



Quaternary Geologist and Geomorphologist

NEWSLETTER OF THE QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION

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CHAIR'S MESSAGE: USE IT OR LOSE IT !

At the annual Geological Society of America meetings in Denver this fall, the officers and Council of the Society will be examining the role of divisions in the organization. The stimulus behind this effort is the situation I outlined in my previous "Chair's Column" in this spring's Quaternary Geology and Geomorphology newsletter. Some divisions have recently experienced declines of more than 30% in their membership numbers. Though our own QG&G Division also declined, it was by a much lesser amount. At a larger scale of analysis, data supplied by the GSA Executive Director's office show that only about half the members in the general organization belong to a division. No one is yet suggesting that divisions in GSA be done away with, but a number of officers and councilors believe that the numbers indicate a declining importance of divisions in the organization, and that concept has ominous overtones. Your QG&G officers will be meeting as a management panel in Denver, and we will discuss the issue as well. It is clear to us that the role of divisions is changing, but it is not at all clear what our new functions can or should be.

The division is slowly losing some functions. For example, at one time the division supplied several reviewers for abstracts for the national meetings. These reviewers ranked the abstracts, and in many cases five to ten percent of the submissions were declined, a proportion usually dictated by limited space and time for the papers to be presented at the meetings. Now, however, GSA usually has its meetings in large convention halls where space and time are less critical, and in recent years the number of abstracts declined has become less than five percent. Changing procedures at GSA headquarters have reduced the number of reviewers nearly to one for the entire division. As the organization of the national meetings continues to gravitate to GSA headquarters, the division's role in quality control and planning is diminishing.

There are some functions in which the division continues to have a strong hand. The research awards dispensed by the division or on the sole recommendation of the division represent an

important investment in our younger members (in the case of graduate student awards) or in special areas (such as the Cole and Fahnstock awards). The recognition bestowed by the division for research and the career award are important prizes that advertise our best and brightest, recognize them, and celebrate their work. I guess I wouldn't argue that the business session is any great shakes, but judging by the decibel level of conversation and the quantity of refreshments consumed, the Tuesday evening social events at the annual meetings are highly successful and are a significant contribution by the division. Our newsletter is evolving from a fact sheet to a true avenue of communication under the able leadership of Rich Whittecar, providing a conduit of information not duplicated elsewhere.

The QG&G officers who will meet in Denver recognize that the division does some things fairly well, but the real question is this: what should we do better or add to our present efforts. What innovations do we need to make to retain the loyalty and support of our members? What services do we need to deliver that we omit now? My concern is that if we do not reinvent ourselves to some degree, we will not remain useful to the general membership, who will gradually drift away. For that reason, I am soliciting the input of division members, as well as other interested Quaternary geologists and geomorphologists. Give me your answers to these questions so your division panel can discuss them at the Denver meetings.

Send your suggestions (a few words or phrases will be enough) to me at my e-mail address: graf@asu.edu, or mail them to me at Department of Geography, Arizona State University, Tempe, Arizona 85282-0104. I cannot promise that we will implement every suggestion immediately, but I do promise we will seriously consider everything you put forward. Your QG&G division just may be like everything else in life: use it or lose it!

-- Will Graf, Chair, Quaternary Geology and Geomorphology Division

RESULTS OF 1996 DIVISION ELECTION

GSA Headquarters mailed 938 ballots to members of the Division, of which 270 valid ballots were returned. The tally of votes was checked and rechecked; no write-in comments were received. Division officers and Panel members elected for 1996-97 are:

Currently serving the division:

OFFICERS for 1994-1995:

NEW OFFICERS for 1996-97:

Chair	Karen L. Prestegaard
First Vice-Chair	Leslie D. McFadden
Second Vice-Chair	Ardith K. Hansel
Secretary	J. Steven Kite

Chair	William L. Graf
First Vice-Chair	Karen L. Prestegaard
Second Vice-Chair	Leslie D. McFadden
Secretary	J. Steven Kite

PANEL MEMBERS

PANEL MEMBERS:

New (1996-1998)	Scott F. Burns John B. Ritter Ellen E. Wohl
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Retiring (1994-1996)	Michael N. Machette Ellen A. Cowan Robert S. Anderson
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Continuing (1995-1997)	Peter U. Clark Lisa L. Ely Dorothy J. Merritts
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The Division greatly appreciates the support of other members who were also on this year's ballot: Paul Karrow, Steve Hicock, Frank Pazzaglia, Richard Marston.

THANKS to QG&G Members who helped the Division

The Management Board, on behalf of the membership, also extends thanks to those members who generously donated their time and energy to the Division during the past year.

- ✓ **Division Panel:** Michael Machette, Ellen Cowan, Robert Anderson, Peter Clark, Lisa Ely, and Dorothy Merritts
- ✓ **Committee on Long-Range Planning:** Steve Wells (chair), Rich Madole and Vic Baker
- ✓ **Committee on Environment:** Jack Schmidt (chair) and Richard Kesel
- ✓ **Nominations Committee:** Parker Calkin (chair), Lisa Ely, and Tom Davis
- ✓ **Committee on Education:** Brain Tormey (chair)
- ✓ **Newsletter Editor:** Rich Whittecar

NOMINATIONS OF 1997-99 PANEL MEMBERS

Clip out and mail this ballot before December 1, 1996 to J. Steven Kite, Dept of Geology & Geography, Box 6300, West Virginia University, Morgantown, WV 26506.

Nominations are also accepted email at kite@wvgeo.wvnet.edu or via forms on the Division's WWW Homepage: www.ocean.odu.edu/~grw100f/quat/index.html.

