

DALE R. LIGHTFOOT

ADDRESS

Department of Geography,
Oklahoma State University,
Stillwater, Oklahoma 74078
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EDUCATION

Ph.D. Geography. August 1990, University of Colorado, Boulder, Colorado.
Dissertation: The Prehistoric Pebble-Mulched Fields of the Galisteo
Anasazi: Agricultural Innovation and Adaptation to Environment

M.S. Geography. July 1986, Oklahoma State University, Stillwater, Oklahoma.
Thesis: Assessment of Inherent and Operational Errors in Geographic
Information Systems

RESEARCH INTERESTS

My research relies on “dusty boots” fieldwork in the arid lands of developing countries, mostly in North Africa, the Middle East, and Central Asia. Research themes emphasize relationships between human and physical environments (cultural ecology, landscape change, resource management, and environment-development conflict). I have conducted funded research projects in the southwest USA, Cyprus, Canary Islands (Spain), North Africa (Morocco, Tunisia), the Middle East (Jordan, Syria, Iraq, Yemen), and Central Asia, examining historic landscapes, agriculture and water technology, groundwater assessments, and people’s relationships to their water.

COURSES TAUGHT

Landforms and Soils
Climate and Vegetation
Physical Geography
Climate and Humans
Environmental Issues
Cultural Geography
World Regional Geography
Geography of Africa
Middle East/Southwest Asia
North America/US and Canada
Political Geography
Computer Cartography
Remote Sensing and Photo Interpretation
Environment and Civilization
International Resource Management
Natural Resources Management: Security, Environment, and Tourism
Cultural Heritage of Mexico and Central America (Study Abroad field course)
Cultural and Natural Resources of Morocco (Study Abroad field course)
Environment and Heritage of Cuba (Study Abroad field course)

ACADEMIC APPOINTMENTS

Professor. Oklahoma State University, Stillwater, OK.

Department of Geography, January 2018 to present. Two-plus-two teaching load including courses in World Regional Geography and Middle East/SW Asia.

Professor and Head. Oklahoma State University, Stillwater, OK.

Department of Geography, April 2001 to December 2017. Administrative duties associated with managing a 17 faculty, 40 major, 40 graduate student doctoral-level department. One-plus-one teaching load including courses in Middle East/SW Asia, World Regional Geography, and International Resource Management.

Associate Professor and Head. Oklahoma State University, Stillwater, OK.

Department of Geography, Spring 2000 to April 2001. Administrative duties associated with managing a 12 faculty, 50 major, 40 graduate student academic department. One-plus-one teaching load including courses in Physical Geography, Middle East/SW Asia, and International Resource Management.

Associate Professor (with tenure). Oklahoma State University, Stillwater, OK.

Department of Geography, Fall 1996 to Spring 2000. Three-plus-two teaching load including courses in Physical Geography, Political Geography, United States and Canada, Middle East/SW Asia, and International Resource Management (seminar).

Assistant Professor (tenure-track). Oklahoma State University, Stillwater, OK.

Department of Geography, Fall 1994-Summer 1996. Three-plus-two teaching load including courses in Cultural Geography, World Regional Geography, Physical Geography, Geography of Africa, Political Geography, and Resource Management Seminar. Co-lead a field course, offered through A&S extension, to Honduras (via Mexico, Guatemala, and El Salvador in a University van), Winter Break 1995-1996.

Assistant Professor (tenure-track). Old Dominion University, Norfolk, VA.

Department of Political Science and Geography, Fall 1990-Spring 1994. Three-plus-three teaching load including courses in Cultural Geography, Environmental Issues, Computer Cartography, North America, Political Geography, and graduate seminars in Political Geography and International Resource Management.

PROFESSIONAL AFFILIATIONS

American Association of Geographers

National Council for Geographic Education

American Schools of Oriental Research

Phi Beta Delta Society for International Scholars (Epsilon Upsilon Chapter)

