Darcy’s Fountains Flow Again!

Story by Patricia Bobeck

Henry Darcy’s major work, *The Public Fountains of the City of Dijon*, a 647-page book accompanied by a 28-plate atlas, was published in France in 1856 shortly before Darcy’s death. The book is famous among hydrogeologists for its description of experiments that led to the formulation of Darcy’s law. Almost 150 years after its publication, *The Public Fountains of the City of Dijon* is a rare book, and one few Americans would read anyway because it’s in French. Now language and availability are no longer barriers to reading Darcy’s words because an English translation is available.

Darcy wrote *The Public Fountains of the City of Dijon* to show how he approached the design and construction of a water supply system: choosing a water source, building an aqueduct and designing a water distribution system. By 1840 Dijon was a model city in terms of water supply because of its 10.5 km of cast iron pipes filled with pure spring water that flowed by gravity and supplied 120 street fountains. The street fountains that provided abundant free water for domestic purposes, street washing, and fire fighting were the goal of Darcy’s system. He installed them at 100-m intervals so that no one had to walk farther than 50 m to obtain water. Since French cities were only beginning to build water supply systems to replace communal wells and water carriers, engineers would benefit from Darcy’s knowledge for many years.

*Please see Fountains on page 8*
Involvement with the Hydrogeology Division has shown me that although we are modest in size - membership now stands at about 1,300 - we are influential. Each year we bring you stimulating technical sessions at Annual and Sectional GSA meetings. We also bring cutting-edge hydrogeologic research to you each year through our Birdsall-Dreiss Distinguished Lectureship, now in its 27th consecutive year. We recognize influential research through the O. E. Meinzer Award, and superlative service to our Division and our discipline through the Distinguished Service Award. We encourage and nurture students through grants and our well-attended student receptions, which have become a fixture at GSA Annual Meetings.

You need not be a Division member to attend Division sponsored technical sessions, to receive the Meinzer Award, to host or attend a Birdsall-Dreiss lecture, to receive a student grant, or attend our student receptions. Contributors and Division members past and present have made this possible, and I invite you to take full advantage of the opportunities these activities present. If you are a hydrogeologist or studying to become one and are not a member of GSA or the Division, I also ask that you help support our activities by joining. Or, if you know someone who should join, please suggest that they do so. Student Division dues are $5, or roughly the cost of a movie ticket. Regular Division dues are $12; let’s say a movie ticket and popcorn.

The Birdsall-Dreiss Lectureship is perhaps the most conspicuous way the Division fosters scientific exchange. Proceeds from the Birdsall and Dreiss endowments are used to cover the travel expenses of our Lecturers. These endowments are professionally managed for the Division by the GSA Foundation. Despite continued modest growth in both endowments, decreased investment returns have required that our Lecturers be extremely frugal and have made it difficult to visit some institutions. I ask your help in keeping the Birdsall-Dreiss Lectureship healthy by contributing to either the Birdsall Fund or the Dreiss Fund (the Birdsall Fund, which created the Lectureship, began as a bequest from the late John Birdsall; the Dreiss Fund recognizes the untimely death of Shirley Dreiss, the 1992 Birdsall Lecturer). It is very easy to contribute; simply go to https://rock.geosociety.org/donate/donate.asp and select either the Birdsall or the Dreiss Fund from the drop-down menu (note that the menu has two successive alphabetical lists). Thank you.

Chair’s Corner...

Chris Neuzil, Chair
GSA Hydrogeology Division

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The Hydrogeologist

The Hydrogeologist is a publication of the Hydrogeology Division of the Geological Society of America. It is issued twice a year, to communicate news of interest to members of the Hydrogeology Division. During 1998, the publication moved from paper-based to electronic media. The electronic version may be accessed at: <http://gsahydrodiv.unl.edu>. Members of the Hydrogeology Division who have electronic mail will receive notification of all new issues. Other members will continue to receive paper copies.

Contributions of material are most welcome, and should be directed to the Editor. Submission as Word or WordPerfect document is most expedient.