All members except Division officers, present of retiring panel members, and Student Associates are eligible for nomination to the Panel. The six names receiving the highest number of nominations will appear on the annual ballot. Each voting affiliate of the Division (Members and Fellows only) may nominate as many as three persons.

- (1) _____
- (2) _____
- (3) _____

Name of Nominator

WINNERS: Mackin and Howard Grants

The **Arthur D. Howard Award** is for outstanding student research proposed by an M.S. candidate. Selected from 7 nominees, the 1996 Howard Award winner is **David Bouchard**, Utah State University; Darrell Kaufman is his advisor. The winner will receive \$1200 to support his study "Quaternary Bear River - Bonneville Basin paleohydrogeography reconstructed from the $^{87}\text{Sr}/^{86}\text{Sr}$ composition of lacustrine fossils."

The **J. Hoover Mackin Award** is for outstanding student research proposed by a Ph.D. candidate. This year 10 students were nominated. The 1996 Mackin Award is **Brenda L. Hall**, University of Maine; George Denton is her advisor. She will receive \$1500 to study "Geological assessment of abrupt climate change and ice-sheet stability hypotheses from an Antarctic perspective."

Mackin and Howard Grants: Applications for 1997 Awards

Awards for student research in geomorphology or Quaternary geology are given from both the J. Hoover Mackin fund and the Arthur D. Howard fund. The Howard fund was established by a bequest from the Arthur D. Howard family estate and is administered by the GSA Foundation. The deadline for receipt of applications is February 15, 1997. Both M.S. (or M.A.) and Ph.D. candidates are eligible. Winners will be selected by April 15, 1997. Application forms are available from the Division Secretary: J. Steven Kite, Department of Geology & Geography, P.O. Box 6300, West Virginia University, Morgantown, WV 26506-6300; e-mail: kite@wvgeo.wvnet.edu.

Contribute to the Mackin Grant and Howard Grant Fund

The fund that supports the Mackin Grant and Howard Grant is administered by the GSA Foundation. You can contribute to the fund when you renew your GSA membership or by designating the Mackin Grant or Howard Grant when you contribute to the GSA Foundation through the Second Century Challenge or Geostar. The hope is to enlarge the fund's principal so that the amount awarded annually can be increased. Please give generously so that the Division will be able to better support deserving graduate students.

1996 Distinguished Career Award Winner ROBERT SHARP

The Quaternary Geology and Geomorphology Division is pleased to announce that **Robert P. Sharp** is the 1996 recipient of the Distinguished Career Award. The Award will be presented to Bob at the Annual QG&G Awards and Business Meeting at Denver on Tuesday, October 29, 1996, 7:15-9:00 pm. The following comments are distilled from letters of nomination by Don Easterbrook, Michael Malin, Alan Gillespie, Barclay Kamb, and Bud Burke.

Reading Bob Sharp's résumé is like reading a composite résumé of a half dozen geomorphologists. Over a career that spans nearly 60 years, he has published 132 papers on an incredible variety of topics - mountain glaciation; dating of moraines and fans; dunes; ripples; permafrost; Martian geomorphology; stable isotopes in ice cores. He chaired the faculty at a leading research facility while providing enthusiastic education to students of all levels. No better recommendation exists than the number of students who chose their career after taking introductory geology from Bob. He is truly one of the giants of geomorphology.

Nominations for 1997 Distinguished Career Award

The Distinguished Career Award was established in 1985 to recognize Quaternary geologists and geomorphologists who have demonstrated excellence in their contributions to science. The recipient need not be a member of the Geological Society of America or the QG&G Division. Nominations will be accepted at any time during the year, but the **deadline is April 15, 1997**. Nominations should be sent to the Division Secretary, Steve Kite, and require: (1) a supporting letter of nomination documenting the contributions of the nominee, (2) three letters or signatures of additional members supporting the nomination, (3) a résumé of the candidate (such as a photocopy from American Men and Women of Science), along with a bibliography of the nominee's most significant papers. The Division Chair will appoint a committee to oversee the collection and completion of award nominations. The names of unsuccessful candidates proposed for the award will remain open without renomination for the following three years. Further consideration after this period will require renomination.

WINNER: 1996 Kirk Bryan Award

The winner of the 1996 Kirk Bryan Award is **Roger T. Saucier** for his paper, Geomorphology and Quaternary Geologic History of the Lower Mississippi Valley, published in 1994 by the U.S. Army Corps of Engineers in two volumes (text and map folio). The award will be presented at the Annual QG&G Division's Awards and Business Meeting at GSA-Denver on Tuesday, October 29, 1996, 7:15-9:00 p.m. The following comments are paraphrased from the letters of nomination by Lawson Smith, Whitney Autin, and Stan Schumm.

Roger has spent his professional career in an attempt to decipher the complex alluvial stratigraphy of the Mississippi Valley and the river's behavior in response to base level and climatic changes. This document represents the definitive synthesis of his own work with relevant contributions of other scientists. It contains detailed description and analyses of a broad range of geomorphological topics, including landforms, processes, controls, sedimentary framework, geotechnical properties, tectonics, engineering considerations and future research needs. Like the report of Harold N. Fisk that it revises, Saucier's treatise promises to be a classic work.

NOMINATIONS FOR THE KIRK BRYAN AWARD FOR 1997

Nominations for the Kirk Bryan Award for 1997 will be accepted until **December 1, 1996**. The Kirk Bryan Award is given for a paper or book published within the past five years. The work may be single or multi-authored. Nominations are made by writing a letter that identifies the work and provides a statement about its significance. Send nominations to the Division Secretary: J. Steven Kite, Department of Geology & Geography, P.O. Box 6300, West Virginia University, Morgantown, WV 26506-6300.

