

Grant D. Smith, Ph.D.

Science Educator /Geologist
4590 NW University Pl. Apt 5, Corvallis, OR 97330
grantdsmith21@gmail.com, 541-908-5843 (cell)

EDUCATIONAL BACKGROUND

Doctor of Philosophy Science Education, 2011. Oregon State University, Corvallis, OR
Master of Science Geology, 1992. Washington State University, Pullman, WA
Bachelor of Science Geology, 1989. Kansas State University, Manhattan, KS

DISSERTATION

Toward Establishing the Validity of the Resource Interpreter's Self-Efficacy Instrument.
Dissertation successfully defended on November 4, 2011.

Committee members: Larry Enochs (Chair), Robert Lillie, John Falk, Nam-Hwa Kang, Misti Lambert.

PROFESSIONAL EXPERIENCE

Instructor (January 2008 - present)

Department of Earth and Physical Sciences, Western Oregon University, Monmouth, OR.

Dr. Smith is currently an adjunct earth science instructor at Western Oregon University where he has been teaching Earth Science 104-106 lectures and labs since 2008. Subjects covered in this sequence include astronomy, plate tectonics, earthquakes, igneous rocks, volcanoes, Newtonian physics, radiometric dating, geologic time, mass wasting, sedimentary processes, sedimentary rocks, oceanography, and meteorology. Having taught these courses multiple times, Dr. Smith has used reflective practice and formative assessment to modify and improve the courses. He currently uses the WOU Moodle system to post grades online, distribute lecture materials, post assignments, and make study guides available. During the 2010-2011 school year, Dr. Smith also served as the laboratory coordinator for the Earth Science 100 sections. Responsibilities of that position included correcting errors in the lab manual, making sure the lab manual was ready for publication at the university copy center, determining that the labs were properly setup each week, and communicating any issues with other instructors in the sequence. In addition, he made major revisions to one of the labs (Light Spectra) because it was considered to be problematic by several instructors.

Instructor (September 2007 - December 2007)

Department of Geosciences, Oregon State University, Corvallis, OR

Dr. Smith was responsible for one of Geology 101 lecture sections and serving as the laboratory coordinator for the course GTAs. Dr. Smith used the university's online Blackboard system to distribute lecture materials and to make assignments available to the 270 students in his lecture section. As a writing intensive course, Dr. Smith was also charged with determining suitable material for three writing assignments for the term and grading those assignments. This employment was relative short due to the fact that OSU only offers Geology 101 in the Fall term.

Interpretive Ranger (June 2007 – September 2007)

Oregon Parks and Recreation Department, Silver Falls State Park. Sublimity, OR

Dr. Smith gave campfire talks, led guided hikes, and taught children's programs at Silver Falls State Park. It was his responsibility to develop talks and hikes on the geology, archaeology, and other resources within the park. He also conducted roving interpretation to help answer questions that visitors may have while hiking the trail system.

Graduate Research Assistant (September 2006 – June 2007)

Department of Math and Science Education, Oregon State University, Corvallis, OR

Dr. Smith served as a researcher for assessing outcomes of the Hydroville Curriculum Project. Hydroville is an environmental problem-based curriculum designed for high school students. Dr. Smith conducted student interviews at several high schools in Oregon that used the curriculum, including students in "at-risk" programs. He also transcribed interviews and helped in the data analysis for the assessment project.

Graduate Research Assistant (September 2005 – June 2006)

Center of Teaching and Learning, Oregon State University. Corvallis, OR

Dr. Smith worked on a project for the OSU graduate school to determine best practices for the mentoring of graduate students. This included writing a summary report and proposing suggestions that the graduate school could implement.

Geoarchaeologist/Geomorphologist (September 1997 – August 2005)

TRC Environmental Inc. El Paso, TX

Dr. Smith served as the geoarchaeologist/geomorphologist for the Cultural Resource Management programs in TRC's Albuquerque, Austin, and El Paso Offices. Projects during this time included working with engineers, archaeologists, biologists, and government managers on multi-disciplinary projects involving cultural resources, hazardous material contamination, and erosion studies. His experiences included conducting geological/archaeological field investigations, performing lab analysis on field specimens, conducting literature reviews and background research on study areas, and writing technical reports for archaeologists and others not familiar with geological principals. In addition, he designed many of his own graphics in CorelDraw and developed GIS layers in ArcView. Finally, Dr. Smith also served as the IT specialist for the TRC El Paso office, which included system repair, network setup and administration, and integrating other electronic devices into that environment (e.g. PDAs and GPS units). His professional experience includes work with national agencies, state agencies, academic institutions, and private cultural resource management firms in throughout the western portion of the United States.

