THE GEOLOGICAL SOCIETY OF AMERICA

Geology and Health Division

Volume 1, Number 2 **August 2006**

Greetings from Dr. E. Lynn Savage

Founder and Initial Chair of the Geology and Health Division

Following the approval of the establishment of the Division of Geology and Health (G&H Division) by the GSA Council on October 18, 2005, and installation of its Management Board, Nominating Committee, and Program Committee, the following developed:

Membership of G&H Division: As of August, there are 105 members of the G&H Division. This is expected to expand when requests for renewal dues are made for 2007 by the GSA (and G&H Division), as this will be the first time the Division appears on the membership renewal forms.

A listserver geohealth@listserv.unco.edu was created by Ms. Ulli Limpitlaw diamspir@aol.com, to which members of the G&H Division and any others are invited to submit information to be shared among those who have registered to be on the listserv. Hopefully all new and existing members of G&H will join the listserv, so communication among members and others is available rapidly.

Liaisons of G&H Division with other groups:

1. IMGA: At the request of Dr. Robert Finkleman, a communications liaison has been established between the the G&H Division and the International Medical Geology Association. Each group may send the other announcements of events, conferences, etc., for their respective newsletters.

2. IYPE: Mr. Larry D. Woodfork has been appointed by the G&H Division Chair and confirmed by the G&H Management Board as Liaison to the G&H Division from IYPE (International Year of the Planet Earth; see http://www.yearofplanetearth.org). Among his impressive list of accomplishments: consulting geologist and adjunct professor MU and WVU, retired Director and State Geologist emeritus of West Virginia, former President of AIPG, AASG, and AGI, US NAS Delegate to the IUGS Governing Councils of the 31st and 32nd IGC subsequently appointed senior advisor to IYPE, and currently North American Representative on the Board of Directors of IYPE.

GSA Council Liaisons:

1. Dr. Jill Schneiderman, who is also a member of the G&H Division, was appointed as GSA Council Liaison to the G&H Division.

2. A GSA Council member to serve as general liaison to all the seventeen GSA Divisions will be elected on the GSA ballot this year to succeed a Council member retiring in 2007. Several names from the G&H Division have been put forth for this position.

G&H Division Booth: A table has been reserved for the October 22-25, 2006 GSA Annual Meeting in the Exhibit Hall at Booth #1306. Ideas about the Poster design and what to offer anyone who stops by the table may be sent to the Secretary-Treasurer Dr. Kevin Nick knick@llu.edu. Mrs. Gerald Friedman, wife of our First Vice-Chair, has generously offered to sit at the table, but others are needed and encouraged to contact Kevin with offers to staff the table, even for an hour or two.

G&H Division Logo: Permission to create a G&H Division logo for use at conventions as pennants, patches on duck bill caps, auto stickers, sweat and T-shirts, paper weights, etc., to be offered for a donation to be used to fund division scholarships, student field trips, GSA courses for students, etc., is being carried to the GSA Council.

Occupational Health Affiliates: A subdivision for Occupational Health Affiliates, who are not primarily geologists but whose work is directed to environmentally induced health problems, to be established within the Division of G&H under GSA guidelines, is being explored by Ms. D. Pinter and Ms. Pat Kilner, GSA Director of Membership.

Division Webmaster: As there is no active G&H Division webmaster, Ms. Joan Manly of the GSA staff has generously agreed to post several web announcements (e.g., newsletters and listings of new officers) on the G&H website at http://www.geosociety.org/sectdiv/geology-health/. Anyone who has web creative talents is invited to contact Dr. Kevin Nick knick@llu.edu to volunteer as the G&H Division webmaster.

Harrisburg, Pennsylvania Sectional Meeting: The pre-inaugural presentations that were made by some members of the G&H Division at the Harrisburg, Pennsylvania Section Meeting in March 2006, were reported on by Dr. Catherine Skinner and will be found elsewhere in this Newsletter.

Philadelphia, Pennsylvania, GSA Annual Meeting October 22-25, 2006:
The following Geology and Health Division Technical Session programs comprise the inaugural offering of the G&H Division at the 2006 GSA Annual Meeting. Details can be found at http://gsa.confex.com/gsa/2006AM/finalprogram/.

Morning of October 22 (Sunday)
P6: Pardee Symposium.
Natural and Anthropogenic Disasters: Earth and Health Scientists Working Together to Identify Potential Health Issues and Improve Outcomes.
Philadelphia Convention Center, Auditorium Lecture Hall, 8:00am-Noon
Dr. Geoffrey S. Plumlee, U.S. Geological Survey, Denver, Colorado
Dr. Gabriel Filippelli, Indiana University-Purdue University, Indianapolis, Indiana.