Recent Recipients of the Kirk Bryan Award: 1990-1995

- 1990 **Arthur S. Dyke and Victor K. Prest** (Geological Survey of Canada), Late Wisconsinan and Holocene history of the Laurentide ice sheet: Géographie Physique et Quaternaire, v. 41, no. 2, p. 237-263, 1987.
- 1991 **Milan J. Pavich** (U.S. Geological Survey), Processes and rates of saprolite production and erosion on a foliated granitic rock of the Virginia Piedmont, in S.M. Colman and D.P. Dethier, eds., Rates of chemical weathering of rocks and minerals: New York, Academic Press, Inc., p. 552-590, 1986.
- 1992 **R. Dale Guthrie** (University of Alaska), Frozen fauna of the Mammoth Steppe: The Story of Blue Babe: Chicago, University of Chicago Press, 323 p., 1990.
- 1993 **William B. Bull** (University of Arizona), Geomorphic responses to climate change, Oxford University Press, 326 p., 1991.
- 1994 **Arthur N. Palmer** (State University of New York, Oneonta) Origin and morphology of limestone caves, Geological Society of America Bulletin, v. 103, p. 1-21, 1991.
- 1995 **James E. O'Connor** (U.S. Geological Survey) Hydrology, hydraulics and geomorphology of the Bonneville Flood, Geological Society of America Special Paper 274, 90 pg, 1993.

A complete list of Awardees honored by the Division may be obtained from the Division Secretary or through the Division's WWW homepage: www.ocean.odu.edu/~grw100f/quat/quat.index.

WINNER: 1996 Robert K. Fahnestock Memorial Research Award

The Robert K. Fahnestock Memorial Research Award honors the memory of Ken Fahnestock who was a member of the Committee on Research Grants. It is given annually to the student who submits the most outstanding research proposal to the Geological Society of America in the field of sediment transport or related aspects of fluvial geomorphology. The recipient for 1996: **Gregory Dick** at University of California at Santa Cruz. He will receive \$1250 to support his research, "Cosmogenic radionuclide dating of fluvial terraces, Wind River, Wyoming."

WINNER: 1996 Gladys W. Cole Memorial Research Award

The Gladys W. Cole Memorial Research Award provides research support for investigations of the geomorphology of semiarid and arid terrains in the U.S. and Mexico. In past years, it has been given annually to a GSA Fellow between the ages of 35 and 60 who has published one or more significant papers on geomorphology and who proposed new research. Now, both GSA Members and GSA Fellows are eligible for the Cole Research Award. **Vance T. Holliday** of University of Wisconsin, Madison received \$12,000 as the Gladys W. Cole Memorial Research Award for 1996. Vance's project is titled "Origin and Evolution of Small Playa Basins on the Southern High Plains."

Cole Memorial and Fahnestock Memorial Research Awards: Applications for 1997

The application forms are available from the Research Grants Administrator, Geological Society of America, P.O. Box 9140, Boulder, CO 80301; phone (303) 447-2020. Applications must be postmarked by **February 15, 1997**, to be eligible; the award is made in April.

JONATHAN O. DAVIS SCHOLARSHIP: Quaternary Sciences Center of the Desert Research Institute

The winner of the Jonathan O. Davis Scholarship for 1996 is **David O. Wilkins**, University of Utah; Ronald R. Currey is his advisor. David's research is "Late Quaternary Paleoenvironments in the Trans-Pecos Closed Basin, West Texas and South-Central New Mexico." **Saxon Sharpe**, University of Nevada was also awarded a stipend for "Late Quaternary Mollusks: Developing the Paleohydrology Link."

This scholarship is a memorial to Jonathan O. Davis, geologist and geoarchaeologist. Established by family and friends of Jonathan this scholarship will be given annually to support the field research of a graduate student working on the Quaternary geology of the Great Basin or surrounding areas. The grant is for \$1000 or more. The scholarship, administered by the Quaternary Sciences Center of the Desert Research Institute, is open to graduate students enrolled in a M.S. or Ph.D. program at any U.S. university.

Applications for 1997 should include (1) a current résumé or vita, (2) a two-page (single-spaced) description of the thesis/dissertation research which also clearly documents the geologic orientation and research significance, and (3) a letter of recommendation from the thesis/dissertation supervisor that emphasizes the student's research ability and potential as a Quaternary scientist. **Applications must be received by February 1, 1997**, so that the scholarship can be utilized in the subsequent summer. Applications should be addressed to: Executive Director, Quaternary Sciences Center, Desert Research Institute, P.O. Box 60220, Reno, NV 89506. If you wish to help the endowment grow, contributions can be sent to the above address. Checks should be made out to the Board of Regents-DRI. Please indicate on the check or in a separate note that the donation is for the Jonathan O. Davis Scholarship Fund.

RESEARCH GRANTS FOR ISOTOPIC ANALYSES: Geochron Laboratories

Geochron Laboratories, a division of Krueger Enterprises, Inc., annually awards a series of **research grants to graduate students** requiring interesting or new applications of isotopic analyses. The awards consist of analytical services to be performed free of charge to the winner in each category. For the past several years awards have been offered in K-Ar dating, C-14 dating, and stable isotope ratio analyses (SIRA), SIRA in dietary studies, and SIRA of fluid inclusions in minerals. The awards are offered by Geochron Labs to encourage the application of isotopic analytical techniques to solve original and significant problems. The deadline for applications is May 1, 1997. Early application is suggested to assist with prompt evaluation and notification of winners. For Research Award Program Guidelines and official rules, call 617-876-3691, fax 617-661-0148 or write 711 Concord Ave, Cambridge, MA 02138.

