

The Hydrogeologist

Newsletter of the
GSA Hydrogeology Division

June 2002
Issue No. 56

The Future of Hydrogeology

A Guest Commentary by Dr. Fred Phillips

Editor's Note: At the 2001 GSA meeting in Boston, a banquet room filled with hydrogeologists, hydrologists, students, and guests were inspired by the insightful words of Dr. Fred Phillips as he accepted the O.E. Meinzer Award. In his speech, Dr. Phillips presented his vision for the future of hydrogeological research and challenged us all to move our discipline into a number of new and exciting directions in the coming decades. For the benefit of those members of the Division who were unable to attend the Annual Meeting at GSA, I have printed this edited portion of Dr. Phillips speech.

Meinzer was a remarkable man. More than any other person, he shaped, guided, and inspired the development of hydrogeology in our nation. He was the author or coauthor of over 120 scientific publications, in a day when 20 publications would have been considered a major lifetime achievement. He headed the Ground Water Division of the U.S. Geological Survey for many years, and he was the President of the American Geophysical Union when he died in his sleep in 1948, at the age of 72. Meinzer was there at the early, exciting days of hydrogeology as a science, indeed, he took the lead in its development. I would like to take the occasion

of this award to examine a rather somber question: are we approaching the end of the road that Meinzer started us out upon?

In asking this question, I am picking up the gauntlet that Frank Schwartz and Motomu Ibaraki threw down with their paper "Hydrogeological Research:



Dr. Fred Phillips accepting the O.E. Meinzer Award at the GSA Annual Meeting in Boston (Photo by Ed Harvey).

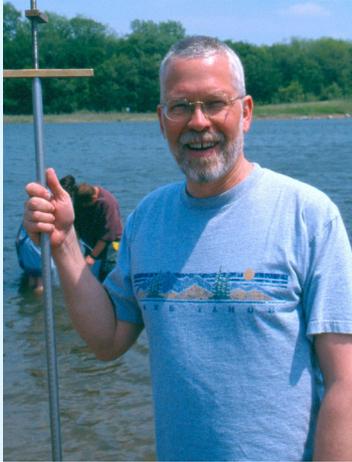
Please see Phillips on page 4

In This Issue:

Chair's Corner	2
Student Reception Prizes A Big Hit	5
Birdsall-Dreiss Distinguished Lecturer Report	7
Birdsall-Dreiss Fund Needs You!	8
A Civil Action...Was The Main Attraction	9
2002 GSA Annual Meeting Hydrogeology Program ...	10
Bahr Named 2003 Birdsall-Dreiss Lecturer	12
Joint North-Central/Southeastern Section Meeting	14

Hem's WSP-2254 Now In PDF Format	15
IAH Becomes GSA Associate Society	16
New Technical Program Chair Named	16
Geo- <i>it</i> -Logical	16
Fogg's 2001-2002 Tour Schedule	17
Bulletin Board	18
From the Editor	19
Division Contacts	21

EDITOR'S NOTE: A color version of this newsletter is available on the web at [<http://gsahydrodiv.unl.edu>]



Bill Simpkins
Chair
GSA Hydrogeology Div

Anesthesia & Hydrogeology

Welcome to the “new look” newsletter and to Ed Harvey, our new newsletter editor/webmaster. I think you will agree that he is off to a great start. Thanks to former editor Ira Sasowsky for a smooth transition. I would also like to thank former webmaster Dave Diodato for his service to the division and his willingness to allow the newsletter and webmaster functions to be consolidated under Ed’s roof in Nebraska.

In April, I experienced general anesthesia for the first time - a result of unexpected surgery to remove wayward disc material in my lower back. One minute you are talking to the doctor and the next minute you are out - really out (some of you perhaps experienced this in college without the aid of an anesthesiologist). Two hours after the surgery, I returned to the hospital room that I vaguely remember from earlier that morning. I lost two hours of existence. It was as though I was invisible to the rest of the world during that time. Fortunately, I was still visible to the neurosurgeon.

As hydrogeologists, we have much in common with an anesthetized patient. Much of our work is invisible to the world. This is a problem that has plagued geologists for years, but it is perhaps worse for hydrogeologists. Just ask my daughter and son, ages 11 and 13, about their experiences telling classmates about dad’s job. Their mother (and my wife of 20 years), Cathy, is an R.N. The cute triangular hats are gone, but most of us know what nurses do because we come in contact with them sometime in our lifetime. Other parents are lawyers, doctors, teachers, or soybean farmers. It is easy to imagine what they do. So, what does your dad do,

the kids ask? “He’s a hydrogeologist”, my kids respond. Stunned silence. My son’s response is: “Rocks. Water. Water in rocks.” I guess most people can grasp that definition. My daughter says: “Water under the ground. Wells and stuff.” You get the picture. There is not much improvement later even among students who take Earth Science. I was “volunteered” recently for a career day at the high school. A very polite senior escorted me to my room. On the way, he asked me what topic I was going to present. “Hydrogeology,” I replied. He replied, “Oh, is that all about rocks?” At the university level, my first challenge when I arrived at Iowa State in 1989 was to educate the geology and meteorology faculty as to what they had just hired. They had voted to hire a hydrogeologist, but few of them knew exactly what that entailed. After exorcising “Geohydrology” during the first few years and giving countless presentations across campus about my research, most people have concluded I am a “hydrologist.” Close enough.

*Please see **Chair** on page 3*

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://www.uakron.edu/geology/gsa/hydro/>. 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
113 NH
University of Nebraska
Lincoln, Nebraska 68588-0517

Voice: (402) 472-8237
Fax: (402) 472-4608
Email: feharvey1@unl.edu

Deadline, Fall Issue

August 16, 2002

Chair from page 2

The lack of a public perception of our discipline is, I think, our own fault. As scientists, most of us are too “anesthetized” in our own “Dilbertian cubicle” to spend much time spreading the word about hydrogeology. At the university, for example, speaking to the lay public or to farmers comes under the heading of service. We get little or no credit for service in our annual review, so it is not a high priority. Perhaps that will change when we are forced to show our relevancy due to the looming budget cuts.

The public certainly understands the relevancy of geologist Jack Shroder at University of Nebraska at Omaha. They discovered that he could look at the famous video of Osama bin Laden and identify where in Afghanistan the video was probably recorded. Wow, geology can do that? In contrast, an American Farm Bureau Federation

editorial a few years ago took me to task for characterizing the geology in areas around hog lagoons in Iowa without drilling a single borehole. How could I possibly know what I was doing, they asked?

We don’t need another 9/11 crisis, but we do need some ideas to bring our discipline to the public “radar screen.” Here are some things that each of us can do. First, bring the message to your elementary or middle schools or volunteer for a career day at your high school. Second, let your city know of your expertise and work with it on planning new well fields or parks involving water, for example. Third, participate in local environmental groups that involve people interested in groundwater. Fourth, educate your university or company colleagues about our discipline. Fifth, participate in the activities of your state groundwater association or AWRA chapter. Sixth, be active in

this division, as well as other organizations, both national and international, that address hydrogeologic issues. Finally, don’t shy away from contacting your city council, state legislator, or Senator or Representative about groundwater issues. Chances are they will call on you again for expertise. As our recent work on hog lagoons in Iowa showed, many legislators welcome the expertise that only we can provide. With any luck, you may help influence the final legislation as we were able to do.

In closing, I admonish all of you to come out of your “anesthesia” now. My slow recovery from surgery shows that good health and lifestyle can change in an instant. If you want to improve the public perception of hydrogeology and guarantee the health of the division into the future, get the word out now, rather than later. You and the division will be glad you did. 



Hey! Have you heard the news?

The GSA Hydrogeology Division has a new web site address:

<http://gsahydrodiv.unl.edu>

Be sure to update the “favorites” address in your browser today! Also, stay tuned for future site updates over the course of the next year as the web site gets a new look. If you have suggestions, or postings for, or comments about the web site, please send them to Ed Harvey at: feharvey1@unl.edu or 113 Nebraska Hall, University of Nebraska, Lincoln, NE 68588-0517. *See you online!*

Phillips from page 1

Beginning of the End or End of the Beginning?”, published in the 2001 July-August issue of *Ground Water*. Schwartz and Ibaraki conducted an extensive analysis of citation patterns in the hydrogeology literature, with the goal of assessing the vitality of the field. They conclude: “Research is inefficient with much

“I am going to suggest a three-fold approach for addressing what I think will be the exciting issues of the next 20 or 50 years.”

produced for little gain. On a typical industrial life-cycle curve, ground water research is likely ranked as mature and close to aging. At this stage, much work will have been completed and the number of truly impactful problems will have dwindled to just a few.” I have reviewed Schwartz and Ibaraki’s data and analysis and am going to at least provisionally accept that their conclusions are correct.