Geoarchaeologist/Geomorphologist (December 1992 – June 1997)

LaRamie Soils Service, Laramie, WY

Dr. Smith served as a consulting geoarchaeologist/geomorphologist for projects throughout the western United States. His experiences included conducting geological/archaeological field investigations, performing lab analysis on field specimens, conducting literature reviews and background research on study areas, and writing technical reports for archaeologists. In addition, he designed many of his own graphics in CorelDraw. Finally, Dr. Smith also served as the IT specialist for the office, which included system repair, network setup and administration.

Graduate Teaching Assistant (August 1989 – May 1992)

Geology Department, Washington State University, Pullman, WA

Dr. Smith was a teaching assistant for multiple lab sections of the Geology 101 program at Washington State University.

Graduate Laboratory Assistant (May 1991 – August 1991)

Northwest College and University Association for Science/ U.S. Department of Energy, Richland, WA

Dr. Smith was responsible for making petrographic thin sections of sand samples for researchers at the DOE's Hanford Nuclear Reservation.

Graduate Geologic Researcher (May 1990 – August 1990)

Northwest College and University Association for Science/ U.S. Department of Energy, Richland, WA

Dr. Smith conducted field investigations of eolian and alluvial deposits on the Hanford Nuclear Reservation and determining their association with archaeological sites.

Field and Excavation Assistant (June 1989 – July 1989)

Kansas Geological Survey, Lawrence, KS

Dr. Smith served as a field technician on a paleontology dig near Hamilton, KS. He was responsible for excavating fossils from a Mississippian estuary deposit.

Neutron Activation Analysis Laboratory Assistant (August 1988 – May 1989)

Kansas State University, Manhattan, KS

Dr. Smith prepared samples for neutron activation analysis at the KSU nuclear reactor. He was also responsible for data collection from the exposed samples.

PROFESSIONAL PUBLICATIONS

Kang, N.K., DeChenne, S.E., & Smith, G.

2012 Inquiry Learning of High School Students Through a Problem-based Environmental Health Science Curriculum. *School Science and Mathematics* 112(3): 147-158.

Smith, Grant D. and Michael McFaul

1997 Paleoenvironmental and Geoarchaeologic Implications of Late Quaternary Sediments and Paleosols: North Central to Southwestern San Juan Basin, New Mexico; *Geomorphology* 21(2): 107-138.

Chatters, James C., Sarah K. Campbell, Grant D. Smith, and Phillip E. Minthorn, Jr.

1995 Bison Procurement in the Far West: A 2,100-Year-Old Kill Site on the Columbia Plateau; *American Antiquity*, 60 (4): 751-763.

McFaul, Michael, Karen Lynn Traugh, Grant D. Smith, William Doering, and Christian J. Zier

1995 Geoarchaeologic Analysis of South Platte River Terraces: Kersey, *Geoarchaeology*, 9(5): 345-374.

TECHNICAL REPORTS

Smith, Grant D.

2001 Chapter 6: Geomorphic Site Assessment of Subsurface Potential. In *Testing and Data Recovery of Burned Rock Features in Sites on Otero Mesa, New Mexico*. Draft report submitted to Fort Bliss Directorate of Environment. El Paso, Texas.

Smith, Grant D., Elia Perez, and Sue Sitton

2001 Chapter 6: Results. In *An Archeological and Geomorphological Assessment of 106 Sites in Limited Use Areas on Maneuver Areas 1 and 2, Fort Bliss, El Paso County, Texas*. Draft report submitted to Fort Bliss Directorate of Environment. El Paso, Texas.

Railey, Jim A., Douglas Lebig, Gwyneth Duncan, Grant D. Smith, John A. Torres, Joell Goff, Richard D. Holmes, and John C. Acklen

2001 Archaeology of the Mount Taylor Volcanic Field Data Recovery Investigations at Four Sites in the Checkerboard Land Exchange, Mount Taylor Volcanic Field, McKinley and Sandoval Counties, New Mexico. Prepared for the United States Department of Agriculture, Forest Service, Southwest Region, Albuquerque, NM.

Smith, Grant D.

2000 Geomorphic Contexts. In *Additional National Register of Historic Places Evaluations of 106 Prehistoric and Historic Sites in the Hueco Mountains Archaeological Project Area, Fort Bliss Maneuver Areas 2C and 2D, El Paso County, Texas*. By Paul Lukowski, Grant Smith, Sue Sitton, and Bruce Boeke. Manuscript submitted to the United States Army, Directorate of the Environment, Cultural and Natural Resources Branch, Fort Bliss, Texas.