STUDENT RESEARCH AND TRAVEL GRANTS

All six GSA Sections support travel grants for undergraduate and graduate students who are members of GSA. The South-Central, Northeastern, and Southeastern sections offer **travel grants to GSA in Denver**. Other sections offer travel grants to the Section meetings in the spring. For application deadlines and other information, contact the Section Secretaries through the GSA WWW Homepage: www.geosociety.org. The Southeastern section also offers **student research grants**; February 15, 1997 is the application deadline. For more information, contact Dr. Harold Stowell, Dept. Geology, University of Alabama, Tuscaloosa AL 35487 (205)348-5089 **email**: hstowell@geology.geo.ua.edu.

CALL FOR NOMINATIONS: Mentors in Applied Geology

GSA's Institute for Environmental Education (IEE) is now soliciting nominations for the "Applied Geology Mentor Program." Funded by an endowment from Roy J. Shlemon, the "Applied Geology Mentor Program" bridges the gap between the applied and academic geology communities. The Mentors are experienced geologists presently practicing in various fields of applied geology. Each Mentor presents a one-day workshop for graduate and senior undergraduate geology students focusing on professional opportunities and challenges in the applied geosciences. Workshops may include lectures and/or field and laboratory exercises, depending on the technical specialty of the Mentor, as well as discussion of "practical problems" in applied geology such as running a business, marketing, hiring and firing, legal and regulatory challenges, etc. Mentors receive an honorarium for conducting the workshop, in partial recognition of their outstanding contribution to the applied geosciences. Up to six applied Shlemon Mentor workshops will be held each year, in conjunction with the six GSA sectional meetings. 1996 Roy Shlemon Applied Geology Mentors: James E. Slosson, Van Nuys, CA (Rocky Mountain Section); William R. Cotton, Los Gatos, CA (Cordilleran Section); Michael Hart, San Diego, CA (Cordilleran Section); Dean Lewis, Ames, IA (North-Central Section).

Criteria for nomination: Mentors should be highly regarded practitioners in the applied geosciences. Preference will be given to nominees who emphasize one of the following specialties: Quaternary geology, geomorphology, environmental geology, engineering geology, geoarchaeology, and hydrogeology. Nominees should have at least 15 years of experience outside of academia and government, and should be working actively in an applied field. Nominees should also be active in the geological community, preferably with a record of presented or published papers. Nominations should be in the form of a brief (one-half-page) narrative summarizing the qualities and experiences of the nominee. This narrative may be supported by additional professional and biographical material. We request that nominators include their phone number and/or E-mail address. Mentors will be selected by GSA section meeting committees from the pool of nominees. For further information, call 303-447-2020 x194. Please send nominations to: Applied Geology Mentors Program, Institute for Environmental Education, Geological Society of America, P.O. Box 9140, Boulder, CO 80301.

1996 ANNUAL MEETING AT DENVER

KEY EVENTS: October 26-31, 1996

The health and vitality of the Quaternary Geology and Geomorphology Division is partly measured by the number and diversity of discipline, poster, theme and symposia sessions at annual meetings. The agenda for the annual GSA meeting in Denver is rich and full. Thus some division-sponsored sessions such as theme and posters compete in time, conflicts that are as unavoidable as the division's endeavors are large. This year, as in years past, "geomorphology" and "Quaternary" topics appear in a great many papers, sessions, and events. The Division sponsors many, but not all of these activities.

Saturday-Sunday, October 26-27:

QG&G G.K. Gilbert Short Course: Geomorphic Expression of Active Tectonics (held at Univ. of New Mexico, Albuquerque)

Monday, October 28:

a.m.
QG/G Posters: Glacial and Neotectonics
QG&G Division Management Board Meeting
p.m.

QG/G I: Process Geomorphology
IEE: Neogene and Quaternary Geology of the Yucca Mountain Region, Nevada, and its Relevance to Long-Term Nuclear Waste Isolation - Part I (Part II Tuesday A.M.)

Tuesday, October 29:

a.m.
QG&G Symposium: Perspectives on Soil-Based Information for Investigating Earth Surface Processes
p.m.

QG/G II: Late Quaternary Climates: Western U.S. and Eastern Pacific Ocean

QG&G Theme Session: Application of Soil-Based Information for Understanding Earth Surface Processes

T51: Mechanics of the Riverbed: Hydrology, Sedimentology, and Geomorphic Consequences

NOTE: Check out the GSA Homepage (www.geosociety.org) for a complete listing of the program schedule. Under **Meetings**, follow several links to the '96 Annual Meeting program and go through **Query** to find sessions with topics of interest to you.

GSA Annual Meeting 1997, Salt Lake City

The QG&G Division is soliciting proposals for symposia (Invited papers), Theme Sessions (volunteered papers), and Continuing Education/Short Courses for the 1997 Annual Meeting at Salt Lake City. Proposals should be sent through normal GSA channels (see recent issues of *Geology Today* for details). For possible QG&G sponsorship please contact: Will Graf (602) 965-7533; e-mail atwlg@asuvm.inre.asu.edu. OR Karen Prestegaard (kpresto@glue.umd.edu).

HOW TO HAVE INPUT INTO YOUR DIVISION

1. Submit nominations for Division offices and awards.
2. Submit suggestions, gripes, etc., for consideration by the Division Management Board.
3. Submit contributions to the Division Newsletter.