REFEREED JOURNAL ARTICLES

- 2018 Manuel, M., D.R. Lightfoot, and M. Fattahi, "The Sustainability of Ancient Water Control Techniques in Iran: An Overview." Water History10(1): 13-30.
- 2018 Khaneiki, M.L., M.R. Rezvani, D. Lightfoot, S.A. Badri, "Territorial Water Cooperation in Central Plateau of Iran and Its Role in Sustainable Rural Development: A Case Study in Yazd Province." Journal of Sustainable Rural Development 1(2): 101-121.
- 2016 T.A. Wikle and D.R. Lightfoot, "Waynoka and the Birth of Transcontinental Air Service." The Chronicles of Oklahoma 94(2): 132-151.
- 2014 Wikle, T.A. and D.R. Lightfoot, "Landscapes of the Slave Trade in Senegal and The Gambia," Focus on Geography 57(1): 14-24.
- 2009 D.R. Lightfoot, N. Mavlyanov, D. Begimkulov, and J. Comer, "Reliability of Interview Data for Monitoring and Mapping Groundwater," International Association of Hydrological Sciences Red Book 334: 40-43.
- 2005 H.I. Tas and D.R. Lightfoot, "'Gecekondü Settlements in Turkey: Rural-Urban Migration in the Developing European Periphery," Journal of Geography 104(6): 263-271.
- 2000 D.R. Lightfoot, "The Origin and Diffusion of Qanats in Arabia: New Evidence from the Northern and Southern Peninsula," The Geographical Journal 166(3): 215-226.
- D.R. Lightfoot, "Ghayl and Miyan in Arabia Felix: The Ecology of Diffusion and Recession of Use," The Arab World Geographer 3(1): 2-21.
- 1997 D.R. Lightfoot, "Qanats in the Levant: Hydraulic Technology at the Periphery of Early Empires," Technology and Culture 38(2): 432-451.
- D.R. Lightfoot, "The Nature, History, and Distribution of Lithic Mulch Agriculture: An Ancient Technique of Dryland Agriculture," The Agricultural History Review 44(2): 206-222.
- T.A. Wikle and D.R. Lightfoot, "The Stream Table in Physical Geography Instruction," Journal of Geography 96(1): 23-30.
- 1996 D.R. Lightfoot, "Moroccan Khetara: Traditional Irrigation and Progressive Desiccation," Geoforum 27(2): 261-273.
- D.R. Lightfoot, "Syrian Qanat Romani: History, Ecology, Abandonment," Journal of Arid Environments 33(3): 321-336.
- D.R. Lightfoot and J. Miller, "Sijilmassa: The Rise and Fall of a Walled Oasis in Medieval Morocco," Annals of the Association of American Geographers 86(1): 78-101.

- 1996 F.W. Eddy, D.R. Lightfoot, E. Welker and L. Wright, "Air Photographic Mapping of San Marcos Pueblo," Journal of Field Archaeology 23(1): 1-13.
- 1995 D.R. Lightfoot and F.W. Eddy, "The Construction and Configuration of Anasazi Pebble-Mulch Gardens in the Northern Rio Grande," American Antiquity 60(3): 459-470.
- 1994 D.R. Lightfoot, "An Assessment of the Relationship between Development and Institutionally Preserved Lands," Area 26(2): 112-122.
- D.R. Lightfoot, "Morphology and Ecology of Lithic Mulch Agriculture," Geographical Review 84(2): 172-185.
- D.R. Lightfoot and F.W. Eddy, "The Agricultural Utility of Lithic-Mulch Gardens: Past and Present," GeoJournal 34(4): 425-437.
- 1993 D.R. Lightfoot and F.W. Eddy, "Effects of Environment and Culture on the Distribution of Prehistoric Dwellings at Chimney Rock Mesa, Colorado," The Geographical Journal 159(3): 291-306.
- D.R. Lightfoot, "The Cultural Ecology of Puebloan Pebble Mulch," Human Ecology 21(2): 115-143.
- D.R. Lightfoot, "The Landscape Context of Anasazi Pebble-Mulched Fields in the Galisteo Basin, Northern New Mexico," Geoarchaeology 8(5): 349-370.
- 1987 S.J. Walsh, D.R. Lightfoot and D.R. Butler, "Recognition and Assessment of Error in Geographic Information Systems," Photogrammetric Engineering and Remote Sensing 53(10): 1423-1430.

OTHER REFEREED PUBLICATIONS

- 2012 "Assessment of Groundwater Sustainability Using Traditional Knowledge from Qanats and Tube Wells." Abstracts of the International Conference on Traditional Knowledge for Water Resources Management, 21-23 February 2012, Yazd, Iran: ICQHS.

BOOKS AND EDITED VOLUMES

- Under contract: D.R. Lightfoot. Qanat: The Stream of Wells. London: I.B. Tauris (projected completion 2019).
- 2007 D.R. Lightfoot, Iraq, Modern World Nations (series), Philadelphia: Chelsea House Publishers. Won the 2007 Middle East Outreach Council's Middle East Book Award for best non-fiction/reference.
- 2002 D.R. Lightfoot and K. Mathewson (eds.), Including "Editors' Introduction" in a special volume on Cultural Ecology produced for the Journal of Cultural Geography 19(2): 1-8.

