evaluation Committee: Deborah Harden (chair), Alan Busacca, Dave Dethier, Craig Kochel, Bill Mode, [illegible] Clark, and Dorothy Sack.

Easterbrook Distinguished Scientist Award Evaluation Committee: Peter Clark (Chair), Tom Dunne, and Steve Porter.

QG&G Election Nomination Committee: Ardith Hansel (chair), Donald Rodbell, and Jim O'Connor

MESSAGE FROM THE CHAIR

As many of you read this, you will recognize some overlapping information I provided in my "blast e-mail" that was sent last November. If you did not receive this e-mail, then you should contact GSA as soon as possible to ensure that your e-mail address is correct, updated, or even entered in their database. We are increasingly moving towards electronic communication, with the blast e-mail being a particularly effective mechanism to rapidly deliver general information, late-breaking news, or last-minute reminders about meetings and nominations. Look for continued movement by the Division this year into the electronic world as Bill Johnson, our Newsletter Editor and Webmaster, further builds our Division web site. Perhaps most important, we will introduce our first "electronic ballot" this year for voting for the Division Management Board. We expect that this will draw a strong voter turnout among you and thus reverse the steady erosion of voter involvement seen in previous elections.

Spring 2000

As I noted in my November e-mail, the QG&G Division continues to be among the strongest of the twelve divisions in the GSA, thanks to the continued outstanding leadership of previous Division officers and especially thanks to the support of our membership. Our Division continues to grow; with well over 1400 members, we are nearly 20% larger than in 1995. We are the second largest GSA Division, but only trail the largest division by a few tens of members. This trend was clearly reflected at the recent GSA Annual Meeting in Denver, where QG&G abstracts constituted the most of any discipline at the largest GSA meeting ever (as measured by number of abstracts submitted). I believe that several forces are at work in explaining this strong growth and representation. In part, it reflects efforts by existing members to enlist new members, and I encourage you to continue to do so.

There are many potential recruits as fewer than 50% of the GSA membership belongs to a Division. Another important factor in our growth, as eloquently commented on before by previous Division Chairs, is that our discipline addresses many of the environmental issues that are now, and will continue to be, of widespread concern and debate. Our growing membership thus also reflects the increasing realization by students and professionals that Quaternary geology and geomorphology is playing a central scientific role in understanding and mitigating the effects, at all scales, of the "anthrosphere" in the operation of the Earth system. Finally, I think that some of the most exciting scientific developments in the geosciences of the last decade fall within our discipline, thus attracting a broader interest in our discipline than ever before. Some of the areas in which Quaternary geology and geomorphology has been at the forefront of research in the geosciences include (to name but a few): the role of surface processes in mountain building, the role of soils in biogeochemical cycles, new insights into landscape evolution from high-resolution digital imagery, and developing a better understanding of climate dynamics from high-resolution paleoclimate records.

The QG&G Division has by far the largest endowment of any GSA division, and we are in an outstanding position to recognize and financially support excellence in research in Quaternary geology and geomorphology through presentation of several awards. In addition to the longstanding Arthur D. Howard, J. Hoover Mackin, Kirk Bryan, and Distinguished Career Awards, as well as the GSA-administered Gladys W. Cole and Robert K. Fahnestock Awards, our Division presented the first Farouk El-Baz Award at the Denver meeting this year, and announced the establishment of the Don J. Easterbrook Distinguished Scientist Award, the first of which will be presented at the 2000 GSA Annual Meeting in Reno, NV.

Some additional new developments relating to our Division include the formation of a new position on the Management Board as Division Historian (ex officio). Our Division has a long (46 years) and fascinating history that is in danger of being lost. Rich Madole, former Division Chair and longtime Division cheerleader, has graciously accepted the role as first Division Historian. You can read his first segment of the Division's history later in this issue. A second development is the new position on GSA Council that will be held by a member representing all of GSA's Divisions. Former QG&G Division Chair Steve Colman was selected to be on this year's GSA ballot for this important position.

The QG&G Division is thus experiencing unprecedented success in a number of important directions. In addition, I believe that the strong involvement and presence by our discipline in important environmental issues as well as in cutting-edge scientific research (often with a healthy blending of the two, such as riparian issues) is clearly reflected in the employment sector, where new advertisements for positions in Quaternary geology and geomorphology are relatively common. However, there is always room for improvement, and we need to consider how we can further strengthen our Division as a leading representative of our discipline. In my November e-mail, I emphasized being more proactive through participation in Division and GSA-wide activities, particularly in nominating and voting for Management Board members and in nominating candidates for Division awards. Given our strong financial position, we should also find ways to support more student attendance at meetings, workshops, and field trips. Currently, our student support is limited to awards for graduate research, and we should consider funding opportunities for more general student participation in professional development activities.

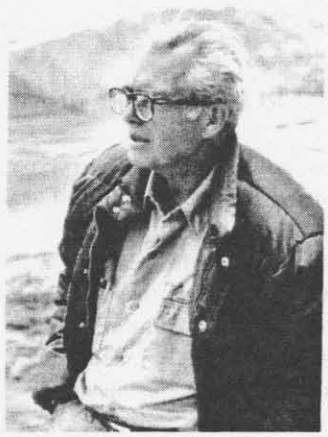
Lastly, I want to raise a concern that I have heard about more and more often from colleagues in the last few years, namely the perception that GSA is losing ground scientifically to AGU. As far as our Division is concerned, this may seem to be a non-issue given the strong growth in Division membership and our strong presence at annual meetings. And perhaps this reflects a natural evolution whereby some strengths are now best represented by our Division, others are represented in AGU, and we should not try to be all things. However, I believe that many areas that we have traditionally considered to be our strengths are in fact increasingly becoming subsumed by AGU at our expense. I thus urge some caution in becoming too complacent in our current very successful state, for while there are certainly no signs of financial or membership problems, there is some indication that scientifically we may not be in the position where I believe all of us would prefer to be, namely at the leading edge. There are a number of ways by which the Division can address this issue, some of which simply require that we continue to offer exciting proposals for symposia at the regional and national meetings and to nominate candidates for the Management Board based on their potential for providing strong leadership and direction. I think we also need to consider new and innovative ideas on how we can make our meetings more attractive, however, and thus maintain our position as the preferred meeting for presenting the best and most exciting science.

Peter Clark, Chair

1999 QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION AWARDS

DISTINGUISHED CAREER AWARD

TROY L. PÉWÉ



Citation by Randall G. Updyke

Mr. Chairman, Lisa, Rick, and Colleagues,

This is indeed a distinct and sobering honor to be asked to offer a few comments on this bittersweet occasion: the recognition of one of our colleagues, Dr. Troy L. Péwé, who has unfortunately departed from us on the eve of this joyous occasion. I hope that, instead of a wake, you will join me in making this a celebration of a man and his remarkable career.

It was 34 years ago this month that I found myself a new graduate student in the Geology-Geophysics Department at a major University. I was attending my first annual meeting of the Geological Society of America and had volunteered to serve as a projectionist for a technical session. Though my research interests at that time were inclined toward the newly emerging revolution in global tectonics, I was assigned to a session on glacial and Quaternary Geology.

Before the session, I introduced myself to the moderator, a distinguished professor from the University of Alaska, who I discovered had recently assumed the chairmanship of the Geology Department at Arizona State University. Dr. Troy L. Péwé gave me his warm, self-assured smile and conveyed a professional calm about the complex session he was about to chair. His presence captured my attention for the next four hours, highlighted by his own remarkable paper on cirque orientations as climatic indicators in central Alaska.

After that first afternoon of seeing Troy in action, both as a geoscientist and a profession leader, there was no question in my mind that this was the person under which I wanted to pursue graduate studies. Eight months later I had transferred to ASU to become one of his first graduate students in Arizona.

For the next six years I lived geology with Troy. Our travels together took us throughout western North America. His insatiable fascination with geology, from ancient structures in the Grand Canyon to modern loess in Alaska, afforded me and his other students with direct exposure to a truly classical geologist in the tradition of our science's great legends.

The uniqueness, in retrospect, of those years with Troy, was the absolute commitment to earth science...I was no longer going to school for my career, nor for my Professor's accolades or his edification. Instead, he and I were sharing an adventure in science. Whether or not in my case, he was wholly successful, Troy's intent was quite clear; he wanted his students to become earth scientists. Specifics like nomenclature, stratigraphy, geomorphology, and Quaternary history were simply vehicles by which he instilled in each of us the deeper values and fundamentals of the scientific method, enlightened skepticism, and the exhilaration of discovery.

Though he tried to mask his emotions, his unbounded delight in unlocking earth mysteries was obvious to us all and, that unerring drive forced us to constantly be trying to keep up with him, both physically and intellectually. At a time when specialization was the norm in graduate schools, he encouraged his students and his colleagues to be multi-disciplinary, not with the aim of getting a job on the outside, but to be assured of the broadest possible understanding of the research at hand.

His appreciation of other disciplines of the earth sciences, his desire to communicate discoveries (large and small) to the public, his aim to make his work and the work of his students meaningful to society, and his disdain for mediocrity in science have set him apart as a unique leader in his field for over five decades.

His students and his colleagues here wish to recognize the most distinguished career and contributions of Dr. Troy L. Péwé.

Please join me in a warm applause to our teacher, colleague, and dear friend.

Response by John Westgate

Madam Chairman, Lisa, Rick and colleagues:

Let me acknowledge at the outset that my comments draw freely on letters I've received from a number of Troy's students, friends and colleagues.

During the course of his long career, Troy Péwé made outstanding contributions to our science -- as a teacher, researcher and administrator. He received his formal education at Augustana College, Illinois, the State University of Iowa, and Stanford University, where he received his Ph.D. in 1952 for his studies on the origin of upland silt in the Fairbanks area of central Alaska. Since then, he worked with the United States Geological Survey, Alaskan Geology Branch (1946-92), the University of Alaska at Fairbanks (1954-65), and Arizona State University (1965-1999).

Possessing a deep commitment to teaching, Troy's contagious enthusiasm inspired many students into the geosciences and guided several generations of graduate students into outstanding careers. His courses in Geomorphology and Quaternary Geology were always packed despite their demanding nature and students who took them benefitted not only in terms of their knowledge of the subject matter but also in terms of their personal development. Troy forced them beyond the limits of their perceived abilities. He introduced hundreds of students to the Grand Canyon each year and also taught a course on "Man and the Geological Environment", aimed at the non-geology student, seeing the importance of informed policy makers as students went on to jobs in the public sector. His course on the "Geology of the Grand

Canyon" -- offered as recently as two years ago -- culminated in a raft trip down the Canyon and has become legendary. Geology and history were intermingled, and, I'm told, John Wesley Powell was present at the last campfire, moving among the participants, in spirit and embodied!