Correspondence to the Division may be sent to our **Division Secretary: J. Steven Kite**, Dept of Geology & Geography, P.O. Box 6300, West Virginia University, Morgantown, WV 26506-6300; phone: (304) 293-5606 fax: (304) 293-6522 e-mail: kite@wvgeo.wvnet.edu. You may contact the new **Division Chair: Dr. Karen Prestegaard**, Department of Geology, University of Maryland, College Park, MD 20742; e-mail: kpresto@glue.umd.edu

ALL INVITED: Tuesday Evening, October 29

7:15 P.M. QG&G Division Business Meeting and Awards

9:00 P.M. Reception

Wednesday, October 30:

a.m.
QG/G (Posters II): All topics
QG/G III: Tectonic Geomorphology and Hillslope Processes
GSA Annual Meeting Committee Symposium (S2): Tectonic Development of the Southern Rocky Mountains
GSA Annual Meeting Committee Symposium (S3): Earth System Processes at the Last Glacial Maxima
p.m.
Paleocean./Paleoclimatology II: Quaternary Climates and Oceans
T38: Evaporite Karst: Origins, Processes, Landforms, Examples

Thursday, October 31:

a.m.
QG&G IV: Quaternary Glacial Events
p.m.
QG&G V: Quaternary Paleoclimates
Clastic Sedimentology III: Continental Sedimentary Deposits

Until the Denver GSA Meeting, the **Chair** is **William L. Graf**, Department of Geography, Arizona State University, Box 870104, Tempe AZ 85287-0104; e-mail: atwlg@asuvm.inre.asu.edu

Newsletters are mailed in February and September of each year. Members are encouraged to use their Division newsletter to communicate with other members. Deadline is January 15 for the February Newsletter and August 15 for the September Newsletter. Please send information to the **Newsletter Editor, Rich Whittecar**, Geological Sciences, Old Dominion University, Norfolk VA 23529; phone: (804)683-5197 fax: (804)683-5194 e-mail: grw100f@giraffe.tech.odu.edu

Sept 27-29, 1996: 27th Binghamton Geomorphology Symposium. Champaign, Illinois. "Scientific Nature of Geomorphology." Organizers: Bruce Rhoads and Colin Thorn. Registration forms and information at site ux1.cos.uiuc.edu:80/~jdomier/inghamton.html.

October 17-18, 1996: Quaternary Relief and Deposits of Present-Day and Pleistocene Glaciations in the Northern Hemisphere Poanan, Poland. Contact: Grzegorz Rachlewicz, e-mail: grzera@hum.amu.edu.pl.

November 4-14, 1996: Late Quaternary Coastal Records to Rapid Change. Sydney, Australia. Meeting of IGCP Project 367. Contacts: Colin Murray-Wallace (c.murray-wallace@uow.edu.au) or David Scott (dbscott@ac.dal.ca)

April 1-5, 1997: Association of American Geographers. Fort Worth, Texas. Sessions being planned include historical channel and hillslope erosion and sedimentation, sediment transport in fluvial systems, soils in cultural contexts, cosmogenic nuclides, and drylands. For meeting information, contact: AAG, 1710 Sixteenth St.NW, Washington DC 20009; (202)234-1450.

May 4-6, 1997: 6th Midwest Glaciology Meeting, Madison, Wisconsin. Overlaps with North Central GSA and includes a symposium and field trip on paleoglaciology. Contact: Dave Mickelson (mickelson@geology.wisc.edu) or Ardith Hansel (hansel@geoserv.isgs.uiuc.edu).

May 4-14, 1997: International Symposium on Soil, Human, and Environment Interactions. Nanjing, China. Sponsored by International Soil Science Society and Chinese Academy of Sciences. Themes include soil resource conservation and sustainable development; soil degradation; land use and environment changes; and soil restoration. Contact: Yongguan Zhu (zhaoqg@njnet.ihep.ihep.ac.cn)

May 19-21, 1997: Geological Association of Canada Annual Meeting. Ottawa

May 20-22, 1997: Management of Landscapes Disturbed by Channel Incision: Stabilization, Rehabilitation, Restoration. Oxford, Mississippi. USDA National Sedimentation Laboratory, US Army Corps of Engineers, University of Mississippi. Contact: Sam S.Y. Wang or Janice Mills, (601) 232-7788.

June 3-5, 1997: Wind Erosion. Manhattan, Kansas. An international symposium/workshop commemorating the 50th anniversary of the USDA's Wind Erosion Research at Kansas State University. For additional information, please contact sym@weru.ksu.edu before 30 September 1996. Also see www.weru.ksu.edu.

June 9-13, 1997: Changing Water Regimes in Drylands. Lake Tahoe, California. Desert Research Institute. System of Nevada. Focus on the hydrologic, biologic, and human responses to climate changes. Contact: Nicholas Lancaster (nick@maxey.dri.edu) or visit DRI Web www.dri.edu.

June 10-12, 1997: International Symposium on Physics, Chemistry and Ecology of Seasonally Frozen Soils. Fairbanks, Alaska. Co-sponsored by the USDA-Agricultural Research Service, University of Alaska, and Cold Regions Research and Engineering Laboratory. Contact: Brenton Sharratt (bsharratt@mail.mrsars.usda.gov (612)589-3411) or Pieter Groenevelt, Dept. Land Resource Science, Univ.Guelph, Guelph, Ontario CANADA N1G 2W1

June 18-19, 1997: Late Quaternary Coastal Tectonics, Geological Society of London, Burlington House, London, UK. Convenors: Dr Ian Stewart (ian.stewart@brunel.ac.uk) & Prof. Claudio Vita-Finzi (e-mail: ucfbcvf@ucl.ac.uk). Abstract deadline is January 1, 1997, but early proposals are welcome. A conference volume is planned.