Disasters, both natural and human-produced, put a large strain on public health resources. This session brings together earth scientists and public health experts to understand the links between causes, impacts, and health-related outcomes of disasters. Earth scientists are increasingly working with public health scientists to identify and assess potential health issues associated with natural and anthropogenic disasters such as earthquakes, hurricanes, wildfires, industrial spills, and terrorist attacks. Earth scientists have traditionally assessed the risks, causes, extent, and physical impacts of natural disasters; from a public health perspective, this information can be used to help understand and mitigate injury and loss of life from the actual physical impacts of the disaster. Earth science expertise is increasingly used to help identify and map potential toxicants or pathogens generated by natural and anthropogenic disasters, and assess how these products respond to environmental processes. This session will use policy and case study presentations by earth and health scientists to highlight both past successes and future opportunities for linking earth and health sciences in natural and anthropogenic disaster planning and response.

Afternoon of October 22 (Sunday)
T123 Geology, Health and Public Policy (Oral)
Philadelphia Convention Center, Room 108-A, 1:30-4:30 pm*
*Geology and Health Division business meeting immediately follows this session, in the same room

Morning of October 23, 2006 (Monday)
T19 Distribution of Arsenic and related Metalloids in Surface and Ground Waters:
Controls and Challenges I (Oral)
Philadelphia Convention Center, Room 204-B, 8am-Noon

Afternoon of October 23 (Monday)
T19 Distribution of Arsenic and related Metalloids in Surface and Ground Waters:
Controls and Challenges II (Oral)
Philadelphia Convention Center, Room 204-B, 1:30-5:00 pm

Morning of October 24 (Tuesday)
T19 Distribution of Arsenic and related Metalloids in Surface and Ground Waters:
Controls and Challenges III (Oral)
Philadelphia Convention Center, Room 204-B, 8:00am-Noon

T123 Geology, Health and Public Policy (Poster)
Philadelphia Convention Center, Exhibit Hall C, 8am-Noon

Afternoon of October 24 (Tuesday)
T19 Distribution of Arsenic and related Metalloids in Surface and Ground Waters:
Controls and Challenges (Poster)
Philadelphia Convention Center, Exhibit Hall C, 1:30-5:30 pm

T124 Forensic Geoscience: In Practice and In Teaching (Oral)
Philadelphia Convention Center, Room 113-C, 1:30-5:30 pm

The G&H Division business meeting will follow immediately after the conclusion of Technical Session T123 in the same room, Room 108-A, and will be held from 4:35-5:30PM, October 22, 2006 (Sunday). The Initial Chair will then transfer responsibility for the G&H Division to the newly Elected Chair, who will conduct installation of the newly elected Management Board Officers. Following the close of this first business meeting, the Division Members will adjourn to the General Party marking the opening of the Exhibit Hall.

GSA Northeast Section Meeting (March 2007), to be held in Durham, New Hampshire: Last June there was an inquiry as to whether the Geology and Health Division wished to participate. I responded with an enthusiastic yes and was strongly supported by Dr. H. Catherine W. Skinner, who will participate. Submissions of abstracts are invited from the G&H Division. For details, inquire of co-conveners Dr. Tim Allen tallen@keene.edu, Dr. Nelson Eby Nelson_@uml.edu, or Dr. Wally Bothner wbothner@unh.edu.

Kudos: On behalf of the entire body of the Geology and Health Division, I want to thank **Mr. Bruce Wahle** for his talented creation of the Division Newsletter. Bruce volunteered at the October 2004 organizational meeting to help get the newsletter started, and we consider it a great loss to the Division that he is now retiring from the position. We appreciate the standard of excellence he has established.

Since early 2004, when I first wrote to the GSA asking if it would be possible to form a division such as G&H, Dr. Barb Mieras EchoHawk, GSA Headquarters, provided the guidance to accomplish this. On behalf of the G&H Division and myself, I thank her for her counsel, which ensured the creation of the Geology and Health Division.

Congratulations to G&H Division member, **Dr. Lynda B. Williams**, Arizona State University, who was elected a GSA Fellow in April 2006.

- Dr. E. Lynn Savage, Geology & Health Division Chair

Welcome! We are delighted to announce our new Newsletter Editor, **Dr. Alta S. Walker**, who is taking on the creation of the G&H newsletter. Please submit items of interest to her for the next newsletter at flexus@earthlink.net as soon as possible. We are interested in news about upcoming meetings, geology and health meetings you have recently attended, opportunities for researchers and practitioners in geology and health, activities and accomplishments of our members, book and resource reviews, and so on.