Quigg, J. M. and G. D. Smith

2000 An Interim Report: Archeological and Geoarcheological Investigations at 41WB556 and 41WB557 along U.S. Highway 83, Webb County, Texas. TRC Mariah Associates Inc., Austin.

Turnbow, Christopher A., Honathan E. Van Hoose, Lori S. Reed, Lisa W. Huckell, Jim A. Railey, Richard M. Reycraft, Gwyneth A. Duncan, Richard D. Holmes, John C. Acklen, Timothy G. Baugh, Grant D. Smith, Catherine Heyne, Steven Bozarth, M. Stephen Shackley, A. Russel Nelson, Andrea Carpenter, Joel Grant, and Hector Neff

2000 A Highway Through Time: Archaeological Investigations along NM 90, In grant and Hidalgo Counties, New Mexico (U.S. Forest Service Report 03-06098-005b). Volume I, Edited by Christopher A. Turnbow. New Mexico State Highway and Transportation Department Technical Report 2000-3. Albuquerque, NM.

Holmes, Richard D., Timothy B. Graves, Howard Smith, Grant Smith, Richard M. Reycraft, and Toni R. Goar

2000 Archaeological Testing for the Yarbrough Drive Extension Project, El Paso International Airport, El Paso County, Texas. Technical Report submitted to Huitt-Zollars, Inc. TRC Project Report 25995. El Paso, Texas.

Quigg, J. Michael, Chris Lintz, Grant Smith, and Scott Wilcox

2000 The Lino Site: A Stratified Late Archaic Campsite in a Terrace of San Idelfonso Creek, Webb County, Southern Texas. Texas Department of Transportation, Environmental Affairs Division, Archaeological Studies Program, Report No. 20. University of Texas Press, Austin.

Smith, Grant D. and Michael McFaul

2000 Geomorphological Analysis. In *Excavation of Thirteen Archaeological Sites along the D.S.E. El Paso Pipeline, Otero and Chaves Counties, Southeastern New Mexico*. By G. Robert Phippen, Jr., Amy B. Silberberg, Christian J. Zier, Kurt B. Menke, Cheryl L. Wase, Grant D. Smith, Michael McFaul, Gerald W. Crawford, Trevor J. Kludt, David V. Hill, and Pamela McBride. Report prepared for D.S.E. Pipeline Company, Amarillo, Texas.

Smith, Grant D.

1999a Geomorphic Contexts. In *National Register of Historic Places Evaluations of 106 Prehistoric and Historic Sites in the Hueco Mountains Archeological Project Area, Fort Bliss Maneuver Areas 2C and 2D, El Paso County, Texas*. Prepared by Paul Lukowski, Grant Smith, Sue Sitton, Bruce Boeke, and Tim Baugh. Prepared for the Fort Bliss Directorate of Environment. El Paso, Texas.

Smith, Grant D.

1999b Geomorphology. In *Assessment of 431 Archeological Sites in Doña Ana Range Firing Groups C, D, G, H, I, and J: Fort Bliss, Texas and New Mexico*. Prepared by Brad Vierra, Paul Lukowski, Grant Smith, Sue Sitton, Bruce Boeke, Val Provencio, Mark Sechrist, Amy Sullivan, Jeff Johnson, Scott Wilcox, and Martha Yduarte. Prepared for the Fort Bliss Directorate of Environment. El Paso, Texas.

Smith, Grant D.

1999c Geomorphology. In *Assessment of 140 Archeological Sites in Fort Bliss Maneuver Areas 3A and 3B*. Prepared by Paul Lukowski, Brad Vierra, Grant Smith, Sue Sitton, Bruce Boeke, Val Provencio, Mark Sechrist, Amy Sullivan, Jeff Johnson, Scott Wilcox, Martha Yduarte, and Mary Beth Tomka. Prepared for the Fort Bliss Directorate of Environment. El Paso, Texas.

Sechrist, Mark T., Carlos Caraveo, Tim Baugh, Grant D. Smith, Richard D. Holmes, and Martha Yduarte

1999 *Archeological Testing of Nine Sites Within the Proposed New Landfill at Fort Bliss, Texas*. Technical report Prepared for Directorate of the Environment – Conservation Division, Fort Bliss. In partial fulfillment of Contract DABT51-97-D-0043, Task Order No. 0003.

