

EDUCATION

M.S. The Pennsylvania State University. August 2001. Environmental Pollution Control

Thesis title - Luminescence of speleothems as an indicator of paleoclimate: Correlation with contemporary climate records.

B.S. The Pennsylvania State University. December 1996. Environmental Resource Management

Relevant Courses:

Karst Hydrology, Hydrogeology, Environmental Organic Chemistry, Water Geochemistry, Soil and Water Engineering, Soil and Water Resource Management, Land Waste Disposal, Pollutant Transport in Soils, Watershed Management, Pollutant Impacts on Water, Aquatic Ecology, Wetlands.

Continuing Education:

- Field Trip Assistant for Geologic Controls on Cave Development in Burnsville Cove, Bath and Highland Counties, Virginia. GSA Southeastern Section Meeting, March 2017.
- National Speleological Society Convention and Geology Field Trip. August 1-7, 2010. Essex Junction, Vermont.
- 72nd Annual Field Conference of Pennsylvania Geologists. Geologic Mapping Walkabouts in Central Pennsylvania: 1st to 5th Order Appalachian Mountain Folds; Folded Thrusts; Ordovician & Silurian Carbonates; Silurian Quartzites & Sandstones. Pennsylvania Geological Survey. September 27-29, 2007.
- NGWA Focus Conference on Eastern Regional Ground Water Issues. September 18-19, 2006.
- NGWA Course - Site Characterization in Support of Fractured Rock Remediation Projects. September 14-15, 2006.
- U.S. EPA/NGWA Fractured Rock Conference: State of the Science and Measuring Success in Remediation. September 13-16, 2004.
- Karst Waters Institute Interdisciplinary Workshop on Epikarst. October 1-4, 2003.

- Southeastern Friends of the Pleistocene Fieldtrip: “Stream Processes in Cave and Surface Streams Flowing Over Limestone” by Greg Springer, Ohio University. October 4-6, 2002.
- “Automated Model Calibration Using WinPEST” by John Doherty/NGWA, March 8, 2002.
- The MODFLOW Course: “Theory and Practical Applications in Natural Attenuation, Remediation Design, and Water Resource Management using Visual MODFLOW Pro” by Robert Cleary, Thomas Franz, and Nelson Guiguer/NGWA, March 5-7, 2002.

Certifications:

- 40-Hour OSHA HAZWOPER certified with Waste Site Worker Supervisory Training and annual 8-hour refresher courses.
- Permit-Required Confined Space Training, Including Entrant, Attendant and Supervisor Non-Entry Rescue. August 2, 2004
- Red Cross CPR, First Aid, and AED certification, June 2001.
- Mine Safety Training in Accordance with MSHA 30CFR Part 46, Training/Retraining of Miners. May 31, 2002, plus annual Miner Refresher Course.
- American Safety and Health Institute Approved Basic First Aid and Adult CPR Certification, plus annual re-certification.

EXPERIENCE

December 2000 to present: *Staff and Project Geoscientist, Meiser & Earl, Inc., State College, Pennsylvania.* Responsible for hydrogeologic and geochemical investigations for quarry permitting, characterization and quantification of water resources in karst settings, site evaluation of wind turbine foundation stability in karst settings, well and surface water sampling and monitoring, aquifer characterization studies and permitting of landfills and drinking water supplies, site assessment for sinkhole development, pollutant transport modeling, and statistical evaluation of landfill monitoring data.

January 1999-May 2001: *Research Assistant, National Science Foundation Grant # EAR9809138.* Performed research relating to speleothems and possible paleoclimate relationships of luminescence and trace element concentrations measured in speleothems.

April 1997 to December 1998: *Technical Representative, Nalco Chemical Company, Pittsburgh, Pennsylvania*. Sampled, analyzed, and reported on waste, process, and boiler waters. Made recommendations and adjustments based on sampling results. Installation and troubleshooting of chemical feed systems.

May 1996 to August 1996: *Scientific and Technical Intern, Department of Environmental Protection, Williamsport, PA*. Sampled and reported on effluent from municipal sewage treatment plants and single residence sewage treatment plants.

PROFESSIONAL AFFILIATIONS

- National Ground Water Association, Association of Ground Water Scientists and Engineers
- National Association of Environmental Professionals

AWARDS/ACTIVITIES

- Member National Speleological Society
- Recipient of James Mitchell award for best scientific paper presentation – 1999 NSS Convention
- Member of Nittany Grotto, Butler Cave Conservation Society, and Mid-Atlantic Karst Conservancy.
- Head Project Cartographer – Kookon Cave Project October 1996 – present
- Eagle Scout

PUBLICATIONS

- Crowell, B. E. and W. B. White. 2012. Measurement of Luminescent Banding in Speleothems: Some Techniques and Limitations. *International Journal of Speleology*. V. 41, no.1. Pgs 51-58.
- Sasowsky, I.D., R.A. Clotts, B.E. Crowell, S.M. Walko, E.J. LaRock, and W. Harber T. 2004. *Paleomagnetic Analysis of a Long-Term Sediment Trap, Kookon Cave, Huntingdon County, Pennsylvania, USA*. In: *Studies of Cave Sediments*. Kluwer Academic.

PRESENTATIONS AND ABSTRACTS

- Behr, R and B. E. Crowell. 2020. Subterranean, surface, and Lidar-derived bedding orientations refine the structural features in Burnsville Cove, Bath and Highland Counties, Virginia. GSA Southeast-Northeast Joint Sectional Meeting, Reston, VA
- Herman, E. K. and B. E. Crowell. 2011. Separating Chemical and Physical Erosion Processes in Fluviokarst: Flume Experiments. GSA 2011 Annual Meeting.

- Sasowsky, I. D., R. Kempthorne, S. Walko, B. Crowell, E. LaRock, and W. Harbet. Clastic Sediments in a Long-Term Karst Trap, Valley and Ridge, Central Pennsylvania. GSA Abstracts with programs. v. 32. no. 7. p. A-27. 2000 Annual Meeting, Reno, Nevada.