F. Edwin Harvey, Editor
The Hydrogeologist
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Deadline, Fall Issue
August 16, 2004
The 2003 Annual Hydrogeology Luncheon, Awards Ceremony and Business Meeting of the Hydrogeology Division of the Geological Society of America (GSA) were held Monday, November 3, 2003 at the Sheraton Hotel in Seattle, Washington. Chair Bob Ritzi introduced the Division officers, awardees, and special guests. Awards were presented by Chair Ritzi immediately following the luncheon.

Student Research Awards were presented to the following:

1. Mr. John A. Breier, Jr. - Understanding Ground-Water Flow and Distribution to Nueces Bay Estuary Using Sediment Resistivity Imaging and Radium Isotope Measurements. University of Texas Marine Sciences Institute, University of Texas. Supervisor: Dr. Henrietta N. Edmonds.


The chair recognized the accomplishments of Dr. Jean Bahr, University of Wisconsin, during her tenure as the 2002-2003 Birdsall-Dreiss Distinguished Lecturer. Dr. Barbara Bekins, U.S. Geological Survey, was introduced as the 2003-2004 Birdsall-Dreiss Distinguished Lecturer.

A plaque for the Distinguished Service Award was presented to Dr. John D. Bredehoeft, The Hydrodynamics Group, for his contributions to the Hydrogeology Division, the Geological Society of America.
America, and hydrogeology over the course of his career. A summary of major accomplishments was documented in a brochure provided for each person attending the luncheon.

The O.E. Meinzer Award was presented to Dr. Steven E. Ingebritsen, United States Geological Survey. Dr. Stuart Rojstaczer was the citationist for Dr. Ingebritsen. Dr. Ingebritsen was presented with a plaque and a miniature of the Meinzer Bowl for his significant contribution to the field of hydrogeology with specific reference to the following papers:


The annual business meeting was called to order at 2:35 p.m. after completion of presentation of awards. The first order of business was reading of the necrology followed by a moment of silence. Following this, chairman Ritzi presented the state of the Division.

The Secretary/Treasurer report was presented by R. K. Davis. For the year July 1, 2002 to June 30, 2003 there was $7,808 in revenue from dues. An additional $579 in revenues was realized from contributions from continuing education courses sponsored by the Division. There were also contribution revenues of $250. The total revenues for the period were $8,637. Expenses include the annual meeting, newsletter, postage, student travel awards, and the Birdsall-Dreiss lecture tour for a total of $8,858.01. There was net income for the year of ($221.01). The negative net income during the budget period resulted because the costs of the Birdsall-Dreiss lecture series were billed against the general Hydrogeology Division funds in an effort to defray expenses.

Please see Secretary on page 9
I first want to thank the Hydrogeology Division for providing a once in a lifetime opportunity to visit a cross-section of institutions involved in hydrogeologic research and practice. During my term as the Birdsall-Dreiss lecturer, I stopped at 62 institutions and gave 81 talks. I met with hundreds of graduate and undergraduate students as well as a large number of professionals in government service and consulting. Personally, it was a delightful odyssey. Traveling mostly by car, I had chances to stop at tacky roadside attractions, such as the Boll Weevil monument in Enterprise, AL, and sites of great beauty like Niagara Falls. I traced my grandparents’ roots in Tennessee, Kentucky, and Queens. I may also have discovered the roots of the lectureships’ founder when, near Alfred College in upstate NY, I happened on the town of Birdsall. I enjoyed visits with family, friends, former mentors and students and I met many new friends who I hope to see more of in future years. My hosts kept me (too) well fed with everything from elegant dinners in restaurants with exotic or local flavor, to informal potlucks and dessert gatherings with faculty and students. Among home cooked meals, Jeff Hanor’s crawfish boil, Don Siegel’s moussaka, and the multi-course feast featuring wild game prepared by Fred Phillips’ wife Lois deserve special mention. My hosts also entertained me with field trips to springs, wetlands and waterfalls from Florida, north through the Appalachians, and east to Texas and Arizona. I hiked up peaks in the Sierra Nevada and the Canadian Rockies and explored landslide deposits at the base of Mt. St. Helens. I got tours of the Wright brothers’ airplane test site near Dayton OH, Magnolia Plantation near Charleston SC, the Governor’s Palace in Colonial Williamsburg, and the Cathedral of Learning in Pittsburgh. I indulged my love for art, particularly blown glass, with visits to museums in Tacoma, Toledo and Toronto. In January I cross-country skied in the Cascades and saw eagles along the Snake River. In September I watched the sunset from a kayak on Lake Superior. I collected Mardi Gras beads amidst a Mardi Gras crowd in New Orleans.