If so, what has brought us from the exciting days of Meinzer and Theis to the present sad picture in the mirror that Schwartz and Ibaraki hold to our faces? These authors describe most hydrogeological research as “commodity-driven”, meaning that it is characterized by incremental improvements to issues motivated by practicality, rather than by trying to achieve major advances in understanding. The validity of this assessment leaped out at me when I read O.E. Meinzer’s obituary, published in the *Transactions of the AGU* in 1948. Nelson Sayre wrote “Although the science of ground-water hydrology was initially considered more or less academic, its practical importance has become increasingly recognized with the great increase in recent years in the development of ground-water supplies...”. Certainly, it is a matter of satisfaction to me to be able to contribute to solving problems of societal importance, and also to be able to educate students in a field in which they will be able to find good jobs, but I think that we have become so accustomed to viewing our science as one oriented toward practical problems that we forget that the pioneers embarked on their research simply because exploring how water behaved in the subsurface was so exciting. They did it *in spite* of the fact that most of their peers viewed the research as purely academic!

Certainly, if we are going to make important and exciting advances in our science, we are going to have to focus on fundamental questions rather than primarily on improving practical applications.

I am going to suggest a three-fold approach for addressing what I think will be the exciting issues of the next 20 or 50 years. The first component I will call “look back”. The earth sciences have their roots in the analysis of the history of the earth, but we hydrogeologists have tended to ignore that aspect of our science. Most hydrogeologists could easily recite the geological history of the rocks composing an aquifer they are studying, but what if you asked them the history of the water cycle in that basin over the fairly recent geological past? Just as the rocks have a history, so does the water cycle, but although we often know a lot about the geological history, we generally know almost nothing about the history of the water cycle.

Although a lot of my own research has been on classically-defined ground-water and vadose-zone problems, a lot has not. I have spent much of the past 20 years trying to understand how an integrated analysis of glacial and lacustrine fluctuations can help us decipher the relative role of temperature and precipitation fluctuations as a cause of changes in the water cycle. This research is finally coming to fruition, due largely to the efforts of my Ph.D. student Mitch Plummer. I did

“Look back, stretch out, and then push forward.”

not think such research had much of a place in a speech for the Meinzer Award, until I came across a very brief communication by Oscar Meinzer published in the *Transactions of the AGU* in 1934. He wrote: “An outstanding achievement of the Section of Hydrology has been... assembling the existing records of the advance and retreat of glaciers... The fluctuations of lakes is a closely related subject that is equally fundamental in the study of hydrology. In 1922 I published a map giving the distribution of 68 Pleistocene lakes... Abundant and convincing evidences of changes in climate in the Pleistocene epoch or at its end are afforded both by the ancient drift-sheets and by the ancient lake features, but the question as to the relative

importance of changes in temperature and changes in precipitation is still very obscure.” Meinzer himself clearly considered the issue of the history of the water cycle to be very important, and in fact proposed the same approach to the problem that I followed 60 years later. We, as hydrogeologists, have lately tended to define our field in such a way as to exclude questions on the history of the water cycle, questions that Meinzer himself obviously considered important.

I’m going to call my second strategy “stretch out”. Eighty years ago pioneers such as Meinzer defined the region below the land surface as the new frontier of hydrogeology, but in the intervening decades that definition has sometimes tended to turn into an intellectual prison. For a long time Peter Eagleson has encouraged us to think of hydrology as a global science, rather than one related merely to local problems. I don’t think the message has quite got through to us hydrogeologists, yet. The land surface is the interface that supports plants, and, in fact, most life, but we have tended to ignore that messy zone filled with roots and worms and focus on “cleaner” problems of physics and chemistry at depth. This has ultimately had the effect of distancing us from the more urgent scientific and practical problems of the present day. Ignacio Rodriguez-Iturbe has recently urged us to deal directly with the role of subsurface hydrological processes in plant communities, a new endeavor he calls “ecohydrology”. This is only one aspect of integrating subsurface hydrology into the global water cycle, but he is pointing in exactly the right direction.

Finally, I want you to consider my third proposed initiative: “push forward”. I think that in the past few years the scientific community has produced very convincing evidence that, due to the effects of human civilization, the globe is beginning to experience environmental changes of an unprecedented magnitude. In the next hundred years most areas will undergo major changes in temperature and precipitation, and associated with them, changes in geomorphology and ecosystems. Shifts in the water cycle will be perhaps the single most significant aspect of these changes. These changes are going to have enormous impacts on human populations. Are we in a position to predict the nature of these shifts and their effects on subsurface hydrology? At the present time, the answer clearly is “no”. Unless we can claim that we understand and can explain such shifts in the recent geological past, and unless we can claim that we understand how the subsurface hydrology interfaces with ecosystems and with geomorphic systems, we cannot

possibly claim to be able to predict the effects of such future shifts. Look back, stretch out, and then push forward. We, as hydrogeologists, are at present in a unique position to both meet what will be the most urgent societal needs of the next century and to advance scientific understanding of the earth system, but we will only be able to accomplish this if we stretch our vision beyond the limits we ourselves have defined for our field.



GSA Student Reception Offered Prizes for All!

Story by Steven Wheatcraft

At the GSA Annual Meeting in Boston last year we held the traditional student reception after the Birdsall-Dreiss Lecture. As has been the custom now for many years, the Past Chair of the Division hosts the event, at



Dr. Steven Wheatcraft presents one of many prizes to a grateful student during the drawing at the student reception at the GSA Annual Meeting in Boston (Photo by Ed Harvey).

least with respect to the student raffle. Prior to the meeting the Past Chair has the duty of finding the prizes for the student raffle. In the past, most of the prizes have been books donated by publishers and authors. This year, I decided to do something a little different, and see if I

Please see [Reception](#) on page 12

GSA Student Reception Prizes Awarded

Software	Donor	Retail Value	# of Prizes
GMS	Scientific Software	\$5,000	2
Groundwater Vistas	Environmental Simulations	\$2,000	3
AquiferWin32	Environmental Simulations	\$1,000	3
Visual Modflow	Scientific Software & Waterloo Hydrogeologic	\$2,000	2

Book Title	Author	Donor
Applied Chemical Hydrogeology	A. Kehew	Prentice Hall
Aqueous Environmental Geochemistry	D. Langmuir	Prentice Hall
Geochemistry of Natural Waters	J. Drever	Prentice Hall
Groundwater Contamination: Transport & Remediation	Bedient, Fifi & Newell	Prentice Hall
Groundwater Hydraulics and Pollutant Transport	R. Charbeneau	Prentice Hall
Contaminant Hydrogeology	C.W. Fetter	Prentice Hall
Hydrogeology in Practice: A Guide to Characterizing Ground-water Systems	W. Stone	Prentice Hall
Mathematical Primer on Groundwater Flow	J. Hermance	Prentice Hall
Unsaturated Zone Hydrology for Scientists & Engineers	J. Tindall	Prentice Hall
Manual of Field Hydrogeology	L. Sanders	Prentice Hall
Physical Hydrology	L. Dingman	Prentice Hall
Applied Hydrogeology	C.W. Fetter	Prentice Hall
Data Visualization in the Geosciences	J. Carr	Prentice Hall
Physical and Chemical Hydrogeology	Domenico & Schwartz	John Wiley & Sons
Mathematical Methods in the Physical Sciences	M. Boas	John Wiley & Sons
Ground-water Microbiology and Geochemistry	F. Chapelle	John Wiley & Sons
Aquifer Hydraulics	V. Batu	John Wiley & Sons
Applied Contaminant Transport Modeling	Zheng & Bennett	Chunmiao Zheng
Dynamics of Fluids in Porous Media (Dover edition) 5 copies	J. Bear	Steven Wheatcraft

Report from 2001 Birdsall-Dreiss Distinguished Lecturer

Story by Steven E. Ingebritsen

It is customary for the outgoing Birdsall-Dreiss Lecturer to report on his or her efforts in the *Hydrogeologist*, including an impression of the state of our discipline.