BOOK CHAPTERS

- 2019 D.R. Lightfoot, "Function, Distribution, and History of Old World Qanats". In V. Scarborough (ed.), *Water History and Humanity*. Paris: UNESCO Publishing (publication date listed as September 2019).
- 2012 D.R. Lightfoot, "Iraq." In A.A.S. Yazdi and M. Labbaf K. (eds.), pp.149-189, *Qanat in It's Cradle*. Yazd, Iran: ICQHS.
- 2004 D.R. Lightfoot, "The Landscape Context of Rock-Bordered Grids: GIS Analysis and Mapping". In Doolittle and Neely, eds., pp.38-47, *The Safford Valley Grids: Prehistoric Cultivation in the Southern Arizona Desert*. Tucson: University of Arizona Press.
- J.A. Homburg, J.A. Sandor, and D.R. Lightfoot, "Soil Investigations at a Late Prehistoric Agricultural Complex in the Safford Basin". In Doolittle and Neely, eds., pp.62-78, *The Safford Valley Grids: Prehistoric Cultivation in the Southern Arizona Desert*. Tucson: University of Arizona Press.

TECHNICAL REPORTS

- 2012 D.R. Lightfoot, "Galerias, Water Mines, and the Myth of Qanats in the Canary Islands." Technical Report submitted to the National Geographic Society, Committee for Research and Exploration, grant number 8997-11, July 2012.
- 2009 D.R. Lightfoot, "Survey of Infiltration Karez in Northern Iraq: History and Current Status of Underground Aqueducts. United Nations Educational, Scientific and Cultural Organization (UNESCO) Report IQ/2009/SC/RP/1. http://www.iauiraq.org/reports/UNESCO_Karez_survey_report_FINAL.pdf Accessed November 27, 2009.

NON-REFEREED PUBLICATIONS

- 2018 D.R. Lightfoot, "Foreword" to *Territorial Water Cooperation in the Central Plateau of Iran*. M.L Khaneiki, pp. v-vi, New York: Springer.
- 2017 D.R. Lightfoot, "Foreword" to *Qanat Knowledge: Construction and Maintenance*. A.A.S. Yazdi and M.L Khaneiki (eds.), pp. vii-viii, New York: Springer.
- 2010 D.R. Lightfoot, "Preface" to the "UNESCO Manual for Sustainable Karez Restoration in Iraq," Published by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).
- 2009 D.R. Lightfoot, "Survey of Infiltration Karez in Northern Iraq: History and Current Status of Underground Aqueducts," Technical report IQ/2009/SC/RP/. United Nations Educational, Scientific, and Cultural Organization (UNESCO), September 2009.

- 2008 D.R. Lightfoot, N. Mavlyanov, D. Begimkulov, and J. Comer, "Reliability of Interview Data for Monitoring and Mapping Groundwater," Proceedings of the International Conference on Groundwater and Climate in Africa, Kampala, Uganda, June 2008.
- D.R. Lightfoot, "Cyprus," Earth (country entry and feature box in a new Atlas). New South Wales, Australia: Millennium House.
- D.R. Lightfoot, "Iraq," Earth (country entry and feature box in a new Atlas). New South Wales, Australia: Millennium House.
- D.R. Lightfoot, "Yemen," Earth (country entry and feature box in a new Atlas). New South Wales, Australia: Millennium House.
- 2006 D.R. Lightfoot, N. Mavlyanov, D. Begimkulov, and J. Comer, "Calibration and Accuracy of Interview Methods for Mapping Groundwater Depletion without Monitoring Wells," Proceedings of the International Conference on Infrastructure Development and the Environment (ICIDEN-ABUJA 2006), Abuja, Nigeria, September 2006.
- 2003 D.R. Lightfoot, "Traditional Wells as Phreatic Barometers: A View from Qanats and Tube Wells in Developing Arid Lands," Proceedings of the UCOWR Conference: Water Security in the 21st Century, Washington, D.C., July 2003.
- 2002 D.J. Patton and D.R. Lightfoot, "Earth Resource Patterns," McGraw-Hill Encyclopedia of Science and Technology. New York: McGraw-Hill.
- 2001 D.R. Lightfoot, "Resources of North America," Encyclopedia of World Geography. Pasadena: Salem Press.
- 2001 D.R. Lightfoot, "Physiography of North America," Encyclopedia of World Geography. Pasadena: Salem Press.
- 1992 R. Messier, N. MacKenzie, J. Knudstad, L. Taouchikt, D. Lightfoot, J. Miller, S. Brown, and J. Runkle. Sijilmasa: An Archaeological Study. Research Report, 70 p.
- 1989 D. and V. Lightfoot, "Revealing the Ancient World Through High Technology," Technology Review 92(4): 54-61.
- D. and V. Lightfoot, "Uno Sguardo Dall'alto," Fin Tecnologia 14: 28-33.
- F.W. Eddy and D.R. Lightfoot, "New Mexico," in Greater Southwest - Current Research, American Antiquity 54(4): 857.
- 1989 D.R. Lightfoot, "Ancient Gardeners Conserved Water," in Talking About Earth, Earth Science 42(3): 5-6.