But enough about how much fun I had. What did I learn about the state of our profession from this more-or-less synoptic sample? A number of geology departments, particularly at public institutions, are facing significant financial challenges in the current economy. There have been budget cuts and losses of faculty slots following retirements. I visited quite a few schools where parades in Baton Rouge and New Orleans, colored Easter eggs in Virginia, and drove through Vermont and New Hampshire during the peak of fall colors.

Please see B-D Report on page 8
The 2003 version of the Student Raffle and Reception was a huge success, thanks to the help of Division members, publishers, professional organizations, and software vendors. Bill Simpkins, Division Past Chair, was Master of Ceremonies. He was ably assisted in the presentations by Division members Kent Keller and Janet Herman. Exactly 137 prizes totaling more than $23,000 were given out during the 1.5 hour event, including 26 pieces of software, 78 books, 13 memberships to professional organizations and/or subscriptions to professional journals, and 24 mugs. A highlight of the event was presentation of a copy of Ghislain deMarsily’s book “Quantitative Hydrogeology,” autographed by the author himself, to a deserving student (see photo at left). We are happy to report that every student walked away with a prize this year. The Division would like to thank the following organizations and individuals for donating prizes for the event, as well as the GSA staff (particularly Barb Mieras) for helping ship the many boxes from Boulder to Seattle for the meeting.

Software Companies
- Environmental Simulations
- Environmental Modeling Systems
- Golden Software
- Haitjema Software
- Hydrosolve
- International Ground Water Modeling Center
- Rockware
- Waterloo Hydrogeologic

Publishers
- American Geological Institute
- Cambridge Press
- Elsevier-Academic Press
- Lewis Publishers
- McGraw-Hill
- National Ground Water Association
- National Academy Press
- Prentice-Hall
- U.S. Geological Survey
- Wiley

Professional Organizations and Journals
- International Association of Hydrogeologists
- National Ground Water Association
- Environmental and Engineering Geoscience

Individual Donors
- Tom Al
- Scott Bair
- Carl Bowser
- Graham Fogg
- Ed Harvey
- Jack Hess
- Steve Ingebritsen
- Dave Larssen
- Chris Neuzil
- Bob Ritzi
- Madeline Schreiber
- Ed Sudicky
- Bill Alley
- Jean Bahr
- Dave Diodato
- Vicki Grabert
- Jim Hendry
- Paul Hsieh
- John Karachewski
- Berry Lyons
- Olaf Pfannkuch
- Dave Rudolph
- Bill Simpkins
- Don Whittemore
The 2004 GSA Annual Meeting, November 7-10 in Denver, will be the place to be for hydrogeologists. Of the 144 topical sessions proposed for the meeting, 31 are sponsored or co-sponsored by the Hydrogeology Division. The interest extends well beyond our membership, however, as several of the proposed hydrogeology sessions are co-sponsored by non-GSA groups and associations as well as other GSA Divisions: the International Association of Hydrogeologists, National Ground Water Association, U.S. Geological Survey, U.S. Environmental Protection Agency, the Karst Waters Institute, GSA Divisions including Engineering Geology, Geophysics, Geobiology & Geomicrobiology, Quaternary Geology & Geomorphology, and Sedimentary Geology, and the GSA Geology and Public Policy Committee. Descriptions of all proposed topical sessions can be viewed at <www.geosociety.org/meetings/2004/topical.htm>.