I'd like to begin with a brief history of the Birdsall-Dreiss Lectureship. John Birdsall was a hydrogeologist who set up the Birdsall Fund at GSA to promote hydrogeology, and this fund has been used to help support a lectureship since 1978. Jacob Bear of the Israel Institute of Technology was the first Birdsall Lecturer in 1978. Shirley Dreiss was the Birdsall Lecturer in 1992. She died in 1993. Shortly thereafter, the Shirley Dreiss Memorial

Fund was established at GSA, and the lectureship was renamed Birdsall-Dreiss in her honor. The Birdsall-Dreiss Lecturer's travel costs are financed mainly by the two funds established at the Geological Society of America Foundation. The Lecturers' local costs are borne by the host institutions, and his/her own institution generally continues to absorb salary costs. In 2002 Graham Fogg of UC-Davis is offering a suite of three talks on flow and transport in heterogeneous systems. (See

<http://www3.uakron.edu/geology/gsaydro/index.htm> for a complete listing of Birdsall-Dreiss Lectures since 1978.)

Demand for the Birdsall-Dreiss Lecturer has grown in recent years, reflecting the growth of our discipline over the past quarter-

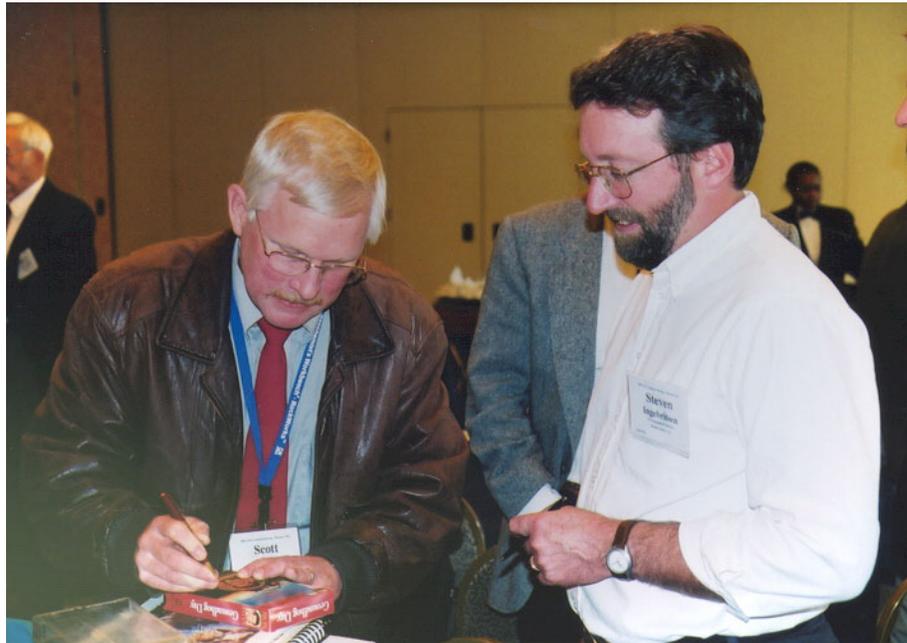
end of August 2000, only a few weeks after the Lectureship was first announced in *GSA Today*, and before the academic year had even begun. Many hydrogeology programs at research universities have come to expect a visit from the Birdsall-Dreiss Lecturer every year.

Accepting their invitations on a first-come, first-served basis, as I did, put an end to my good intentions for outreach to less-visited institutions such as liberal arts colleges.

Serving as the Birdsall-Dreiss Lecturer was a wonderful opportunity to get to know many colleagues and

improve my own knowledge of the field. I did not get to quite as many places as Scott Bair, who had a topic with unusually broad appeal. (And therefore I deny Les Smith's claim that the lectureship has become a macho competition to see who can get to the most sites.) However, I did give a total of 62 lectures at 47 different sites. I submit that this is as much as can reasonably be

Please see [Report](#) on page 15



The ceremonial passing of the torch, in this instance a copy of the movie "Groundhog Day" from the former Birdsall-Dreiss Lecturer, Scott Bair to the 2001 Lecturer, Steve Ingebritsen (Photo by Ed Harvey).

century. The very popular Birdsall-Dreiss Lecturer for 2000 was Scott Bair of Ohio State, who talked about the ground-water contamination case that was the basis of the book and movie *A Civil Action*. In 2001 I offered two talks: "Land subsidence in the US", designed for a general hydrologic audience, and "The permeability of the continental crust", which was of interest in traditional geoscience departments. I was surprised to receive approximately 30 invitations by the

Birdsall-Dreiss Fund Deserves Your Additional Support

Story by Bill Simpkins, Chair

One of the real gems of our Division is the Birdsall-Dreiss Distinguished Lecturer program. It is frequently pointed to as the “model” lecture program among the GSA Divisions. Each year, the lecturer visits about 30 to 50 laboratories, geological surveys, and institutions of higher learning in North America and the world. Lecturers sacrifice much and they have to work around class, airline, and often family schedules. They do not receive payment for their services; rather, they get to visit cool places and receive the satisfaction of seeing hydrogeology alive and well. Given the current endowment of the fund, lecturers do their tour on only about \$6500. Your Management Board and I are concerned that this amount is no longer sufficient to fund the tour as we would like to see it, given the rising cost of airfares after the September 11 attacks. Many lecturers have received additional funding to allow them to visit more

institutions and even go overseas. In Scott Bair’s case, for example, the Dean of his college matched our allotment in exchange for Scott becoming chair of his department upon his return. Good deal for the tour, bad deal for Scott. However, with universities like my own making draconian and repeated budget cuts this year alone, it appears that we can no longer count on Deans to supplement funds for the Birdsall-Dreiss lecture tour.

What can you do about this?

First, I have asked Tom Fouch, President of the GSA Foundation, to begin looking for some form of long-term sponsorship of the lecture tour. This would be a low-key sponsorship; hence, I do not envision the tour becoming the Birdsall-Dreiss-Subaru lecture tour with the designee having to drive an Outback across the country to all the stops. Tom will continue to work on identifying individuals or corporations that are willing to

support this effort. Second, I believe we can all participate in supporting the tour by contributing a mere \$25. Our Division membership is presently at about 1114 members. If we all contributed \$25, we would raise an additional \$27,850 and allow us to allot about \$8000 for the lecture tour. If we did this for a few years, we could increase the lecture tour budget to more than \$10,000. So, I hope you will join me in this effort and encourage your fellow Division members to do the same. I’m sending in my \$25 today to the GSA Foundation to support one the best assets of our Division – the Birdsall-Dreiss Distinguished Lecturer program. (NOTE: You can send your donation to GSA by using the form in the April or May issues of GSA Today, or you can donate online at the GSA web site. Remember to note on your contribution that your donation is intended for the Birdsall-Dreiss Fund). 



“Hey You! Over Here!”... Have a new research idea to try out on a captive audience? Want to get everyone working on your particular research topic in one room and go “nose to nose” with them? Like to visit magnificent geologic locales? If your answer is yes to all three questions, then the Division needs your ideas for a Penrose Conference. We have not sponsored one since 1994. Contact your Division officers about their experiences with past Penrose Conferences.

The Penrose Conferences, named in honor of R. A. F. Penrose, Jr., a benefactor of the Geological Society of America, were established in 1969 by the Society as a further step in its service to the science of geology. The conferences provide the opportunity for exchange of current information and exciting ideas pertaining to the science of geology and related fields. They are intended to stimulate and enhance individual and collaborative research and to accelerate the advance of the science by the interactions and development of new ideas.

**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**

“A Civil Action” Was... The Main Attraction!