Troy's research interests spanned the fields of geomorphology, Quaternary geology, and environmental geology. His work in Alaska goes back more than 50 years and included studies on permafrost and seasonal frost, glaciology, glacial geology of the central Alaska Range and Yukon-Tanana Upland, the origin and age of interior upland silts, and the interglacial forest beds within the loess sequences of the Fairbanks area. Benchmark papers were written on the effects of permafrost on agriculture, origin of loess, origin and paleoclimatic significance of large-scale polygons, Quaternary geology of Alaska, Quaternary stratigraphy of unglaciated interior Alaska, geologic Hazards of the Fairbanks area, and the 125 ka interglacial Eva Forest Bed At Fairbanks, published as a Geological Society of America Special Paper a few years ago.

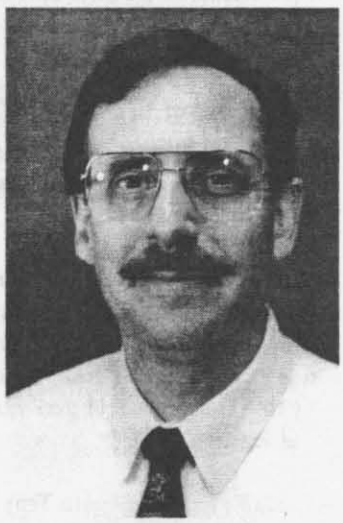
New research interests evolved on moving to Arizona in 1965. The glacial geology of the San Francisco Peaks and White Mountains were quickly tackled, but later, Troy's focus changed to the environmental and engineering geology of the greater Phoenix area. Beginning with an environmental geological survey of a portion of the McDowell Mountains for the city of Scottsdale, Troy spearheaded a series of projects funded by various municipalities and agencies that resulted in more than 20 comprehensive reports. The legacy of these studies is not only the foundation data upon which much of the planning of the greater Phoenix area has depended, but also the more than 30 Masters students who were involved with these projects, every one of whom has gone on to a successful career in environmental geology. Other research efforts addressed geologic problems in other countries, including Antarctica, Siberia, and China; his imagination and expertise even extended to extraplanetary surfaces, such as Mars.

Troy enthusiastically served his professional colleagues and scientific communities in many administrative and advisory roles. He served as Chair of the Geology Department at the University of Alaska at Fairbanks (1958-65) and later at Arizona State University (1965-76), elevating both to first-class research and teaching units. Indeed, Geology at ASU is now recognized by the University as one of the strongest departments on campus and certainly the most active in research. Given his outstanding leadership and administrative skills, considerable energy, and widespread recognition of his accomplishments amongst his colleagues, it followed that Troy was elected to prominent positions within numerous professional bodies. For example, he served as President of AMQUA(1984-86), member of the Board of Governors of the Arctic Institute of North America (1969-74), President of the Arizona-Nevada Academy of Sciences (1982-83), Chairman of GSA Quaternary Geology and Geomorphology Division (1981-82), member of the Periglacial Commission of the International Geographical Union (1967-72, 1981-88), and President (and a Founding Father) of the International Permafrost Association (1988-93) -- to name a few!

In sum, Troy distinguished himself as a preeminent international Quaternary scientist, he was responsible for guiding several generations of graduate students into outstanding careers, he excelled as a teacher and academic administrator, and he demonstrated the same longevity, resistance and resilience as the permafrost for which he is renowned. His positive attitude, constant energy, willingness to embrace new ideas and to interact with younger colleagues and friends are sources of inspiration to us all. Hence, it is entirely appropriate that his professional society and colleagues recognize his outstanding life-long accomplishments by awarding him -- posthumously -- the 1999 Distinguished Career Award.

KIRK BRYAN AWARD

WILLIAM L. GRAF



Citation by W. Andrew Marcus

Professor William L Graf is the recipient of the 1999 Kirk Bryan Award for his remarkable publication, *Plutonium and the Rio Grande: Environmental Change and Contamination in the Nuclear Age*, published by Oxford University Press.

Plutonium and the Rio Grande documents and explains the distribution of plutonium, particularly plutonium from Los Alamos National Laboratory, in the river sediments of the Northern Rio Grande. A simple question, "where are the metals and why are

there?" but one which takes Graf and his readers on a captivating geographic journey through the history, landscapes and riparian environments of the Rio Grande. Along this journey we delve into the atomic policies of World War II, look at the biogeography of semiarid riparian systems, examine the engineering works of the 20th century, reconstruct watershed-wide histories of climatic variation, sedimentation, and flooding, and develop and test theories of contaminant distributions at reach to watershed scales through clever use of modeling and an empirical data base of epic proportions.

In simplest terms, *Plutonium in the Rio Grande* is a great read. Beyond that simple statement, however, four factors set *Plutonium and the Rio Grande* apart as a major work of research.

First, the empirical data set developed for the research is extraordinary, providing powerful backing for the conclusions in the study and a treasure trove of information for future work in the Rio Grande.

Documenting historical changes of plutonium distributions in sediments and the variables controlling these distributions for a 72,000 km^2 drainage at local to watershed scales is an exceptional task. Yet Graf rises to this challenge, mixing and matching modeling with existing data, old and new mapping approaches, and dating techniques derived from a variety of different sources.

As just one example, Chapter 6 reports on the sampling of 1,985 trees throughout the drainage to determine if trees can be used to discriminate channel form and sediment texture. The association of vegetation and sedimentary environments discovered by Graf is an efficient method for mapping fluvial landforms and local areas of probable plutonium accumulation. The development of this one technique required a major effort and is a contribution to geomorphology deserving of its own publication, yet only makes up five pages of one chapter.

Second, the concepts laid out in *Plutonium and the Rio Grande* significantly advance our understanding of the temporal and spatial variability of contaminants in stream sediments.

Geomorphologists have long known that geomorphic environment plays a primary role in controlling trace metal distributions in river sediments. The majority of work in this field has focused on qualitative descriptions of metal patterns in different depositional environments, the use of regression models to simulate downstream trends, documentation of the associations between tractive force and metal concentrations, or derivation of simple deterministic models that mimic watershed-wide trends in metal concentrations. No previous research has developed data sets or models that link and explain reach-scale to sub-basin scale variations of metal concentrations in sediments, much less simulate these variations under different flow conditions and over different periods of time. In *Plutonium and the Rio Grande,* William Graf succeeds in this ambitious task.

Third, the study provides a comprehensive and useful guide to research approaches necessary to document and understand human impact on sediment contamination at watershed scales. Professor Graf outlines very specific guidelines for documenting and understanding metal distributions and impacts, and then leads by example with myriad case studies of how these concepts can be put into action. *Plutonium and the Rio Grande* thus provides a role model for future studies to follow.

Fourth, because of the clarity of writing, the findings are accessible to educated resource managers, environmental lawyers, and other interested parties as well as geomorphologists. Professor Graf's research will allow managers to target potential hot spots for remediation in the Rio Grande, rapidly develop emergency sampling protocols for tailings or metals spills in similar fluvial systems, and evaluate the significance of future changes in plutonium in the Rio Grande. *Plutonium and the Rio Grande* leads the way in demonstrating how geomorphology can inform policy and help society.

In summary, *Plutonium and the Rio Grande* represents the best that geomorphology can contribute to the earth sciences. The geographic roots of its author shine in its extensive use of maps as a tool of description and analysis, in its explicit examination of the spatial variability of human impacts, and in its focus on a region -- the Northern Rio Grande. The study also proudly displays its geologic roots, making wide use of historical documentation and dating techniques. And it is quintessential geomorphology, concentrating on process modeling of sediment and metal transport, and explicitly focusing on geomorphic landform as the primary control on plutonium storage throughout the Rio Grande.

In his preface (p. viii), William Graf states:
For me, there is a deep sense of pleasure in using science to analyze questions such as the issue of plutonium in the Rio Grande. It is much like the sense of pleasure a carpenter feels in using a finely made tool. And there is a sense of satisfaction in the scientific resolution of these questions, much like the satisfaction of the carpenter with a pleasing piece of woodwork. The science notwithstanding, I always return to this place, this landscape, these spirits, and I know again why this work is more than science. America has accomplished many great things, but preserving a quality of life as well as a quality environment is our greatest challenge for the twenty-first century. Efforts to understand places like the Northern Rio Grande in their entirety, with their human and natural histories, are the surest path to achieving this ambition of a quality national life.

With *Plutonium and the Rio Grande*, Professor Graf has achieved his goal. He has built an edifice that represents the best

of what geomorphologists can contribute to science, but also represents the best of what geomorphologists can contribute to society.

Response by William L. Graf

Thank you very much, Andrew, for your kind remarks. I'm not sure they are all true, but I'm grateful in any case for your support, and the support of the nominators and the Division Award Panel. I am truly honored by the Kirk Bryan Award and the recognition of the Geological Society of America. For more than a quarter of a century the members of the Quaternary Geology and Geomorphology Division have been my valued professional associates and personal friends, and I am delighted to acknowledge that whatever I have accomplished as an individual has actually taken place within the supportive context of these people. I also want to recognize Senior Editor Joyce Berry, of Oxford University Press, whose sound advice and good judgment immeasurably improved the book *Plutonium and the Rio Grande*.

I am grateful to her and to Oxford University Press for their dedication to the production of a quality product, and for their willingness to undertake the additional expense and difficulties of publishing the basic raw data of the project.

The eight years of work that led to the publication of *Plutonium and the Rio Grande* reflect three important threads that are common to all modern earth science: the continuity exceeds the contributions of any one of us; the nature of our research connects us with other sciences; and answers we provide have true societal importance. My research into the environmental quality consequences for the Rio Grande of the Manhattan Project at Los Alamos, New Mexico, was a continuation of important work started by many others. The U.S. Department of Energy financially supported the research. Alan Stoker, a Los Alamos specialist in plutonium, undertook an initial accounting of the material released into the environment, at a time when he risked disapproval of some of his superiors. Leonard Lane, a Department of Agriculture hydrologic engineer, William Purtyman, a geologist, Thomas Hakonson, a radioecologist, Thomas Buhl, a health physicist, and Steven McLin, a hydrologist, all conducted and published research that was preliminary to my own. They worked closely with me in my own investigations and greatly contributed to my efforts. I also want to recognize Steven Reneau, a Los Alamos geomorphologist, who picked up the work where I left off, in a continuing effort to understand the dynamics of plutonium in the fluvial environment.

It has been the easy cooperation among all these disparate researchers and personalities that has led to our progress.

No great and challenging research problem of interest to modern society is limited to a single discipline. While the great advances of science in the past two centuries have been largely made in the analytical arena, constantly reducing problems to their most elemental bits and pieces for study, there is now a great need for synthetic science. Approaches based on synthesis that seek scientific understanding of complex functional, interactive systems demand interdisciplinary efforts at the individual and team level of research. The unraveling of the study of plutonium in the Rio Grande would not have been possible without attention to such diverse (but actually closely related) topics as the physical chemistry of the element, geomorphology, hydrology, biogeography, water resource engineering, and the human history of the region. Almost a decade and half ago, one of our most revered division members, Charlie Hunt, decried in print the lack of such integrative approaches in modern geomorphology. I think he would be pleased with the progress we have made in recognizing the importance of these approaches to synthesis that are now much more common.