As in the past, only those sessions with enough abstracts submitted will be presented at the Annual Meeting. If you want to ensure a session in your area of interest, submit your abstracts. The deadline for abstract submission is July 13, 2004.

Although many of the proposed sessions relate to important hydro-geologic themes and physical areas, two sessions will honor the scientific accomplishments of Mary Jo Baedecker and Dick Parizek. Other proposed sessions will provide visions of future science and practice in hydrogeology, and the implications of upcoming revolutions in observing systems hydrogeology.

Attendees will also be offered two short courses and two distinguished lectures. The titles of the short courses are Estimating Rates of Groundwater Recharge (offered by Rick Healy) and Hydrogeologic Field Methods (by John Moore). Both will be offered on Saturday, November 6.

The Birdsall-Dreiss Distinguished Lecture will be presented by Barbara Bekins on the afternoon of Monday, November 8, after the Hydrogeology Division luncheon. The National Ground Water Association’s Henry Darcy Distinguished Lecture will be presented by Allen Shapiro. Shapiro’s lecture is titled “Recent Advances in Characterizing Ground Water Flow and Chemical Transport in Fractured Rock: From Cores to Kilometers.”

Denver skyline at sunset. (Photo by Denver Metro Convention & Visitors Bureau).

Story by Jim Hendry

Jim Hendry
Chair, Technical Program Committee
Throughout the book, Darcy shows his concern for the poor and their right to free clean water, probably (as a family biography confirms) because of Darcy’s memories of drinking putrid water as a child growing up in Dijon, and his difficult adolescence after his father’s death when Darcy was 14. Darcy’s mother was able to obtain scholarships from the city of Dijon to enable Henry to continue his studies. Darcy repaid the city’s investment many times over through his contribution of the water supply system (and the railroad, but that’s another story), for which he would not accept the customary remuneration.

Translation of this book took three years of evenings and weekends, with many hours spent on research and consultation with subject experts. I took on this project because I enjoy translation (my academic degrees are in French, linguistics and geology) and because I thought I could make a unique contribution to the science of hydrogeology. The project provided a bonus: Darcy expresses his personal opinions on numerous topics, so I was able to get to know him as a person. I hope my translation enables readers to develop a friendship with Darcy and share my admiration for him. We are fortunate to have a brilliant, generous and compassionate man like Henry Darcy as the founder of our profession.

The English translation has been published as a result of financial backing by Geomatrix Consultants.

Patricia Bobeck, Translator of The Public Fountains of the City of Dijon, by Henry Darcy.


B-D Report from page 5

geology departments had recently, or are slated soon to be, merged with geography or other disciplines into new “environmental science” programs. Enrollments in courses, including those in the hydrogeology sequence, are much lower than they were at the peak of the contaminant hydrogeology boom of the mid-90s. Graduate applications are also down in terms of numbers, although many colleagues remarked that the quality of their applicants remains high.

However, I also saw a number of positive developments in my travels that, overall, leave me with much optimism for the future of our field. I think it is important to recognize how far hydrogeology has come in the time since John Birdsall decided to endow this lecture series. Of the over 50 colleges and universities I visited, fewer than a dozen (by my rough estimate) had a hydrogeologist on the faculty (or even a hydrogeology course on the books) in 1978 when Jacob Bear began the first lecture tour. Now, hydrogeology courses are offered widely at both undergraduate and graduate institutions and many have not just one, but several, hydrogeology faculty. I was particularly impressed by the number of universities that have decided to devote a substantial portion of their limited resources to hydrologic science. In the last decade, these institutions have hired (or expanded) clusters of faculty with interests ranging from subsurface, to surface and atmospheric aspects of the hydrologic cycle, housing them either together in a single department or linking them through interdisciplinary hydrologic science programs. Another cause for optimism is the wide range of research applications that are being tackled by hydrogeologists, often in collaboration with scientists from other subspecialties in the earth sciences or from completely separate disciplines. Given that one of the themes of my lectures is the importance of hydrogeology to interdisciplinary studies of ecosystem restoration, I was particularly pleased to see the large number of colleagues who are involved in those types of projects.