July 1-2, 1997: Symposium on Glaciers of the Southern Hemisphere. Melbourne, Australia. Abstract deadline: 2 December 1996. The International Snow and Ice Commission. Contact: IAMAS/IAPSO Secretariat (mscarlett@peg.apc.org) Web site: www.dar.csiro.au/pub/events/assemblies.

Aug 28-Sept 3, 1997: 4th International Conference on Geomorphology. Bologna, Italy. Second announcement will be sent to those who request information before Sept 30, 1996. Contact: I.C.G., Planning Congress s.r.l., Via Crociali 2, I-40138 Bologna, Italy e-mail: forti@geom.in.unibo.it. **28th Binghamton Geomorphology Symposium**, "Engineering Geomorphology," will be held at the 4th ICG in Bologna. Contact: Rick Giardino.

SPECIAL JOURNAL SUBSCRIPTION RATES QG&G Division Members

GEOMORPHOLOGY

Elsevier offers the journal *Geomorphology* to QG&G members at a special rate of \$70 for 1996. Contact Customer Services at (212)633-3750. Send your manuscripts to the Journal Editor, Jack Vitek, Dept. Geography, Oklahoma State University, Stillwater OK 74078.

QUATERNARY SCIENCE REVIEWS and QUATERNARY GEOCHRONOLOGY

Members of the QG&G Division also qualify to get both *Quaternary Science Reviews* AND *Quaternary Geochronology* for the special group rate of \$99/year (ten issues total). This offer is for *personal subscriptions only*. Subscription orders with payment (and/or Free Sample Copy) can be sent directly to: Agnes Impellitiere, Pergamon Press Inc, 395 Saw Mill River Road, Elmsford, NY 10523. Please identify yourself as a QG&G Division member of GSA. Bill Farrand, Regional Editor for QSR, is soliciting manuscripts. Prospective authors should write him at Exhibit Museum, University of Michigan, Ann Arbor, MI 48109-1079. Send manuscripts for QC to Rainer Grun, Quaternary Dating Research Centre, RSPacS, ANU, Canberra ACT 0200, Australia, Tel: + 61 6 249 3122, fax: + 61 6 249 0315.

GEOARCHEOLOGY

QG&G Division members can get *Geoarcheology* for the group rate of \$75/year. The rate for Division members outside North America is \$105. The offer is for *personal subscriptions only* (subscription orders must include GSA membership number). Payment can be sent directly to: Subscription Department, John Wiley & Sons, Inc, P.O. Box 7247-8491, Philadelphia, PA 19170-8491. U.S. members should include appropriate state sales tax and Canadian members should add 7% GST, which Wiley must collect.

Geomorphology Listserver: All messages sent to the GEOMORPHLIST members are screened by the moderator, Jeff Lee. To join GEOMORPHLIST, send a message to Jeff at: adgil@ttacs.ttu.edu. For the directory please provide the following information: your name, mailing address, phone and fax numbers, e-mail address, and a few keywords to specify your interests in geomorphology.

Quaternary Listserver: A listserver for all interested in Quaternary research, particularly but not exclusively in Canada, is established through the Canadian Quaternary Association. Many items of interest to CANQUA members appear on the list. But anyone, CANQUA or otherwise, can subscribe. To subscribe send to the address listserv@morgan.ucs.mun.ca the following message: subscribe quaternary your name (e.g. subscribe quaternary Mike Mammoth). The subject category should be left blank. You should receive acknowledgement of your subscription. To sign off the list send this message to the same address: signoff quaternary. Messages to the list should be sent to: quaternary@morgan.ucs.mun.ca. The listowner is Dave Liverman, Newfoundland Geological Survey, Department of Mines and Energy, P.O. Box 8700, St. John's, Newfoundland, AqB 4J6 email: dgl@zeppo.geosurv.gov.nf.ca.

Palynology Listserver: To join a listserver for exchange of news and information about Palynology and Pollination Biology please send e-mail message to: stserve@uoguelph.ca with the message: subscribe polpal-l your-real-name (e.g. subscribe polpal-l Mike Mammoth). The subject category should be left blank. To post a message to this list, please send it to the address: polpal-l@uoguelph.ca. The list owner is Peter Kevan at University of Guelph.

Radiocarbon Dating Listserver: The listserver C14-L has been established for discussion of radiocarbon dating and related issues. To subscribe please send e-mail message to: listserv@listserv.arizona.edu with the following content: SUBSCRIBE C14-L Your Name, where "Your Name" is your first and last name. For further information please contact David Sewell at e-mail address: dsew@packrat.aml.arizona.edu.