Story by: Scott Bair & Maura Metheny
Photos by: Abe Springer & Bill Simpkins

Prior to the Annual GSA Meeting in early November last year, 65 geologists and friends made a pilgrimage to Woburn wells G & H, the site of the alleged leukemia cluster in Massachusetts and the focus of Jonathan Harr’s award-winning book “A Civil Action”. Maura Metheny, Shay Beanland, and Scott Bair of Ohio State University and Terry Lahm of Capital University led the two one-day trips. John Drobinski, Chuck Myette, Jack Guswa, and Jay Bridge, who all played a role in the famous federal trial or the acquisition and analysis of field data for it, also led discussions. The goal of the field trip was to demonstrate the complexity of the ice-contact and outwash deposits that comprise the geologic materials through

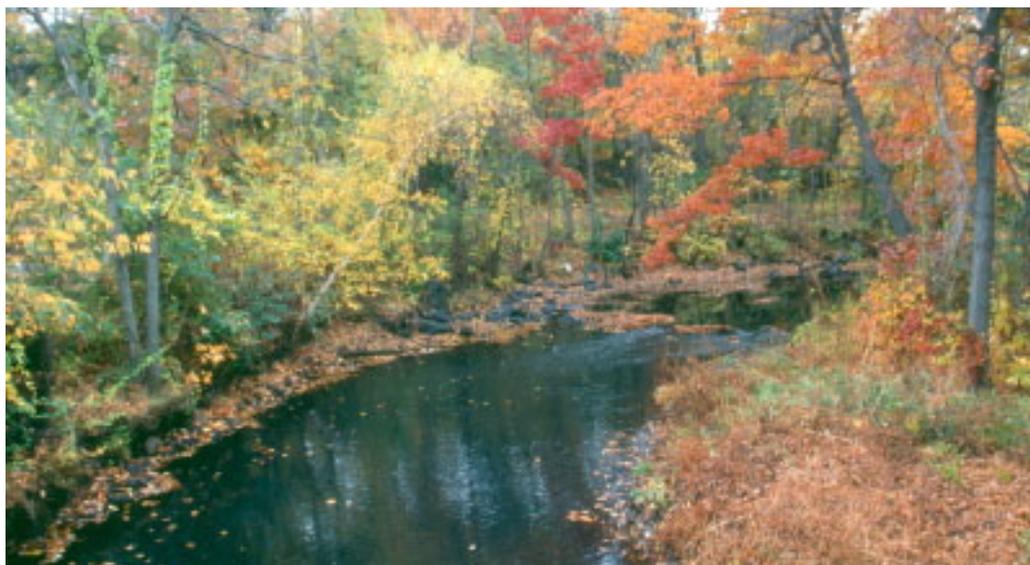
which VOCs traveled to wells G & H and to demonstrate the complex hydrologic conditions created by the wetland, river, and two partially penetrating municipal wells.

Nine stops were made along the field trip route during which topographic and potentiometric maps, water-level and streamflow hydrographs, and geologic cross sections and



Dr. Scott Bair leads a field trip to Woburn, MA, the small town that was the backdrop for the book and movie “A Civil Action” (Photo by Abe Springer).

potentiometric profiles were used to show the highly heterogeneous nature of the glacial deposits and the highly transient nature of the pumping stress created by wells G & H. Historic aerial photographs and historic site photographs were used to describe and document the locations and timing of contaminant sources emanating from the Beatrice/Riley, Olympia Trucking, UniFirst, W.R. Grace/Cryovac, and New England Plastics properties. The remains of the well houses at wells G & H and a short but harrowing hike on the boardwalk across the wetland



The Aberjona River near Woburn, MA (Photo by Bill Simpkins).

Please see [Woburn](#) on page 15

2001 Annual Business Meeting Minutes

Reported by Ralph Davis, Secretary/ Treasurer

The 2001 Annual Hydrogeology Luncheon, Awards Ceremony and Business Meeting of the Hydrogeology Division of the Geological Society of America (GSA) was held Tuesday, November 6, 2001 at the Boston Park Plaza Hotel, Boston, MA. Chair Jean Bahr introduced the Division officers, awardees, and special guests. Awards were presented by Chair Bahr immediately following the luncheon.



Dr. Jean Bahr, outgoing Chair, presents the Student Research Awards to (left to right) Mingjuan Shi, Nathaniel Warner, and Timothy Wineland (Photo by Ed Harvey).

Student Research Awards were presented to the following individuals:

Mingjaun Shi, Heterogeneity of low-permeability stratified units and its effects on solute transport. The University of Texas at Austin. Project Supervisor: Dr. John M. Sharp.

Reminder: The 2002 Hydrogeology Division Management Board Meetings will be held at 7:00 am on Sunday October 27, & Wednesday October 30, during the Denver GSA Annual Meeting.

Nathaniel R. Warner, Groundwater contamination in Nepal: A regional comparison and assessment of controlling site characteristics. Miami University, Ohio. Project Supervisor(s): Dr. Jonathan Levy, Miami University and Dr. Todd Rayne, Hamilton College, New York.

Daniel Obrist, Influence of fire and subsequent cheatgrass invasion on the spatial and temporal distribution of soil water in the rooting zone of a sagebrush ecosystem. Desert Research Institute, University of Nevada, Reno, Nevada. Project Supervisor: Dr. John A. Arnone III.

Timothy R. Wineland, Hydrogeological, geochemical and geophysical characterization of alluvial sediments for implementation of riparian buffers in the Bear Creek watershed. Iowa State University. Project Supervisor: Dr. William W. Simpkins.

The Chair recognized the accomplishments of Dr. Steve Ingebritsen, United States Geological Survey during his tenure as the 2000-2001 Birdsall-Dreiss Distinguished Lecturer. Professor Graham Fogg, University of California, Davis, was introduced as the 2001-2002 Birdsall-Dreiss Distinguished Lecturer.

A plaque for the Distinguished Service Award was presented to Professor Donald I. Siegel for his contributions to the Hydrogeology Division, the Geological Society of 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. Fred M. Phillips, Professor, Department of Earth & Environmental Science, New Mexico Tech. Dr. Mark



Dr. Donald Siegel accepting the Distinguished Service Award at GSA Annual Meeting in Boston (Photo by Ed Harvey).

Person was the citationist for Professor Phillips. Dr. Phillips 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:

1. Phillips, F.M. (1995) The use of isotopes and environmental tracers in subsurface hydrology: Rev. Geophys. 30 1029-1033 (Supplement, July 1995, U.S. Nat. Rept. To Int. Union Geod. Geophys. 1991-1994).
2. Phillips, Fred M. (1998) Groundwater dating and isotope chemistry. In: Hydrologic sciences; taking stock and looking ahead. National Academy Press, Washington, DC, United States, 87-100
3. Plummer Mitchell A., Fred M. Phillips, June T. Fabryka-Martin, H. J. Turin, Peter E. Wigand, and Pankaj Sharma (1997) Chlorine-36 in fossil rat urine; an archive of cosmogenic nuclide deposition during the past 40,000 years. Science 277, no. 5325 (19970725): 538-541
4. Phillips, Fred M., David B. Rogers, Shirley J. Dreiss, Nancy O. Jannik, and David Elmore, (1995) Chlorine 36 in Great Basin waters; revisited, Special section; Shirley J. Dreiss memorial, Water Resources Research, 31, no. 12 (199512): 3195-3204
5. Wolvoord, Michelle A, Page Pegram, Fred M. Phillips, Mark Person, Thoma L. Kieft, James K. Fredrickson, James P. McKinley and John B. Swenson (1999) Groundwater flow and

geochemistry in the southeastern San Juan Basin; implications for microbial transport and activity. Water Resources Research, 35, no. 5 (199905): 1409-1424

The annual business meeting was called to order at 2:05 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, Chair Bahr presented the state of the Division.

The Secretary/Treasurer report was presented by R. K. Davis. For the period ending December 31, 2001 Division revenues and expenses were: Revenue from dues \$7,019.00. Expenses include the annual meeting, newsletter, postage awards and the Birdsall-Dreiss lecture tour for a total of \$10,578.45. There was net income for the year of \$(3,955.45). The negative net income resulted because no funds were transferred from the Birdsall-Dreiss lecture accounts to cover the cost of the tour for the year. The management board decided to utilize existing funds in the operating budget rather than expend funds from the Birdsall-Dreiss fund because of negative market pressure on these two funds. It was felt that there was sufficient cushion in the operating budget to cover the expenditures thus minimizing market impacts on the Birdall-Dreiss fund in hopes that 2002 will be a better year. The net income combined with the net assets of the Division at the beginning of January 2001 \$(23,918.53) leaves a balance of \$20,467.58 in the unrestricted funds for the Hydrogeology Division as of December 31, 2001.

