

H. CURTIS MONGER

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Distinguished Achievement Professor and Professor of Pedology and Environmental Science,
New Mexico State University, Department of Plant and Environmental Sciences,
Las Cruces, NM

Education

University of Tennessee	B.S.	1981	Plant and Soil Science
University of Tennessee	M.S.	1986	Geology
New Mexico State University	Ph.D.	1990	Soil Science (Agronomy), Minor: Geology

Appointments

2013-2014	Acting Lead PI, NSF Jornada Basin LTER Program
2012-present	Distinguished Achievement Professor
2004-2012	Professor, Pedology and Environmental Science, New Mexico State University
1998-2004	Associate Professor, Pedology and Environmental Science, New Mexico State University
1992-1998	Assistant Professor, Pedology, New Mexico State University, Dept. of Agron & Hort.
1990-1992	Soil-Geomorphology-Paleoclimate Project Leader, US DoD Fort Bliss, Texas
1984	Oak Ridge National Laboratory Soil Scientist
1981-1982	USDA-Soil Conservation Service, Chester Co, Tenn. Soil Scientist

Primary Research Interests

Soil-geomorphic-ecosystem response to climate change; Carbon sequestration and biomineralogy in desert soils and ecosystems; Environmental science; Geoarchaeology.

Professional Recognitions and Service

2012	Distinguished Achievement Professor, New Mexico State University
2010	Recipient, U.S. National Cooperative Soil Survey Achievement Award
2010	Co-Recipient, Distinguished Scientist Award, given collectively to PIs of the LTER Network by the American Institute of Biological Sciences.
2009	Chair, Soil Mineralogy Division, Soil Science Society of America
2009	Host, National Cooperative Soil Survey Biennial Meeting
2008	Host, National Soil-Geomorphology Institute
2002	Distinguished Research Award, College of Agriculture and Home Economics, NMSU
2002	Host, National Soil Science Institute
2000	Roush Award for Teaching Excellence, New Mexico State University
1999	Distinguished Teaching Award, College of Agriculture & Home Economics, NMSU
1990	Outstanding Graduate Student Research Award, Sigma Xi, Las Cruces Chapter

Graduate Student Mentorship

Sa'eb Khresat	Ph.D. (1993)	Rebecca Kraimer	Ph.D. (2003)
Arnulfo Encina	M.S. (1995)	Alfonso Serna-Perez	Ph.D. (2004)
Brenda Buck	Ph.D. (1996)	Mike Duniway co-advise	Ph.D. (2006)
John Kipp	Ph.D. (1998)	Stacey Weems	M.S. (2006)
Robert Gallegos	M.S. (1999)	Justin Riggs	M.S. (2008)
Juan Martinez	Ph.D. (1999)	Janella Cruz	M.S. (2008)
Alfredo Granados	Ph.D. (2000)	Keith Crossland co-advise	M.S. (2012)
Gordon Michaud	M.S. (2000)	David Rachal co-advise	Ph.D. (2012)
Marco Inzuna	Ph.D. (2002)	Darroc Goolsby co-advise	Ph.D. (2012)
Xiaoyun Liu	Ph.D. (2002)	Jeremy Klass co-advise	Ph.D. (2012)
Haiyang Xing	M.S. (2002)	Lauren Svejcar co-advise	M.S. (2012)

Helena Deswood co-advise	M.S. (2014)
Ella McKinney (current)	M.S. (current)
Danny Itkin co-advise	Ph.D. (current)

Professional Activities

2015	European Geophysical Union Conference Co-convener of session on carbonates
2012-2014	Associate Editor, <i>Soil Science Society of America Journal</i>
2012-2013	Guest Co-Editor, <i>Spanish Journal of Soil Science</i>
2011-present	International Union of Soil Science Working Group Universal Soil Classification
2009-present	Advisory Group to NRCS Soil Survey Division Director
2008	International Session Chair, Conference on Soil Micromorphology, China
2008	National Organizing Committee for Joint Geology/Soil Science conferences
2007	Tour Leader, 50 th Anniversary Desert Soil-Geomorphology Tour
2007	Co-chair, National Gypsum Task Force
2003	National Science Foundation, Geology and Paleontology Panel
2000-2002	Co-Chair, National Cooperative Soil Survey Research Needs Committee
1996-2006	Associate Editor, <i>Arid Land Research and Management</i>

Teaching

2005-present	Introductory Environmental Science (110G)
1992-present	Soil Classification (472) and Advanced Soil Classification (630)
1992-2005	Introductory Soil Science (252) on a rotational basis
1992-2005	Soil Genesis (520)
Intermittent	Chihuahuan Desert Ecosystems, Soil Micromorphology, Soil Mineralogy

Journal Articles

Monger, H.C., W.C. Lindemann, R.A. Kraimer, A. Unc, E. McKinney, F.O. Holguin, M. Seger, D.R. Cole. Differing abilities of soil microorganisms to biomimic mineralize carbonate and fractionate carbon isotopes. (in review *Geochimica et Cosmochimica Acta*)

Monger, H.C., Rebecca A. Kraimer, Sa'eb Khresat, David R. Cole, Xiujun J. Wang, Jiaping P. Wang. Sequestration of inorganic carbon in soil and groundwater. (in revision *Geology*).