Geocosmo Listserver: For discussions about in situ produced cosmogenic nuclides including 3-He, 10-Be, 14-C, 21-Ne, 26-Al, 36-Cl, and 41-Ca. To join, send email to listproc@list.uvm.edu. Leave the subject field blank. If your name is Mike Mammoth, make the following line the first line of your message: **sub geocosmo Mike Mammoth**. If your mailer automatically sends a signature, turn off that function before subscribing. Problems? Contact Paul Bierman (pbierman@moose.uvm.edu)

Quaternary Geology and Geomorphology Division with news, research opportunities, and Quaternary and geomorph links

www.ocean.odu.edu/~grw100f/quat/index.html

INQUA: International Quaternary Association
inqua.nlh.no/

Quaternary Research Association

www2.tcd.ie/QRA (recently moved to this site)

INQUA Commission on Glaciation
geology.wisc.edu/cog

EQMal: European Quaternary Malacologists

www.inter.nl.net/users/Meijer.T/eqmal.html

UT Vertebrate Paleontology & Radiocarbon Laboratory

www.utexas.edu/research/vprrl

Flood Remote Sensing page keeps a running total of flood damage worldwide

www.dartmouth.edu/artsci/geog/floods/tally.gif

Assoc of Polish Geomorphologists, with Polar Regions links

hum.amu.edu.pl/~sgp/hotspe.htm

Quaternary sites listed at U of Alberta-Edmonton

www.geog.ualberta.ca/kholden/quat.htm

Canadian Geomorphology Research Group

geography.geog.uvic.ca/dept/cgrg/cgrg.htm

Tropical Geomorphology Newsletter with back issues

www.zikzak.net/tgn

Center for Cave and Karst Studies, Western Kentucky U

www.wku.edu/www/geoweb/karst

Quaternary Paleoecology program, Colby College, Maine

www.colby.edu/geology/Quaternary.html

British Geomorphological Research Group and its "non-publication" Geophemera

ggg.qub.ac.uk/andy/bgrg/geophem/index.htm

Lists of international scientific conferences

www.lib.uwaterloo.ca/society/meetings.html

Illinois State Geological Survey, Geoscience Information page

denr1.igis.uiuc.edu/igsroot/dinos/earthsci_links.html

Oak Ridge Lab Distributed Active Archive Center (DAAC)

www-eosdis.ornl.gov

The Paleoseismology Group of the Geologic Hazards Team of the Central Region of the U.S. Geological Survey has a homepage list other sites of interest to paleoseismologists, some recent books and other publications of very wide interest, and, of course, **The Fossil Earthquake of the Month**. Based on your suggestions, other information could be included, such as a list of upcoming paleoseismology fieldtrips or trenches that are open for inspection. <http://gldage.cr.usgs.gov/paleosei/>.

The International Union of Geological Sciences (IUGS) through its Commission on Geological Sciences for Environmental Planning has developed a checklist of geoindicators. These are high-resolution measures of short-term (< 100 years) geological variations that are important for assessment of terrestrial ecosystems. Almost all of the twenty-seven geoindicators stem from geomorphic studies. See the checklist at www.gcrio.org/geo/title.html. For more information contact: Dr. A.R. Berger, Chairman, Geoindicators Working Group, 528 Paradise Street, Victoria, BC V9A 5E2, CANADA. Phone/fax: (604) 480-0840.

Stratigraphy and Paleoenvironments of Late Quaternary

Valley Fills on the Southern High Plains by Vance T. Holliday. 1995. Geological Society of America Memoir 186. 142 p. ISBN 0-8137-1186-X. \$54. Call 1-800-472-1988. Reports on ten dry valleys in Texas and New Mexico. Sections include geomorphology, stratigraphy of valley fills, and paleontology, paleobotany, and stable isotopes. Changing depositional environments suggest shifts in regional vegetation and climate, but there also were distinct local variations in environmental evolution.

The Ice Age world: an introduction to Quaternary history and research

by Bjorn Andersen and Hal Borns Jr., 1994, is now published by Scandinavian University Press, P.O. Box 2959, Toyen, N-0608 Oslo, Norway.

"To Boldly Go ... : A Practical Career Guide for Scientists"

by Peter Fiske. 1996. American Geophysical Union. An excellent practical guide for students to use in thinking about careers (rather than jobs) that contains many examples from the geosciences. It suggests how the scientific content and the skills that students learn in the geosciences can be used in a variety of "alternative" or "nontraditional" careers. Written primarily for graduate students in the geosciences, but comes highly recommended for juniors and seniors, too. E-mail AGU at cust_ser@kosmos.agu.org.

Ashworth, P.J., Bennett, S.J., Best, J.L. and McLelland, S.J.

1996. **Coherent Flow Structures in Open Channels.** John Wiley and Sons. 733 pp. ISBN 0 471 95723 2. Coherent flow structures are examined systematically across a range of scales from flat-bed boundary layers, grain and bedform roughness generated structures through to the largest scales where coherent structures may be associated with bars, meander bends and channel confluences. A contents list and informal enquiries can be obtained from Stuart McLelland (geo5sm@geog.leeds.ac.uk). Cost: UK Sterling 65.00 (plus postage: 2.00 for UK; 3.00 for elsewhere). Order at <http://www.wiley.co.uk>.

AMQUA Special Issues in the Journal of Paleolimnology. In 1995 and 1996 JOPL published three issues which are selected proceedings from the 1994 AMQUA meetings held at the University of Minnesota. For further information, access www.umanitoba.ca/faculties/science/geological_sciences/PALEOLIM/jopl.html

Sheridan Bowman. 1990. **Radiocarbon dating: interpreting the past.** University of California Press ISBN 0-520-07037-2. Recent discussions on the Radiocarbon Listserv indicate this book provides excellent explanations usable for introductory discussions or inquiries.

"Database of Selected British Columbia Radiocarbon Dates" by R.N. McNeely and J.J. Clague, Geological Survey of Canada Open File 3259 (1 diskette). Maps and Publication Sales, Geological Survey of Canada, 100 W. Pender St., Vancouver, B.C. Canada V6B 1R8; phone (604) 666-0271. \$20 Canadian.