And the final cause for optimism is the students that I met. In addition to a large cadre of creative and energetic graduate students who are poised to become the next generation of academics and professionals, there is an even larger pool of talented undergraduates who are being inspired by outstanding mentors at the 4-year colleges I visited. The Birdsall-Dreiss lecture tour is a great way for the Division, and our profession as a whole, to reach out to that audience, and it was an honor for me to be a part of it.
applying these costs against the Birdsall-Dreiss funds which have been heavily impacted by market fluctuations over the last several years. The ending balance for the Hydrogeology Division account on June 30, 2003 was $18,163.11.

Three funds managed by the GSA Foundation for the Hydrogeology Division did remain relatively stable over the period as a result of a somewhat improved market and significant contributions from Hydrogeology Division Members (Thank You!!) The Hydrogeology Division Award Fund ended the period with $42,971 an increase of $38; the Birdsall Award Fund ended the period with a balance of $59,310 an increase of $3,151; and the Dreiss Award Fund had an ending balance of $25,581, an increase of $2,811.

The election results were presented: Total votes: 179 – 172 online and 7 paper. Just under 15% of the voting members voted.

The Bylaws change was approved; 160 yes, 2 no, 17 abstain.

Officers: Chair: Christopher E. Neuzil; 178 yes, 0 no, 1 abstain. First Vice-Chair: Janet S. Herman; 177 yes, 0 no, 1 abstain; 1 write in. Second Vice-Chair: D. Kip Solomon – 176 yes, 2 abstain, 1 write in.

Chair Ritzi reported that division membership was 1317 strong, which was up eight members from 2002.

Dr. Alan Fryar provided a report on the status of the Division’s program for the 2003 annual meeting indicating that the Division sponsored or co-sponsored 35 topical sessions that included over 450 abstracts, two field trips, and one short course on stable isotopes. Dr. Jim Hendry was introduced as the Hydrogeology Division’s joint technical program representative for the 2004 annual meeting scheduled for Denver.

A newsletter update was provided by Dr. Ed Harvey. The newsletter is now fully functional in electronic format. The web site for the Hydrogeology Division is now being hosted by the Conservation and Survey Division, University of Nebraska. If you have questions or comments about the newsletter or the web page please send Ed a note. He’s always looking for new material to add to the newsletter.

Dr. Jean Bahr and Dr. Don Siegel provided reports from GSA Council indicating that the Council was finalizing the electronic library under one umbrella so universities can purchase the entire package. The vision is to include groups such as GSA, AGU, USGS, and others. In addition, a new journal will be launched with the intent of providing a forum for creative applications that require color and animation, or that have large interactive data sets attached. This would be a dynamic system.

Dr. Leonard Konikow provided a status report for the International Association of Hydrogeologists. He made a plea for all to join the organization and start receiving the Hydrogeology Journal. He pointed out that advertising was left on the tables for those interested in joining.

Dr. Vicki Kretsinger reported on the success of the exchange of distinguished (Darcy Lecturer-NGWA and the Birdsall-Dreiss Lecturer – GSA) speakers between the GSA Annual Meeting and the National Ground Water Association annual meeting. The Hydrogeology Division Board is supportive of this and will work to see it continues if possible.

The meeting was adjourned at 3:30 pm.

Ralph Davis
Secretary/Treasurer
GSA Hydrogeology Division

Visit the GSA Hydrogeology Division web site at <http://gsahydrodiv.unl.edu> to catch up on the latest happenings within the division.
Evaporite Karst Session in Zaragoza, Spain, 2005.