Thanks to **Dr. David Mogk** for chairing the initial Program Committee and for securing a prestigious Pardee Symposium for the initial offering of the new Geology and Health Division. Thanks to **Dr. Catherine Skinner** for chairing the Division's initial Nominating Committee. And thanks to each person who served on the Program and Nominating committees. Without your contributions, the Division could not be moving forward and growing as it is.

Past Meetings of Interest

GSA Southeastern Section–55th Annual Meeting, Knoxville, TN, March 23–24, 2006
submitted by Bill Halliday

Medical geology in geohazard/risk assessments: The example of CO_2 in caves. Halliday, William R., Commission on Volcanic Caves, International Union of Speleology, 6530 Cornwall Court, Nashville, TN 37205, bnawrh@webtv.net.
Especially in Australia, Texas and Thailand, naturally elevated levels of CO_2 in some karstic caves constitute a well-recognized geohazard. In addition, CO_2 levels as high as 6% have been reported in three lava tube caves in Australia; an extraordinary biological community exists at that level. Further, many small, poorly ventilated cave chambers can serve as induced CO_2 traps. Whether natural or human-induced, Appalachian and many other cavers and cave-oriented geoscientists and biologists are necessarily alert to clinically significant levels of CO_2. These have been found to be readily detectible by changes in breathing. Worldwide, lethal CO_2 levels exist mostly in karstic caves which are subject to volcanic emissions, e.g., thermal springs (temporary levels of 10% CO_2 in some dissolutional Texas caves constitute a well-known exception). An empirically-determined maximum working level of 6% CO_2 has been developed in Australia and unofficially adopted worldwide. Adequate knowledge of pulmonary physiology and its spelean applications is essential for accurate assessment of such hazards and risks. Certain recommendations of the National Commission on Risk Assessment and Risk Management also are highly pertinent. These include early and continued involvement of "stakeholders" in the assessment process, multidisciplinary search for relevant information, avoidance of both default decisions and command-and-control decisions, transdisciplinary peer review whenever time permits, and iterative management. Recent widely publicised hazard/risk assessments for a group of 200 well-ventilated, frequently visited caves ignored these principles. Instead they relied upon a temporary industrial elevation (to 8% CO_2) in a nearby masonry-lined artificial subterranean instrument chamber plus speculative extrapolation of roadside CO_2 measurements to volcanic caves several km away where no clinical symptoms of elevated CO_2 have ever been observed. Resulting undesirable scientific, social and political impacts could easily have been avoided by proper application of medical geology. (continued on p.5)

(continued from p.4)
Toxicity of lunar dust for humans at a lunar base. Park, Jaesung1, Liu, Yang1, Kihm, Kenneth D.2, and Taylor, Lawrence A.1, (1) Earth and Planetary Sciences, University of Tennessee, Knoxville, TN 37996, jpark29@utk.edu, (2) Mechanical, Aerospace, and Biomedical Engineering, University of Tennessee, Knoxville, TN 37996.
Several countries have announced their plans to send humans back to the Moon, to establish Lunar Bases for 'test-beds' and fueling stations for further human missions to Mars and beyond. This grand endeavor obviously necessitates our immediately addressing many problems involving the In-Situ Resource Utilization (ISRU) of lunar materials. However, an unanticipated situation arose during the Apollo Missions with breathing of lunar dust upon the return of the astronauts to the Lunar Module after each EVA. Many of them complained of the strange smell of "gun powder" from breathing of the lunar dust. Armed with our present knowledge of the chemical and physical properties of the lunar dust (<20 μm fraction of the regolith), it has become apparent that there may be extreme toxicity effects to future astronauts upon ingestion of such particles. This has activated several studies on the mitigation of lunar dust problems, a new design of spacesuit, and an efficient air-filtration system. Perhaps the most important data to obtain for these studies involve the potential toxicity of the finest of lunar dust. In fact, dust particles on Earth have been shown to result in pulmonary diseases such as black lung with miners in general, wherever rock powder is a breathing factor. In the case of the lunar dust, the ultra-fine particulates could be easily embedded in alveolar sacs and ducts of human lungs, and might cause a progressive lung failure. It is therefore of utmost importance for any return of humans to the Moon that the toxicity of lunar dust be explored in detail. Fundamental measurements on size distribution, reactive surface area, and morphology have never been performed until now. This will permit medical researchers to make first-approximations into the possible effects of lunar dust particles to pulmonary disease. We report SEM studies on lunar dust particles from an Apollo 11 (10084) and a unique Apollo 17 soil (70051). The resolution of SEM is approximately 20 nm. The particle sizes of 10084 and 70051 dust have Gaussian distributions. The reactive surface area of high-porous (Swiss-cheese-type) particle is about 25% higher than that of non-porous particle. In morphology, particles are classified with different shapes like spherical, elongated, irregular, and so on.

