

VOLUME 31, NUMBER 2

OCTOBER 1997

## OLDEST GSA DIVISION CELEBRATES 50 YEARS

### CHAIRPERSON'S COLUMN

by Helen L. Delano

The Engineering Geology Division of the Geological Society of America celebrates our 50th Anniversary Year in 1997. Eleven members petitioned GSA Council to authorize creation of a Section on Engineering Geology for "the promotion of the science of geology as applied to engineering work." GSA Council approved the bylaws of its first topical, rather than geographic, subsection in April 1947. Charles P. Berkey, whose long dedication to the promotion of applied geology was instrumental in inspiring the division's formation, served as chairman for 1947 and 1948. The list of later division Chairmen includes many of the best-known names in engineering geology.

The issues addressed in the first meeting program are familiar ones that still concern us: application of field and laboratory geology to engineering works; issues in concrete aggregate geology, geophysical exploration techniques at a dam site; glacial geology and related engineering problems; and geological contributions from the deep tunnels of New York. Although new topics have been added as technology has changed the world, the basic concerns of engineering geology remain the same. The need for engineering geology continues.

One of the first major activities of the new Division was to prepare a special commemorative volume, in honor of Charles Berkey, entitled The Application of Geology to Engineering Practice. The resulting Berkey volume was printed and reprinted six times between 1950 and 1967. Preparation of publications on various aspects of engineering geology has continued to be one of the Divisions most important activities. The Engineering Geology Case Histories series was initiated in 1957 to show how geology affects the planning, design, construction and maintenance or operation of engineering works. In eleven volumes, the Division and

the Society documented conditions and problems related to tunnels, dams, landslides, river diversions, ground water, waste disposal, foundation performance, mine subsidence, swelling soils, man-induced seismicity, effects of rapid excavation, geologic mapping, behavior of stone as a construction material, and legal aspects of practicing geology.

Shortly after the Case Histories series was launched, the need was recognized for a different style of publication, presenting review articles on major topics in Engineering Geology. The first volume of Reviews in Engineering Geology was released in 1962. Nine others have followed it since then, and one will be released this year as the Division's 50th Anniversary Commemorative Volume. The next three are well along in preparation.

Sharing of information through publications, presentations at meetings, field trips, short courses and informal interaction of members is our primary activity. I encourage you to read the history of the Division, written by past-chairmen George Kiersch and Allen Hatheway, in the GSA Centennial Special Volume 3 for a detailed view of our past activities and accomplishments. The biography of Charles Berkey contained in the Berkey Volume is also well worth reading to recognize the setting from which the division emerged, and the contributions that can be made by one individual.

The need for applied geology information continues. Engineering geology has long relied on the study of case histories to provide exposure to the real-world problems that are critical to developing the practical understanding to apply more general theoretical knowledge. We must continue to analyze both successful and failed projects, and to publish our conclusions. We also need to continue to compile and publish review articles to consolidate and summarize the rapidly increasing knowledge necessary for responsible application of

geology to engineering practice.

The Engineering Geology Division of the Geological Society of America has a role in the future of our profession. The needs that triggered the formation of the Division, for a forum to promote sharing of information, are still with us. As we enter our second 50 years, the future of the Division belongs to you, the members. I am optimistic about the future of the Division. We have talented and dedicated members, and a long tradition of service. But we need the abilities and knowledge of all our members. How do you plan to contribute?

Where would we be now without the efforts of Berkey and his fellow founding members? Without the contributions of hundreds of geologists who presented papers, ran symposia, wrote guidebooks and newsletters, edited books and served on committees over the last 50 years? Where will we go in the future, and will you have a part in it?

## 1997 DIVISION AWARDS

E.B. Burwell, Jr., Award

**A. Keith Turner** and **Robert L. Schuster**

for the volume they edited; Landslides: Investigation and Mitigation, Transportation Research Board Special Publication 247.

Distinguished Practice Award

**Jeffrey R. Keaton**

Meritorious Service Award

**Jerome V. DeGraff**

Richard H. Jahns Distinguished Lecturer

**Thomas L. Holzer**

EGD Student Research Grant

**Karen L. Boven**

for her Masters research on Stable Isotope Systematics of Municipal Waste Landfills: Landfill Dynamics and Groundwater Contamination.

## 1997 GSA ANNUAL MEETING

The program for the 1997 GSA Annual Meeting in Salt Lake City, Utah is looking great. The Engineering Geology Division was asked to review 83 abstracts whose authors selected either the "engineering geology" or "environmental geology" as the review category. Topics represented by these abstracts include contaminant hydrogeology to rock properties to landslides to volcano hazards to ancient seaways to, well, you get the picture. The following is the schedule of EGD- sponsored events, in chronological order.

**Short Course:** Techniques of Geostatistical Estimation and Simulation Applied to Environmental Geology

by Sean McKenna and Christopher Rautman of Sandia National Labs, Saturday & Sunday, October 18 & 19

**Theme Session T4:** Hydrogeology of Landslides: Monday morning, October 20

**GSA-EGD Management Board Meeting:** Monday, October 20 at noon in the cafeteria of the convention hall  
**Environmental and Engineering Geology Posters,** Tuesday morning, October 21

**Symposium S24:** Celebrating 50 Years of the Engineering Geology Division: The Past, Present, and Future of Geoscience in the Public Interest, Wednesday morning, October 22

**GSA-EGD Business Meeting and Annual Awards Luncheon:** Wednesday noon, October 22, at the Wyoming Room of the Little America Hotel

**Environmental and Engineering Geology** Thursday morning/afternoon, October 23

## 50<sup>th</sup> ANNIVERSARY VOLUME OF THE EGD ON SALE NOW

Reviews in Engineering Geology  
Volume 11

Storm-induced Geologic Hazards: Case Histories from the 1992-1993 Winter in Southern California And Arizona