- 1987 S.J. Walsh, D.R. Lightfoot and D.R. Butler, "Assessment of Inherent and Operational Errors in Geographic Information Systems," Proceedings, American Society for Photogrammetry and Remote Sensing and the American Congress on Survey and Mapping 5: 24-35.

BOOK AND SOFTWARE REVIEWS

- 2001 "As Nomadism Ends: The Israeli Bedouin of the Negev," by A. Meir, The Professional Geographer 53(2): 308-310
- 1996 "History and Technology of Olive Oil in the Holy Land," by R. Frankel, S. Avitsur, and E. Ayalon, Technology and Culture 37(3): 242-244.
- "Environmental Resources and Constraints in the Former Soviet Republics," by P.R. Pryde (ed.), Annals of the Association of American Geographers 86(1): 159-160.
- 1994 "The Chaco Anasazi: Sociopolitical Evolution in the Prehistoric Southwest," by L. Sebastian, Geographical Review 84(1): 126-128.
- 1993 "Ecogeography and Rural Management," by J. Tricart and C. KiewietdeJonge, The Professional Geographer 45(4): 494-495.
- 1991 "IDRISI GIS" version 3.1 software review (with D. Zeigler), The Professional Geographer 43(2): 236-237.

INVITED PRESENTATIONS

- 2017 "Re-visualizing the Diffusion of Global Karez," International Conference on Karez on Cultural Borders, Bidar, Karnataka, India, October 2017.
- 2014 "The Geography and Rehabilitation of Karez in Iraq." Presentation at the international conference on "The Qanat: Archaeology and Environments," Durham University, Durham, Great Britain, October 2014.
- 2012 "Assessment of Groundwater Sustainability Using Traditional Knowledge from Qanats and Tube Wells." Presentation at the University of La Laguna, Canary Islands, Spain, May 2012.
- 2011 "The Enabling of GISciences in Iraq." Presentation at the Centennial Rotary of Stillwater, OK, March 30, 2011
- 2009 "Past and Future of Groundwater: Lessons from the Qanats of Cyprus." Presentation at the Cyprus Environmental Stakeholder Forum (CESF) bi-communal workshop, "Climate Change: Vulnerability of Cyprus to Climatic Extremes." Nicosia, Cyprus, December 2009.

"Interview-based Groundwater Assessment Using Qanats and Traditional Wells for Data." Session presented in the training course, "Restoration and Maintenance of

2009 Karez in Iraq: Advanced Techniques in Planning, Methodology and Applications," International Center for Qanats and Historic Hydraulic Structures (ICQHS), Yazd, Iran, December 2009.

"Geographic Information System (GIS) for Managing Karez (Qanat) Resources" (with Hawta Khayyat). Session presented in the training course, "Restoration and Maintenance of Karez in Iraq: Advanced Techniques in Planning, Methodology and Applications," International Center for Qanats and Historic Hydraulic Structures (ICQHS), Yazd, Iran, December 2009.

"Enhancing the GIS Capabilities of Salahaddin University." Roundtable presentation offered to faculty and administrators of Salahaddin University, Erbil, Iraq, July 2009.

2004 "Assessing the Subterranean Watershed Potential at a Multi-Oblast Level in Uzbekistan: Hydro-Geological Calibration of an Interview-Based Method." UIUC Joint Area Studies Conference, "Troubled Waters in a Globalizing World," Champaign-Urbana, Illinois, November 2004.

2001 "Tourists, Travelers, and Bureaucracy: Considerations for Building a More Diverse and User-Friendly Tourism Industry in Uzbekistan." Perspectives for Tourism in Uzbekistan and the Role of Foreign Languages in the Development of International Relations; a conference sponsored by Samarkand State Institute of Foreign Languages and the United States Department of State, Bureau of Education and Culture, Samarkand, Uzbekistan, May 2001.

1999 "Ghayl and Miyan in Arabia Felix: The History and Ecology of Qanats in Yemen." SSRC-NMERTA Fellows Conference, Tangier, Morocco, May 1999.

1998 "The History and Ecology of Subterranean Irrigation in Yemen." American Institute for Yemeni Studies Presentation series, Sana'a, Yemen, August 1998.

1993 "Water Resources and Agricultural Policies in the Middle East." Virginia Geographic Alliance Fall Meeting, Williamsburg, Virginia, October 1993.

COLLOQUIUM PRESENTATIONS

2014 "Keeping the Old with the New: Historic Diffusion and Restoration of Qanat Water Supply," Presentation at the University of Texas, Department of Geography Colloquium Series, Austin, Texas, September 2014.