Geoinformatics 2006, May 10-12, 2006, Reston, VA
For information: www.geongrid.org/geoinformatics2006/about.html

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Did You Know? Abstracts from Past GSA Meetings

Abstracts from past GSA Annual Meetings (1997-2005) and Section Meetings (2001-2006) can be searched at: http://rock.geosociety.org/Indexing/abstractSearch.asp.

Upcoming Meetings, Conferences

GSA Annual Meeting, Philadelphia, PA, October 22-25, 2006

http://gsa.confex.com/gsa/2006AM/finalprogram

Please see list of events sponsored by the G&H Division on pages 2 and 3 of this newsletter.

Division Chair Meeting, Saturday, October 21, 9am-Noon, Philadelphia Convention Center.

Division Business Meeting, Sunday, October 22, 4:35-5:30pm, Philadelphia Convention Center Room 108-A. All members of the G&H Division are welcome.

Division Secretary, Editor, and Webmaster reception, Tuesday, October 24, 11:30am-12:15pm, Philadelphia Convention Center Room 310.

GSA 2007 Section Meetings

The original downwinders lived downwind of the atomic tests in Nevada and Utah. Now Utahans live downwind from the burning of mustard gas in Utah. See "Army burning mustard gas in Utah" http://www.cnn.com/2006/US/08/19/chemical.weapons.ap/index.html. Wouldn't this be a good time to plan your talk for the 2007 Rocky Mountain Section Meeting in St. George, Utah, May 7-9, 2007? Or do you work or live in another of GSA's geographic Sections? For the 2007 schedule of Section meetings, deadlines, and more information, please click on the Section meeting of your choice at http://www.geosociety.org/sectdiv/sections.htm.

Clay Minerals Society 44th Annual Meeting

Santa Fe, New Mexico, June 2-7, 2007. For information, please see: www.sandia.gov/clay.

Courses

International Association of Medical Geology (IAMG). 24/IX/06 full-day short course on Medical Geology. Beijing, China. www.medicalgeology.org.

Medical Mineralogy & Geochemistry Short Course, Mineralogical Society of America, Menlo Park, CA, December 8-10, 2006. http://www.minsocam.org/msa/sc/medmin_descrptn.html.

Websites of Interest

American Geological Institute www.agiweb.org

Centers for Disease Control www.cdc.gov

GSA Geobiology and Geomicrobiology Division
www.geosociety.org/sectdiv/gbgm/gbgm-officers.htm

GSA Geoinformatics Division www.geosociety.org/sectdiv/geoInf

GSA Geology and Health Division www.geosociety.org/sectdiv/geology-health

GSA Geology and Society Division www.geosociety.org/sectdiv/GeoAndSoc.htm

International Medical Geology Association (IMGA) www.medicalgeology.org

National Institutes of Health www.nih.gov

National Science Foundation Site on Biogeosciences listserv www.biogeosciences.org

Open Forum on Participatory Geographic Information Systems and Technologies; this site deals with GIS, and often medical issues, worldwide www.PPgis.net

Pan-American Center for Earth and Environmental Studies http://paces.geo.utep.edu

On the Cutting Edge, Teaching Geology and Human Health on-line resources
and activities http://serc.carleton.edu/NAGTWorkshops/health/index.html

Geomedical Listserver

The independent listserver for Geology and Health and Medical Geology is now available to all interested participants. This is a worldwide forum to exchange ideas, announce workshops, ask for information, etc. It is not a place to sell. The listserv is hosted by the University of Northern Colorado. To join this listserv, send an email to diamspir@aol.com and put "subscribe geohealth listserv" in the subject line and your name & address in the text. Once you are subscribed, a confirmation e-mail will be sent to you.

Geoinformatics

– With thanks to the Chair of the new Geoinformatics Division, Krishna Sinha pitlab@vt.edu.