Edited by:

**Robert A. Larson** and **James E. Slosson**

Contents

**P. Kyle House**

**Katherine K. Hirschboeck**

Hydroclimatological and Paleohydrological Context of Extreme Winter Flooding in Arizona, 1993

**Brian J. Doeing**

**David T. Williams**

**Jeffrey B. Bradley**

Gas Pipeline Erosion Failures: January 1993 Floods, Gila River Basin, Arizona

**Michael Sandecki**

**Catherine Crossett Avila**

Channel Adjustments from Instream Mining; San Luis Rey River, San Diego, California

**Roy J. Shlemon**  
**Mack Hakakian**

Impact of the 1992-1993 Winter Storms on Hydroconsolidation, Differential Settlement and Ground Fissures, Murrieta Area, Southwestern Riverside County, California

**Raymond C. Wilson**

Operation of a Landslide Warning System During the California Storm Sequence of January and February, 1993

**Raymond C. Wilson**

Broad-scale Climatic Influences on Rainfall Thresholds for Debris Flows: Adapting Thresholds for Northern California to Southern California

**Jeffery A. Johnson**

Effects of the 1993 Storms on the West Castellammare Mesa Landslide, City of Los Angeles, California

**William R. Goodman**

**Jules A. Darras**

La Ventana Landslide, Cities of San Clemente and Dana Point, California

## 1998 GSA ANNUAL MEETING

The 1998 GSA Annual Meeting will be in Toronto, Canada, October 26-29. Its time to start planning the Engineering Geology Division activities for that meeting: short courses, field trips, symposia, theme sessions, and so on. The coordinator for all of these division activities for the Toronto meeting is Scott Burns, who is slated to be the in-coming Vice-Chair of the EGD in 1997-98. Please contact Scott with your ideas so that we can have plenty of time to develop them. Please see address at end of newsletter.

And it's not too early to start planning for the 1999 GSA Annual Meeting in Denver...

## REQUEST FOR NOMINATIONS FOR DIVISION AWARDS

The E.B. Burwell, Jr., Award is given for the top publication in engineering and environmental geology published during the past five years. Nominations for the 1998 Burwell Award should be sent by December 31, 1997 to: Scott Burns, Please see address at end of newsletter.

Nominations for the Distinguished Practice Award and the Meritorious Service Award should contact Helen L. Delano. Please see address at end of newsletter.

## 1997 DIVISION COMMITTEES

**Burwell Award Committee:**

Matthew J. Brunengo  
Robert A. Larson  
James P. McCalpin  
Roy J. Shlemon  
Terry R. West  
Scott F. Burns, Chair

**Division Awards Committee:**

Jerome V. DeGraff  
Duane A. Eversoll  
John R. (Rick) Giardino, Chair

**Publications Committee:**

Duane A. Eversoll

**Newsletter Editor:**

Robert A. Larson

**Joint ASCE-GSA-AEG Committee on Engineering Geology:**

Don Helm, Morgan State University  
Bruce Rogers, U.S.A.C.E., Philadelphia

## DIVISION WEB SITE

Have you browsed the Engineering Geology Division's Web Site yet? It is accessible via the GSA home page at <http://www.geosociety.org>. The EGD Web site is approximately one year old, and is still growing and evolving under the management of Rick Giardino at Texas A&M University.

There are (or soon will be) clickable links to information concerning the history of EGD, current division officers, duties of the division officers, the EGD newsletter, Reviews & Case Histories, the Distinguished Practice Award, the Meritorious Service Award, student awards, the Jahns Lecture, upcoming meetings, membership, Engineering Geology programs, other useful links and the GSA homepage.

We would like this site to evolve into a useful resource for all engineering geologists and EG students with access to the Web. To make it truly useful to the broadest spectrum of people interested in engineering geology, we will need some feedback and ideas from you. What sorts of information do YOU think we should post or link to via our Web site? Do you have any suggestions for useful links? Would you like to help with the future evolution of the EGD Web site (volunteer labor is always appreciated in GSA)?

One idea is to have links to down-loadable freeware/shareware programs that would be useful to engineering geologists and EG students. Another is to

have little micro-course tutorials on various useful techniques. We will probably soon have a link to discussions of professional ethics in applied geoscience supplied via the AIPG.

Please let us know what YOU think would be useful! Rick Giardino, Web Master

## NEWS OF MEMBERS

**Don Helm** has taken a two-year leave from the Nevada Bureau of Mines and Geology (Univ. of Nevada, Reno) and has accepted the DOE-sponsored Massie Chair of Excellence in Environmental Disciplines at Morgan State University in Baltimore. His new e-mail address is: helm@eng.morgan.edu

**Don U. Deere** was stricken with a moderate stroke while he was working on a project in Puerto Rico in mid-August. His son and wife assisted Don in returning on August 21 to Gainesville, Florida, where he has been receiving treatment. Don's prognosis is for a good, strong recovery, although he says that he will not be traveling beyond his home base in the near future.

Don is the 1996-97 AEG/GSA Richard H. Jahns Lecturer, and was scheduled to visit universities in Alaska, Hawaii, and Ohio in coming weeks to deliver his presentation "Engineering Geology in Dam Foundation Studies." He was also scheduled to deliver the Jahns Lecture at the GSA Annual Meeting in Salt Lake City on October 22. Clearly, his recovery will make it impossible for him to deliver these presentations.

All of us in the Engineering Geology Division join with his colleagues and friends to wish Don and his family all the strength and perseverance they need at this time, and hope for Don's full recovery as soon as possible.

## FUTURE MEETINGS

Next year the IAEG and AEG will meet back to back in Vancouver and Seattle, followed shortly by EGD-GSA in Toronto.