Monger, H.C., Osvaldo E Sala, Mike Duniway, Haim Goldfus, Isaac A Meir, Rosa M Poch, Heather Throop, and Enrique R Vivoni. 2015. Legacy effects in linked ecological–soil–geomorphic systems of drylands. *Frontiers in Ecology and the Environment* 13(1): 13–19, doi:10.1890/140269.

Khormali, F., H.C. Monger, Y. Feng. 2014. Experimental micropedology—A technique for investigating soil carbonate biogenesis along a desert-grassland-forest transect, New Mexico, USA. *Spanish Journal of Soil Science* 4: 1-18. DOI: 10.3232/SJSS.2014.V4.N1.01.

- Monger, H.C. and P. H. Cooke. 2013. Soil micromorphology and the Anthropocene—cross-scale connections and technology trends. *Spanish Journal of Soil Science* 3:1-13.
- Monger, H.C. and D.M. Rachal. 2013. Soil and landscape memory of climate change: how sensitive, how connected? *Society of Sedimentary Geology Special Publication* 104. p. 63-70.
- Michaud*, G.A., H.C. Monger, D.L. Anderson. 2013. Geomorphic-vegetation relationships using a geopedological classification system, northern Chihuahuan Desert, USA. *Journal of Arid Environments* 90:45-54
- Rachal*, D.M., H.C. Monger, G.S. Okin, and D.P.C. Peters. 2012. Landform influences on the resistance of grasslands to shrub encroachment, Northern Chihuahuan Desert, USA. *Journal of Maps* DOI:10.1080/17445647.2012.727593
- Monger, H.C., B.J. Buck, J.W. Hawley, and D.M. Rachal. 2012. Geochronology of the Bolson sand sheet, New Mexico and Texas, and its archaeological significance: Discussion. *Geological Society of America Bulletin* 124:1552-1556. doi: 10.1130/B30517.1
- Weems*, S.L. and H.C. Monger. 2012. Banded vegetation-dune formation in the Medieval Warm Period and 20th Century, Chihuahuan Desert, New Mexico, USA. *Ecosphere*: March 2012, Volume 3(3) Article 21 www.esajournals.org
- Kidron, G., H.C. Monger, A. Vonshak, and W. Conrod. 2012. Contrasting effects of microbiotic crusts on runoff from desert surfaces. *Geomorphology* 139-140:484-494.
- Throop, H.L., S.R. Archer, H.C. Monger, S. Waltman. 2012. When bulk density methods matter: Implications for estimating soil organic carbon pools in rocky soils. *Journal of Arid Environments* 77:66-71
- Duniway*, M.C., J.E. Herrick, and H.C. Monger. 2010. Spatial and temporal variability of plant-available water in calcium carbonate cemented soils and consequences for arid ecosystem resilience. *Oecologia* 163:215-226.
- Peters, D.P.C., J.E. Herrick, H.C. Monger, and H. Huang. 2010. Soil-vegetation-climate interactions in arid landscapes: effects of the North American monsoon on grass recruitment. *Journal of Arid Environments* 74:618-623.
- Monger, H.C., D.R. Cole, B.J. Buck, and R.A. Gallegos. 2009. Scale and the isotopic record of C₄ plants in pedogenic carbonate: from the biome to the rhizosphere. *Ecology* 90:1498-1511.
- Kraimer*, R.A. and H.C. Monger. 2009. Carbon isotopic subsets of soil carbonate—a particle-size comparison of limestone and igneous parent materials. *Geoderma* 150:1-9.
- Williams, A., C. Robins, B.J. Buck*, and H.C. Monger. 2008. Common ground: discovering a shared purpose in Inner Mongolia. *Soil Survey Horizons* 49:96-97.

Duniway*, M.C., J.E. Herrick, and H.C. Monger. 2007. The high water holding capacity of petrocalcic horizons. *Soil Science Society of America Journal* 71:812-819.

Liu*, X., H.C. Monger, and W.G. Whitford. 2007. Calcium carbonate in termite galleries—biomineralization or upward transport?" *Biogeochemistry* 82:241-250.

Peters, D.P.C., B.T. Bestelmeyer, J.E. Herrick, E.L. Fredrickson, H.C. Monger, and K.M. Havstad. 2006. Disentangling complex landscapes: new insights into arid and semiarid system dynamics. *BioScience* 56:491-501.