Geoinformatics is an emerging science that utilizes information technology to discover, integrate, analyze and visualize geoscientific data. Geoinformatics includes the development and deployment of a cyberinfrastructure to facilitate access to data and knowledge. By applying data and knowledge management techniques developed in partnership with computer scientists, heterogeneous geoscience data relevant to the Geology and Health Division, such as geologic and medical data, can be efficiently accessed and integrated. Some of the relevant geospatial data generated from remote sensing techniques, such as satellite or aerial imagery, are distributed at diverse locations, and cyberinfrastructure tools make it possible to access and analyze them in a web based environment. Geoinformatics also supports new ways to organize, analyze, and visualize research data to be used in scientific presentations and education. Some relevant resources are presented below.

Geospatial Data

DEM http://edcdaac.usgs.gov/gtopo30/hydro/na_dem.asp
SWGEONET data sets http://www.geoinformaticsnetwork.org/swgeonet

Books

Koch, Tom, 2005. Cartographies of disease: Maps, mapping, and medicine. Redlands, CA, ESRI Press, 408 pp.

Maguire, David J., Michael Batty, and Michael F. Goodchild (eds.), 2005. GIS, spatial analysis, and modeling. Redlands, CA, ESRI Press.

Sinha, A. K (ed.), 2006. Geoinformatics: Data to knowledge. GSA Special Paper 397, Boulder, CO, GSA, 282 pp.

Journal Articles on Medical Geology

Dissanayake, Chandra, 2005, August 5. Of stones and health: Medical geology in Sri Lanka. Science 309:883-885; http://www.sciencemag.org.

Dogan, A. Umran, et al., 2006. Genetic predisposition to fiber carcinogenesis causes a mesothelioma epidemic in Turkey. Cancer Research 66(10):5063-5068. http://www.aacrjournals.org

Edwards, Verity, 2006. Bottled water a dental disaster.
http://www.theaustralian.news.com.au/story/0,20867,19990895-23289,00.html

GSA Geology and Health Division Information Online

The Geology and Health Division is now an officially recognized division of the Geological Society of America. The mission, bylaws and officer contact information can be found on the Division's homepage at http://www.geosociety.org/sectdiv/geology-health.

Geology and Health Division Officers and Staff 2005-2006

Chair: Dr. E. Lynn Savage savage@brooklyn.cuny.edu
First Vice-Chair: Dr. Gerald M. Friedman gmfriedman@juno.com
Second Vice-Chair: Ms. Monica Gaiswinkler Easton monica.easton@ndm.gov.on.ca
Secretary-Treasurer: Dr. Kevin E. Nick knick@llu.edu
Outgoing Newsletter Editor: Mr. Bruce Wahle earthgeo@frii.com
Incoming Newsletter Editor: Dr. Alta S. Walker flexus@earthlink.net
Outgoing Web Manager: Dr. Anna Szabo-Balog abalog-szabo@vw.vccs.edu
Incoming Web Manager: YOU?? to volunteer, please contact Kevin Nick knick@llu.edu

Ballot Instructions

This is the ballot for the election of 2006-07 officers for the **GSA Geology and Health Division**. Please refer to the candidate biographies on the pages following the ballot. Vote for no more than one candidate for each office. Submit your vote in one of the following ways:

1) **By Mail:** Vote on the paper ballot below. Complete the bottom section of the ballot. Mail the completed ballot to: Geological Society of America, PO Box 9140, Boulder, CO 80301, Attn: Division Ballot. Ballots must be **received at GSA by October 13, 2006** ***or***

2) **By Fax:** Vote on the paper ballot below. Complete the bottom section of the ballot. Fax the completed ballot to GSA, Attn: Division Ballot, at (303) 357-1074. Ballot must be **received at GSA by October 13, 2006** ***or***

3) **Online:** Vote online at https://rock.geosociety.org/ballot/vote.asp?Name=geoh. Log onto the ballot using your GSA member number (given on your mailing label) **or** your e-mail address (which will work *only* if your e-mail address is in your GSA member record). For assistance, please contact GSA at gsaservice@geosociety.org or (303) 357-1000 (option 3) or tollfree in the U.S. at (888) 443-4472. Electronic votes **must be submitted by October 13, 2006.**

Ballot – Geology and Health Division

Vote for no more than one individual for each office.

Chair: one-year term of office

❑ Gabriel M. Filippelli ❑ Gerald M. Friedman ❑ Write-In _____

First Vice-Chair: one-year term of office

❑ Monica G. Easton ❑ Geoffrey S. Plumlee ❑ Write-In _____

Second Vice-Chair: one-year term of office

❑ Monica E. Gowan ❑ Mickey E. Gunter ❑ Write-In _____

Secretary-Treasurer: two-year term of office

❑ Achim D. Herrmann ❑ Kevin E. Nick ❑ Write-In _____

Your Name (printed) _____

Your Signature (required) _____

Your GSA Member Number (required)* _____

* Given at the top of your mailing label. For assistance, please contact GSA at gsaservice@geosociety.org or (303) 357-1000 (option 3) or tollfree in the U.S. at (888) 443-4472.