Plutonium and the Rio Grande is both basic and applied research, and I believe it emphasizes the fact that the division between these two labels is fast disappearing. As we enter the 21st century, the society that pays the bills for our research is demanding new levels of accountability for their investments in us. It is no longer acceptable for us to escape into the field, office, or laboratory and then argue that what we do advances science and is therefore worthy of support. Our theory must serve purposes that are recognizable to the educated layperson, and our applications in problem solving must be elegant and intellectually satisfying to the most demanding scientific critic. In this new era, basic and applied science are likely to be the same thing. The challenge for us is that we not only do good science, but that we do useful science.

My research at Los Alamos shows that in an effort to construct a weapon to protect our nation, we paid great environmental costs. The federal government has already spent heavily to rectify the problem, and eventually we are likely to invest ten times more in environmental restoration than we did in the original bomb project. This expenditure reflects our changing social values to recognize that Earth is the only home humanity is likely to have for a long time to come. As earth scientists, it is our responsibility to offer the experience, the intellect, and the will (as evidenced by this generous award) to contribute to the making of a quality environment for all future generations.

STUDENT AWARDS: J. HOOVER MACKIN AND ARTHUR HOWARD RESEARCH GRANTS

See the announcements of the winners in the Minutes of the QG&G Management Board below. Congratulations to these student winners.

MEMORIAL FOR TROY L. PÉWÉ

Troy Péwé, who earned an international reputation as an outstanding Quaternary geologist and geomorphologist, died on 21 October 1999 in Phoenix, Arizona at the age of 81.

Troy was born on 28 June 1918 in Rock Island, Illinois. He earned his doctorate at Stanford University, Palo Alto, California, in 1952.

Troy's career covered two major divisions. The first was focused in Alaska from 1946 to 1958 as a Geologist with the U.S. Geological Survey, Alaskan Geology and Military Geology Branch, and from 1958 to 1965 as Professor and Head of the Department of Geology at the University of Alaska, Fairbanks. Just a month before his death, Troy attended the dedication of the Troy L. Péwé Climatic Change Permafrost Reserve in Fairbanks, Alaska.

The second major stage was his appointment as Professor and Head, Department of Geology at Arizona State University, Tempe, Arizona, from 1965 to 1976, and then his continued work there as Professor in the Department, with the additional assignment as Director of the Museum of Geology, which he established.

In addition to these two major bases of activity, Troy was awarded numerous travel grants for work abroad. These included research in the Antarctic during the International Geophysical Year 1957-58, work in Yakutia, Siberia, U.S.S.R. in 1973, Svalbard, 1979-1981, and China, 1980, 1982, 1984, and 1986.

Troy belonged to a number of professional societies, many as a Fellow. Those of which he was an officer include the American Association for the Advancement of Science, Alaska Division President 1956-1957; American Quaternary Association, President 1984-1986; Arctic Institute of North America, Board of Governors 1969-1974; Arizona-Nevada Academy of Science, President 1982-1983; Geological Society of America's Quaternary Geology and Geomorphology Division, Chairman 1981-1982; International Permafrost Association, Vice President 1983; National Academy of Sciences Polar Research Board Committee on Permafrost, Chairman 1975-1981. A listing of Troy's publications numbers some 350 items.

Troy is survived by his wife Mary Jean, sons Richard and David, and daughter Lisa.

Most fittingly, Troy's stature and accomplishments were posthumously honored by his being awarded the 1999 Distinguished Career Award from the Geological Society of America's Quaternary Geology and Geomorphology Division.

A.L. Washburn

TROY L. PÉWÉ CLIMATIC CHANGE PERMAFROST RESERVE

The following text was sent to the newsletter editor by Troy Péwé shortly before his death:

At this site, called Gold Hill, the United States Smelting, Refining, and Mining Company mined 126,000 ounces of gold worth 4.4 million dollars from gravel under the loess from 1951 to 1957. In 1989, 25.5 acres were purchased by the University of Alaska through an appropriation from the Alaska Legislature, to be set aside as a permanent scientific research site. Professor Troy L. Péwé, Head of the Geology Department, School of Mines, from 1958 to 1965, and Senator Bettye Fahrenkamp were the motivating forces behind this acquisition. Research at the site since 1947 by Professor Péwé and his associates traced back the geological and climatic history of the site to about three million years ago, as laid down in the frozen layers of windblown "loess"dust, ash layers from volcanic eruptions, and ancient tree trunks and animal remains exposed in 200-foot high silt cliffs created by gold mining. Several major episodes of global warming are recorded, with times of major permafrost thawing and great erosion of loess, alternating with major periods of loess deposition and permafrost formation. This makes it one of the richest sites for the study of past climates in Alaska. It is now preserved for future generations of researchers.

The reserve is located a few miles west-southwest of the University of Alaska-Fairbanks campus.

MINUTES OF THE QG&G MANAGEMENT BOARD MEETING
and
2000 ANNUAL REPORT TO GSA COUNCIL
Denver, Colorado
Sunday, October 24, 1999

Attending: Chair A. Hansel; 1st Vice Chair P. Clark; 2nd Vice Chair C. Kochel; 2nd Vice Chair-elect D. Harden; Treasurer (and Acting Secretary) J.S. Kite; Treasurer-elect S. Burns; Newsletter Editor W. Johnson; Panelists: A. Bettis, B. Burke, P. Knuepfer, E. Muller, J.E. O'Connor, M. Reheis; GSA Councilor S. Wells; Members: D. Easterbrook, F. El-Baz, A. Gillespie.

1. **Easterbrook Distinguished Scientist Award**

Draft award procedures for the Donald J. Easterbrook Distinguished Scientist Award were presented and discussed. Formal procedures will be drawn up, in consultation with Easterbrook, and approved by the Management Board. Plans are to present the first award in 2000. The amount of the award will be determined by the GSA Foundation, but the Division will control the award process. The award amount will be a substantial incentive for an accomplished researcher to conduct research in Quaternary Geology or Geomorphology.

2. **Farouk El-Baz Award for Desert Research**

Mohamed Sultan was announced as the first recipient of the annual Farouk El-Baz Award for Desert Research. Farouk El-Baz was citationist at the Annual QG&G Business Meeting and this year's award was set at $1000. The Division was informed of the award after the 1998 business meeting, so an *ad hoc* set of award procedures were used for the 1999 award. El-Baz explained the rationale for the award and some suggested guidelines for selection of future recipients. Recent contributions will allow the award amount to increase greatly in future years. Permanent award criteria and procedures will be drawn up and approved by the Management Board before the end of the year. The amount of the award will be determined by the GSA Foundation, but the Division will control the award process. (In March 2000, the Division learned that the award amount for 2000 will be about $10,000.)

The Division is elated to be involved in two new prestigious awards, and appreciative of the generosity and effort extended by both Easterbrook and El-Baz. Several officers and panelists recognized that these two substantial awards deserve more formal presentation time than the bursting-at-the-seams QG&G annual business meeting agenda will allow. Division officers were directed to explore the possibility of providing each of these two awards (citationists and recipients) with 30 to 40 minute time slots during a Tuesday afternoon session in the GSA program. (In response to numerous comments from the membership, in February 2000 the Management Board voted to reduce the time allowed for award citations and responses at the annual evening business meeting and awards ceremony to five minutes for each citation and response.)

3. **Secretary's Report** (Alan Nelson)

1999 Election Results: The percentage of returned ballots this year was 16% (195/1180), up from 10% last year. This, however, is not close to return rates of 29% in 1996 and 23% in 1997. For the 2000 election, Bill Johnson and GSA have arranged for an optional interactive ballot form to be placed on the new Division web site. We hope the web ballot will increase the return rate, especially among younger members.

Chair:	**Peter U. Clark**
Vice Chair:	**R. Craig Kochel**
2nd Vice Chair:	**Deborah R. Harden**
Treasurer:	**Scott Burns**
1999-2001 Panelists:	**Arthur E. Bettis III, Marith C. Reheis, Peter Knuepfer**

Special thanks to other candidates (Paul Bierman, Frank Pazzaglia, Steve Kite, & Rich Whittecar) and to the 1998-99 Nominating Committee ("Bud" Burke – Chair, Jim Knox, Ernest Muller).

The proposal to increase Division dues to $8.00 won handily with 174 of 185 (94%) votes.

Membership: The Division continues its steady growth. GSA shows **1401 members** as of 4 Oct 1999, 4% more than the 1346 members in Oct 1998. We had 1330 members in 1997, 1245 members in 1996, and 1179 members in 1995. QG&G remains the second largest GSA Division, trailing only Structure and Tectonics.

4. **Treasurer's Report** (Steve Kite)

As of either 30 September or 1 October 1999, the following balances were shown in Division or Division-related accounts:

QG&G Division Account:	$ 1,934.87
J. Hoover Mackin Fund:	$ 53,604.44
Arthur D. Howard Fund:	$ 50,462.77
Kirk Bryan Fund (GSA):	$ 50,956.93
Farouk El-Baz Fund (GSA):	$139,526.00

The award accounts have grown spectacularly and, with the new Donald J. Easterbrook Fund, provide excellent resources to meet the Division's goals. The Division Account, after annual meeting expenses, is likely to show a small deficit in 1999 for the third consecutive year. This recurring problem will be addressed in 2000 with the increase in Division dues from $5.00 to $8.00.

Grant A. Meyer is the 1999 recipient of the **Gladys W. Cole Memorial Research Grant** ($11,000) for his work: *Postglacial climate and alluvial system processes in the arid Bighorn Basin, Wyoming: Insights through comparison to adjacent high-elevation systems.*

5. **Newsletter Editor's Report** (Bill Johnson)

Several new initiatives were discussed, including putting old newsletters on the web site to serve as a Division Archive.

The Management Board voted unanimously to support a motion to establish the Newsletter-Editor/Webmaster as a formal officer in the Division. (This motion was passed by a voice vote of the membership at the Annual Business Meeting on 25 Oct 1999.)

6. **Second Vice-Chair's Report** (Craig Kochel)

J. Hoover Mackin Research Grants of $2000 for Ph.D. research were awarded to **Sarah Konrad**, Univ. of Wyoming (*Flow dynamics of Galena Creek Rock Glacier, Absaroka Mountains)* and **Stephen Thompson**, Univ. of Washington (*Luminescence dating to evaluate hydrologic change, fold growth, and fault slip, Tien Shan, Kirgiz Republic).*

J. Hoover Mackin Honorable Mention certificates were awarded to **Matthew Lachniet**, Syracuse Univ. (*Late Quaternary paleoclimate derived from Costa Rican lake deposits),* **Jeffrey Munroe**, Univ. of Wisconsin-Madison, (*Late-Quaternary history of the Uinta Mountains, northeastern Utah)* and **Catherine Yansa**, Univ. of Wisconsin-Madison (*Vegetation and climate change in the northeastern Great Plains during the late Pleistocene and Holocene: pollen and plant macrofossils).*

The Arthur D. Howard Research Grant of $1800 for M.S. research was awarded to **Robert Burrows**, Western Washington Univ. (*Glacial chronology and paleoclimatic significance of Swift Creek and Shuksan Creek cirque moraines, North Cascade Range).*

Arthur D. Howard Honorable Mention certificates were awarded to **Michele Koppes**, Univ. of Washington (*Calving retreat and the paleoclimatic signature: sediment accumulation from tidewater glaciers)* and **John Van Hoesen**, Univ. of Nevada-Las Vegas (*Assessing the potential of stable isotopic analysis of pedogenic gypsum as a paleoclimate indicator).*

Special thanks to the 1999 Mackin-Howard Panel: Craig Kochel, Peter Clark, Steve Esling, Ed Evenson, Hugh Mills, and Jerry Miller, who reviewed 7 Mackin and 10 Howard award applications.