Graves, Timothy, Christopher A. Turnbow, Grant Smith, and Timothy G. Baugh

1998 *A Cultural Resource Survey of Proposed Air Defense Artillery Areas on McGregor Range, Fort Bliss, Otero County, New Mexico*. Report submitted to the United States Army, Directorate of the Environment, Cultural and Natural Resources Branch, Fort Bliss, Texas.

TRC Mariah Associates

1998 *A Survey of Natural Resources on Proposed Air Defense Artillery Areas for McGregor Range, Fort Bliss, Otero County, New Mexico*. Prepared for the Director of Environment, Conservation Division, Fort Bliss.

Acklen, John C. (editor).

1997 *OLE, Volume I: Context*, Public Service Company of New Mexico, Albuquerque, New Mexico.

McFaul, Michael and Grant D. Smith

1997 *Geoarchaeological Investigations of the China Wall Site, Sybille Canyon, Wyoming*. Technical report submitted to the Wyoming Department of Transportation. Copies on file at LaRamie Soils Service, Laramie, Wyoming.

McFaul, Michael and Grant D. Smith

1997 *Geoarchaeological Investigations in the Southern Portions of the E470 Corridor*. Report submitted to Centennial Archaeology Inc., Fort Collins, Colorado.

McFaul, Michael and Grant D. Smith

1997 *Geoarchaeological Investigations in the Northern Portions of the E470 Corridor*. Report submitted to Metcalf Archaeological Consultants, Eagle, Colorado.

McFaul, Michael and Grant D. Smith

1996 *Geoarchaeological Investigations for the Lorencito Coal Mine Project, Colorado*. Technical report submitted to Centennial Archaeology Inc., Fort Collins, CO. Copies on file at LaRamie Soils Service, Laramie, Wyoming.

McFaul, Michael and Grant D. Smith

1996 *Geoarchaeological Investigations of the proposed Adam's Rib Ski Area and Resort, Eagle County, Colorado*. Technical report submitted to Western Cultural Resource Management, Boulder, CO. Copies on file at LaRamie Soils Service, Laramie, Wyoming.

Smith, Grant D., and Michael McFaul

1996 *Geoarchaeologic and Paleoclimatic Summary of the Southwestern Portion of the San Juan Basin*. Chapter 16 In: Supporting Studies: Nonceramic Artifacts, subsistence and Environmental Studies and Chronometric Studies. Volume 12 of Pipeline Archaeology 1990-1993: The El Paso Natural Gas North System Expansion Project, New Mexico and Arizona. Edited by Kearns, T.M. and McVickar, J.L., Western Cultural Resource Management, Farmington, NM.

Smith, Grant D., and Michael McFaul

1996 *Geoarchaeologic Investigations of the El Paso II Pipeline Extension, San Juan Basin, New Mexico*. Report submitted to Western Cultural Resource Management, Farmington, NM.

Zier, Christian J., G. Robert Phippen Jr., Cheryl L. Wase, Amy B. Herder, Christian J. Zier, Michael McFaul, Grant D. Smith, Eric D. Herder, Gerald W. Crawford, and Trevor J. Kludt

1996 *Archaeological Inventory, Test Excavations, Construction Monitoring, and Geomorphological Overview of the D.S.E. El Paso Pipeline, Texas and New Mexico*. Report Submitted to D.S.E. Pipeline Company, Amarillo, Texas. Copies on File at Centennial Archaeology, Inc., Fort Collins, CO.

Painter, Mary W., Christian J. Zier, Daniel A. Jepson, Michael McFaul, Karen Lynn Traugh, and Grant D. Smith

1995 *Archaeological and Geomorphic Investigations Along U.S. Highway 34 Between Kersey and Hardin, Weld County, Colorado*. Technical Report prepared for the Colorado Department of Transportation, CDOT Project CY 03-0034-19.

McFaul, Michael and Grant D. Smith

1994 *Geoarchaeological Investigations and Terrain Analyses for the Highway 34 Expansion, Grand Rapids to Effie, Minnesota*. Technical report submitted to Woodward-Clyde Consultants, Minneapolis, Minnesota.

McFaul, Michael and Grant D. Smith

1994 *Geoarchaeological Investigations and Terrain Analyses for the Carter Lake Pipeline Project*. Report submitted to Western Cultural Resource Management, Boulder, CO.