Candidates for Chair

Gabriel M. Filippelli. Environmental health, geochemistry, paleoclimate. Educ: BS Geology, Univ California, Davis; PhD Earth Sciences, Univ California, Santa Cruz. Prof Exp: Indiana Univ–Purdue Univ Indianapolis (IUPUI), Dept Earth Sci, Asst Prof 94-00, Assoc Prof 00-04, Prof 04-present, Dept Chair 03-present. Additional Appts: Assoc Director, Indiana University, Center for Environmental Health 06-present; Faculty Member, IU School of Medicine, Dept of Public Health. Prof Affil: GSA since 90; AGU, TOS, GS, Indiana Academy of Science, Sigma Xi. GSA Service: Geology & Health Division Program Committee 05-present; Geology editorial brd 99-01; Technical Program Chair, North-Central Sctn Mtg 00. Addtnl Service: Applied Geochemistry, assoc editor 04-present; Chair, US Advisory Commission IODP 04-06; SPC (06-09); SSEP (01-04) IODP. Honors/Awards: IODP Distinguished Lecturer, IODP 05-06. Research Interests: Children's health, metal geochemistry, climate and geochemical cycles. **Statement of Interest:** As a recent convert to environmental health, I am surprised at how little interaction currently exists between earth and health scientists. I welcome the opportunity to work with both communities to improve training and research outcomes through GSA and have begun this process locally, through the recent approval of our Indiana University Center for Environmental Health, and nationally, via our upcoming Pardee Symposium on earth/health science integration. Geoscientists can have profound impacts on human health outcomes in the future, an outcome which I hope to facilitate through open discussion of cross-cultural training and research approaches.

Gerald M. Friedman. Petroleum geology; geochemistry; mineralogy; sedimentology. Education: BSc University of London; MS, PhD Columbia University. Prof Exp: Founder, Director Northeastern Science Foundation; Brooklyn College CUNY since 85, Distinguished Professor Emeritus 88-present; Rensselaer Polytechnic Institute faculty 64-84, Professor Emeritus, founder Rensselaer Center for Applied Geology; Amoco scientist 56-65; Univ Cincinnati faculty 50-54. GSA member since 1951, Fellow since 1961. GSA Service: Joint Tech Prog Comm rep NAGT 65; Committee on Publications 80-82; Sedty Geol Div Panel on Sloss Award 99; Annl Mtg field trip leader 01; History of Geol Div Chair 00, Past Chair 01, 1st Vice-Chair 99, 2nd Vice-Chair 98; Geology & Health Div 1st Vice-Chair 05-present. Addtnl Serv: Past President SEPM; past editor, Jour Sed Pet (Sedty Rsrch); co-founder, History of Earth Science Society; founder, Earth Sciences History journal; Assoc of Earth Science Editors Exec Board Vice-Chair 70-71. Honors/Awards: Fulbright Scholar 64; honorary doctorates Univ London, Univ Heidelberg; SEPM Twenhofel Medal 97; AAPG Sidney Powers Medal 00; Hedberg Award 04; AGI Legendary Geoscientist Award 05; Mary C. Rabbitt History of Geology Award 05; honorary fellowships/memberships GSA, AAPG, Geological Society of London, SEPM, International Association of Sedimentologists, History of Earth Sciences Society. Rsrch Int: Sedimentary geology. **Statement of Interest:** My current research concerns intertidal deposits worldwide. In southeast Asia, my data generated temperatures of carbonate for water approximately 105°C. The explosions had been deposited "the day the world exploded." Explosions killed 200,000 people. More than a million became homeless. The economic impact is a shock to the world. Few organizations have the tools for projects to investigate what happened to the seafloor. Information is needed to clarify what goes on. This need is extremely urgent and is one of the projects and programs to implement urgent surveys. The contribution of our Geology and Health Division needs to be involved urgently. Our knowledge of geology is underused.