Panelist O'Connor added some insights into other student awards. The GSA Student Grants now average $2500 each with a success rate of about 45%. (QG&G Division Awards must grow to keep pace.) GSA Student Grant proposals are unlikely to be reviewed by a member of our Division and should be written toward general geological reviewers. The significance of the work must be clear in the student's proposal. (In February, the Management Board voted to adopt the downloadable GSA Application for a Research Grant form (with one additional page) for use within the Division for students applying for these two grants. This greatly simplified the 2000 application process for both students and the Division Secretary.)

7. **First Vice-Chair's Report** (Peter Clark)

Sadly, the recipient of the **Distinguished Career Award, Troy L. Péwé,** passed away just before the annual meeting. Péwé's son Rick and daughter Lisa accepted the award at the Annual Business Meeting, and John Westgate and Randy Updike served as citationists. A check for $500 mailed to Troy from the Division in July helped the family with travel costs. Peter Birkeland's nomination carries over for 2000.

Plans for the Summit 2000 GSA Meeting were discussed, including the 10 Jan deadlines for Keynote Symposia and Topical Session proposals and the 1 August abstract deadline. 2000 JTPC Reps will be Clark and Kochel. Members are encouraged to submit proposals for Pardee Keynote Symposia (for which limited travel funds are available) and Topical Sessions (no travel funds are available).

A student best paper award was discussed, with an intent to further develop this concept in 2000. The Treasurer was instructed to determine the number of QG&G student associates who presented papers at this meeting (S. Kite answer: about 22).

8. **Chair's Report** (Ardith Hansel)

Chair Hansel reported that at least 21 paper sessions at GSA were related to the Division. A total of 299 abstracts were submitted with QG&G listed as their primary topical area, more than for any other Division. We continue to be the most active Division in the Society.

All members are encouraged to enter barnesandnoble.com or amazon.com via the GSA home page (http://www.geosociety.org) and GSA Foundation will earn 7% of the purchase price. (The Treasurer tried this on 01/12/1999 and could not find the appropriate links).

The Annual Meeting Business agenda was set.

9. **Other business**

Alan Gillespie and Steve Wells presented the Desert Research Institute's plans to host the next **International Quaternary Association Meeting** in Reno, which will be held 28 July-6 August 2003. The theme of INQUA 2003, the first such meeting in the US since 1965, will be Frontiers in Quaternary Geology.

The Management Board voted to support the 2003 INQUA meeting in Reno.

10. **New Business Items Suggested by Panel Members**

Panelists Burke and Rodbell (*in absentia*) introduced a proposal to present a Division **award for undergraduate theses**. The Board was very supportive, but had many questions on the implementation of this award. The Treasurer was instructed to determine if GSA would waive or refund annual meeting registrations for award winners (Nancy Carlson's answer: not likely). Burke and Rodbell were encouraged to formulate a detailed plan for implementing this award for the next Management Board meeting.

11. **Adjournment** at 11:00 p.m.

BIOGRAPHIES OF THE CANDIDATES FOR THE QUARTERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION.

DAHMS, DENNIS E., b. Kansas City, MO, 12-05-49. QUATERNARY STRATIGRAPHY, SOILS, GLACIAL GEOMORPHOLOGY. Educ.: Univ. of Missouri, BJ 71, MA 73; Univ. of Colorado, MA 83; Univ. of Kansas, PhD 91. Prof. Exp.: Cinematographer, PBS, 1974- 1977; Geomorphologist (part-time/full-time), Science Applications, Inc., 1979-1982; Instr., UNIVERSITY OF NORTHERN IOWA, 1990-91; Asst. Prof., 1991-96; Assoc. Prof., 1996-present. Memberships: GSA, AAG, AGU, SSSA, AMQUA, INQUA (Paleopedology working group; World map of Pleistocene Glaciation working group). Directed 4 theses; member of 3 thesis committees. Helped conduct 1989 Rocky Mtn FOP (Wind River Range). Research: quaternary glacial stratigraphy of Wind River Range; cosmogenic radionuclide exposure age-dating of Quaternary deposits and analyses of alpine glacial erosion rates; soil geomorphology, soil chronosequences, eolian processes in basin-alpine environments. Mailing address: Dept. of Geography, #127 Sabin Hall, University of Northern Iowa, Cedar Falls, IA 50614-0406; dennis.dahms@uni.edu

DETHIER, DAVID P., QUATERNARY GEOLOGY, GEOMORPHOLOGY. Educ.: Dartmouth College, A.B., 1972, Univ. of Washington, M.S. 1974; Ph.D., 1977. Prof. Exp.: Geologist, U. S. Geol. Survey, 1977-81, Staff Member, Los Alamos National Laboratory, 1981-82; Asst. Prof.-Prof., WILLIAMS COLLEGE, 1982-present. Memberships: GSA, AGU, SSSA, AAAS (Geology and Geography Section Nominating Committee, 1997-99); Research: glacial history of the Puget lowland, Washington; geomorphology of the Española basin, New Mexico; geochemistry and hydrology of surface water; geomorphic evolution of w. Massachusetts. Mailing Address: Dept. of Geosciences, Williams College, Williamstown, MA 01267; e-mail: ddethier@williams.edu

HARDEN, DEBORAH R., b. Pittsfield, Mass, GEOMORPHOLOGY, FLUVIAL SYSTEMS; Educ: Stanford, BS, MS 1973; Univ. of Colorado, PhD 1982; Prof. Exp.: Professor, San Jose State Univ. 1986-present; Geologist, Woodward Clyde Consultants, 1980-83, Hydrologist, USGS, Menlo Park, 1974-89, Tech USGS 1971-74; Membership: GSA, QGG Divison panel member 1989-90, Sec 1990-94; Interests: Fluvial processes; tectonic effects on stream systems; watershed impacts; California geology; teaching and geoscience literacy. Mailing address: Dept. of Geology, San Jose State Univ., San Jose, CA 95192-0102; harden@geosun1.sjsu.edu

KITE, J. STEVEN, QUATERNARY GEOLOGY, GEOMORPHOLOGY. Education: James Madison Univ., B.S., 1976, Univ. of Maine, Orono, M.S. 1979; Univ. of Wisconsin, Madison, Ph.D., 1983. Professional Experience: Instructor, James Madison Univ., 1978-80, Asst.- Assoc. Prof., WEST VIRGINIA UNIV., 1983-date; Co-operating Geologist, WEST VIRGINIA GEOLOGICAL SURVEY, 1990-date. Memberships: GSA (QGG Secretary 1994-98, treasurer 1998-99), AAG, AGU-Hydrology, AMQUA, WV Arch. Soc., Southeastern FOP (executive officer 1987-date). Research: Late Cenozoic history of the Appalachian Mountains, paleohydrology of the Ohio River basin, sedimentology & geomorphology of debris flows & extreme floods, reclamation geomorphology, geoarchaeology. Mailing Address: Dept. of Geology & Geography, West Virginia Univ., Morgantown, WV 26506-6300; e-mail: jkite@wvu.edu; Web site: http://www.geo.wvu.edu/~kite/

KOCHEL, R. CRAIG, b. Lancaster, PA, 12-16-53. GEOMORPHOLOGY, ENVIRONMENTAL GEOLOGY. Educ.: Franklin & Marshall College, AB 75; Southern Illinois Univ., MS 77; Univ. Texas at Austin, Ph.D. 80. *Prof. Exp.*: Asst. Prof., Dept. of Environmental Sciences, Univ. Virginia 80-81 and 82-83; Asst. Prof., Dept. of Geology, SUNY Fredonia 81-82; Asst. Prof., Dept. of Geology, Southern Illinois Univ. 84-87; Assoc. Prof., 87-90; Prof. and MacArthur Chair, DEPT. OF GEOLOGY, BUCKNELL UNIV., 90-95; Prof. and DEPT. CHAIR 94-present. *Mem.:* GSA (Fellow), SigmaXi, YBRA. *Res.*: Flood geomorphology, with emphasis upon magnitude and frequency issues, flood impacts, and recovery processes; Appalachian debris flow processes, frequency, and role in evolution of alluvial fans (recent emphasis on Madison County, VA floods of 1995); interactions between storm overwash, hydrology, and vegetation on Virginia barrier islands; effects of short-term climate changes on desert slope and fluvial systems in southern California; paleoflood hydrology and slackwater deposits; evidence for water on Mars—planetary images, terrestrial analogs, and experimental flume studies. Mailing address: Dept. of Geology, Bucknell Univ., Lewisburg, PA 17837, kochel@bucknell.edu

MEYER, GRANT A., GEOMORPHOLOGY, QUATERNARY GEOLOGY. Educ.: Univ. of Idaho, BS 1978; Montana St. Univ., MS 1986; Univ. of New Mexico, PhD 1993. Professional Exp.: USGS Field Ass't./Geologist 1978-1983; Ass't. Prof., Middlebury College, 1993-1999; Ass't. Prof., Univ. of Oregon, 1999-present. Memberships: GSA (Fellow), AGU, AMQUA; Prof. Service: Geology editorial board 1999-present; FOP trips. Awards: UNM Kelley-Silver Fellow, GSA Kirk Bryan, Cole Research Award. Research: climatic and tectonic geomorphology, debris flows and floods, fire effects, hazards, hillslopes and fluvial systems, Yellowstone region, western US. Mailing Address: Geography Dept., Univ. of Oregon, Eugene OR 97403-1251; e-mail: gmeyer@oregon.uoregon.edu; Website: http://geography.uoregon.edu/meyer/

NELSON, ALAN R., QUATERNARY GEOLOGY, PALEOSEISMOLOGY Educ.: Univ. of Wisconsin-Madison, B.S. 1971, M.S. 1973; Univ. of Colorado, Ph.D. 1978. Prof. Exp.: Geologist, U.S. Bureau of Reclamation, Denver, 1979-1985; Research Affiliate, INSTAAR, Univ. of Colorado, 1981-present; RESEARCH GEOLOGIST, USGS, GOLDEN, CO 1985-present. Awards: Univ. of Colorado Graduate Fellowship 1975-78; Killam Fellowship, Dalhousie Univ., 1978-79; Gilbert Fellowship, USGS, 1989. Mem.: GSA 1972-, AMQUA 1972-, SEPM, AGU, AEG, SSA, IGCP274,367. Editorial Board: GEOLOGY. Research: Paleoseismology and tsunami hazards in U.S. Pacific Northwest; intertidal stratigraphy and micropaleontology applied to coastal tectonics; paleoseismic records in lakes; active deformation recorded by Holocene sea-level change; paleoseismology of strike-slip faults in The Philippines; paleoseismology of normal faults in Utah; neotectonics, geomorphology, amino acid dating, and soils in Basin and Range, western U.S. Mailing Address: Geologic Hazards Team, MS 966, U.S. Geological Survey, PO Box 25046, Denver, CO 80225-0046; anelson@usgs.gov