2008 "Tunisia to Tanzania: Field Research and Travels in Africa." Oklahoma State University, College of Education Brown Bag Series, Stillwater, Oklahoma, October 2008.

2004 "Moving Past the Ground Floor: USAID and GIScience in the Reconstruction of Higher Education in Iraq." Geography Colloquium Series, Oklahoma State University, Stillwater, Oklahoma, October 2004.

- 2003 "Mongolia: National Heroes and Nomads in the Land Without Fences." Geography Colloquium Series, Oklahoma State University, Stillwater, Oklahoma, October 2003.
- 2000 "Qanats as Phreatic Barometers: An Assessment of Groundwater Stewardship in Morocco, Syria, and Yemen." University of Kansas, Department of Geography Colloquium Series, Lawrence, Kansas, April 2000.
- 1998 "Qat, Qanats, and Kalashnikovs: Summer Fieldwork in Arabia Felix." Geography Colloquium series, Oklahoma State University, Stillwater, Oklahoma, November 1998.
- "The Wells are Not Well in the Maghrib and Mashriq: Studies in Groundwater from Morocco and Syria." Geography Colloquium series, Oklahoma State University, Stillwater, Oklahoma, April 1998.
- 1994 "Water Resources Development in the Moroccan Sahara." Geography Colloquium series, Oklahoma State University, Stillwater, Oklahoma, January 1994.

OTHER PROFESSIONAL PRESENTATIONS

- 2019 "Mine Adits, Bierkellers, and the Qanats of Bavaria-Bohemia," American Association of Geographers Annual Meeting, Washington, DC, April 2019.
- 2018 "Qanats in the Indian Subcontinent," American Association of Geographers Annual Meeting, New Orleans, Louisiana, April 2018.
- 2017 "Qanats in the New World," American Association of Geographers Annual Meeting, Boston, Massachusetts, April 2017.
- 2016 "Reimagining and Mapping the Global View of Karez," Association of American Geographers Annual Meeting, San Francisco, California, March 2016.
- 2015 "Integration and Efficiency of Traditional Canal Irrigation in Morocco," Association of American Geographers Annual Meeting, Chicago, Illinois, April 2015.
- 2015 "Managing the 'Ecosystem' of Departments: Best Practices in Academic Team-Building" (Panel session), Association of American Geographers Annual Meeting, Chicago, Illinois, April 2015.
- 2014 "The Revival of Karez in Vulnerable Communities: A Case Study from Iraq," Association of American Geographers Annual Meeting, Tampa, Florida, April 2014.
- 2013 "Galerias, Water Mines, and the Myth of Qanats in the Canary Islands," Association of American Geographers Annual Meeting, Los Angeles, California, April 2013.
- 2011 "New Perspectives on the Distribution and Restoration of Old World Qanats," Association of American Geographers Annual Meeting, Seattle, Washington, April 2011.

- 2010 "Karez in Northern Iraq: History and Status of Subterranean Water Technology," presenter and primary author with A.H. Al-Khayyat, Association of American Geographers Annual Meeting, Washington, D.C., April 2010.
- 2009 "The Foggara of Tunisia: History and Ecology of a Surviving Technology," Association of American Geographers Annual Meeting, Las Vegas, Nevada, March 2009.
- "Planning a Successful Study Abroad Field Course," National Council for Geographic Education Annual Meeting, San Juan, Puerto Rico, September 2009.
- 2008 "Reliability of Interview Data for Monitoring and Mapping Groundwater," primary author with contributors N. Mavlyanov, D. Begimkulov, and J. Comer, International Conference on Groundwater and Climate in Africa, Kampala, Uganda, June 2008.
- "The Chain Wells of Cyprus: History and Ecology of an Ancient Technology," Association of American Geographers Annual Meeting, Boston, Massachusetts, April 2008.
- 2007 "Reliability of Interview Data for Monitoring and Mapping Groundwater," Association of American Geographers Annual Meeting, San Francisco, California, April 2007.
- 2006 "Testing the Effectiveness and Efficiency of a Local Irrigation Network in Morocco," Co-author with Jeremy Odenwald, Annual Meeting of the Southwest Division of the Association of American Geographers, Norman, Oklahoma, October 2006.
- "Calibration and Accuracy of Interview Methods for Mapping Groundwater Depletion without Monitoring Wells," primary author with contributors N. Mavlyanov, D. Begimkulov, and J. Comer, International Conference on Infrastructure Development and the Environment (ICIDEN), Abuja, Nigeria, September 2006.
- 2006 "Outreach in a War Zone: The Enabling of GIScience in Iraq," Association of American Geographers Annual Meeting, Chicago, Illinois, March 2006.
- 2005 "General Aviation and U.S. Airspace Following 9/11: The Domestic No-Fly Zones," co-author with Thomas Wikle, Association of American Geographers Annual Meeting, Denver, Colorado, April 2005.
- 2004 "Euro-Asia Exchange in the Diffusion of Qanats: Periphery versus Core in Europe," Association of American Geographers Annual Meeting, Philadelphia, Pennsylvania, March 2004.
- 2003 "Traditional Wells as Phreatic Barometers: A View from Qanats and Tube Wells in Developing Arid Lands," Universities Council on Water Resources special conference on Water Security in the 21st Century, Washington, D.C., July 2003.
- "The Karez of Central Asia: History, Ecology, and Post-Soviet Vestige," Association of American Geographers Annual Meeting, New Orleans, Louisiana, March 2003.