To be held during the 6th International Conference on Geomorphology, September 7-11, 2005. Session organized by Francisco Gutierrez fgutier@unizar.es and Kenneth Johnson ksjohnson@ou.edu. Conference website is: <http://wzar.unizar.es/actos/SEG/index.html>

GSA Denver Meeting Approaching Fast

Don’t forget to submit your abstracts for the upcoming GSA Annual Meeting in Denver, CO. The online abstract deadline is midnight, Pacific Time, July 13, 2004. Please visit the GSA Webpage <www.geosociety.org/meetings/2004/> to review the list of this year’s sessions.

AGU Fall Meeting Deadlines Draw Near

Abstracts for the AGU 2004 Fall Meeting (December 13-17) in San Francisco are due on September 1 (by mail) or September 9 (online). For information on sessions see the AGU web site at: <http://www.agu.org/meetings/fm04/>.

2004 NGWA Ground Water Expo in Las Vegas

This year’s 56th Annual National Ground Water Association’s Ground Water Conference and Exposition will be held in Las Vegas, Nevada, December 12-15. For more information visit the NGWA webpage at <www.ngwa.org>.

The University of Connecticut has dissolved its Department of Geology and Geophysics. Gary Robbins, the Department Hydrogeologist, is being reassigned to the Department of Natural Resources, Management & Engineering. He can be reached at 860-486-2840 <gary.robbins@uconn.edu>.

Wanna Get Away?...Then organize a Penrose Conference.

For guidelines contact GSA Headquarters via e-mail at: ecollis@geosociety.org or by phone or fax at: (303) 357-1034 • fax 303-357-1070
From The Editor...

This issue of the Hydrogeologist contains new Hydrogeology Division Chair Chris Neuzil’s first column, a feature article on a new translation of Darcy’s famous report, updates on the Denver GSA meeting, several related meeting and conference announcements, and the minutes of the membership meeting last fall.

I want to personally thank everyone who contributed an article, note, announcement, etc., to this issue, and also to thank all of you who helped me with edits, photos, graphics, reports, schedules and any other contributed information contained herein. This issue of the newsletter would not be possible without you.

Happy reading!

F. Edwin (Ed) Harvey, Editor
The Hydrogeologist

Join us for the Annual Geological Society of America Meeting this fall in Denver, Colorado and check out the newly remodelled Colorado Convention Center. (Rendering courtesy of Jill Strunk, Public Relations Manager, Denver Metro Convention & Visitors Bureau)

Do you have an interesting idea for a short scientific article? Perhaps an opinion on a new policy or technique? Any exciting news in your professional life? Upcoming conference? An announcement of interest to the hydrogeological community? If so, why not publish it in The Hydrogeologist? Send your submission ideas to <feharvey1@unl.edu>.
Hydrogeology Division Candidate Biographies

Chair:

Janet S. Herman. Educ: BS (Highest Distinction) Geol Sci, PhD Geochemistry (low temperature aqueous), Penn State Univ. Prof Exp: Univ of Virginia, Dept of Envir Sci (82-present), currently Professor and Director, Prog of Interdisciplinary Rsrch in Contaminant Hydrogeology, involving hydrologists, geochemists, microbial ecologists, civil & chemical engineers. Prof Affil: GSA (mbr 84, Fellow 94); IAGC, AGU, GS, NSS. GSA Service: GSA Bull, Assoc Edtr (93-95, 96-98, 99-00), Comm on Rsrch Grants (01-03), Hydro Div Panel on O.E. Meinzer Award (95-97, Chr 97), Hydro Div Second Vice-Chr (02-03), First Vie-Chr (03-04). Addtnl Service: Applied Geochemistry, Assoc Edtr (10 yrs); Water Resources Research, Deputy Edtr (2 yrs); numerous Natl Rsrch Council committees. Rsrch Int: Chemical evolution of groundwater in pristine & contaminated hydrogeological systems; role of iron redox chemistry in contaminated aquifers, environmental fate of hormonally active agents, surface water-groundwater interaction influencing fate of dissolved chemicals in riparian zones.