Candidates for First Vice-Chair

Monica Gaiswinkler Easton. Publishing and editorial issues; volcanology; non-traditional geology. Educ: DiplScLT, Fanshawe College. Prof Exp: Memorial Univ, Chem Dept, Rsrch Asst 80-82; Ontario Geol Survey (OGS), Geo Labs, Tech 83-85; Geoscience Canada, Managing Editor 85-92; Easton Enterprises, President/Editor 83-02; OGS, Geosci Edtr 00-present. Concurrent Pos: Natl Rsrch Cncl of Canada, Research Press, Contract Copy Editor 99-02. Prof Affil: GSA since 00; Geol Assoc of Canada; Assoc of Earth Science Editors. GSA Service: Joint Tech Prog Comm 01-present; Geology & Health Division 2nd Vice-Chair 05-present; AESE GSA Co-ordination Comm chr/mbr 01-pres. Addtnl Service: GAC Volc Div secty & edtr nwsltr Ashfall 85-88, GEOLOG co-edtr 85-92, Pubs Comm mbr 85-92, Cncl Observer 85-92, Exec Comm mbr 92-96, GAC Pubs Comm chr 92-96; GAC edtr-in-chief 92-96; GAC-MAC-SEG 91 annl mtg, Comm for Pubs & Printing chr 89-91; GAC-MAC 99 annl mtg, Spec Events Comm chr, Guests Comm chair, Pubs Comm mbr 97-99; AESE 03 annl mtg co-chr 02-03. Rsrch Int: Ethical issues in geoscience publishing; stratigraphic nomenclature (Ontario); emerging interdisciplinary geological trends. **Statement of Interest:** The next few years are an important and exciting period for GSA and the fledgling Geology & Health Division during which to develop the Division's direction and improve knowledge of our mission among GSA members. Now that work has begun, it is crucial to establish the Division on a firm footing - technically and financially - both of which can be accomplished through participation and visibility at GSA Section/Annual meetings, involvement in other national/international activities, by encouraging membership through our activities, and by generating long-term strategies for these efforts. I offer extensive volunteer experience to our members to meet these aims.

Geoffrey S. Plumlee. Geochemistry and environmental health. Educ: BS Geol, Univ New Mexico; PhD Geochem, Harvard Univ. Prof Exp: US Geol Survey 85-present, currently senior rsrch geochemist; USGS Team Chief Scientist, (96-01); currently co-project chief USGS Earth Materials & Human Health Project. Prof Affil: GSA member since 05; SEG since 90. Service: GSA Service: GSA 2004 Annl Mtg Hot Topics Chair; Geology & Health Division Program Committee, 05-present; co-convenor, 2006 GSA Annl Mtg Pardee Symp, Earth & Health Sci in Disaster Planning & Response; AGI Envtl Advsry Comm (rep SEG) since 95; US Navy Lung Disease Assessment Prog Advsry Panel 03-04; Intl Volc Health Hazards Network expert mbr 03-present; SEG lead edtr, contrib author, Envtl Geochem of Mnrl Deposits 99; Invited instructor, IUGS-IMGA Medical Geol wrkshps 00, 03-06; Intl Soc Envtl Geoch, plenary speaker 06. Honors/ Awards: SEG Lindgren Citation 94; Organisation Mondiale de Mineralogie, Prix D'Excellence Pour Les Sciences de La Terre 04 (for contributions to medical geology); USGS Superior Service Award 06. Rsrch Int: Toxicological geochemistry of earth materials; earth sciences in disaster response and planning; environmental geology and geochemistry of mineral deposits. **Statement of Interest:** Earth scientists continue to expand into research areas that help health scientists understand the linkages between geology, the environment, and human health. However, my personal experiences reinforce that building these collaborations requires effective communication (particularly listening), strategy, and patience in order to overcome substantial barriers such as discipline-specific jargon and (mis)perceptions. A crucial role for the Geology and Health Division's officers will be to vigorously pursue innovative forums to foster interdisciplinary communication, such as co-sponsoring meetings with health science societies or providing continuing education opportunities for health scientists on environmental health issues linked to geology or earth science expertise.