PATTERSON, CARRIE J., GLACIAL GEOLOGY, GEOMORPHOLOGY, GLACIOLOGY. Educ.: Northwestern Univ., B.A., 1984; Univ. of Minnesota, M.S., 1989; Univ. of Minn., Ph.D., 1996. Prof. Exp.: Asst. Geol., Harza Eng. Co., Chicago, 1984-1985; Instr., Earth Sci. Dept., St. Cloud State Univ., St. Cloud, MN, 1986-1988; Instr., Chem. Dept., St. Johns Univ., Collegeville, MN, 1987-1988; Proj.Geol., Foth and Van Dyke, Eden Praire, MN, 1988-1989; Assoc. to Senior Scientist, Minnesota Geological Survey, 1989-present; Adjunct Instr. to Assoc. Grad. Faculty, University of Minnesota, 1996-present. Memberships: GSA, AWG, AMQUA, INQUA. Research: Glacial processes, icesheet dynamics, glacial history of Minnesota. Mailing Address: Minnesota Geological Survey, University of Minnesota, 2642 University Ave., St. Paul, MN, 55114-1057; e-mail: patte018@tc.umn.edu; Website: http://www.geo.umn.edu/people/profs/PATTERSON.html

PAVICH, MILAN J., Quaternary Soils, Geomorphology and Stratigraphy. Education: Franklin and Marshall College, B.S., 1969, Johns Hopkins University, PhD., 1974. Prof. Exp.: USGS, Reston, VA, 1974-present. Memberships: GSA, AGU, AAAS. Research: Saprolite and soil genesis in the Appalachian Piedmont; Beryllium-10 geochemistry of soils and soil chronology; arroyo stratigraphy, fire history and paleoclimatology. Mailing address: USGS, MS 926A, Reston, VA, 20192; mpavich@usgs.gov

PERSONIUS, STEPHEN F., b. Alexandria, VA, 12/10/55. QUATERNARY GEOLOGY, PALEOSEISMOLOGY, NEOTECTONICS. Educ.: Utah State Univ., BS 1977; Montana State Univ., MS 1983. Prof. Exp.: Field Assistant-Geologist-RESEARCH GEOLOGIST, U.S. GEOLOGICAL SURVEY, 1983-date. Memberships: GSA, AMQUA, Colo. Sci. Soc. (Secretary, 1996-date), NM Geol. Society. Research: Paleoseismology of extensional (Western U.S.) and strike-slip (Philippines) fault systems; fluvial geomorphology and incision response to active tectonics (Pacific Northwest). Mailing Address: U.S. Geological Survey, Box 25046, MS 966, Denver Federal Center, Denver, CO 80225; personius@usgs.gov

WHITTECAR, G. RICHARD, QUATERNARY GEOLOGY, GEOMORPHOLOGY. Educ.: Univ. North Carolina–Chapel Hill, B.S. 1974; Univ. of Wisconsin–Madison, M.S. (Geology) 1976; Univ. of Wisconsin–Madison, Ph.D. (Geology and Geography) 1979. Prof. Exp.: Assist.-Assoc. Professor, 1979-pres., University Professor, 1998-2002, OLD DOMINION UNIVERSITY. Memberships: GSA, AMQUA, Southeastern FOP, Soc. Wetland Scientists, Virginia Assoc. Prof. Soil Scientists. Service: GSA QGG Division Newsletter Editor, 1995-1998; Associate Editor, Journal of Geoscience Education, 1998-pres.; Field Trip leader and guidebook editor, SEFOP, SE-GSA. Research: Cenozoic alluvial fans and boulder streams of the Appalachian Mountains, sedimentation and hydrology in wetlands on the Atlantic Coastal Plain, eolian strata and paleosols within coastal dunes. Mailing address: Dept. of Ocean, Earth and Atmospheric Sciences, Old Dominion Univ., Norfolk, VA 23529; e-mail: rwhittec@odu.edu; Webpage: http://web.odu.edu/webroot/instr/SCI/rwhittecar.nsf/pages/homepage

SPECIAL FEATURE

BRIEF HISTORY OF THE QG&G DIVISION

Rich Madole has graciously agreed to compose a series of essays that describe the history of our division. This is his first installment.

BRIEF HISTORY OF THE QG&G DIVISION—PART I

On April 15, 2000, the organization currently known as the Quaternary Geology and Geomorphology Division of the Geological Society of America will be 46 years old. The organization was one of the first Groups, now called Divisions, to be formed within the Geological Society of America. From the beginning, the organization has been one of the largest and most active groups, and for most of its history has grown and evolved steadily. Few aspects of the organization have remained unchanged since its inception, except for its purpose and the unifying interest of the membership in geomorphology and Quaternary geology.

At its April 1954 meeting, the Council of the Geological Society of America adopted a recommendation to amend its bylaws so that "representative numbers of Fellows and Members from particular branches of geology, with the consent of the Council, may organize as Groups of the Society." Geomorphologists were one of the first two groups to take advantage of the bylaws change. Anticipating that the bylaws would be changed, geomorphologists in the Society selected an ad hoc committee consisting of W.C. Putnam, L.B. Leopold, R.P. Goldthwait, and A.N. Strahler to organize a geomorphology group. In February 1954, Strahler, acting in the capacity of "temporary Secretary," wrote to the Secretary of the Society describing a letter that was being mailed to Fellows and Members whose major field of interest was geomorphology. The letter was intended to determine their interest in enrolling in a geomorphology group, and it also called for nomination of panel members and a nominating committee.

The letter stated that "The desire of our group to organize and protect its own interests in a rapidly growing Society is too strong now to be defeated, as it was five years ago, by a few who reflect longingly upon the old days when the Society was a small, well-knit group." By March 1955, the first slate of officers—Eliot Blackwelder (Chairman), J. C. Frye, (1st Vice-Chairman), A.N. Strahler (2nd Vice-Chairman), and R.P. Goldthwait (Secretary)—were elected by the Fellows of the Society who had enrolled in the Group.

Name Changes

During its 46 years of existence, the organization has been known by three different names. Initially, it was one of two groups, referred to, respectively, as the Group on Geomorphology and the Group on Coal Geology. At that time, Groups comprised members from "particular branches of geology" and Divisions comprised members working in "fields covering the application of geology to other fields of endeavor." Thus, the changes in the bylaws that led to the formation of the Group on Geomorphology also provided for the formation of the Division on Engineering Geology, as well as the creation of the various Sections of the Society. This organizational structure lasted for eight years before the Society amended its bylaws so that what had formerly been called Groups became Divisions. Beginning in 1963, the Group on Geomorphology became the Geomorphology Division of the Geological Society of America. At this time, there were only four Divisions; Coal Geology, Engineering Geology, Geomorphology, and Hydrogeology.

The third and final name change was initiated from within the Division, beginning with a recommendation from the Management Board at the annual meeting in Atlantic City in November 1969.

Beginning

In 1970, ballots were mailed to voting affiliates (all members, except for student associates) of the Division. The ballots contained three proposals: (1) change the Division name to be more inclusive, (2) change the time officers begin their terms, and (3) add a second choice (dual slate) for the office of Second Vice-Chairman. All three proposals passed by a large majority, although only a little more than half of the membership voted. Beginning in 1971, the Geomorphology Division became the Quaternary Geology and Geomorphology Division.

Membership

For most of its 46 years, the Division has alternated between being either the second or third largest of the GSA Divisions, vying mainly with the Engineering Geology and Hydrogeology Divisions for that position. Although Division membership fluctuated, it increased steadily from decade to decade, until the 1990s when it ended the decade with 10 fewer members then it had at the beginning of the decade. In 1957, two years after start-up, there were 350 members, and over the next 28 years membership grew at the rate of about 5% per year. Thus, membership doubled between 1957 and 1971, thanks to a spurt in growth from 637 to 717 members between 1970 and 1971. The next doubling required a similar number of years and also was attained during a growth spurt from 1191 to 1488 members between 1984 and 1985. An all-time high of 1551 members was attained in 1989, after which membership declined steadily to 1179 in 1995 before again increasing annually to close the decade at 1495.

Prior to 1977, membership in the Division was free of charge. Then, in June 1976, members approved, by mail ballot, a recommendation from the Management Board to begin charging dues in amount of $2. per year. Apparently, money issues generate greater membership participation because a whopping 628 ballots were returned, including 77 that voted to abstain. The members who voted against dues numbered 127. In spite of inflation, annual dues remained at $2. until 1988 when they were raised to $5. The third increase in annual dues came in 1999 when they were raised to $8.

For much of the past 46 years, Division officers and Newsletter editors have periodically commented on the low percentage of ballots returned and the low level of member participation in nominating candidates for awards or to stand for election. The level of participation in Division business has waxed and waned over the years, but may never have been as low as during much of the 1990s. In the 1960s and early 1970s, between 40% and 55% of the membership voted annually in elections and about 30% of the membership participated in making nominations. In 1970, nominations for the Division Panel included the names of 211 different members. By the early 1980s, these percentages had declined, but still were much higher than in the 1990s. In 1983, nominations for the Division Panel included 44 different names, not including several names received of individuals who were not eligible (mainly because they were not members) to stand for election.

Annual Business Meeting and Awards Ceremony

The Division bylaws stipulate that it will hold an annual business meeting during the Society's annual meeting and that the Division Management Board shall hold a meeting prior to the business meeting. Proposed changes to bylaws must receive Management Board approval, acceptance by voting affiliates of the Division, and ratification by the GSA Council. In practice, the voting affiliates present at the annual business meeting are considered to be representatives of the entire membership when a vote is required, such as for changes to the bylaws. In the early years, the annual business meeting was a luncheon meeting, which worked well when the Division membership was small. With the inauguration of the Kirk Bryan Award in 1958, the award ceremony became part of the annual luncheon-business meeting.

As the Division grew, the members attending the annual luncheon represented an ever-narrower cross-section of the total membership. By the 1980s, it had become increasingly difficult to find a room large enough to accommodate all who desired to attend the luncheon. In addition, the cost of the luncheon had risen to the point that it deterred many members and most students from attending. As Division membership increased, so did the length and complexity of the annual luncheon-business meeting, and with the addition of the Distinguished Career Award in 1986, the business meeting was on the verge of conflicting with the beginning of the afternoon technical sessions. In early 1987, Harvey Kelsey wrote a thoughtful letter to the Management Board, through the Division Secretary, suggesting that the Awards Ceremony be separated from the annual business meeting. He recommended that it be held at a time and place that would allow a greater number of members as well as friends and colleagues of award recipients to attend the ceremony. Finally, in 1989 the Management Board voted to end the traditional of an annual luncheon, and beginning in 1990, to have the business meeting/awards ceremony precede the Division "cocktail" party, which since its inception in 1984 had become a well-attended annual event.