Jean Bahr also reported that the Division has 1145 members and is the third largest within the Geological Society of America. However this does represent a decline in membership from a high of about 1,400 members in 1999. This decline is due in part to GSA allowing payment of dues on a two-year basis during 2000. However, when they provided this option they failed to provide a mechanism for the Division dues to also be allocated/payed on a two-year basis. The membership drop may also be reflective of employment opportunities in the field over the past few years.

Dr. Anne Carey provided a report on the status of the Division's program for the 2001 annual meeting indicating that the Division sponsored 18 topical sessions that included over 200 abstracts. Dr. Carol Wicks was introduced as the Hydrogeology Division's joint technical program representative for the 2002 annual meeting scheduled for Denver, and Dr. Alan Fryar has agreed to take over these duties for the 2003 annual meeting.

A newsletter update was provided by Dr. Ira Sasowsky. This was Ira's final report as newsletter editor as Dr. Ed Harvey will be taking over this duty in 2002. The delivery of the newsletter via electronic format has resulted in significant savings.

Dr. Dave Diodato is undertaking maintenance of the Hydrogeology Division's webpage. He is hopeful that the website will allow an avenue to reach out to members and others with some of the accomplishments of the Division.

Dr. Mary Anderson provided a report from GSA Council. She indicated that the Council would be receptive to new or additional members from the Hydrogeology Division. This is great considering we are the third largest Division in GSA.

The final order of business occurred when Jean Bahr turned over the chair duties to Dr. William W. Simpkins. Bill introduced new officers for the year as: Bill Simpkins - Chair, Robert Ritzi - First Vice-Chair, Chris Neuzil - Second Vice-Chair, Ralph K. Davis - Secretary/Treasurer, and Jean Bahr - Past Chair.

The meeting was adjourned at 3:15 pm.



Reception from page 5

could obtain some free software. I managed to be fairly successful at this, and we were able to give away groundwater modeling and aquifer testing software donated by several companies (see page 6), as well as many books donated by publishers and authors. We had more than \$25,000 (retail value) worth of software and books to give away, including two grand prizes of GMS, worth about \$10,000 each. I am especially grateful to Jim Rumbaugh, President of Environmental Simulations, Inc. and author of Groundwater Vistas for his generous donation, and to Susan Hardy of Scientific Software, Inc. for her help in obtaining copies of Visual Modflow and GMS for donation. A list of the prizes that we were able to give away can be found on page 6 of this newsletter. The reception and raffle generate tremendous goodwill and loyalty to the division from the attending students, so I urge all of you to bring your students to GSA next year! This is our best way of building the Division with young scientists and new blood.



Jean Bahr Named 2003 Birdsall-Dreiss Distinguished Lecturer

Jean Bahr of the University of Wisconsin – Madison (UW) has been selected as the 2003 Birdsall-Dreiss Distinguished Lecturer, sponsored by the GSA Hydrogeology Division. At the request of interested institutions, she will present one of two lectures for audiences interested in broad geologic aspects of groundwater resources.

Bahr received a B.A. in Geology and Geophysics from Yale University and then spent 4 years working in geotechnical and hydrogeologic consulting, including

two years of a groundwater resources inventory project in West Africa. She then continued her education with graduate training in hydrogeology at Stanford University, earning an M.S. and Ph.D. in Applied Earth Sciences. During her graduate work she participated in field studies of contaminant transport in Canada and modeling studies through an appointment with the U.S.G.S Water



2003 Birdsall-Dreiss Distinguished Lecturer Dr. Jean Bahr.

Resources Division in Menlo Park, CA. Following completion of her Ph.D in 1987, she joined the faculty at UW and currently holds the rank of Professor in the Department of Geology and Geophysics. At UW, Bahr teaches courses in hydrogeology, contaminant hydrogeology, field hydrogeology, and environmental geology. She is also member of the governance faculty for the Institute for Environmental Studies (IES) and of the program faculty for Geological Engineering. From 1995-1999, she served as chair of the IES Water Resources Management graduate program. Her research interests include interactions between physical and biogeochemical processes in groundwater, effects of

heterogeneity on solute transport, groundwater-surface water interactions, and paleohydrogeology. During a 6-year term as a member of the National Research Council's Board on Radioactive Waste Management, Bahr was involved in reviews of various aspects of the planned high-level radioactive waste repository at Yucca Mountain. She is now chairing the National Research Council Committee on Restoration of the Greater Everglades Ecosystem.

To request a visit to your institution contact Jean Bahr, Department of Geology and Geophysics, UW-Madison, 1215 W. Dayton St., Madison WI 53706, 606-262-5513, jmbahr@geology.wisc.edu. The Hydrogeology Division is particularly interested in including liberal arts colleges in the itinerary. The Division will pay transportation expenses and the host institution will provide local accommodations.

Lecture Topics

Groundwater as an Ecosystem Resource

Management of groundwater resources has traditionally focused on human needs for domestic, industrial, and agricultural water supply. In recent years, however, there has been an increasing recognition of the importance of the "ecological services" provided by groundwater discharge to streams, wetlands, and lakes. This recognition comes at a time of increasing human demands resulting from population growth, and as expanding urban areas limit rates of groundwater recharge. In the U.S., water shortages have been experienced both in the arid west and in areas that are generally considered to be water rich such as the Midwest and Florida. While management strategies that allow for temporary overdraft of aquifers may offer an economically efficient option to satisfy human needs, ecosystems that rely on groundwater discharge can be sensitive to even small declines in water levels. Developing groundwater management strategies that meet human needs while protecting critical ecosystems is a delicate balancing act, and requires improved understanding of the relationships between ecosystem function and groundwater hydrology and geochemistry.

This talk will discuss several case histories related to the role of groundwater in ecosystem preservation and restoration. Research projects in several watersheds near Madison, WI have explored the hydrogeologic controls on spring flow and the effects of municipal pumping and reduced recharge on the springs.

Results of these studies are being used in an interdisciplinary effort to identify urbanization alternatives that minimize negative hydrologic impacts on springs and wetland habitat. Another study, in a lowland savannah along the Lower Wisconsin River, demonstrates the effects of stage control by upstream dams on spatial patterns of groundwater discharge to the river and adjacent floodplain. Groundwater discharge into wetland areas results in loss of agriculturally derived nitrate. This suggests strategies for restoration of riparian wetlands and dam management that could reduce nitrogen fluxes from the Upper Midwest to the Mississippi River. The final case history will review groundwater management strategies that are included in a 7.8 billion dollar, 20+ year program, to restore the Florida Everglades.

Geochemical Heterogeneity of Groundwater in Uncontaminated & Contaminated Aquifers

Hydrogeologists are accustomed to finding large spatial and temporal variations in groundwater chemistry as a result of contaminant migration. During characterization of "background" conditions in these aquifers, however, it is often assumed that only one or a small number of wells are adequate for assessing pristine groundwater chemistry. This talk will present results of multilevel sampling in shallow aquifers in a variety of hydrogeologic settings that demonstrate the prevalence of fine scale spatial and short-term temporal variability in major ions and redox sensitive species such as oxygen, nitrate and iron. The sites include several in unconsolidated sediments and two in fractured bedrock: one a carbonate aquifer in Wisconsin and the other in a shale/carbonate aquifer in Tennessee. The geochemical heterogeneity of groundwater at these field sites reflects a combination of distinct flow paths and geochemical and biogeochemical reactions that occur during transport. In many cases the observed geochemical signatures can be used as natural tracers to delineate flow paths. Identification of the background heterogeneity, as well as understanding the controlling physical and geochemical processes, is important to interpretation of changes induced by introduction of contaminants. A case study of gasoline contaminants in a sandy aquifer in Wisconsin demonstrates the applications of these principles to assessing the potential for intrinsic and enhanced biodegradation under aerobic and anaerobic conditions.



Joint North-Central/Southeastern Section Meeting in Lexington a Rousing Success!