- 2002 "An Interview-Based Approach to Mapping Groundwater Fluctuations in Samarkand Oblast, Uzbekistan." Association of American Geographers Annual Meeting, Los Angeles, California, March 2002.
- 2001 "Qanats as Phreatic Barometers: A View from the Galleries of Morocco, Syria, and Yemen." Association of American Geographers Annual Meeting, New York, New York, March 2001.
- 2000 "The Origin and Diffusion of Arabian Qanats: New Evidence from the Northern and Southern Peninsula." Association of American Geographers Annual Meeting, Pittsburgh, Pennsylvania, April 2000.
- 1999 "The Ecology and History of Qanats in Yemen." Association of American Geographers Annual Meeting, Honolulu, Hawaii, March 1999.
- "Yemen: Tradition and Aberration in Southwest Arabia," National Council for Geographic Education Annual Meeting, Boston, MA, November 1999.
- 1998 "Lithic-Bordered Grids of the Lands In Between: Landscape, Site, and Construction." Association of American Geographers Annual Meeting, Boston, Massachusetts, March 1998.
- 1997 "The Search for Sijilmasa: Multi-Image Reconstruction of a Medieval Moroccan Cityscape." Association of American Geographers Annual Meeting, Fort Worth, Texas, April 1997.
- 1996 "Impact of Modern Canals on Traditional Canal Networks and Village Connectivity, Tafilalt Oasis, Morocco." Association of American Geographers Annual Meeting, Charlotte, North Carolina, April 1996.
- 1996 "Modelling Fluvial Processes in Landscape Development Using a Stream Table," (with T. Wikle, presenter). National Council for Geographic Education Annual Meeting, Santa Barbara, California, November 1996.
- 1995 "Qanats in Jordan: Infiltration Galleries at the Periphery of Early Levant Empires." Association of American Geographers Annual Meeting, Chicago, Illinois, March 1995.
- 1994 "Syrian Qanat Romani: History, Ecology, Abandonment." Association of American Geographers Annual Meeting, San Francisco, California, April 1994.
- 1993 "In Search of Medieval Sijilmasa: An Interdisciplinary Approach to Testing Historical Models" (co-presenter in a special session). Middle Eastern Studies Association 27th Annual Meeting, Research Triangle Park, NC, November 1993.
- "Water Resources in the Moroccan Sahara." National Council for Geographic Education Annual Meeting, Halifax, Nova Scotia, August 1993.

- 1993 "Moroccan Rhetara: Ancient Irrigation Dies in a Saharan Oasis." Association of American Geographers Annual Meeting, Atlanta, Georgia, April 1993.
- "Air Photographic Interpretations for the Chimney Rock Archaeological Area," (with F.W. Eddy, presenter). 58th Annual Meeting of the Society for American Archaeology, St. Louis, Missouri, April 1993.
- "Sijilmassa: Agriculture and Water Resources in the Archaeological Record," (co-presenter in a joint session with R. Messier and J. Miller). Southeast Region Middle East and Islamic Studies Seminar Spring Meeting, Norfolk, Virginia, March 1993.
- 1992 "Impact of Development on the Institutionalized Preservation of Environment." National Council for Geographic Education and Conference of Latin Americanist Geographers Annual Meeting, Santo Domingo, Dominican Republic, Sept. 1992.
- "Global-Historical Variations in the Design and Application of Lithic-Mulch Agriculture." Association of American Geographers Annual Meeting, San Diego, California, April 1992.
- 1991 "The Nature, Origin, and Distribution of Lithic-Mulch Agriculture." Association of American Geographers Annual Meeting, Miami, Florida, April 1991.
- 1990 "Effects of Environment and Culture on the Distribution of Prehistoric Dwellings at Chimney Rock Mesa, Colorado." National Council for Geographic Education Annual Meeting, Williamsburg, Virginia, November 1990.
- "The Prehistoric Pebble-Mulched Fields of the Galisteo Anasazi: An Agricultural Adaptation to Environment." Association of American Geographers Annual Meeting, Toronto, Ontario, April 1990.
- 1989 "A Locational Analysis of Prehistoric Dwellings in the Chimney Rock Archaeological Area, Southwestern Colorado: Settlement Geography of a Chacoan Outlier." Great Plains-Rocky Mountain Division AAG Conference, Ogden, Utah, October 1989.
- "Remote Sensing of Glaze Period Towns in the Galisteo Basin, Northern New Mexico," (with F.W. Eddy, presenter). 54th Annual Meeting of the Society for American Archaeology, Atlanta, Georgia, April 1989.
- 1988 "An Aerial Photo Interpretation of Ruins at Chimney Rock Mesa, Southwestern Colorado: A Case Study in Archaeological Survey and Mapping." Association of American Geographers Annual Meeting, Baltimore, Maryland, March 1989.
- 1988 "The Impact of Development on Global Environmental Consciousness." Great Plains-Rocky Mountain Division AAG Conference, Colorado Springs, Colorado, September 1988.