Frank Weirich, University of Iowa, received a \$1,250,000 equipment grant from the Silicon Graphics Corporation. This grant, along with an additional funds provided from within the university enabled purchase of a supercomputer and supporting facilities at the University of Iowa. The system will permit research on fluvial, watershed and fire modeling and other advanced computational fluid dynamics. The system's performance is measured in multiple Cray C90 computer units. The system will rank as the 19th fastest computer in the country (among all academic systems). The main processor units will be housed in the Institute of Hydraulic Research where Weirich holds a faculty appointment. Moreover, as part of the grant, an additional supercomputer-class SGI/RE2 Onyx system will be located in Geology's Geomorphology computer lab the University of Iowa. This system with its advanced graphics capabilities will be directly linked to the main processors via dedicated high speed fiber to permit fully integrated computational efforts. The initial system configuration involves over 4 gigabytes of RAM, 20 high-end processors and a potential mass storage in the terabyte range. The system will be operated as a limited access research system with geomorphic research being one of its principal uses. Some of the specific applications that will be run on the system are outlined in more detail on the U of Iowa Geomorphology Homepage www.geomorphology.uiowa.edu or by contacting Frank Weirich (weirich@geomorphology.uiowa.edu) or Brian Aker (brian@geomorphology.uiowa.edu)

INQUA Commissions

The International Union for Quaternary Research (INQUA) supports research activities through the following Commissions: Glaciation; Global Continental Paleohydrology; The Holocene; Loess; Neotectonics; Paleoclimate; Quaternary Shorelines; Paleopedology; Tephrochronology and Volcanism; Stratigraphy; and Terrestrial Carbon. For more information about these commissions, contact Sylvi Haldorsen, INQUA Secretary (sylvi.haldorsen@nlh10.nlh.no).

FRIENDS OF THE PLEISTOCENE FIELD TRIPS
Southeastern Cell - Cheat River

The 10th SEFOP Trip will be held in the Cheat Canyon, northern West Virginia on 18-20 April 1997, led by Greg Springer (James Madison U), Steve Kite (West Virginia U) and others. We will focus on cave morphology and a suite of sedimentary facies in caves that possess evidence of whether they were deposited above or below local baselevel (Cheat River). Such evidence combined with paleomagnetic sampling permits us to calculate a rate of incision for the Cheat River that includes error bars. We also plan to visit slackwater sediments used as stage indicators (good-1996 and bad-1985), huge boulder bedload transport, hillside boulder streams, and canyon-rim rock cities. The trip will require a 10 to 12 km round-trip hike along an old logging railroad in the canyon with two or three 30 m descents on steep slopes. The off-road nature of the trip will require that registration be limited to the first 30 registrants. Contact: Steve Kite (Kite@WVUGEO.WVNET.EDU); Web site: vax2.jmu.edu/~springgs/index.html.

The U.S. Army Corps of Engineers is developing a new approach to assess the functions of natural and created wetlands - the "hydrogeomorphic" (HGM) method. The HGM approach relies on a classification scheme for wetlands explained in 1993 by Mark Brinson, an ecologist at East Carolina University. The three major factors of the HGM classification are the geomorphic setting, the water source, and the hydrodynamics. The most recent documents published by the Corps recognize wetlands formed in seven geomorphic settings - depressions; slopes; mineral flats; organic flats; riverine floodplains; lacustrine fringes; and estuarine fringes. The water source factors (e.g. precipitation, groundwater, surface water) and the hydrodynamic factors (e.g. vertical flow; unidirectional flow; bidirectional flow) occur in various wetlands as controlled by the geomorphic setting. Essentially, Brinson and his colleagues have adopted and expanded a viewpoint long advocated by hydrogeologists - not only is a wetland's existence largely controlled by its position in the landscape, so are its functional capabilities.

As presently planned, the HGM assessment procedure will rely upon detailed studies of wetland functions conducted in "reference wetlands" - a suite of natural wetlands with the same hydrogeomorphic classification in one region. These studies will form the basis for standards of success to be established for mitigation wetlands. Of the 44 functions that should be evaluated, 22 are clearly geomorphological (e.g. abundance of beaver; frequency of overbank flow; macrotopographic relief; retained sediments; etc.) (Smith et al 1995). At the present time, scientists at the Corps are developing guidelines for different geomorphic settings that can be used to assess reference wetlands (e.g. Brinson et al 1995). Assessment Management Teams ("A-teams") will be

formed in different regions of the country to develop specific assessment procedures for use by many government agencies in that region. Geomorphologists, hydrologists, and soil scientists lead the list of specialists needed to staff these A-teams.

If the Corps officially adopts the hydrogeomorphic method to assess wetlands, geomorphologists can contribute greatly to the preservation and management of wetland resources. Wherever possible, apply your knowledge of surficial processes and subsurface conditions to assist in this nation-wide effort. In addition, once involved, take every opportunity to highlight the importance of geologic time in the evolution of natural wetlands. For example, many existing mitigation wetlands do not function well because their designers did not appreciate the influence of weathering, of Quaternary stratigraphy, or of climatic changes. Members of the QG&G Division will bring a unique perspective to the study of wetlands, both natural and created, one that will be crucial to future successes in wetland science and ecological engineering. -- Rich Whittecar (grw100f@giraffe.tech.edu.edu)

Brinson, M.M. 1993. A hydrogeomorphic classification for wetlands. Technical Report WRP-DE-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg MS.

Brinson, M.M. and others, 1995. Guidebook for application of hydrogeomorphic assessments to riverine wetlands. Technical Report WRP-DE-8, U.S. Army Engineer Waterways Experiment Station, Vicksburg MS.

Smith, R.D. and others, 1995. An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands, and functional indices. Technical Report WRP-DE-9, U.S. Army Engineer Waterways Exper. Station, Vicksburg MS.

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