Fourth International Conference on Case Histories in **Geotechnical Engineering** - The conference is being held in St. Louis, Missouri, at the St. Louis Marriott Pavilion Downtown on March 8-15, 1998.

**Association of Engineering Geologists** 41<sup>st</sup> Annual Meeting - "*Engineering Geology - Knowledge for Better Decisions*", September 28-October 3, 1998, Doubletree Guest Suites, Seattle, Washington. Contact Julie Keaton at (520) 204-1553.

The 8th Congress of the **IAEG** will meet in Vancouver,

British Columbia, Canada on September 21-25, 1998 at the Hyatt Regency Hotel. The Tunnelling Association of Canada will hold its 16th Annual Conference concurrently with the Congress. Abstracts will be required by December 1, 1997 and final papers by March 15, 1998. Potential authors should contact the Congress Secretariat to obtain information:

Ms. Kim Meidal, Secretariat, 8<sup>th</sup> Congress  
c/o BC Hydro, 6911 Southpoint Drive, Burnaby,  
British Columbia, Canada V3N 4X8; phone (604) 528-2421, e-mail: kim.meidal@bchydro.bc.ca or visit the web page at <http://www.bchydro.bc.ca/bchydro/IAEG/IAEG98.html>

### OBJECTIVE OF THE 8<sup>th</sup> CONGRESS

The objective is to bring together experts, practitioners, and students of Engineering Geology to share knowledge and experience and to promote a global view of our subject from this unique setting, the first IAEG Congress held in Canada, and the first in the Pacific Rim. The proposed themes of the 8th Congress reflect the broad spectrum of problems and issues which Engineering Geologists confront and resolve. Vancouver is situated in a tectonically active region astride the Cascadia subduction zone and within the Garibaldi Volcanic Belt. The city stretches north into the Coast Mountains, east into the Fraser River valley and south to the Fraser River delta. Each of these geographic areas affords engineering geology challenges for residents, planners, scientists, engineers and government officials alike. Residential, commercial and industrial development sites are diverse, ranging from steep mountain slopes to floodplain and liquefaction-susceptible soils, to foreshore and offshore lands reclaimed from the sea. The natural array of geomorphic settings and processes offer a stimulating backdrop for discussions. The Congress will provide a forum for learning from both the successes and failures of practitioners from around the globe, and opportunities to share thoughts on existing and new technologies as well as to discuss ways of dealing with the challenges facing our industry. [From the IAEG web page].

**Geological Society of America** Annual Meeting - October 26-29, 1998 at the Metro Toronto Convention Centre in Toronto, Ontario, Canada. Contact GSA at (303) 447-2020 or at their web page [www.geosociety.org](http://www.geosociety.org).

**GeoEng2000** - An International Conference on Geotechnical and Geological Engineering, in Melbourne, Australia, on November 19-24, 2000. Abstracts due May 1, 1999. Papers due November 1, 1999. For information contact: Secretariat, GeoEng2000, C/-ICMS Pty Ltd, 84 Queensbridge Street, Southbank, VIC 3006 Australia, e-mail [geoeng2000@icms.com.au](mailto:geoeng2000@icms.com.au) and website at [civil-ww.eng.monash.edu.au/discipln/mgg/geo2000.htm](http://civil-ww.eng.monash.edu.au/discipln/mgg/geo2000.htm)

## SUBMITTING TO THE NEWSLETTER

Please contribute news of members or the profession to the newsletter editor. Your contribution will help make this newsletter a success. To receive the newsletter by e-mail, GSA needs your e-mail address when you pay your dues. Only about 32% of our Division's members have e-mail, so we will continue to send out paper newsletters.

Your new editor for 1997-98 is our Meritorious Service Award winner Jerry DeGraff. Contact him at 5339 N. Orcard Ave., Fresno, California 93701; office (209) 297-0706, ext. 4932, or e-mail fishlake@worldnet.att.net.

## TIME FOR YOU TO VOLUNTEER

We think it is important to further develop EGD participation in section meetings, where information about geologic hazards, professional practice, and public policy can be transmitted that is more locally relevant and useful. Why not think about helping the engineering geology community by convening an Environmental and Engineering Geology theme or discipline session at your local GSA section meeting? You can invite local/regional environmental/engineering firms to participate, which may help us to build bridges that will help in the future membership evolution of EGD. Let the EGD officers know if you are interested, and we will be happy to help with logistics to the greatest extent that we can.

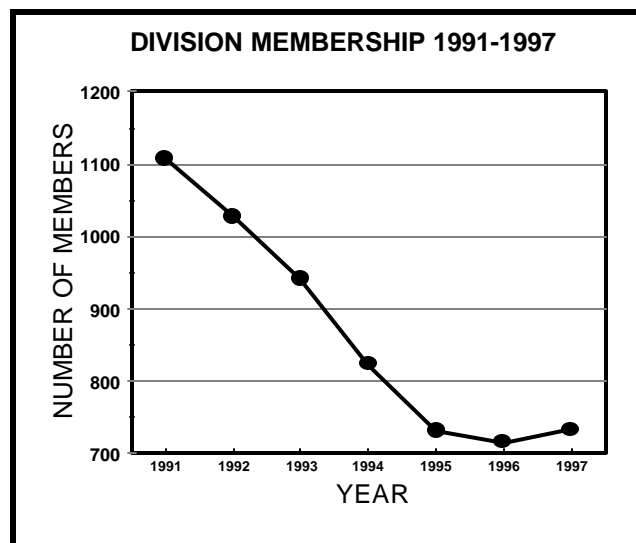
We are looking for two new members for the Burwell Award committee. The term is for three years and is not much work - just reviewing papers and books that have been nominated during the past for the top publication in engineering geology. Contact Scott Burns at the address given at the end of this newsletter.