1987 "Assessment of Inherent and Operational Errors in Geographic Information Systems," (with S.J. Walsh, presenter). ASPRS-ACSM Annual Meeting, Baltimore, Maryland, March 1987.

AWARDS

2019 Gamma Theta Upsilon (Chi Chapter) Outstanding Faculty Award, May 2019

2016 Outstanding Faculty Member, School of International Studies, Oklahoma State University, Spring 2016.

2016 Outstanding Faculty Study Abroad Leader Award, International Studies and Outreach (IS&O), recognized at the President's Leadership Recognition Ceremony, Oklahoma State University, Spring 2016.

2010 Environmental Institute, Oklahoma State University, Bud Birks Award for Outstanding Environmental Research, Spring 2010.

2009 School of International Studies, Oklahoma State University, Outstanding Faculty Award for Spring 2009.

2007 Middle East Outreach Council, 2007 Middle East Book Award for best non-fiction/reference for Iraq (Modern World Nations series).

Oklahoma State University 2007 International Faculty Excellence Award for outstanding contributions to international education, research and outreach.

1999 National Council for Geographic Education Distinguished Teaching Achievement Award for outstanding teaching at the university level. This award is conferred annually by the principal organization for geography educators in the United States.

1997 OSU College of Arts and Sciences 1997 Junior Faculty Award for Scholarly Excellence (Social and Behavioral Sciences).

1997 Outstanding Teacher of Geography for Excellence in Teaching at OSU for 1996-1997, awarded by the students of the Geography Department.

GRANTS AND FELLOWSHIPS AS PRINCIPAL INVESTIGATOR

2018 College of Arts and Sciences Fall Travel Award, Oklahoma State University, April 2018 (for fall travel), \$1,000 for "Qanats of Bavaria-Bohemia: History and Ecology of a Roman Water Technology."

2011 National Geographic Society, Committee for Research and Exploration, \$20,000 awarded September 2011 for "Qanats in the Atlantic: History and Ecology of Galerias in the Canary Islands."

- 2009 United Nations Educational, Scientific, and Cultural Organization (UNESCO), \$31,391 awarded May 2009 for "Survey of Infiltration Karez in Northern Iraq: History and Current Status of Underground Aqueducts."
- 2006 Council of American Overseas Research Centers (CAORC), Multi-Country Research Fellowship, \$9,000 awarded March 2006 for "Foggara and Chain-Wells in Mediterranean Irrigation: History and Ecology of a Subterranean Technology."
- 2004 National Academy of Science, COBASE Project Development and Initiation Grants for Collaborative Research with Central/Eastern Europe and the Newly Independent States, \$10,300 awarded February 2004 and February 2005 (supplemental) for "Hydro-geological Calibration of Interview-Based Mapping for Assessing Groundwater Fluctuations at a Multi-Oblast Level in Uzbekistan."
- 2000 International Research and Exchanges Board (IREX) Short-Term Travel Grant, \$1,440 awarded April 2000 for "An Interview-Based Approach to Mapping Groundwater Development in Samarkand Oblast, Uzbekistan."
- 1998 Social Science Research Council, \$11,400 awarded April 1998 for "Falaj Irrigation in Yemen: History, Ecology, and Changing Technology."
- American Institute for Yemeni Studies/United States Information Agency, \$8,000 awarded April 1998 for "Falaj Irrigation in Yemen: History, Ecology, and Changing Technology."
- College of Arts and Sciences 1+1 Program Grant, Oklahoma State University, \$5722 awarded April 1998 for "Falaj Irrigation in Yemen: History, Ecology, and Changing Technology."
- 1997 National Science Foundation (Co-PI) 1997, Instructional Laboratory Improvement (ILI) Program, \$36,442 (\$18,221 with local institutional match) for "Simulations Laboratory for Undergraduate Geography Instruction."
- 1997 College of Arts and Sciences Summer Research Funds, Oklahoma State University, April 1997, \$4,400 for "The Impact of Modern Technology and Changing Policies on Karez Irrigation in Soviet and Post-Soviet Central Asia."
- College of Arts & Sciences Dean's Incentive Grant, Oklahoma State University, March 1997, \$3,000 for "'Chain of Wells' Irrigation in Cyprus: History, Ecology, and Changing Technology."
- 1996 College of Arts and Sciences Dean's Incentive Grant, Oklahoma State University, March 1996, \$3,000 for "The Impact of Local and Exogenous Forces on the Use and Sustainability of Groundwater Resources in the Oases of Xinjiang, China."
- 1995 College of Arts and Sciences Dean's Incentive Grant, Oklahoma State University, March 1995, \$3,000 for "Impact of Modern Technology and Exogenous Change on the Karez Oases of China."