Story by Alan Fryar

The GSA Hydrogeology Division was well represented during the joint meeting of the North-Central and Southeastern Sections in Lexington, Kentucky, April 3 – 5. The meeting, which was cosponsored by the Kentucky Geological Survey (KGS), the University of Kentucky Department of Geological Sciences, and the University of Cincinnati Department of Geology, drew more than 1,200 attendees. The Hydrogeology Division sponsored two theme sessions, “Groundwater Flow and Geochemistry in Carbonate Terranes” and “Wetlands Hydrology and Biogeochemistry”. The carbonates session, convened by Chris Groves (Western Kentucky University), Alan Fryar (University of Kentucky), and Jim Currens (KGS), featured 18 speakers. The session was co-sponsored by the American Chemical Society – Petroleum Research Fund (PRF) and the National Ground Water Association. A PRF grant supported the participation of three invited speakers from abroad: Andy Baker from the University of Newcastle-upon-Tyne (UK), Heather Viles from Oxford University, and Yuan Daoxian of the Institute of Karst Geology (Guilin, China). The wetlands session, convened by Alan Fryar, Elisa D’Angelo, and A.D. Karathanasis (University of Kentucky) and Abinash Agrawal (Wright State University), was co-sponsored by the Society of Wetland



Blue Hole at McConnell Springs in Lexington, Kentucky (Photo by Alan Fryar)

Scientists and had 14 speakers. Rob Young, one of the speakers and the editor of the journal *Environmental Geosciences*, solicited papers for a pending special issue on wetlands. The theme sessions attracted a diverse group of geologists, geographers, engineers, biologists, and soil scientists; attendees included GSA Executive Director (and Division member and former Chair) Jack Hess. In addition, a general oral session on Hydrogeology and Environmental Geoscience had 11 speakers, and general poster sessions in Hydrogeology and Environmental Geoscience had a total of 29 presenters. Most encouraging of all was the extent of student participation. Next year the Southeastern Section will meet

jointly with the South-Central Section in Memphis March 12 – 14. For more information on that meeting, contact Gregg Davidson (davidson@olemiss.edu, 662-915-5824). The deadline for theme session and symposium proposals is June 24.



EDITOR’S NOTE:

Next year (2003) the GSA North-Central Section Meeting will be held in Kansas City, Missouri, March 23-25. Site information for the remaining section meetings can be found on the GSA webpage located at [<http://www.geosociety.org/meetings/>]

Report from page 7

expected of one Lecturer. If s/he is to cover more ground than this, we may need to consider selecting – and funding – more than one Lecturer per year.

Regarding the state of the discipline, I agree with Scott Bair's assessment that it is in generally good shape (see the July 2001 issue of the *Hydrogeologist*

newsletter for Scott's comments). As is often the case in science, much of the growth and excitement is at the interfaces with

other disciplines. In particular I noted a growing interaction with the biosciences, expressed in a variety of ways – in groundwater microbiology; in interactions with forestry departments, as I saw, for example, at Oregon State; with agronomy departments, as at Iowa State; and in collaboration with the Nature Conservancy on habitat-restoration projects, as at the Universities of Northern Arizona and North Dakota.

While I finished the tour feeling very positive about the state of our own discipline, I'm not as sanguine about the state of the geoscience departments that house much of it. A lot of geoscience departments are asking "Where are the students?" Statistics compiled by the American Geological Institute show that enrollment in US geoscience departments has dropped by about 50% since 1985 – approximately the time when many of these departments first hired hydrogeologists. And, at a number of universities, geoscience departments are struggling to justify themselves to the university

administration on objective bases, such as student credit hours per faculty member. This is an unfortunate situation. My personal view is that the earth sciences, broadly defined, are crucial to the future of humanity in this century, as our growing population will continue to stress all of the Earth systems.

"Daddy, can't somebody else give that lecture?"

Fortunately, some geoscience programs do seem to be attracting students by redefining themselves more broadly in terms of earth systems science. This can be an easy and positive transition for the hydrogeologist(s) involved, because it is compatible with the multidisciplinary nature of hydrogeology.

I'll conclude by thanking the Hydrogeology Division for the opportunity to serve as Birdsall-Dreiss Lecturer for 2001. It was an extraordinary professional experience. On a personal note, I owe a great debt of thanks to my wife, Barbara Gaal. We have 3 young daughters, and she has a demanding career as a senior attorney for the State of California. Each week that I was gone was difficult for her. I'd like to thank our daughters, too, though their response varied with age. The oldest, now 13, was continually amazed that anyone would voluntarily listen to me for an hour. The youngest, who is 7 and really did object to my being gone so much, would ask, "Daddy, can't somebody else give that lecture?"

Woburn from page 9

to the mighty Aberjona River provided a host of photographic opportunities.

Many people attending the field trip were interested in using various aspects of the geology, hydrology, and contaminant chemistry in courses. The GSA guidebook contains an overview of the geologic and hydrologic data including hydrographs, geologic maps, aerial photographs, and a comprehensive list of references. Additional data dealing with the types of remediation systems and the amounts of recovered VOCs are also presented in the guidebook.



Hem's Water Supply Paper 2254 Is Again Available

Story by Ira Sasowsky

In 1985 the USGS published Water Supply Paper 2254, *Study & Interpretation of the Chemical Characteristics of Natural Water*, by John D. Hem. The book went through several printings, and served as an essential reference for many hydrogeologists. Unfortunately, it went out of print in 2000, and there are no plans to republish it. However, in February of this year, it was placed as an Acrobat (pdf) file on the USGS website. It may be accessed at: <http://water.usgs.gov/pubs/wsp/wsp2254/> We are very pleased to have this important reference available once again.



International Association of Hydrogeologists Becomes an Associated Society of the Geological Society of America

Story by Lenny Konikow



The Geological Society of America has accepted the IAH/U.S. National Chapter (IAH/USNC) as an Associated Society. This should also lead to closer cooperation between IAH and GSA, but especially with the Hydrogeology Division of GSA, as the two groups have many interests (and members) in common. IAH/USNC would like to sponsor one or two special sessions at future GSA Annual Meetings, and is soliciting proposals or suggestions for future GSA meetings. To begin this cooperative effort, IAH/USNC is co-sponsoring (with the Hydrogeology Division) two special sessions at the next GSA Annual Meeting in Denver. The topics include “Groundwater Depletion and Overexploitation: A Global Problem” and “Groundwater and

Hardrock Mining.” Abstracts can be submitted electronically through July 16.

Hydrogeology Journal is published by IAH and co-sponsored by the Hydrogeology Division of GSA. If you presently get this journal through GSA, remember that IAH membership includes a one-year subscription to this journal for a lower cost than subscribing to it through GSA. If this applies to you, then next Fall consider joining IAH and receiving the journal as part of your 2003 membership. If you don't presently get the journal, join IAH now and get all the issues for 2002 (including the special theme issue on “Groundwater Recharge”). You can join on-line from the web page at: <http://www.iah.org/member.htm>



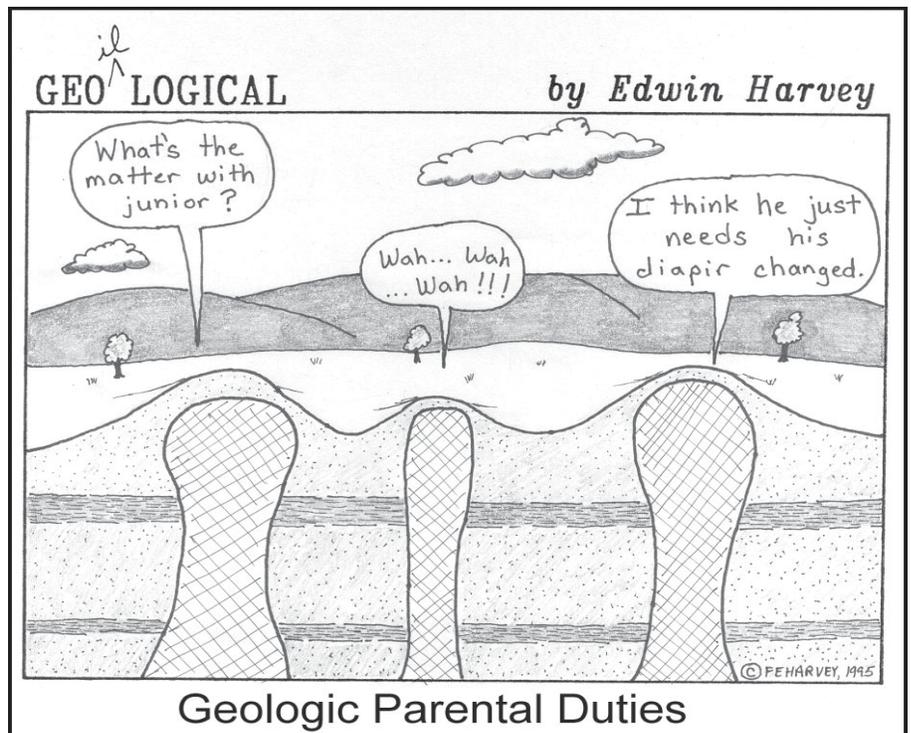
FROM THE DIVISION CHAIR - BILL SIMPKINS:

On behalf of the GSA Hydrogeology Division, I would like to welcome the IAH as an Associated Society of GSA and encourage you to attend the two co-sponsored theme sessions at the Annual GSA Meeting in Denver. Lenny Konikow is the Chair of the U.S. National Committee, Colin Booth is the Sec. Treas, John Harsh and Yoram Eckstein are the Vice-Chairs - all of them are members of the Hydrogeology Division. **Welcome, IAH!**

New GSA Technical Program Chair Named

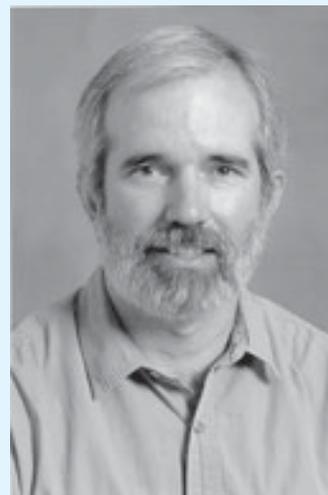
Story by Chris Neuzil

I am pleased to announce that Dr. Jim Hendry of the University of Saskatchewan has agreed to serve as the next representative to the Technical Program Committee and will follow Carol Wicks and Alan Fryar as Chair in 2004.



Graham Fogg's 2002 Birdsall-Dreiss Lectureship Schedule

<i>Date of Lecture</i>	<i>Location</i>	<i>Date of Lecture</i>	<i>Location</i>
January 14	Indiana University (Bloomington)	September 16	Johns Hopkins University
January 15	Wright State University (Dayton)	September 17	Delaware Geological Survey
January 16	University of Kentucky, Lexington	September 19	University of Virginia
January 17	Ohio State University (Columbus)	September 23	USGS – Reston
January 18	University of Akron	September 30	Western Michigan University
January 28	University of Mississippi (Oxford)		
January 29	University of Memphis	October 3	Michigan State University
		October 4	University of Michigan
February 1	University of Tennessee, Knoxville	October 16	Stanford University
February 5	Clemson University	October 17	USGS – Menlo Park
February 6	Georgia State University (Atlanta)	October 18	University of California, Santa Cruz
February 12	Fresno State University	October 27-30	GSA Denver
February 19	Boise State University		
February 21	University of British Columbia	November 11	University of Hawaii
February 25	Louisiana State University (Baton Rouge)		
February 27	Texas A&M University	TBA	University of Kansas (Lawrence)
		TBA	University of Nebraska (Lincoln)
March 1	University of Texas at Austin	TBA	University of Nevada Reno
March 4	Bureau of Economic Geology	TBA	Tuebingen University, Germany
March 4	Intera, Inc.		
March 12	Penn State University		
March 13	MIT		
March 14	University of New Hampshire		
April 2	Iowa State University		
April 3	University of Wisconsin		
April 9	University of Waterloo		
April 10	Syracuse University		
April 11	Canadian Geological Survey (Ottawa)		
April 23	Northern Arizona University		
April 24	University of Arizona		
April 30-May 1	New Mexico Tech		
May 2	Los Alamos National Laboratory		
May 3	Univ. of New Mexico (Albuquerque)		
May 9-10	University of Hong Kong, China		
May 13-14	Wuhan, China?		
May 15-16	University of Beijing, China?		



*Graham Fogg, 2002
Birdsall-Dreiss Lecturer*

BULLETIN BOARD



GSA Denver Meeting Approaching Fast

Don't forget to submit your abstracts for the upcoming GSA Annual Meeting in Denver, CO. The abstract deadline is **July 16, 2002**. Please visit the GSA Webpage [www.geosociety.org/meetings/2002/] to review the list of this year's sessions.



New Journal May Be of Interest to Members

The Soil Science Society of America is publishing a new journal this fall called *Vadose Zone Journal*. If you are interested in publishing in this journal, contact Keith Schlesinger (kschlesinger@agronomy.org)



AGU Fall Meeting Deadlines Draw Near

Abstracts for the AGU 2002 Fall Meeting (December 6-10) in San Francisco are due on August 29 (by mail) or September 5 (online). For information on sessions see the AGU web site at: [earth.agu.org/]



Chapman Conference on Eco-hydrology of Semiarid Landscapes: Interactions and Processes

September 9-13, 2002 in Taos, New Mexico.
For Information contact: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, D.C. 20009, USA, (202) 462-6900, toll-free in North America 800-966-2481, fax: 202-328-0566. (Abstract deadline: June 15, 2002)



2002 NGWA Ground Water Expo in Las Vegas

This years National Ground Water Association's Ground Water Expo will take place in Las Vegas, December 9-11. The theme of the technical program is "*Linking Surface and Subsurface Hydrology - From Science to Technology*". For more information about the Expo, visit the NGWA webpage at [www.ngwa.org/convention/national.html]



32nd Congress of IAH in Argentina

The 32nd International Association of Hydrogeologists Congress will be held in Mar del Plata, Argentina, in October 2002. For details about this event visit the following web site [www.mdp.edu.ar/exactas.geologia/iah2002/version_english.htm]

From The Editor...

Please allow me to introduce myself as the new editor of *The Hydrogeologist* newsletter. In this, my first column, I would like to make several comments regarding this the inaugural issue of my tenure as editor, and to take a moment on behalf of the Hydrogeology Division to thank our former editor, Dr. Ira Sasowsky for his outstanding service the past four years. I would also like to personally thank Ira for his assistance with the editorial transition the past year. It has been a very painless process as a result of his cooperation, advice and support.



Bill Simpkins, GSA Hydrogeology Division Chair, expresses the Division's appreciation to Ira Sasowsky at the 2001 GSA Annual Meeting in Boston for his service as editor of the Hydrogeologist.

By now you have likely noticed a number of changes to this edition of the newsletter - a new title banner, the feature article, the Chair's Corner, the more liberal use of photos and color, etc. Hopefully, these changes (seemingly inevitable each time a new editor arrives on the scene, insistent on putting his or her own personal signature on the document) are more than change for change sake, but actually improve the quality of the newsletter, and make it a more informative and enjoyable publication for the reader. In order for me to produce a quality and informative publication, I need your help through your

comments on the format, your article and news submissions, and your feed back on the usefulness of the publication as a whole. I encourage you to submit timely editorials and issue articles, as well as any information or announcements that you feel would be of value to the readership. I would also ask for your enthusiastic cooperation if I should one day ask you to write a feature article.

I would like to offer a very special "thank-you" to everyone who contributed to this issue. Your contribution made the job of editing both fun and easy.

Finally I would like to say that I am very grateful to have been given the opportunity to serve you and the Geological Society of America as newsletter editor, and I look forward to my term of service with great excitement. Together, I am confident that we will make *The Hydrogeologist* a continuing success.



F. Edwin (Ed) Harvey, Editor
[The Hydrogeologist](#)

Biographies of Officer Candidates

Robert W. Ritzi, Jr.: Born October 25, 1959, Cincinnati, Ohio. Education: Ph.D., 1989, Hydrology and Water Resources, University of Arizona; M.S.; 1983, Geological Sciences, Wright State University; B.A.; 1981, Geology, Wittenberg University. Publications: more than 90 journal articles, book chapters, and technical reports. Professional Experience: Associate Professor, Department of Geological Sciences, Wright State University, 1995-present; Assistant Professor, Department of Geological Sciences, Wright State University, 1989-1995; Director, Center for Ground Water Management, Wright State University, 1995-2000; Associate Director for Research, Center for Ground Water Management, 1992-1995; Concurrent appointments: Environmental Science Faculty, Wright State University, 1994-present; Adjunct Faculty, Air Force Institute of Technology, 1993-1995; Research Appointment, U.S. Geological Survey, 1987-1989; and numerous technical assistance contracts with environmental and engineering consulting firms. Service: Member of GSA since 1980. Hydrogeology Division Young Professionals Committee, Chair, 1998-1999; Program Chair and Joint Technical Program Committee for the 2000 Annual Meeting in Reno, 1999-present. Associate Editor: *Hydrogeology Journal*, 1999-present; *Journal of Ground Water*, 1993- 2000. Other peer review: DOE Subsurface Science Program, *GSA Bulletin*, NSF, *Ohio Journal of Science*, *Water Resources Research*. Member AGU, AGWSE, AEEP, Sigma Xi - president Wright State Sigma Xi Chapter 1992-1993; NSF Committee of Visitors, 1996; US Air Force Environmental Advisory Board, 1994-present. Research interests: characterizing and modeling heterogeneity and evaluating effects on flow and transport in granular aquifer systems, geostatistics, fluid flow in fractured carbonates, and insular hydrogeology.