We are also looking for a Chairperson for the Publications Committee. This work involves reviewing Division publications prior to submittal to GSA. If interested, please contact Vince Cronin.

## WE NEED YOUR HELP MEMBERSHIP GROWTH VITAL

Our membership decreased for many years and has now flattened out, as the graph below demonstrates. We need each of you to remain a member and to recruit two more. We can rebuild and gain more strength. So what do you get for your \$5 dues? Your money supports the awards program of the EGD. One of the most important functions of the Division is to recognize those who have shown us the way with their service, professional practice, publications, and communication abilities. You get organized symposia at the meetings,

short courses, and field trips that are worth attending. You get a couple of newsletters a year. But best of all, you get to meet like-minded professionals that share many of the same experiences. So please, help the Division out!



## EDITOR'S NOTE

*by Robert A. Larson*

For historical purposes, and to honor those who have shown us the way, I have included the following lists of our awardees, chairpersons, and publications. These lists are an update of those in Kiersch, G.A., and Hatheway, A.W., 1991, History and Heritage of the Engineering Geology Division, Geological Society of America, 1940s to 1990; in The Heritage of Engineering Geology; The First Hundred Years; GSA Centennial Special Volume 3.

The newsletter masthead is derived from Figure 37(a) of Kiersch, G.A., 1991, The heritage of engineering geology: Changes through time; GSA CSP 3, and was taken from Fluhr, T.W., 1969, Recent engineering data on the New York City Group of Formations: New York, Queens College Press Geological Bulletin 3, p. 1-2. I hope that you will place this newsletter in your copy of The Heritage of Engineering Geology.

So what happened to the e-mail version of this newsletter? Well, I crashed my computer and had not backed up the file. I did not want to input each address again. Hopefully, the new editor, Jerry DeGraff, will be able to send out e-mail versions. Until then, check our Web site.

## Edward Burwell, Jr., Award

The Edward Burwell, Jr., Award, established by the Division in 1968, honors the memory of one of the founding members of the Division and the first chief geologist of the U.S. Army Corps of Engineers. It consists of an embossed award certificate. This award is made to the author or authors of a published paper of distinction that advances knowledge concerning principles or practice of engineering geology, or of related fields of applied soil or rock mechanics where the role of geology is emphasized. The paper that receives the award must (1) deal with engineering geology or a closely related field, and (2) have been published no more than 5 years prior to its selection. There are no restrictions as to the publisher or publishing agency of the paper. The author or authors of the selected paper need not be a member(s) of the Engineering Geology Division or of the Geological Society of America and need not be a resident(s) or citizen(s) of the United States.

### RECIPIENTS

#### 1969 **Lloyd B. Underwood**

U.S. Army Corps of Engineers, for his paper Classification and Identification of Shales: Proc. Amer. Soc. Civil Engineers, v. 93, SM6, p. 97-116, 1967

#### 1970 **David J. Varnes** and **Glenn R. Scott**

U.S. Geological Survey, for their paper General and Engineering Geology, United States Air Force Academy: U.S. Geol. Survey Prof. Paper 551, 93 p., 1967.

#### 1971 **Edwin B. Eckel**

U.S. Geological Survey, for his paper The Alaska Earthquake, March 27, 1964, Lessons and Conclusions: U.S. Geol. Survey Prof. Paper 546, 57 p., 1970.

#### 1972 **Richard J. Proctor**

Metropolitan Water District of Southern California, for his paper Mapping Geological Conditions in Tunnels: Bull. Assoc. Engineering Geologists, v. 8, no. 1, p. 144, 1970.

#### 1973 **Murray R. McComas** and **J. E. Hackett**

Illinois Geological Survey, for their paper Geology for Planning in McHenry County, Illinois: Illinois Geol. Survey Circular 438, 29 p., 1969.

#### 1974 **Robert F. Leggett**

National Research Council of Canada (ret.) for his book, Cities and Geology: McGraw-Hill, 624 p., 1973.

#### 1975 **Erhard M. Winkler**

University of Notre Dame, for his book Stone Properties, Durability in Man's Environment: Springer-Verlag, 230 p., 1973.

#### 1976 **David J. Varnes**

U.S. Geological Survey, for his paper The logic of Geologic Maps with Reference to their Interpretation and Use for Engineering Purposes: U.S. Geol. Survey Prof. Paper 837, 48 p. 1974.

#### 1977 **Richard E. Goodman**

University of California, Berkeley, for his book Methods of Geological Engineering in Discontinuous Rocks: West Publishing Co., 472 p., 1976.

#### 1978 **Nicholas R. Barton**

Norwegian Geotechnical Institute, Oslo, for his paper The Shear Strength of Rock and Rock Joints: Int. Jour. Rock Mechanics and Mining Science, v. 13, no. 9, p. 255-279, 1976.

#### 1979 **Evert Hoek**, **Golder Associates**,

Vancouver, and **John W. Bray**, Imperial College of Science and Technology, London, for their book Rock Slope Engineering: Institution of Mining and Metallurgy, London, 402 p., 1977.

#### 1980 **Kerry E. Sieh**

California Institute of Technology, Pasadena, California, for his paper Prehistoric Large Earthquakes Produced by Slip on the San Andreas Fault at Palmett Creek, California: Jour. Geophys. Res., v. 83, no. B8, p. 3907-3939, 1978.

#### 1981 **Cole R. McClure, Jr.**, **Bechtel Inc.**, San

Francisco, Calif., and **Allen W. Hatheway**, University of Missouri, Rolla, Missouri (formerly Haley and Aldrich, Inc., Cambridge, Mass.), for their role as editors of and contributors to Geology in the Siting of Nuclear Power Plants: Geol. Soc. Amer., Reviews in Eng. Geol., v. IV, 1979.