Smith, Grant D., Michael McFaul, and Karen Lynn Traugh
1994 *Geoarchaeological Investigations of Sites along Spring Creek, Moffat County, Colorado*. Technical report submitted to Metcalf Archaeological Consultants, Eagle, Colorado. Copies on file at LaRamie Soils Service, Laramie, Wyoming.

Kuhr, Scott K., Carol B. Brandt, Heidi S. Lippmeier, Michael McFaul, Stacie Reutter, Elizabeth J. Skinner, Grant D. Smith, Karol W. Stoker, Karen Lynn Traugh, and Robert M.R. Waterworth
1993 Results of Phase I Data Recovery on the Proposed Route N-2007 Extension, Apache County, Arizona. Edited by Ramona Alam-Parry. Zuni Archaeology Program Report No. 411.

Morris, Kaea J., Carol Brandt, Michael McFaul, Grant D. Smith, Susan Smith, Karol Stoker, Elizabeth Skinner, and Robert Waterworth
1993 *Eligibility Testing on Four Sites and Phase II Data Recovery on Two Sites Located along N-2025(1), Apache County, Arizona*. Edited by Ramona Alam-Parry. Zuni Archaeology Program Report No. 416.

Smith, Grant D.
1993 *Geoarchaeological Investigations for Copper Mine Expansion, Ely, Nevada*. Technical Report submitted to Western Cultural Resource Management, Reno, Nevada.

Smith, Grant D., Michael McFaul and Karen Lynn Traugh
1993 *Geoarchaeological Investigations of the Blaine Site (39CU1144), Custer County, South Dakota*. Technical report submitted to the South Dakota Department of Transportation. Copies on file at LaRamie Soils Service, Laramie, Wyoming.

Smith, Grant D.
1992 *Sedimentology, Stratigraphy, and Geoarchaeology of the Tsulim Site, on the Hanford Site, Washington*. Unpublished Ph.D. dissertation, Department of Geology, Washington State University, Pullman.

Gaylord, David R., Larry D. Stetler, Grant D. Smith, and Ronald W. Marrs
1990 *Summary Report of 1990 Eolian Characterization Studies, Hanford Site Washington*. Technical Report submitted to Battelle-PNL under Contract No. 097718-A-L2.

PRESENTATIONS

Kang, Nam-Hwa, Grant Smith, Molly Bloomfield
2007 Student Inquiry Learning Through Environmental Health Science Curriculum: Preliminary Findings. Paper presented at the National Association of Research In Science Teaching Annual Conference, New Orleans, LA. April 17, 2007

Smith, Grant D.
2002 Tanks, Wind, Vibrational Sorting and Gravel-Armored Hearths: The Development of Carbonate Nodule Lag Surfaces at Fort Bliss, Texas. Paper presented at the Society of American Archaeology Annual Meeting, Denver, CO.

Smith, Grant D.
2000 The Development of Carbonate Nodule Lag Surfaces at Fort Bliss, Texas. Paper presented in the Geoarchaeology Symposium of the Texas Archeological Society 71st Annual Meeting, League City, Texas.

Smith, Grant D. and Michael McFaul

1994 *Geoarchaeological and Paleoenvironmental Interpretations of Two Alluvial Fill Terraces Associated with Archaeology Site 39CU1144: Custer County, South Dakota*. Paper presented at the third annual "Island in the Plains Conference", Lead, South Dakota.

Other Community Service and Outreach

2012 (April) – Oregon Science Olympiad, Monmouth, OR – Mr. Smith served as the event supervisor for the Dynamic Planet section of the Olympiad. This included designing an appropriate challenge for middle school and high school students regarding the geology of rivers, groundwater, and lakes. Mr. Smith also judged the results.

PROFESSIONAL REFERENCES

Larry G Enochs, PhD
Professor, Science and Mathematics Education
237 Weniger Hall
Oregon State University
Corvallis, OR 97331
Phone: (541)-829-4777
E-mail: enochsl@onid.orst.edu

Jeffrey Templeton, PhD
Department Chair, Department of Earth and Physical Sciences
Western Oregon University
345 N. Monmouth Ave.
Monmouth, Oregon 97361
Phone: (503)-838-8858
E-mail: templej@wou.edu

Robert J. Lillie, PhD
Professor of Geology
Department of Geosciences, Oregon State University
Corvallis, OR, 97331-5506, USA
Phone: (541)-231-2247
E-mail: lillier@geo.oregonstate.edu

Elia Perez
5400 Suncrest Drive, Suite D-1
El Paso, TX 79912
Phone: (915) 581-8872
E-mail: eperez@trcsolutions.com