The idea for the annual "cocktail" party was born in a breakfast diner in downtown Indianapolis on Thursday morning of the 1983 annual meeting. The Division can thank Gail Ashley and Tom Hamilton for the idea. They discussed their idea with then Secretary Rich Madole and John Costa, who also were at the diner that morning, and thus it was forwarded to become an agenda item at the next Management Board meeting. The principal reasons for a "cocktail" party were (1) the annual luncheon no longer provided much time or space for members to gather and socialize, and it had become too costly for most students, and (2) at the time, there were no planned events for the Wednesday night of the annual meeting. Consequently, the first annual Division "cocktail" party was held at the 1984 meeting in Reno, and was a huge success. During the first few years, a variety of schemes were attempted to recover some of the party costs from the party-goers. None of the schemes worked well, and were discontinued, as it became clear that the value of the event to the Division justified the use of Division funds to pay for the event.

NEW DIVISION AWARD
FAROUK EL-BAZ AWARD FOR DESERT RESEARCH

The Quaternary Geology and Geomorphology Division of the Geological Society of America seeks nominations for the Farouk El-Baz Award for Desert Research.

The Farouk El-Baz Award was established to reward excellence in research in desert geomorphology world-wide. The purpose of the award is to stimulate research in desert environments by recognizing an individual whose research has significantly advanced the understanding of the Quaternary geology and geomorphology of deserts. Although the award primarily recognizes achievement in desert research, funds that accompany the award may be used for further research. The award is normally given to a single person, but it may be shared by two people if the recognized research was the result of coequal partnership. In 2000, the funds that accompany the award will be $10,000.

Any scientist from any country may be nominated for the award. Because the award recognizes research excellence, self-nomination is not permitted. Neither nominators nor nominees need be members of the Geological Society of America.

Nominations are to be accompanied by supporting documentation, including: a statement of the significance of the

nominee's research; a resume, letters of support, and must include documentation of published research results that have significantly advanced our knowledge of the Quaternary geology and geomorphology of desert environments.

The deadline for nominations will is May 15 and nominations should be sent to Alan Nelson, U.S. Geological Survey, MS 966, Box 25046, Denver, CO 80225 (anelson@usgs.gov).

UPCOMING MEETINGS

2000

AMQUA 16th Biennial Meeting
May 22-24, University of Arkansas, Fayetteville

8th International Conference on Ground Penetrating Radar
May 23-26, Gold Coast, Queensland, Australia
See http://www.cssip.uq.edu.au/gpr2000.

Paleo-Grassland Research 2000
June 1-3, Water's Edge Resort, Westbrook, Connecticut
A conference on the reconstruction and modeling of past grass-dominated biomes (sponsored by National Science Foundation Geosciences: Earth System History and PAGES Past Global Changes-IGBP). Contact M.J. Wooller, Tropical Paleoenvironments Research Group, Department of Geography, University of Wales Swansea, Singleton Park, Swansea, SA2 8PP, or m.wooller@swansea.ac.uk.

Penrose Conference: Great Cascadia Earthquake Tricentennial
June 4-8, Seaside, Oregon
The conference will be multidisciplinary and multinational in scope, with talks and posters and a one-day field trip. Contact John J. Clague, Earth Sciences, Simon Fraser University, Burnaby, British Columbia V5A 1S6 Canada; 604.291.4924 (voice), -.4198 (fax); jclague@sfu.ca.

International Radiocarbon Conference
June 18-23, Jerusalem.
Sessions will be devoted to archaeology, calibration of the 14C time scale, geophysics and geochemistry of 14C, cosmogenic radionuclides, environmental past and present, global change, glaciology, hydrology, oceanography, geology, and soils. Contact the 17th International Radiocarbon, P.O. Box 29041, Tel Aviv 61290, Israel (972.3.517.5150-voice, .5155-fax); trgt@netvision.net.il; http://www.radiocarbon.co.il/.

International Glaciological Society Symposium
June 18-24, Fairbanks, Alaska
The conference is entitled "Sea Ice and its Interactions with the Ocean, Atmosphere, and Biosphere. Contact M. Jeffries (martin.jeffries@gi.alaska.edu), 907.474.7290 (fax).

Weathering 2000
June 26-30, Belfast, UK
See http://boris.qub.ac.uk/bgrg/diary/weathering2k.html. Contact B. Whalley (b.whalley@qub.ac.uk) +44 (0) 1232.335140.

8th International Symposium on Landslides
June 26-30, Cardiff, UK
See http://www.king.ac.uk/~ce_s011/is18-000.htm. Contact Cherrie Summers (SummersC@Cardiff.ac.uk) at +44 (0) 1222.874421.

5th International Symposium and Field Workshop on Paleopedology
July 10-16, Suzdal, Russia
The theme is paleosols and modern soils as stages of continuous soil formation. Topics will include polygenetic concepts of Quaternary and pre-Quaternary surface paleosols, methodological recognition of soils with relic properties, environmental implications of paleopedogenic features, buried Quaternary and pre-Quaternary paleosols, and paleopedology and archaeology. See http://www.fadr.msu.ru/inqua/reg.html. Contact A.O. Makeev, Soil Institute of the Faculty of Soil Science, Moscow State University (makeev@fadr.msu.ru).

IUFRO World Congress
August 7-12, Sumava Mountains, Czech Republic
The IUFRO Tree Ring Analysis 5.09 group is planning sessions to cover all aspects of tree-ring analysis. See http://iufro.boku.ac.at/iufro/congress/cip-98.pdf for a copy of the information packet.

Global Continental Palaeohydrology-4th International Meeting
August 20-28, Moscow and Central Russian Plain.
The meeting is entitled Hydrological Consequences of Global Climate Changes: Geologic and Historic Analogs of Future Conditions. Contact Alexander Georgiadi and Andrey Chepalyga, Laboratory of Hydrology, Institute of Geography, Russian Academy of Sciences, GLOCOPH 2000, Staromonetny per., 29, 109017 Moscow, Russia; 095.959.00.33 (fax), geography@glasnet.ru, or georg@ipcom.ru.

Paleolimnology Symposium
August 20-24, Queen's University, Kingston, Ontario
Contact John P. Smol and Brian Cumming (co-organizers), paleoecological Environmental Assessment and Research Lab (PEARL), Department of Biology, Queen's University Kingston, Ontario K7L 3N6, Canada; SmolJ@Biology.QueensU.Ca, or CummingB@Biology.QueensU.Ca.

Soil Erosion and Global Change
September 8-10, Almeria, Spain
The meeting, entitled "linkage of hillslope erosion to sediment transport and storage in river and floodplain systems," is to provide a forum for the presentation and discussion of recent developments in understanding the linkages that operate through a catchment system. Contact John Wainwright, Department of Geography, King's College London, Strand, London, WC2R 2LS, UK; +44.20.7848.2287, or john.wainwright@kcl.ac.uk.

British Geomorphological Group annual Conference 2000
September 12-14, University of Sheffield, UK
The meeting will be non-thematic, and papers and posters are invited on any topic of geomorphological interest. For registration, see http://www.shef.ac.uk/~g/bgrg. Contact Conference Secretary, BGRG Conference, Department of Geography, University of Sheffield, Western Bank, Sheffield, S10 2TN, UK; (0)114.22.7903 (voice), (0)114.279.7912 (fax).

European Society for Soil Conservation
September 15-17, University of Oxford, UK
A workshop, entitled "long-term effects of land-use on soil erosion in a historical perspective: European comparisons,"will review current work on past land use and erosion in Europe and plan a future collaborative project. The meeting will include oral and poster presentations. For further information see http://www.eci.ox.ac.uk/ld/ldhp.htm. Contact John Boardman (john.boardman@eci.ox.ac.uk) or Dave Favis-Mortlock (d.favis-mortlock@qub.ac.uk).

Karst 2000
September 17-27, Marmaris, Turkey
International symposium and field seminar on present state and future trends of karst studies. See http://www.karst.hun.edu.tr, karst@hun.edu.tr, or +90.312.299.2136 (fax).

International Association of Geomorphologists
Working Group on Large Rivers-Conference on the Mekong River
October 11-22, Singapore and Mekong River
Contact Avijit Gupta (avijit@foxhill.demon.co.uk).

Understanding Future Dryland Changes from Past Dynamics: Linkages between Fluvial, Lacustrine, and Eolian Systems
October 23-28, Desert Studies Center, Zzyzx, CA
The primary theme of the workshop will be the linkages and roles of the systems in the past and how they may be affected by future climatic changes. See http://www.dri.edu/Projects /IGCPworkshop. Contact Nicholas Lancaster, Desert Research Institute, UCCSN, 2215 Raggio Parkway, Reno, NV 89512; 775.673.7304 (voice); nick@dri.edu.

The Alluvial Archaeology of North-West Europe and the Mediterranean
December 18-19, University of Leeds, UK
Research themes will include multidisciplinary high-resolution landscape studies, impact of natural and anthropogenic environmental change, paleobiological research, modeling of catchment and valley floor evolution, geochronology and dating control, geoprospection, provenancing of alluvial sediments, management of alluvial archaeological resources, and experimental archaeology in alluvial settings. See http://www.geog.leeds.ac.uk/conferences/alluvial. Contact Dr. Andy J. Howard, School of Geography, University of Leeds, Leeds, LS2 9JT (a.howard@geog.leeds.ac.uk).

2001

7th International Conference on Fluvial Sedimentology
August 6-10, University of Nebraska-Lincoln
The conference, held every four years since 1977, seeks to stimulate the exchange of ideas between scientists with common interests in rivers and their deposits, both modern and in the geological record. The scope of the meeting will encompass geomorphology of modern rivers, sediment transport and deposition, Quaternary fluvial history, fluvial facies models, alluvial basin analysis and sequence stratigraphy, economic aspects of fluvial deposits, and river management. See http://www.unl.edu/geology/ICFS.html. Contact Dr. Mike Blum, Department of Geosciences, 214 Bessey Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0340, 402.472.7872 (voice), -.4917 (fax), mblum@unl.edu.

Fifth International Conference on Geomorphology
August 23-28, Tokyo
For information and registration, see
http://wwwsoc.nacsis.ac.jp/jgu/icp_hopa/indexicg.html.

Functions of Soils in the Geosphere-Biosphere Systems
August 26-29, Russian Academy of Sciences, Moscow State University, Moscow.
The main topics will include soil functioning in ecosystems, soil-atmosphere relationships, soil influence on the hydrological and hydrochemical cycles, soil functions in the lithosphere, soil as a record of geosphere-biosphere interactions, and soil as a natural resource for human society. Contact Alexander Makeev at makeev@fadr.msu.ru.

6th International Symposium and Field Workshop on Paleopedology
October 7-13, Mexico City
Themes of the meeting are expected to include paleosol-sedimentary sequences, magnetic properties of Quaternary and pre-

Quaternary paleosols and sediments as paleoclimate indicators, polygenetic models of pedogenesis in relation to Quaternary climatic change, biomorphs in paleosols, and paleopedology and archaeology. Three field trips are planned (pre-, mid-, and post-conference). Contact Dr. Elizabeth Sollerio-Rebolledo (solleiro@geologia.unam.mx) or Dr. Klavdia Oleschko (oleschko@seridor.unam.mx), +52.56.22.43.17 (fax).