#### 1982 **Douglas R. Piteau**, Vancouver, British

Columbia, and **F. Lionel Peckover**, Baudruil, Quebec, for their paper Engineering of Rock Slopes: in National Academy of Sciences, Transportation Research Board Special Report 176, p. 193-228, 1978.

#### 1983 **Peter W. Lipman** and **Donald R.**

**Mullineaux**, U.S. Geological Survey, for their editorship and contributions to Eruption of Mount St. Helens: U.S. Geol. Survey Prof. Paper 1250, 844 p., 1981.

#### 1984 **Roy E. Hunt**

for his book Geotechnical Engineering Investigation Manual; McGraw Hill, 983 p. 1984.

#### 1985 **Larry D. Dyke**

Queen's University, Kingston, Ontario, for his paper Frost Heaving of Bedrock in Permafrost Regions: Bull. Assoc. Engineering Geologists, v. 21, no. 4, p. 389-405, 1984.

#### 1986 **James F. Quinlan**, National Park

Service, and **Ralph O. Ewers**, Eastern Kentucky University, for their paper Ground Water Flow in Limestone Terranes: Strategy Rationale and Procedure for Reliable, Efficient Monitoring of Ground Water Quality in Karst Areas: National Symposium and Exposition on Aquifer Restoration and Ground Water Monitoring (5th, Columbus, Ohio, 1985), Proceedings, National Water Well Assoc., Worthington, Ohio, p. 197-234, 1985.

**1987 Joseph I. Ziony**

U.S. Geological Survey, Menlo Park, California, for his editorship of and contributions to *Evaluating Earthquake Hazards in the Los Angeles Region-An Earth Science Perspective*: U.S. Geol. Survey Prof. Paper 1360, 505 p., 1985.

**1988 Gary H. Eisbacher**

University of Karlsruhe, and J.J. Clague, Geological Survey of Canada, Vancouver, British Columbia, for their paper *Destructive Mass Movements in High Mountains: Hazard and Management*: Geological Survey of Canada Paper 84-16, Ottawa, 230 p., 1984.

**1989 Robert B. Johnson and Jerome V. DeGraff**, for their book *Principles of Engineering Geology*: John Wiley and Sons, New York, 497 p. 1988.

**1990 Perry H. Rahn**

South Dakota School of Mines and Technology, Rapid City, South Dakota, for his book *Engineering Geology - An Environmental Approach*; Elsevier Science Publishing Company, New York, 585 p., 1986.

**1991 Richard M. Iverson and Jon J. Major**, for their paper *Rainfall, Ground-water Flow, and Seasonal Movement at Minor Creek Landslide, Northwestern California: Physical Interpretation of Empirical Relations*: Geological Society of America Bulletin, v. 99, p. 579-594, 1987.

**1992 George A. Kiersch**

for his editorship of *The Heritage of Engineering Geology: The First Hundred Years*: Geological Society of America, Centennial Special Volume 3, 1991.

**1993 Richard W. Galster**

for *Engineering Geology in Washington*, Vols. I and II, Washington Division of Geology and Earth Sciences, Bulletin 78, 1989

**1994 J. David Rogers**

for his authorship of *Reassessment of the St. Francis Dam Failure*, in *Engineering Geology Practice in Southern California*, Star Publishing Co., Belmont, Calif., 1992.

**1995 Charles G. Higgins and Donald R. Coates** for *Groundwater Geomorphology: The Role of Subsurface Water in Earth-Surface Processes and Landforms*: GSA Special Paper 252, 1990.

**1996 Gerald Shuirman and James E. Slosson**, for their book *Forensic Engineering: Environmental Case Histories for Civil Engineers and Geologists*, Academic Press, 1992.

**1997 A. Keith Turner and Robert L. Schuster** for the volume they edited, *Landslides: Investigation and Mitigation*, Transportation Research Board Special Publication 247.

## ***DISTINGUISHED PRACTICE AWARD***

The Division membership feels it is appropriate to recognize outstanding individuals for their continuing contributions to the technical and/or professional stature of engineering geology. Presentation of the Distinguished Practice Award recognizes such contributions. A nominee need not be a member of the Engineering Geology Division but must have made a major contribution to engineering geology in North America. The nomination consists of filing the nominee's resume and a brief statement of the technical and/or professional contributions that form the basis for the candidate's nomination. The selection of the awardee is made by the Committee on Distinguished Practice and Meritorious Service Awards. Approval of the selectee is the responsibility of the Division Management Board. Only one Distinguished Practice Award can be given each year, and the award is a citation and plaque.

### **Distinguished Practice Award Recipients**

1982	Neil B. Steuer
1983	Thomas W. Fluhr
1984	Edwin B. Eckel
1985	Shailer S. Philbrick
1986	George A. Kiersch
1987	David J. Varnes
1988	Earl E Brabb
1989	William R. Judd
1990	Robert L. Schuster
1991	F. Beach Leighton
1992	James E. Slosson
1993	Don U. Deere
1994	C. Michael Scullin
1995	Richard W. Galster
1996	No Award Given
1997	Jeffrey R. Keaton

## MERITORIOUS SERVICE AWARD

The Division's Meritorious Service Award was developed in 1982 to recognize outstanding efforts on behalf of deserving members. The Committee on Distinguished Practice and Meritorious Service Awards annually ranks the candidate nominees. The highest ranked nominee or, in unusual circumstances, the two highest ranked candidates receive the award. Approval of the recipient(s) is the responsibility of the Division Management Board. The Meritorious Service Award was preceded, in 1980, by the presentation of several Certificates of Appreciation to worthy members.