Candidates for Second Vice-Chair

Monica E. Gowan. Geomorphology; engineering geology. Educ: BA Geology, Geography, Gustavus Adolphus College; MS Geology, Western Washington Univ; Regent's Certificate in Public Health Preparedness, Response & Recovery, University of Minnesota; PhD Candidate, Hazard & Disaster Mgmt, Dept Geol Sci, Univ Canterbury, NZ 06-09. Prof Exp: Olmsted County Public Works, MN, Envtl Scientist 84-86; Geo Logic, Bellingham & Glacier, WA, Owner, Consulting Geologist 89-01; Olmsted Co Envtl Resource Services South Zumbro Watershed Coordinator 01-02, Public Health Dept Envtl Health Assess't Coord 02-03; Mayo Clinic College of Medicine, Research Study Coord 04-05, Senior Prog Coord 05-06; AIPG CPG; Oregon RPG; Washington LEG, LG. Conc Pos: Western Wash Univ, Dept Geol, Faculty Rsrch Assoc 89-90, Faculty Lecturer 91-01; GSA Inst for Envtl Educ, Geol & Envt Public Outreach Prog Coord 93-95. Prof Affil: GSA since 87; AIPG. GSA Service: Geol & Public Policy Comm 96-99, chair 98; Congressional Science Fellow Selection Subcommittee 97-99; Geol & Health Div Program Committee 05-present. Rsrch Int: All-hazards/disaster research, geology & public health, spatial epidemiology, GIS applications to disaster management, risk communication, decision-making, public policy.
Statement of Interest: The earth sciences play a critical but underappreciated role in public health & epidemiology and are the physical foundation of hazard and disaster management. I would like to represent the Geology & Health Division to enhance opportunities for collaboration between the physical and health sciences, especially those that build individual and community resilience to risk. I would seek to do this through fostering interdisciplinary dialogue and exchange, both within the GSA community and between GSA and the health sciences community, and by pursuing promising avenues for national and international outreach on the key role of the geosciences.

Mickey E. Gunter. Mineralogy. Educ: BS Geology, Southern Illinois U; MS, PhD Geology, Virginia Tech. Prof Exp: University of Idaho, Department of Geosciences, Asst Prof 89-95, Assoc Prof 95-02, Prof 02-present. Concurrent Positions: Visiting Professor, University of Bern, Switzerland 96; Visiting Professor, Kyoto University, Japan 02. Prof Affil: GSA; NAGT, MAC, MSA. Service: ATSDR expert panel on asbestos biomakers 06; MSA Councilor 03-06; co-organizer, 2005 Goldschmidt Conference, Moscow, ID; EPA review committee on World Trade Center dust signature 05. Honors/Awards: MSA Fellow 99; MSA distinguished lecturer 02-03; University of Idaho teaching excellence award 98. Research Interests: Environmental mineralogy, optical mineralogy, forensic mineralogy, anisotropy of the physical properties of minerals.
Statement of Interest: My main interest is in health effects of minerals – positive, negative, and none. I think we (the geosciences) concentrate too often on the negative aspects of human exposure to minerals (i.e., exposure to mineral dusts) without thinking of the positive (adding iodine to table salt). We need to clearly understand these effects to better interact with individuals in the medical, regulatory, and legal communities. I would like to increase our interactions with these groups by helping establish a better dialogue with them, and I think the Geology & Health Division within GSA is the perfect vehicle by which to accomplish this.

Candidates for Secretary-Treasurer

Achim D. Herrmann. Paleoclimatology; geochemistry. Education: MS Geology, Heidelberg University; PhD Geosciences, Penn State University. Prof Exp: George Washington Univ, Visiting Asst Professor/Instructor 03-05; Arizona State Univ, Barrett Honors College, Faculty Fellow 05-present. Prof Affil: GSA member since 99; AGU. GSA Service: Geology & Health Division Program Committee mbr 05-present. Research Interests: Earth systems science, environmental geochemistry; metal stable isotopes as paleoredox proxies; isotope biogeochemistry; Earth's ancient environment.
Statement of Interest: As secretary-treasurer, I will be committed to strongly supporting the growth and health of the division.

Kevin E. Nick. Sedimentology, paleomagnetics, geochemistry, environmental geology. Education: BS Biology, MS Geology, Loma Linda University; PhD Geology, University of Oklahoma. Prof Exp: Target Reservoir Analysis, Sedimentologist 89-94; Stim-Lab Inc., Group Leader for Reservoir Analysis 94-98; Loma Linda University, Asst Prof Geology 98-present; Reg Prof Geol in CA. Prof Affil: GSA since 2000; AGU; AAPG; SEPM; S Calif Acad Science. GSA Service: Geology & Health Division Secretary-Treasurer 05-present. Research Interests: Dust and health; iron transport by clay; paleomagnetic dating of diagenesis.
Statement of Interest: The main contribution that I think I might make to the Division would be from association with health care providers. My department of Earth and Biological Sciences is on the Loma Linda University campus that strongly emphasizes the health sciences. For example, LLU will be involved in the management of influential health care facilities and health education in Kabul, Afghanistan. I am working to try to have earthquake geohazards resulting from the mud/stick construction used in the seismically active area of Kabul, to be addressed in health care planning. I also have served as G&H Secretary-Treasurer for the past year.