1995 College of Arts and Sciences Summer Research Funds, Oklahoma State University, April 1995, \$3,666 for "The Impact of Modern Technology and Changing Policies on Karez Irrigation in Soviet and Post-Soviet Central Asia."

1994 Social Science Research Council, Near and Middle East Advanced Research Grants, May 1994, \$6,000 for "Foggara Irrigation in the Middle East: Ancient Technology in a Modern World."

1993 American Schools of Oriental Research, USIA Fellowship, March 1993 (for 1994 research), \$8,667 for "Foggara Irrigation in the Syrian-Jordanian Desert: Contemporary Impacts on Ancient Technology."

College of Arts and Letters Research Grant, Old Dominion University, November 1992, \$1000 for "Tradition versus Technology: Water Resources in the Moroccan Sahara."

Old Dominion University Summer Faculty Research Fellowship Program, January 1992, \$3,100 for "Global-Historical Variations in the Use of Lithic-Mulch Agriculture."

1990 Association of American Geographers Research Grant (Vouras Fund), February 1990, \$300.00 for "The Prehistoric Pebble-Mulched Fields of the Galisteo Anasazi: An Agricultural Adaptation to Environment."

1989 University of Colorado, Graduate School Dean's Small Grant Award, November 1989, \$450.00 for "The Prehistoric Pebble-Mulched Fields of the Galisteo Anasazi: Agricultural Innovation and Adaptation to Environment."

1988 Department of Geography, University of Colorado, Boulder, Dissertation Support Award, December 1988, \$460.00 for "Regional Mapping and Settlement Analysis of the Galisteo Basin Anasazi, Northern New Mexico: A Prehistoric Geography Using Archaeological Remote Sensing."

GRANTS AND FELLOWSHIPS AS SUBCONTRACTOR OR PARTICIPANT

2004 United States Agency for International Development (USAID) Higher Education and Development Program (HEAD), 2003-2005, Essential Infrastructure Team member participating with \$5 million "Al-Sharaka Program for Higher Education, Oklahoma Higher Education Partnership (OHEP) with Iraq University Partners (IUP)." Sub-contract Principal Investigator responsible for \$374,013 in project funds to organize, equip, and train faculty for the new Center of GIS and Remote Sensing facility at the University of Technology, Baghdad, and the GIS and GPS Center at Salahaddin University, Erbil, Iraq.

- 2003 Department of State / United States Information Agency, Newly Independent States College and University Partnerships Program (NISCUPP), 2001-2003, Instructor at Samarkand State Institute of Foreign Languages, participating with a grant for Faculty Exchange Program between Oklahoma State University, Tashkent State University (Uzbekistan), and Samarkand State Institute of Foreign Languages (Uzbekistan).
- 2001 Department of State / United States Information Agency, Newly Independent States College and University Partnerships Program (NISCUPP), 2001-2003, Instructor at Samarkand State Institute of Foreign Languages, participating with a grant for Faculty Exchange Program between Oklahoma State University, Tashkent State University (Uzbekistan), and Samarkand State Institute of Foreign Languages (Uzbekistan).
- 1996 National Geographic Society, November 1996 (for 1997 field research), Project Team Member expending \$3290 for "Ancient Agricultural Landscapes of the Middle Gila Valley, Arizona."
- 1994 National Geographic Society, April 1994, Team member with \$25,720 grant for "Local Economy and Long Distance Trade in Medieval Sijilmasa (Morocco)."
- 1993 Department of State / United States Information Agency, College and University Partnerships Program, 1992-1994, Instructor and field-researcher at Aleppo University, participating with a grant for Faculty Exchange Program between Old Dominion University (Virginia) and Aleppo University (Syria).
- 1992 National Geographic Society, January 1992, Team member with \$10,885 grant for "The Impact of Political Change on Sijilmasa's Ecosystem (Morocco)."