PEER REVIEWED PUBLICATIONS: (STUDENT AUTHORS IN ITALICS)

In Preparation:

Biogeochemical gradients and bioenergetics of hydrothermal waters of El Tatio Geyser Field, Chile.
In Preparation for Geochimica et Cosmochimica Acta.

Engel, A.S.E., Omelon, C., Franks, M., Bennett, P.C. Microbial mats and microbial communities of
the El Tatio Geyser Field, Chile. In Preparation for Applied and Environmental Microbiology.

Denbow, J. Omelon, C., and Bennett, P.C. Arsenic metabolism by Geobacillus in a geyser field, El
Tatio, Chile. In Preparation for Microbial Ecology.

Bennett, P.C., Sharp, J.M., El-Shishtawy, A., Atwia, M., Bakrah, A., Noweir, A.-H. Sources and
pathways of manganese in the central Nile Delta, Egypt. In Preparation for Hydrogeology J.

In Review/Revision

(SUBMITTED) Anaerobic Microbial Diversity in Redox-Stratified Microbial Mats: The Basis
for Nutrient Spiraling in a Chemolithoautotrophic Ecosystem. In Review, Chemical
Geology.

Partitioning geochemistry of Arsenic and Antimony, El Tatio Geyser Field, Chile. Applied
Geochemistry.

In Print/Press:

Omelon, C.R., Pollard, W., Ferris, F.G., Bennett, P.C. (IN PRESS) Cyanobacteria within
Cryptoendolithic Habitats: the Role of High pH in Biogenic Rock Weathering under Elevated
Temperatures in the Canadian high Arctic. 9th International Conference on Permafrost, p. 1-6.

Twelfth International Symposium on Water-Rock Interaction WRI-12. (T. Bullen and Y. Wang, Eds)

El Tatio Geyser Field, Chile. Proceedings of the Twelfth International Symposium on Water-Rock

Meisinger, D.B., Zimmermann, J., Ludwig, W. Schleifer, K.H., Wanner, G. Schmid, M., Bennett,
P.C. Engel, A.S., Lee, N.M. (2007) In situ detection of novel Acidobacteria in microbial mats from
a chemolithoautotrophically-based cave ecosystem (Lower Kane Cave, WY, USA). Environmental
Microbiology. 9, 1523-1534.


Committee on Research Priorities for Earth Science and Public Health (Skinner, C.H. Chair; Bennett,
P.C., and others) (2007) Earth Materials and Health, Research Priorities for Earth Science and


**CONFERENCE PROCEEDINGS**


INVITED LECTURES, SYMPOSIA, AND SHORT COURSES

- *American Society of Microbiology* (Invited paper) June 2008
- *University of Texas El Paso* (Invited Lecture) Feb. 2007
- *Cairo University, Egypt* (Invited Lecture) Nov. 2006
- *University of Vermont* (Invited Lecture), Oct. 2006
- *McMaster University* (Invited Lecture), Feb. 2006
- *University of Toronto* (Invited Lecture), Feb. 2006
- *University of Sheffield* (Invited Lecture), January 2006
- *IAH Water-2000:* Cape Town, South Africa, Invited keynote speaker
- *Intl. Symp. GW Contamination.* (Invited speaker) June, 2000, Tokyo, Japan
- *Virginia Tech etc.* (Invited Lecture) February, 2000
- *XIVth Intl. Symposium on Environmental Biogeochemistry (1999)* Plenary Speaker
- *University of Wisconsin (1999)* Invited Weeks Lecturer
- *Goldschmidt, France (1998)* Session Organizer “Bacterially mediated silicate diagenesis”
- *University of New Mexico (1998):* Invited lecture
- *Duke University (1996)* Invited Lecture
- *GSA Annual Meeting (1995)* GSA Short Course “Contaminant Organic Geochemistry”
- *GSA Annual Meeting (1994)* “Geologic significance of microbial processes
- *University of Michigan (1992):* Invited Turner Lecturer
- *Southern Methodist University (1992)* Invited Lecture
- *Texas A&M University (1991)* Invited Lecture

1997 HENRY DARCY DISTINGUISHED LECTURESHIP

The Henry Darcy Distinguished Lecturer is selected annually by the Association of Ground Water Scientists and Engineers of the National Ground Water Association. During 1997, I was invited by 70+ academic and research institutions to present the lecture *Water, Microbes, and Rocks: The Geochemical Ecology of Contaminated Ground Water.* I visited 52 of these locations in the U.S., Canada, Australia, Germany, England and Ireland.
ABSTRACTS AND PAPERS PRESENTED (SELECTED, LAST 10 YEARS)


Steinhauer, E.S. and Bennett, P.C. (2008) Microbial acceleration of sulfuric acid speleogenesis in Kane Cave, WY. Goldschmidt Meeting, Vancouver Canada.