### Meritorious Service Award Recipients

1982	Alice S. Allen
1983	No Award Given
1984	No Award Given
1985	Robert H. Fickies
1986	Ellis L. Krinitzsky
1987	No Award Given
1988	Richard E. Gray
1989	George A. Kiersch
1990	No Award Given
1991	Christopher C. Mathewson
1992	John W. Williams
1993	No Award Given
1994	No Award Given
1995	John R. (Rick) Giardino
1996	No Award Given
1997	Jerome V. DeGraff

## EDITOR OF THE ENGINEERING GEOLOGIST

(Issues per year in parentheses)

1959-65	Alice S. Allen, Editor (2-3)
1966	Alice S. Allen and Richard E. Goodman (4)
1967	Richard E. Goodman (4)
1968-71	Lloyd B. Underwood (3-4)
1972	Richard H. Howe (2)
1973-75	Mary E. Horne (2-3)
1976-78	William E. Mallio (1-2)
1979	William E. Mallio and Allen W. Hatheway (2)
1980-84	Robert H. Fickies (3-4)
1985	Robert H. Fickies and Theodore C. Smith (2)
1986-87	Theodore C. Smith (1)
1987-88	Arthur Keene (2)
1988-89	Robert J. Larsen (1)
1989-96	John R. (Rick) Giardino (0-2)
1996-97	Robert A. Larson (2)

## CHAIRPERSONS OF THE DIVISION

1947	<b>Charles P. Berkey</b> Columbia University, New York
1948	<b>Charles P. Berkey</b> Columbia University, New York
1949	<b>Sidney Paige</b> U.S.G.S., Columbia University, New York
1950	<b>Heinrich Ries</b> Cornell University, Ithaca, New York
1951	<b>Roger W. Rhoades</b> U.S. Bureau of Reclamation, Denver
1952	<b>Edward B. Burwell, Jr.</b> U.S. Army Corps of Engineers, Wash., D.C.
1953	<b>Arthur B. Cleaves</b> Washington University, St. Louis
1954	<b>Edwin B. Eckel</b> U.S. Geological Survey, Denver
1955	<b>Shailer S. Philbrick</b> U.S. Army Corps of Engineers, Pittsburgh
1956	<b>William H. Irwin</b> U.S. Bureau of Reclamation, Denver
1957	<b>John R. Schultz</b> Harza Engineering Co., Chicago
1958	<b>Ernest W. Dobrovolny</b> U.S. Geological Survey, Denver
1959	<b>Robert F. Leggett</b> National Research Council, Ottawa, Canada
1960	<b>Stafford H. Happ</b> U.S. Atomic Energy Comm., Grand Junction, Colorado
1961	<b>George A. Kiersch</b> Cornell University, Ithaca, New York
1962	<b>Robert H. Nesbitt</b> U.S. Army Corps of Engineers, Wash., D.C.
1963	<b>Thomas F. Thompson</b> Consultant, Burlingame, California
1964	<b>John H. Melvin</b> Ohio State Geological Survey, Columbus
1965	<b>George E. Ekblaw</b> Illinois State Geological Survey, Champaign
1966	<b>Laurence B. James</b> Calif. Dept. Water Resources, Sacramento
1967	<b>Elmer C. Marliave</b> Consultant, Sacramento, CA (until his death 9/24/67)
1967	<b>Robert W. Karpinski</b> University of Illinois, Chicago
1968	<b>Donald H. McDonald</b> H. H. Acres, Consultant, Niagara Falls, N.Y.
1969	<b>W. Harold Stuart</b> U.S. Army Corps of Engineers, Portland
1970	<b>H. Garland Hershey</b> State Geologist of Iowa; Office of Water Resources, U.S.D.I., Washington, D.C.



- 1971 **Howard A. Coombs**  
University of Washington, Seattle
- 1972 **Richard E. Gray**  
General Analytics, Inc., Pittsburg
- 1973 **Gordon W. Prescott**  
U.S. Army Corps of Engineers, Wash., D.C.
- 1974 **Howard J. Pincus**  
University of Wisconsin-Milwaukee
- 1975 **Paul L. Hilpman**  
University of Missouri-Kansas City
- 1976 **James W. Skehan**  
Boston College, Boston
- 1977 **David J. Varnes**  
U.S. Geological Survey, Denver
- 1978 **Richard W. Galster**  
U.S. Army Corps of Engineers, Seattle
- 1979 **Richard H. Jahns**  
Stanford University, Palo Alto
- 1980 **Allen W. Hatheway**  
Haley & Aldrich, Inc., Cambridge, Mass.
- 1981 **John S. Scott**  
Geological Survey of Canada, Ottawa
- 1982 **Harry F. Ferguson**  
USCE, Consultant, Pittsburgh
- 1983 **Erhard M. Winkler**  
University of Notre Dame, South Bend
- 1984 **Frank W. Wilson**  
Kansas Geological Survey, Lawrence
- 1985 **Robert L. Schuster**  
U.S. Geological Survey, Denver
- 1986 **David M. Cruden**  
University of Alberta, Edmonton
- 1987 **Christopher E. Mathewson**  
Texas A&M University, College Station
- 1988 **Ellis L. Krinitzsky**  
U.S.A.E. W.E.S., Vicksburg
- 1989 **Thomas L. Holzer**  
U.S. Geological Survey, Menlo Park
- 1990 **Jeffrey R. Keaton**  
Sergents, Hauskins, Beckwith, Utah
- 1991 **Perry H. Rahn**  
S. Dakota School of Mines and Technology
- 1992 **Charles Welby**  
North Carolina State University
- 1993 **Jerome V. DeGraff**  
Sierra National Forest, Clovis CA
- 1994 **Rhea L. Graham**  
U.S. Bureau of Mines, Wash., D.C.
- 1995 **Michael Hart**  
Consultant, San Diego, CA
- 1996 **John R. (Rick) Giardino**  
Texas A & M University
- 1997 **Helen L. Delano**  
Pennsylvania Geological Survey