Millennial-scale events in the North Atlantic region during Termination 1

June 13-18, University of Ulster, Northern Ireland.

Oral and poster contributions are invited for presentation at an international conference. The conference will focus on evaluating the timing, signatures and correlation of high-frequency hemispheric-scale climate and environmental changes during Termination 1 (last deglaciation) in the North Atlantic region, as can be deduced from ice core, marine core, and terrestrial (glacial, peat, lake) records. Papers presented at the conference are invited for submission to an associated volume, most likely a Geological Society Special Publication, edited by Marshall McCabe and Jasper Knight. See http://www.ulst.ac.uk/faculty/science/crg/home.htm ; or contact Jasper Knight (j.knight@ulst.ac.uk).

FRIENDS OF THE PLEISTOCENE FIELD CONFERENCES

MIDWEST CELL

June 2-4, 2000

This year's leaders, Rolfe Mandel (University of Kansas) and Art Bettis (University of Iowa), will focus on late-Quaternary landscape evolution in the South Fork Big Nemaha River, southeastern Nebraska and northeastern Kansas. Sites will express alluvial and colluvial records, late-Pleistocene loess, Pre-Illinoian till, late-Pleistocene buried soils, and surface and subsurface archaeological sites. The Hiawatha Inn, Hiawatha, KS will be the conference headquarters. For further information contact Art Bettis, Department of Geoscience, 121 Trowbridge Hall, University of Iowa, Iowa City, IA 52242; 319.335.1831 (art-bettis@uiowa.edu).

PACIFIC NORTHWEST CELL

September 15-17, 2000

This year's leaders are Larry Chitwood (USFS) and Bob Jensen (USFS) with co-leaders Bob Reynolds (COCC), Steve Kuehn (WSU), Tom Connolly (U of O), and Julie Donnelly-Nolan (USGS). The trip will consider geology and archaeology of Newberry National Volcanic Monument, Oregon. Recent discoveries include a large Holocene paleoflood, Holocene uplift of the caldera floor, human use and occupation including the oldest known dwelling in western North America, drowned lake terraces, giant bubbles in obsidian flows, numerous silicic tephras, high temperatures in deep geothermal drill holes, etc. See http://geocities.com/pnw2000fop. Contact Larry Chitwood, 61644 Daly Estates Dr., Bend, OR 97702; 541.389.2373 (chitwood@bendnet.com).

ROCKY MOUNTAIN CELL

September 22-24, 2000

This year's leaders include Richard Waitt (USGS), Thure Cerling and Dave Marchetti (U. Utah), and Lee Kreutzer and Adrienne Anderson (NPS). They will be doing the "Red Gate to Blue Gate"tour of Boulder Mountain, Waterpocket Fold, the Fremont valley and vicinity. Optional trips will include the Hartnet and Cathedral valleys. Topics will include late-Wisconsin glacial moraines and drift, landslides, diamicts, coarse bouldery deposits, localities included in G.K. Gilbert's 1875 report on nearby Henry Mountains, rock art and architecture, and classic Permian through Miocene sedimentary rock. Contact Richard Waitt at 360.696.7558, or waitt@usgs.gov.

SOUTHEAST CELL

October 21-22, 2000

The Southeast Cell will examine landscape responses to incision by the Maury and James Rivers. Pediment/fan incision history, fluvial terrace chronosequences, intra-basin capture, abandoned meanders, and stream knickpoints will be addressed. Contact David Harbor, Geology Department, Washington and Lee University, Lexington, VA 24450; 540.463.8871 (voice), -.8142 (fax) (harbord@wlu.edu).

SOUTH-CENTRAL CELL

Spring, 2001

Reid Ferring will lead the trip which will present an overview of the late-Quaternary geology and archaeology of the Upper Trinity River Basin, northern Texas. Reconstruction of the sedimentary environments and alluvial soil genesis as contexts for archaeological site formation will be the emphases. Sites to be visited include the Aubrey Clovis site, the George King Site (Dalton) and several middle and late Holocene localities. Contact Reid Ferring, Institute of Applied Sciences, Box 310559, University of North Texas, Denton, TX 76203; 940.565.2993 (voice), -.4297 (fax) (ferring@cas.unt.edu).

JONATHAN O. DAVIS SCHOLARSHIP FUND

A Funding Opportunity for Graduate Student Research.....

As many of you know, Jonathan O. Davis, a prominent Quaternary geologist, was tragically killed in an auto accident ten years ago (12/90). The friends and family of Jonathan established an endowment which provides funds for the scholarship. This scholarship is awarded annually to support field research of a graduate student working on the Quaternary geology of the Great Basin or surrounding areas. The grant amount is $2,000. For more information, contact the Executive Director, Quaternary Sciences Center, Desert Research Institute, P.O. Box 60220, Reno, NV 89506. If you wish to make a contribution to help the endowment grow, send contributions to the above address, with checks made payable to the Board of Regents-DRI and indicating that the donation is for the J.O. Davis Scholarship Fund.

IT'S TIME TO VOTE!

Paper or electronically! If GSA has an e-mail address for you, a Blast-E-mail will come your way with an exclusive URL at which you may place your vote. Otherwise, use the paper ballot enclosed. PLEASE TAKE A MINUTE TO VOTE!

JOURNAL ANNOUNCEMENTS

QUATERNARY SCIENCE REVIEWS

Special Price to the Membership .....

Members of the Division can qualify for the special group rate of $120/yr (vs. $619/yr!). This applies to personal subscriptions only. Subscription orders with payment (or, if desired, for a free sample copy) should be sent to Elsevier Science, P.O. Box 64245, Baltimore, MD 21264-4245. Phone orders (credit card only) can be made by dialing 914.524.9200. You need to indicate that you are a member of the Division to get the special rate. You may also see their web site at http://www.elsevier.com/locate/quascirev.

Peter Henn, Senior Publishing Editor (Earth Sciences)
Jim Rose, Editor-in-Chief
Peter Clark, Regional Editor (North America)

QUATERNARY INTERNATIONAL

Special Issue ....

Peter Henn, Senior Publishing Editor (Earth Sciences) at Elsevier Science announces the following special issue of Quaternary International: *Holocene Environmental Change on the Great Plains* (QI v. 67). The issue is available at the special price of $24 and may be ordered from Peter at the following address: Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK; +44 (0).1865 843327 (voice) or +44 (0).1865 843960 (fax); p.henn@elsevier.co.uk; http://www.elseveir.nl.

Also, see INQUA's Quaternary Perspectives Newsletter on-line at http://www.elsevier.nl/locate/qp.

ASSOCIATION OF AMERICAN GEOGRAPHERS

GEOMORPHOLOGY SPECIALTY GROUP

Allan James has established the home page of the Association of American Geographers (AAG) Geomorphology Specialty Group (GSG). You may view the site at http://www.cla.sc.edu/geog/gsgdocs/.

The newsletter of the AAG GSG may be accessed on the web and is available from Dr. Basil Gomez (bgomez@indstate.ecu) at http://www.indstate.edu/gomez/GSG.html.

COASTAL AND MARINE SPECIALTY GROUP

The newsletter and other coastal information is available on the Coastal and Marine Specialty Group (COMA) web site at http://aag_coma.homestead.com or http://www.homestead.com/aag_coma. COMA has produced a CD-ROM on the continuum of research being conducted within the coastal zone. These digital slide sets include full documentation; see the latter web site, or contact Harry M. Jol, Secretary/treasurer, COMA, Department of Geography, University of Wisconsin-Eau Claire; jolhm@uwec.edu; http://www.harryjol.cjb.net.

CALIB on-line

The on-line version of the radiocarbon calibration software package is available at two different sites: the University of Washington http://depts.washington.edu/qil/calib/ and Queen's University http://radiocarbon.pa.qub.ac.uk/calib/

Although operating instructions are provided in the web sites, you may address any inquiries to Dr. Paula Reimer, School of Archaeology & Paleoecology, Queen's University of Belfast, Belfast BT7 1NN, Northern Ireland, 44.(0)1232.273980 (voice), 44.(0)1232.315779 (fax), p.j.reimer@qub.ac.uk (http://www.qub.ac.uk/arcpal/staff/reimer) Editor's note: as many of you already know, Dr. Reimer is extremely helpful and receptive to any comments.

137CESIUM BIBLIOGRAPHY

A bibliography of publications of 137Cs studies related to erosion and sediment deposition can be found at http://hydrolab.arsusda.gov/cesium137bib.html. Contact Jerry Ritchie, USDA ARS Hydrology Laboratory, BARC-West Building-007, Beltsville, MD 20705; 301.504.8717 (voice), .8931 (fax), jritchie@hydrolab.arsusda.gov.

INQUA DATA-HANDLING NEWSLETTER

The most recent issue (19) of the INQUA Data-Handling Newsletter is available at http://www.kv.geo.uu.se/inqua. Lou Maher continues to pass along useful information, this time on calibrating spore tablets; and information on an image database is presented by Ernest Joynt and Alexander Wolfe. Past information in the newsletter is available through the site as well.

NATIONAL SCIENCE FOUNDATION

Two example of NSF funding .....

1) Earth System History (ESH)

Deadline for proposal receipt: February 14, 2001
The goal of ESH is to encourage research to understand the natural variability of the Earth system through records preserved in geo-biologic archives and to contribute to a comprehensive understanding of climate change with annual to millennial resolution, including the forcing mechanisms, interactions, and feedbacks among its components.
Contact Dr. Steven Coleman, Program Officer, Room 775, 4201 Wilson Blvd., Arlington, VA 22230, 703.306.1527 (voice), .0377 (fax); scolman@nsf.gov.

2) Geology and Paleontology (GE)

Deadlines for receipt of proposals are June 1 and December 1, 2000.
Contact Dr. H. Richard Lane, Program Director, hlane@nsf.gov.

The next issue of the Newsletter will contain a more detailed outline of opportunities for funding with NSF.

QG&G BYLAWS

Alan Nelson, working with other members of the Management Board, has updated the Division's Bylaws. The modified version submitted to council is presented below for your perusal:

QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION BYLAWS

Established by Council on April 15, 1955

ARTICLE I

Organization, Name, and Purpose

1. The division of The Geological Society of America, Inc., is organized in accordance with Article IX, *Divisions of Society*, of the bylaws of that Society and is governed by the provisions of that article.
2. *Name.* The name of the division is the Quaternary Geology and Geomorphology Division of The Geological Society of America, Inc.
3. *Purpose.* The purpose of the division is to ring together scientists interested in Quaternary geology and geomorphology, to facilitate presentation and discussion of their problems and ideas, to promote research and publication of results in those fields of geology, and to advise and assist the officers and committees of the Society in matters pertaining to Quaternary geology and geomorphology.