First Vice-Chair:

D. Kip Solomon. Educ: BS Geol Engg, MS Geology, Univ of Utah; PhD Earth Sciences, Univ of Waterloo. Prof Exp: Univ of Utah, Dept of Geol & Geophy (93-present), currently Professor and Director, Noble Gas Laboratory; Oak Ridge Natl Lab (85-92), var positions incldg Rsrch Staff, Groundwater Group Leader; U.S. Geol Surv, Hydrologist (84-85). Appts: Natl Rsrch Council Comm on Improving Practices for Regulating & Managing Low-Activity Radioactive Waste (03-pres), Comm on Conceptual Models in Frac’d Unsaturated Zones (98-99); U.S. rep, Intl Atomic Energy Agncy Adv Grp (97); EPA Tech Rvw Comm (97). GSA mbr since 94. GSA Service: Joint Tech Prog Comm, Chr & Hydro Div rep (96-97), Second Vice-Chr (03-04). Addtnl Serv: IAEA Expert Missions (03, 02); Ground Water Edtrl Bd (97-01); AGU Wtr Qual Comm (93-97). Awards: Univ of Utah, Coll of Mines & Earth Sci, Outstanding Faculty Teaching Award (01-02); Univ of Waterloo, Pearson Medal and Alumni Gold Award (92). Rsrch Int: Envir tracers in evaluating grndwtr flow & solute transport processes in local- to regional-scale aquifers, partic use of dissolved gases to evaluate grndwtr travel times, location & rates of recharge, and the sustainability of grndwtr resources.

Second Vice-Chair:

Scott W. Tyler. Educ: BS Mech Eng, Univ Conn; MS Hydrology, New Mex Tech; PhD, Univ Nev Reno. Prof Exp: Dir. Graduate Program and Prof in Env and Resour Sci and in Geol Sci UNR (00-present); Sabbatical at CNRS France (98); Prof Desert Research Inst and Dept Env and Resour Sci UNR (98-99); Assoc Prof DRI and DERS UNR (92-98); Sabbatical CSIRO Australia (90-91); Staff Hydrologist and Asst Research Soil Sci DRI (83-92); Research Eng Battelle (82-83); Senior Sanitary Eng Conn Dept Health Svcs (78-80). GSA mbr, Fellow 97. Service: NAS Panel on waste disposal at Ward Valley, AGU Large-Scale Field Exp Comm; Associate Editor Water Resour Res (95-01). Awards: Antarctic SVC Medal (93); NGWA Darcy Lecturer (99); Fellow Soil Sci Soc Amer (03). Rsrch Int: Flow and transport in UZ, quantifying arid region recharge, fractal mathematics in predicting soil hydraulic properties.

Secretary/Treasurer:

Ralph K. Davis. Educ: BS, MS and PhD,Univ. Nebraska –Lincoln, Prof Exp: Dist Mgr, Big Bend Groundwater Management District, Stafford, KS, (83-89); Asst Prof, Dept Earth Science & Physics, Univ South Dakota, (92-94); Asst Prof Dept Geosciences, Univ Arkansas, (94-00). Present affiliation: Assoc Prof, Dept Geosciences and Director, Arkansas Water Resources Center, Univ Arkansas. GSA (Mbr 93, Fellow 03), AGU, AGWSE, Sigma Xi, Arkansas Groundwater Association. GSA Service: Hydrogeology Div Ann Mtg Chair (98), Joint Tech Prog Comm (97-98). Secretary/Treasurer GSA Hydrogeology Div (00-present). Other Service: President Kansas Groundwater Mgmt Dist Assoe, (84-86); Member & Chair, Dept Geosciences, Alumni Adv Board, Univ Nebraska (98-04). Rsrch Int: Groundwater sustainability/groundwater declines, contaminant hydrogeology, water-resources management including estimation of artificial and natural recharge to aquifers, contaminant transport in all types of geologic media ranging from low-permeability to very open karst systems, wetlands/riparian area delineation and assessment, and source water assessment.
TO ALL VOTING MEMBERS OF GSA’S HYDROGEOLOGY DIVISION:
This is the ballot for 2004-2005 officers for the Hydrogeology Division. Please vote by marking your ballot and returning it to GSA postmarked no later than August 31, 2004. Biographical data for this year’s candidates appear on the next page. You may also vote using the GSA web site by accessing the electronic ballot using your GSA member number (or your e-mail address if it is in your GSA records). If you need assistance, please contact GSA at <gsaservice@geosociety.org> or (303) 357-1000, option 3 or tollfree at (888) 443-4472.