## ROCK USED FOR THE BERKEY GAVEL

*by Helen L. Delano*

The Berkey gavel is passed down from Chair to Chair each year at the Annual Business and Awards Luncheon. The head of the gavel is made from Roxbury Conglomerate. The Roxbury Conglomerate is a member of the Boston Bay Group (BBG), the major bedrock of Boston, Massachusetts. The conglomerate, also known as the Roxbury Puddingstone, is a polymictic conglomerate having a felspathic sandstone matrix. It was first described in 1861, and with the rest of the BBG has been a subject of geological controversy ever since. Both age and depositional environment of these rocks have seen many interpretations. Much of what is known about the Boston Bay Group is based on exposures in various construction projects, and subway, water and sewer tunnels. A late Precambrian age was established for the BBG in 1982 based on Vendian microfossils from the Cambridge argillite exposed in a subway extension tunnel. This age has been recently confirmed by radiometric dating of associated igneous rocks. The depositional setting for the BBG is probably an Avalonian volcanic arc basin subjected to some glacial influence. The conglomerates represent subaqueous debris flows.

The complex and controversial geologic interpretations, the connection to major engineering projects in Boston, and the charming imagery of the poets version of the origin of the puddingstone make this an appropriate rock to form the head of the Berkey Gavel. This rock was chosen for the third Berkey gavel to honor William Otis Crosby, the "Father of Engineering Geology", who practiced in Boston. The gavel is one symbol of the Engineering Geology Division of the Geological Society of America through which the breadth of geologic interpretation, the mechanical considerations of construction projects, and human and societal concerns are brought together in consideration of the "applications of geology to various uses of mankind and engineering structures."

## PUBLICATIONS OF THE DIVISION

### SPECIAL PUBLICATIONS

- 1939 Geology in engineering; Frontiers of geology: Charles P. Berkey, Geological Society of America Brochure, p. 31-34.
- 1942 The geologist in public works: Charles P. Berkey, Bulletin, Geological Society of America, v. 53, p. 513-532.
- 1950 Application of geology to engineering practice (Berkey Volume): Sidney Paige, Chairman, Geological Society of America, 327 p.

- 1955 Engineering geology reference list: Committee on Reference List, Stafford C. Happ, Chairman, in Bulletin Geological Society of America, v. 66, no. 8.
- 1957 Teaching aids and allied material in engineering geology: Committee on Teaching Aids, John F. Mann, John T. McGill, and G. A. Kiersch, Chairman, Special Report: Geological Society of America, 36p.
- 1962 Films for teaching engineering geology: Committee on Teaching Aids, John T. McGill, editor, Distributed through Department Geological Sciences, Cornell University 1968 (describes 109 films and availability).
- 1991 Heritage of Engineering Geology - The First Hundred Years: George A. Kiersch, editor, Decade of North American Geology, Centennial Special Volume, No. 3.

### **CASE HISTORIES**

#### **IN ENGINEERING GEOLOGY**

- 1957 Engineering Geology Case Histories No. 1: Parker D. Trask, Editor.
- 1958 Engineering Geology Case Histories No. 2: Parker D. Trask, Editor.
- 1959 Engineering Geology Case Histories No. 3: Symposium on Rock Mechanics; Parker D. Trask, Editor.
- 1964 Engineering Geology Case Histories No. 4: Parker D. Trask and George A. Kiersch, Editors.
- 1964 Engineering Geology Case Histories No. 5: George A. Kiersch, Editor.
- 1968 Engineering Geology Case Histories No. 6: George A. Kiersch, Editor.
- 1969 Engineering Geology Case Histories No. 7: Legal Aspects of Geology in Engineering Practice; George A. Kiersch and Arthur B. Cleaves, Editors.
- 1970 Engineering Geology Case Histories No. 8: Engineering Seismology; The Works of Man; William M. Adams, Editor.
- 1973 Engineering Geology Case Histories No. 9: Geological Factors in Rapid Excavation; Howard J. Pincus, Editor.
- 1974 Engineering Geology Case Histories No. 10: Geologic Mapping for Environmental Purposes; Harry F. Ferguson, Editor.
- 1978 Engineering Geology Case Histories No. 11: Decay and Preservation of Stone; Erhard M. Winkler, Editor.

*Case Histories Series Retired in 1997*

### **REVIEWS IN ENGINEERING GEOLOGY**

- 1962 v. I; General Thomas W. Flohr, Robert F. Legget, Editors.
- 1969 v. II; General, David J. Varnes, George A. Kiersch, Editors.
- 1977 v. III, Landslides, Donald R. Coates, Editor.
- 1978 v. IV, Geology in the Siting of Nuclear Power Plants; Allen W. Hatheway and Cole R. McClure, Jr., Editors.
- 1982 v. V, Geology Beneath Cities of North America; Robert F. Legget, Editor.
- 1984 v. VI, Man-Induced Land Subsidence; Thomas L. Holzer, Editor.
- 1987 v. VII, Debris Flows/Avalanches; Process, Recognition, and Mitigation; John E. Costa and Gerald F. Wieczorek, Editors.
- 1990 v. VIII, Neotectonics in Earthquake Evaluation; Ellis L. Krinitzsky and David B. Slemmons, editors (Centennial Symposium of the Division).
- 1992 v. IX, Landslides/Landslide Mitigation; James E. Slosson, A. G. Keene, and Jeffery A. Johnson, editors.
- 1995 v. X, Clay and Shale Slope Instability; William C. Haneberg and Scott A. Anderson, editors.
- 1997 v. XI, Storm-Induced Geologic Hazards: Case Histories From The 1992-1993 Winter in Southern California And Arizona; Robert A. Larson and James E. Slosson, editors.