Christopher E. Neuzil. Born February 2, 1949, Staten Island, NY. Education: NYC Public schools; B. A. Geology 1971, SUNY Binghamton; Ph.D. Hydrogeology 1980, Johns Hopkins. U.S. Navy 1971-1974. Member of GSA since 1977, elected Fellow in 1993. GSA service: Hydrogeology Division Scholarships Committee 1988, Meinzer Award Committee 1992-1994, Birdsall-Dreiss Lectureship Committee 1995-1997. Employment: 1985-present, Chief of Cretaceous Shale Hydrology Project, WRD National Research Program, U.S. Geological Survey; 1977-1985, Hydrologist, WRD Headquarters Staff and National Research Program, U.S. Geological Survey. Service: Research Advisor, WRD National Research Program, 1990-2000; Associate Editor, Water Resources Research, 1993-1996; Editorial Board, Ground Water, 1993-present; National Science and Engineering Research Council (NSERC) panel for Industrial Chair, Univ. of Sask., 1995-present; Commentary Editor, Ground Water, 1998-present; Councillor, Geological Society of Washington, 1999-2001; AGU Groundwater Technical Committee, 2001-present. Awards: O. E. Meinzer Award, 1991; AGU Editor's Citation for Excellence in Refereeing, 1992; Geological Society of Washington Bradley Prize (2nd place), 1992; Birdsall-Dreiss Distinguished Lecturer, 1995. Research interests include hydrogeology of low- permeability media, regional hydrogeologic systems, anomalous subsurface fluid pressures, groundwater-geologic process interaction, and paleohydrology.

Janet S. Herman: Born October 6, 1955, in Altoona, PA, and moved throughout the northeast as part of a railroad family. Education: B.S. (with Highest Distinction) Geological Sciences, 1977, and Ph.D. Geochemistry, focusing in low-temperature aqueous geochemistry, 1982, from The Pennsylvania State University. Employment: 1982 to present in the Department of Environmental Sciences at the University of Virginia. Currently Professor and Director of the Program of Interdisciplinary Research in Contaminant Hydrogeology, an interdisciplinary program involving hydrologists, geochemists, microbial ecologists, and civil and chemical engineers. Collaborations with scientists at the U.S. Geological Survey as well as colleagues at UVA have been central to her research career. Prof. Herman investigates the chemical evolution of groundwater in hydrogeological systems, both pristine and contaminated. Current research efforts address the role of iron redox chemistry in contaminated aquifers, the environmental fate of hormonally active agents, and surface water-groundwater interaction influencing the fate of dissolved chemicals in the riparian zone. Sixty refereed journal publications attest to her research contributions; funding sources include NSF, DOE, EPA, and private foundations. Her most significant career contribution, however, is the training of students. She was awarded a Presidential Award for Excellence in Mentoring in Science, Mathematics, and Engineering in 1996 for her training of women in the interdisciplinary field of contaminant hydrogeology. Over 35 former students now populate academic institutions, government agencies, and private firms. Service to the scientific community includes being Associate Editor of Applied Geochemistry (10 years), Bulletin of the Geological Society of America (6 years), and Deputy Editor for Water Resources Research (2 years). Prof. Herman has served on numerous National Research Council Committees and external review committees to academic institutions. She contributes service to the evaluation of research proposals by colleagues (NSF, DOE) and by students (Cave Conservancy). For GSA, she sits on the Research Awards Committee, has served on the Meinzer Award Committee, has reviewed abstracts for the Hydrogeology Division, and is a frequent convener of symposia and theme sessions at the society's annual meetings. A member of GSA since 1984 and elected Fellow of GSA in 1994, Prof. Herman is also a member of IAGC, AGU, GS, and NSS.

Ralph K. Davis. Born in Memphis, Tennessee, March 1955. BS, MS and Ph.D. University of Nebraska -Lincoln, 1981, 1986, and 1992. Work: District Manager, Big Bend Groundwater Management District, Stafford, Kansas, 1983-1989; Assistant Professor, Department of Earth Science and Physics, University of South Dakota, 1992-1994; Assistant Professor Department of Geosciences, University of Arkansas, 1994-2000. Present affiliation: Associate Professor, Department of Geosciences and Director, Arkansas Water Resources Center University of Arkansas. Memberships include GSA, AGU, AGWSE, Sigma Xi, Arkansas Groundwater Association. GSA Service: Hydrogeology Division Annual Meeting Chair, 1998, Joint Technical Program Committee, 1997-1998. Secretary/Treasurer GSA Hydrogeology Division, 2000-2002. Other Service: President, Kansas Groundwater Management District Association, 1984-1986; Member and Chair, Department of Geosciences, Alumni Advisory Board, University of Nebraska, 1998-2002. Research Interests: groundwater sustainability/ groundwater declines, contaminant hydrogeology, water-resources management. This includes 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.

Chair	Robert W. Ritzi, Jr.	<input type="checkbox"/>	1 - Year Term
	(Write in _____)	<input type="checkbox"/>	
First Vice-Chair	Christopher E. Neuzil	<input type="checkbox"/>	1 - Year Term
	(Write in _____)	<input type="checkbox"/>	
Second Vice-Chair	Janet S. Herman	<input type="checkbox"/>	1 - Year Term
	(Write in _____)	<input type="checkbox"/>	
Secretary -Treasurer	Ralph K. Davis	<input type="checkbox"/>	2 - Year Term
	(Write in _____)	<input type="checkbox"/>	

Instructions:

1. Vote for no more than one officer for each of the positions.
2. Complete and sign the opposite side of this form.
3. Fold and tape the form. Please *Do Not Staple!*
4. Mail the ballot using a *first class* stamp.
5. Ballots must be postmarked by August 31, 2002.

Hydrogeology Division Contacts

2002 Management Board

Chair: Bill Simpkins (bsimp@iastate.edu)

First Vice-Chair: Robert W. Ritzi (rritzi@wright.edu)

Second Vice-Chair: Chris Neuzil (ceneuzil@usgs.gov)

Secretary-Treasurer: Ralph K. Davis (ralphd@mail.uark.edu)

Past Chair: Jean Bahr (jmbahr@geology.wisc.edu)

Standing Committees

Technical Program Committee:

Carol Wicks (Co-Chair; wicksc@missouri.edu) and Alan Fryar (Co-Chair; afryar1@uky.edu)

Nominating Committee:

Darryll Pederson (Chair; dpederson@unlserve.unl.edu), Mary Jo Baedeker, Steven Wheatcraft

Meinzer Award Committee:

Mary Anderson (Chair; andy@geology.wisc.edu), Ed Sudicky, Laura Toran, Fred Phillips, Scott Tyler

Birdsall-Dreiss Lecturer Committee:

E. Scott Bair (Chair; bair.1@osu.edu), Stephen Ingebritsen, Graham Fogg (Lecturer)

Distinguished Service Award Committee:

Abe Springer (Chair; abe.springer@NAU.EDU), Berry Lyons, Ken Bradbury

Ad Hoc Committees

Historical Committee:

Steve Wheatcraft (Chair; steve@hydro.unr.edu)

Past Chair's Long-Range Planning Committee:

Mary Jo Baedeker (mjbaedec@usgs.gov)

Section Representatives

Section representative positions are being determined and will be published in an upcoming issue of the Hydrogeologist

Representatives to Other Societies

The GSA Hydrogeology Division has representatives to a number of other societies related to the interests of the division members. New representatives are being identified by the Management Board and their names will be published in an upcoming issue of the Hydrogeologist

Newsletter Editor / Webmaster:

F. Edwin Harvey (feharvey1@unl.edu)

GSA Council: Mary Anderson (andy@geology.wisc.edu)

Hydrogeology Division Website: <http://gsahydrodiv.unl.edu>