Ballot Instructions
Vote for one candidate for each office. If voting by mail, complete the ballot and return it to: Geological Society of America, PO Box 9140, Boulder, CO 80301, Attn: Divisions. Ballots must be postmarked by August 31, 2004.

2004-2005 Officers of the Hydrogeology Division:

Chair
☐ Janet S. Herman
☐ (or write-in)__________________________________

First Vice-Chair
☐ D. Kip Solomon
☐ (or write-in)__________________________________

Second Vice-Chair
☐ Scott W. Tyler
☐ (or write-in)__________________________________

Secretary/Treasurer
☐ Ralph K. Davis
☐ (or write-in)__________________________________

Your Name (printed)________________________________________________________________________

Your Signature (required)____________________________________________________________________

Your GSA Member Number (required)*_______________________________________________________

*GSA contact information for assistance is near the top of this ballot.

NOTE: If you prefer, you may vote online by August 31 at: <http://rock.geosociety.org/balloting/hydro.asp>. At that site, access the electronic ballot using your GSA member number (or your e-mail address if it is in your GSA records).
Hydrogeology - Denver 2004

AWARDS

The *O. E. Meinzer Award* to **Prof. Ghislain de Marsily**
and
The *Distinguished Service Award* to **Dr. R. Allan Freeze**

LECTURES

The *Birdsall-Dreiss Lecture* by **Dr. Barbara Bekins**
and by special arrangement with the National Ground Water Association
The *Darcy Lecture* by **Dr. Allen Shapiro**

TECHNICAL SESSIONS

About 30 sponsored or co-sponsored by the Hydrogeology Division, including

- The Future of Hydrogeology
- Revolutions in Monitoring
- Mountain Region Hydrogeology
- Aquitards
and much, much more. Something for everyone!

*Abstract deadline July 13!*  <http://www.geosociety.org/meetings/2004/>

STUDENT RECEPTION

Socialize, meet senior scientists, win prizes
2004 Management Board
Chair: Chris Neuzil (ceneuzil@usgs.gov)
First Vice-Chair: Janet Herman (jherman@virginia.edu)
Second Vice-Chair: Kip Solomon (ksolomon@mines.utah.edu)
Secretary-Treasurer: Ralph K. Davis (ralphd@mail.uark.edu)
Past Chair: Robert W. Ritzi (rlitzi@wright.edu)

Standing Committees
Technical Program Committee:
  Jim Hendry (Chair)

Nominating Committee:
  Bridget Scanlon, Bill Simpkins, Steven Wheatcraft (Chair)

Meinzer Award Committee:
  Steve Ingebritsen, Garth van der Kamp, Fred Phillips (Chair),
  Scott Tyler, Tom Winter

Birdsall-Dreiss Lecturer Committee:
  Jean Bahr, Barbara Bekins, Graham Fogg (Chair)

Distinguished Service Award Committee:
  Ken Bradbury (Chair), John Cherry, Jack Sharp

Ad Hoc Committees

Historical Committee:
  Steve Wheatcraft (Chair)

Section Representatives
  Cordilleran - Jim Thomas
  Northeastern - Grover Emrich
  North-Central - Maureen Muldoon
  South-Central - Todd Halihan
  Rocky Mountain - Robert Sterrett
  Southeastern - Joe Donovan & Brian Katz

Representatives to other Societies
  American Geophysical Union - Dave Diodato
  American Geological Institute - Dave Stephenson
  National Ground Water Association - Dave Rudolph
  International Assoc. of Hydrogeologists - Colin Booth
  Water Science Policy Liaison - Dave Diodato
  Society for Sedimentary Geology - Gary Weissmann

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