## **MEMBERS OF THE 1998 DIVISION MANAGEMENT BOARD**

### **CHAIR**

VINCENT S. CRONIN

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SCOTT F. BURNS

### **SECRETARY**

ROBERT A. LARSON

### **MEMBER-AT-LARGE**

DUANE A. EVERSOLL

### **PAST CHAIR**

HELEN DELANO

## ELECTIONS

The election of officers occurred at the Annual Business Luncheon for the second year in a row. Your new editor will endeavor to have the fall newsletter out next year in time for ballots to be cast by the general membership. Biographies of your new officers are presented below

### CHAIR

VINCENT S. CRONIN

Currently an Associate Professor of Geology at the University of Wisconsin in Milwaukee, with primary teaching responsibilities in engineering geology and structural geology. He is a certified geologist in the State of Wisconsin, and is a member of the GSA, AEG, AGU, NAGT, and AAPG. His doctorate in Tectonophysics is from Texas A&M University (1988), and he also earned an A.M. in Earth Sciences from Dartmouth College (1983) and a B.A. in Geology from Pomona College (1979). Dr. Cronin's work experience in engineering geology has been primarily with Slosson and Associates of Van Nuys, California, where he worked as a staff geologist in several stints prior to beginning his tenure at the University of Wisconsin. Dr. Cronin is married to Cynthia Ellis Cronin, who is also a geologist, and has two children who are not geologists, yet.

Vince Cronin's current interests include the recognition and characterization of landslides and unstable slopes, neotectonics with particular emphasis on the Malibu Coast Fault Zone of southern California, and professional ethics in the geosciences. He is author or co-author of approximately 18 published papers and 36 abstracts.

### VICE-CHAIR and CHAIR-ELECT

SCOTT BURNS

Currently a Professor of Geology at Portland State University where he is beginning his 8th year of teaching. He has been teaching full-time at the university level for 27 years and has taught in Switzerland, New Zealand, Washington, Colorado and Louisiana before coming back to Oregon where he grew up. His main interests are in engineering and environmental geology, soils, Quaternary Geology and geomorphology. He is a registered geologist in Oregon and is a member of GSA, AEG, IAEG, NAGT, SSSA, AMQUA, and Sigma Xi. He is past president of the Oregon Soil Science Society and is current chair of the Oregon section of AEG. He was a Kellogg National Leadership Fellow from 1990-1993 with the Kellogg Foundation.

Scott has BS and MS degrees from Stanford University and a Ph.D. from the University of Colorado, Boulder. He is a part-time private consultant in engineering geology. He is a author and co-author on over 90 publications and is the editor of a new book coming out this fall on case histories of engineering geology in Oregon. His current research interests are in

landslide inventory and susceptibility maps, earthquake hazard maps, radon and heavy mineral hazard maps, soil development, and loess. He and his wife Glenda have been married for 23 years and have three children, Lisa, Doug and Tracy. **Previous GSA Service:** Member-at-large EGD Manage. Bd., 96; EGD Secretary, 97; Chair, Burwell Award Comm., 96-97.

### SECRETARY

ROBERT A. LARSON

**Prof. Exp.**, Geol., Nevada Resources, Inc., 80-81; Staff Eng. Geol., Slosson and Assoc., 81-86; Senior Eng. Geol., Calif. GeoSystems, Inc., 86-87, Eng. Geol., Los Angeles Co. Dept. Public Works, 87- present; **Pers. Data**, b. Glendale, CA, 1-14-56. **Educ.**: UCLA, B.Sc. Geology, 79; CSUN, M.Sc. Geology (with distinction), 95. **Other Positions and Service:** Chair, So. Calif. Sec. AEG, 95-96, Pres., Calif. Sec., AIPG, 96, Member, Prof. Affairs Comm., Calif. State Board of Reg. for Geol. and Geophy., 95-present; Member, Landslide Working Group, Seismic Hazard Mapping Act Advisory Comm., Calif. State Min. and Geol. Board, 96-97; Member, Geosciences Policy Focus Group, California-at-Risk Update, Calif. Seismic Safety Comm, 96-97; Reg. Geol., CA, AZ, OR, ID; Cert. Eng. Geol., CA, OR; Cert. Hydrogeol., CA; Chartered Geol., GS. **Mem.**: GSA (fellow), AEG, IAEG, AIPG, AMQUA, AGU, SSA, EERI, ICBO, GS (London). **Previous GSA Service:** Member-at-large EGD Manage. Bd., 1997; EGD Newsletter Editor, 1997; Member, Burwell Award Comm., 1997; Co-editor, EGD Reviews in Eng. Geol. #11, 1997; Symposium convenor, 1994, Cordilleran Sec. Meet.

### MEMBER-AT-LARGE

DUANE A. EVERSOLL

**Prof. Exp.**: Geophys., Cont. Geophy. Co., 59-60; Geol. Nebr. Dept. of Roads, 60-74; Res. geol. Nebr. Geol. Sur. 74-present; Assoc. Dir. and Assoc. Prof. Nebr. Geol. Sur., 91-present. **Pers. Data**: b. Grand Island, NE, 5-6-36; m. 57, c. 2. **Educ.**: Univ. Nebr., B.Sc. geology, M.Sc. geology, 77. **Mem.**: Geol. Soc. Am.; Eng. Geol. Div., GSA; Assoc. Eng. Geol.; Sigma Xi. **Other Positions and Service:** Nat. Assoc. State Boards Geology (ASBOG); Nebr. Water Well Stds. and Contr. License Board; Registered geol., Wy.; Co-founder & Ex. Dir. Shallow Exploration Drillers Clinic, 65-present; **Res.**: Nebr. Landslides; Geol. mapping.; Eng. Geol.; Geothermal Energy.; Environmental Geol.; Mineral Resources. **Previous GSA Service:** Eng. Geol. Div. Awards Committee, 91-93, 97, Chair, 92-93.

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