Landrum, J.T., Milliken, K., Engel, A.S., Lansdown, J. and Bennett, P.C. (2005) Biogeochemical controls on As and Sb partitioning into hydrothermal silica at El Tatio, Chile. ISEB


Engel, A.S. Stern, A., and Bennett, P.C. The secret to sulfuric acid speleogenesis. GSA 2003 meeting, Seattle, WA.

Phoenix, V. R., Bennett, P.C., Engel, A. S., Tyler, S.W., and Ferris F.G. Chilean high-altitude hot spring sinters: a model system for UV screening mechanisms by early Precambrian cyanobacteria. GSA meeting, Seattle, WA.


**Funded Research (*Current)*:

- Bennett, P.C. The Geochemical Ecology of Cryptoendolithic Microorganisms: Relationships Between Cyanobacteria and sandstone weathering in the Canadian High Arctic. *(SUBMITTED)* National Science Foundation Polar Programs. 6/2008-6/2010
- Bennett, P.C. The Kinetics of Microbial Speleogenesis. National Science Foundation, geochemistry and geobiology, EAR-0617160. $65,000 8/15/2006-8/14/2009
- Bennett, P.C., (with S.S. Engel, LSU). Hydrobiogeochemistry of As and Sb at El Tatio Geyser Field. NSF-geochemistry and geobiology. $120,000 (UT Portion). EAR-0545336 8/15/2006-8/14/2008
- Bennett, P.C. and Stern, L.A. Sulfuric Acid Speleogenesis by Chemolithotrophic Bacteria: Community Structure and Habitat Modification by Acid Extremophiles. NSF Life in Extreme Environments (LExEn) Program. EAR 0085576 12/1/2000 – 11/30/2004 $356,000
Banner, J.L., Bennett, P.C., Connelly, J. and Housh, T. Acquisition of a high-resolution ICP-MS. National Science Foundation, Major Research Instrumentation. $229,000. 8/1/98-8/1/01 (matched by the University of Texas for a total of $658,000)

Bennett, P.C. Microbial Weathering of Feldspars: Aggressive Release of Limiting Nutrients. National Science Foundation. $144,000, 6/1/99-12/1/01

Bennett, P.C. Mineral chemistry controls of microbial ecology during intrinsic biodegradation of petroleum. American Chemical Society, Petroleum Research Fund. 6/98 – 9/00. $60,000

Bennett, P.C. Investigations of methane seeps in the Pine River Valley, Colorado. Colorado Oil and Gas Conservation Commission, 9/95-9/96. $9,000

Famiglietti, J.S., Bennett, P.C., Sharp, J.M., and Banner, J. Graduate Research Traineeships in Hydrology: Role of the Hydrologic Cycle in the Coupled Earth System. 9/94-9/00; $537,500.

Bennett, P.C. and Hillis, D. Polymer-labeled clays for tracing groundwater flow and transport in fractures. Texas Higher Education Coordinating Board, Advanced Technology Program. 1/94-1/96, $136,000

Bennett, P.C. and Sharp, J.M. Mass transport properties of fracture skins. National Science Foundation, 1/94-6/98, $254,000

Bennett, P.C. Silicate dissolution in organic-rich aqueous systems: reaction mechanisms and rate control. National Science Foundation. 9/91-9/93, $129,000


Bennett, P.C. The aqueous organic chemistry of silica in geologic systems. American Chemical Society, Petroleum Research Foundation. 7/90-6/92, $18,000

Bennett, P.C. Innovative biological techniques for the remediation of manufactured gas sites. Remediation Technologies Inc., Niagara Mohawk Project #04-9276, 6/89 - 3/90, $10,400

OUTREACH:
The Kane Cave research project was featured in the WGBH-NOVA program, “The Mysterious Life of Caves” (originally aired 2002, repeated several times since), with a parallel article in the Smithsonian Magazine (Oct. 2002 issue) http://www.pbs.org/wgbh/nova/caves/. This program shown in modified form in 2003 in the UK by BBC as “The Secret Life of Caves”, and then translated for broadcast in at least Sweden and France. The work was also featured in a radio spot on MicrobeWorld, sponsored by the American Society for Microbiology. Based on the May, 2004 Geology publication, highlight articles have appeared in Science, Nature, Spiegel, and Nederlandse Geologische Vereniging, and additional articles have appeared in six languages based on Internet searches.

UNIVERSITY SERVICE:
University Research Safety Advisory Committee (AY1998 to present).
University Committee on Objectivity in Research (AY1997). Committee member.

**Departmental Service**

Graduate Advisor (AY2003 to 2006)
Safety Officer/Safety Committee Chair (AY1993 to present).