ARTICLE II

Membership

1. Any Member, Fellow, Honorary Fellow, Student Associate or Teacher Associate of the Geological Society of America who is in good standing may affiliate with the Quaternary Geology and Geomorphology Division. To effect such affiliation, an applicant shall express his/her desire in writing to the executive director of the Society. All affiliates, except Student and Teacher Associates, may vote and hold office in the division. Student and Teacher Associates may serve on committees as conferees.

ARTICLE III

Finances

1. The division shall be financially responsible for its normal expenses. All other financial obligations or commitments of the division may have prior approval of the Council.
2. The division may collect annual dues or special assessments from affiliates when recommended by its management board and approved by a majority vote of the voting affiliates.
3. The division may solicit and accept contributions of funds to be used and expended under supervision of its management board and subject to Council approval.

ARTICLE IV

Officers, Management Board, and QG&G Panel

1. *Officers.* The officers of the division shall be a chair, a first Vice Chair, a second Vice Chair, a secretary, a treasurer, and a

newsletter editor/webmaster. The chair and Vice Chairs shall be elected for terms of one year, and the secretary, treasurer, and newsletter editor/webmaster for terms of two years. The terms of office shall begin immediately following the annual business meeting at which the results of the election are announced. Only the secretary, treasurer, and newsletter editor/webmaster may be re-elected to the same office.

2. *Management Board.* The management board shall consist of the chair, first Vice Chair, second Vice Chair, secretary, treasurer, newsletter editor/webmaster, and immediate past chair.

3. *Election of Officers.* The election nominating committee of the division shall propose annually a single slate of candidates for chair and for first Vice Chair, a dual slate for second Vice Chair, and a single slate for secretary, treasurer and/or newsletter editor/webmaster. The treasurer and newsletter editor/webmaster are elected in the same year. The secretary is elected in alternate years. These nominations shall become the regular ticket and shall be submitted by the secretary of the division to the executive director of the Society, who shall have prepared and mailed to the voting affiliates (or made available on a division web site) a ballot which also shall have space for write-in nominees.

In the event of a tie vote for the office of second Vice Chair, a second ballot bearing the names of the two candidates in alphabetical order shall be mailed (or made available on a division web site), and should the second vote also result in a tie, the management board shall decide the winner.

4. *Quaternary Geology and Geomorphology Panel.* The Quaternary Geology and Geomorphology Panel consist of six voting affiliates elected from the division at large in the following manner. Each year, on a clip-out form to be included in the division Newsletter (or made available on a division web site), each voting affiliate of the division may nominate three voting affiliates to serve on the panel. The clip-out forms will be returned to the secretary of counting.

The names of the six voting affiliates who receive the most nominations will appear on the division ballot that will be mailed to voting affiliates. The three who receive the most votes will be elected to the panel and will take office immediately following the fall annual business meeting for a period of two years.

In the event that a voting affiliate shall decline to serve on the panel, the voting affiliate who received the next greatest number of votes shall be elected. If two or more voting affiliates receive the same number of votes, the management board shall decide the winner.

Panel members may not serve two consecutive terms. In the event that a panel member is elected as an officer of the division, the member shall withdraw from the panel, and the voting affiliate nominated in the same year who received the next great number of votes shall succeed the member.

ARTICLE V
Committees

1. *Nominating Committee.* An election nominating committee consisting of two members of Quaternary Geology and Geomorphology Panel and the past chair, whom shall be designated chair, shall be appointed by the chair.

The nominating committee shall nominate annually a single slate of candidates for chair and for first Vice Chair, a dual slate for second Vice Chair, and a single slate for secretary, treasurer, and/or newsletter editor/webmaster.

2. *Other Committees.* Other committees may be appointed by the chair and with the approval of the management board.

3. *Responsibility.* Reports, recommendations, or other actions by appointed committees, other than the nominating committee, shall be subject to the approval of the management board. After such approval, the secretary of the division shall report appropriately to the executive director of the Society if the attention or action of the Council is required. Appointed committees shall present annual reports which shall be summarized in the annual report of the management board.

4. *Tenure.* Committee appointments shall expire at the close of the next Annual Meeting of the division, unless specified otherwise. Vacancies on committees may be filled by interim appointment at any time by the committee chair. Committee members may be reappointed for up to three consecutive terms.

5. *Student and Teacher Association.* Student and Teacher Associates may be appointed as conferees to any committee.

ARTICLE VI
Management

1. Management Board. The property and affairs of the division shall be managed by the management board. At the annual business meeting, the management board shall submit a report of the preceding year's activities of the division which shall include the reports of the chair, secretary, treasurer, and the reports of various committees. Before *February 15* of the following year, this report shall be submitted by the secretary of division to the executive director of the Society. The report will be presented to the affiliates of the division of the division's Newsletter.

The management board shall assume the responsibility for evaluation of applications for the annual J. Hoover Mackin and Arthur D. Howard grants which are administered by the division. The grantees will be announced at the annual business meeting.

2. *Chair.* The chair shall preside at meetings of the division and of the management board. The chair shall submit a report to the management board of the activities of the division during his/her term of office and on future plans. The chair shall serve as the division's representative on the Council's Joint Technical Program Committee.

3. *First Vice Chair.* The first Vice Chair shall assume the power and duties of the chair in the event of the absence of disability of the chair. The first Vice Chair shall supervise planning for the division symposium to be held at the annual Meeting of the succeeding year.
4. *Second Vice Chair.* The second Vice Chair shall assume the position of chair whenever both the chair and Vice Chair are not available.
5. *Secretary.* The secretary shall keep the records of the proceedings of the division and shall act as secretary of the management board. He/she shall maintain liaison with GSA headquarters, and shall serve, *ex officio*, as a member of all committees. He/she shall submit semiannual reports of the Council of the Society of the division.

The secretary shall notify the officers and the members of the committees of their election or appointment and shall arrange for issuance of notices of all division and management board meetings and of election results.
6. *Treasurer.* The treasurer shall keep informed on the balance of division funds obtained from membership dues, and shall account for all funds of the division.
7. *Past Chair.* The past chair shall be chair of the election nominating committee.
8. *Quaternary Geology and Geomorphology Panel.* The panel shall select the winner of the Kirk Bryan Award from nominations made by the voting affiliates of the division. The Kirk Bryan Award, given annually for an outstanding paper in Quaternary geology and geomorphology, is authorized by the Council, and specific procedures for its implementation are spelled out in rules of the division. The secretary of the division shall act as chair of the panel in matters relating to the award. Following the Annual Meeting, the secretary shall assemble nominations and forward them to the panel for balloting which is to e completed prior to the spring meeting of the Council. The winner of the award will be announced at the annual business meeting of the division. The panel shall also be responsible for other duties as requested by the chair from time to time.

ARTICLE VII
Meetings

1. *Annual Business Meeting.* The annual business meeting of the division shall be held during the Annual Meeting of the Society. Except when actions are governed by specific provision in the bylaws, conduct of the business of the division at the annual business meeting shall follow *Robert's Rules of Order* (revised).
2. *Meetings of the Management Board.* The management board shall meet immediately prior to the annual business meeting of the division. Special meetings of the management board may be called at any time by the chair. Decisions of the management board may also be made by mail vote. In order to broaden representation of the division membership at the Annual Meeting of the management board, panel members are encouraged to attend; and those in attendance are voting participants.

ARTICLE VIII
Rules and Amendment of the Bylaws

1. The management board, by majority vote, may adopt, rescind, or amend rules supplementing the bylaws.
2. Bylaws of the division may be adopted, rescinded, or amended according tot he following procedures. (1) approval by the management board, (2) approval by majority vote of voting affiliates of the division at the annual business meeting or by mail votes, and (3) ratification by the Council.

Established by Council in April 15, 1955.

Bylaws amended in 1974, on November 1, 1981, (September 17, 1984, ExCom), November 7, 1984, October 31, 1990, May 4, 1991, May 8, 1992, and October 27, 1998.

On October 27, 1998, Council approved the addition of the office of treasurer to the management board of the division.

CONTRIBUTE WITHOUT PAIN

If you enter Amazon.com or Barnesand.noble.com through the GSA web site, 7% goes to the GSA Foundation! If you need one of those new "weather-proof" Munsell soil charts, see Amazon..com. Improvement in the visibility of these links in the GSA page has been proposed.

NEW FEATURE: RESEARCH FACILITIES

In the polling of professional members last year, several of you mentioned that you would like to see the showcasing of laboratories around North America (and elsewhere?) that conduct specialized analyses. If you would like to have your specialized/unique research facility featured in the newsletter, please let me know (wcj@ukans.edu). There will be room for photographs and/or diagrams, if you like, in addition to text. We can feature one or two facilities per issue. The series can start in the September/fall 2000 newsletter.

NEXT ISSUE: STUDENT RESEARCH

A blast e-mail will be sent to all the student members of the division in August in order to solicit short statements of their research, which will be featured in the fall issue of the Newsletter. Professionals: please encourage your students to respond.

The Geological Society of America
3300 Penrose Place - P.O. Box 9140 - Boulder, Colorado 80301 - 303/447-2020 - FAX 303/447-1133

Quaternary Geology and Geomorphology Division

To Voting Members of the Division:

Election of Officers for the Quaternary Geology and Geomorphology Division

The slate of officers for the Division is submitted herein. Please vote by checking the appropriate box or by writing in the name of your nominee in the space provided. Biographical data for nominees can be found in the newsletter.

Your ballot must be returned no later than **July 15, 2000** , and must be signed in the space provided on the reverse side to constitute a valid ballot.

CHAIR (vote for one candidate):

- Craig Kochel ☐
- Write In _____ ☐

FIRST VICE-CHAIR (vote for one candidate):

- Deborah Harden ☐
- Write In _____ ☐

SECOND VICE-CHAIR (vote for one candidate):

- Steven Kite ☐
- Milan Pavich ☐
- Write In _____ ☐

SECRETARY (vote for one candidate):

- Alan Nelson ☐
- Write In _____ ☐

AWARD PANEL (vote for three candidates):

Dennis Dahms ☐	Grant Meyer ☐	Steve Personius ☐
Dave Dethier ☐	Carrie Patterson ☐	G. Richard Whittecar ☐
Write In _____ ☐		

Please return your signed ballot to GSA Headquarters by **July 15, 2000**.

Fold here second and tape

For a legal vote, this ballot must bear the ***SIGNATURE*** of the voter.

Signature: _____

Address: _____

_____

Member ID: _____

Date: _____

First Class
Postage

Ballot Quaternary Geology and Geomorphology Div.
Geological Society of America
P.O. Box 9140
Boulder, CO 80301-9140

Fold here first

SUGGESTIONS TO THE EDITOR AND WEBMASTER

Please send along any suggestions, news, and comments to Bill Johnson at wcj@ukans.edu. An apology is extended for the lateness of the spring newsletter.

VOTING ONLINE IS NOW AVAILABLE

To vote online, have your e-mail address and GSA Membership ID number ready. You can find your ID number on any GSA mailing label, or call GSA's Member Service Center at 1-888-443-4472. This opportunity to vote online will be up until July 1, 2000. The online site is: http://rock.geosociety.org/balloting/sedimentary.asp