Monger, H.C. and B.T. Bestelmeyer. 2006. The soil-geomorphic template and biotic change in arid and semiarid ecosystems. *Journal of Arid Environments* 65:207-218.

Serna-Perez*, A., H.C. Monger, J.E. Herrick, and L. Murray. 2006. Carbon dioxide emissions from exhumed petrocalcic horizons. *Soil Science Society of America Journal* 70:795-805.

Kraimer*, R.A., H.C. Monger, and R.L. Steiner. 2005. Mineralogical distinctions of carbonates in desert soils. *Soil Science Society of America Journal* 69:1773-1781.

Inzunza-Ibarra*, M.A. and H.C. Monger. 2005. Variation of soil chemical properties in irrigated and non-irrigated areas of La Laguna region of Mexico. *Terra* 23:429-436.

Inzunza-Ibarra*, M.A. and H.C. Monger. 2005. Historical analysis of the irrigation evolution of La Laguna region of Mexico. *Terra* 23:363-370.

Khresat*, S.A., Z. Rawajfih, B.J. Buck, H.C. Monger. 2004. Geomorphic features and soil formation of arid lands in northeast Jordan. *Archives of Agronomy and Soil Science* 50:607-615.

Buck*, B.J., J.M. Kipp*, and H.C. Monger. 2002. Inverted clast stratigraphy in an eolian archaeological environment. *Geoarchaeology* 17:665-687.

Deutz, P., I.P. Montañez, and H.C. Monger. 2002. Morphology and stable and radiogenic isotope composition of pedogenic carbonate in late Quaternary relict soils, New Mexico: an integrated record of pedogenic overprinting. *Journal of Sedimentary Research* 72:809-822.

Martinez-Rios*, J.J. and H.C. Monger. 2002. Soil classification in arid lands with Thematic Mapper data. *Terra* 20:89-100.

Deutz, P., I.P. Montañez, H.C. Monger, and J. Morrison. 2001. Derivation of a palaeoenvironmental record from pedogenic carbonates in buried and relict Quaternary soils, Rio Grande Rift, New Mexico. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 166:293-317.

- Asare, D.K., D.O. Sitze, H.C. Monger, T.W. Sammis. 2000. Impact of irrigation scheduling practices on pesticide leaching at a regional level. *Agric. Water Mgmt.* 43:311-325.
- Buck*, B.J. and H.C. Monger. 1999. Stable isotopes and soil-geomorphology as indicators of Holocene climate change, northern Chihuahuan Desert. *Journal of Arid Environments* 43:357-373.
- Granados-Olivas*, A. and H.C. Monger. 1999. Remote sensing technology for development planning along the US-Mexico border: hydrogeology and geomorphology. *New Mexico Journal of Science* 39:123-137.
- Buck*, B.J., R.L. Steiner, G. Burgett, and H.C. Monger. 1999. Artifact distribution and its relationship to microtopographic geomorphic features in an eolian environment, Chihuahuan Desert. *Geoarchaeology* 14:735-754.
- Monger, H.C., D.R. Cole, J.W. Gish, and T.H. Giordano. 1998. Stable carbon and oxygen isotopes in Quaternary soil carbonates as indicators of ecogeomorphic changes in the northern Chihuahuan Desert, USA. *Geoderma* 82:137-172.
- Leach, J.D., R.P. Mauldin, H.C. Monger. 1998. The impact of eolian processes on archeological site size and characteristics in west Texas and southern New Mexico. *Bull. Texas Archeological Soc.* 69:99-108.
- Monger, H.C. and Adams. 1996. Micromorphology of calcite-silica deposits, Yucca Mountain, Nevada. *Soil Science Soc. Am. J.* 60:519-530.
- Mack, G.H., W.C. McIntosh., M.R. Leeder, and H.C. Monger. 1996. Plio-Pleistocene pumice floods in the ancestral Rio Grande, southern Rio Grande Rift. *Sedimentary Geology* 103:1-8.
- Monger, H.C. and D.R. Cole. 1994. Climate, CO₂, and plant abundance—Reply. *Nature* 372:626.
- Cole, D.R. and H.C. Monger. 1994. Influence of atmospheric CO₂ on the decline of C₄ plants during the last deglaciation. *Nature* 368:533-536.
- James, W.C., G.H. Mack, and H.C. Monger. 1993. Classification of paleosols: discussion and reply. *Geological Society of America Bulletin* 105:1635-1637.
- Mack, G.H., W.C. James, and H.C. Monger. 1993. Classification of paleosols. *Geol. Soc. Am. Bull.* 105:129-136.
- Monger, H.C. and L.A. Daugherty. 1991. Neoformation of palygorskite in a southern New Mexico Aridisol. *Soil Sci. Soc. Am. J.* 55:1646-1650.
- Monger, H.C. and L.A. Daugherty. 1991. Pressure solution: possible mechanism for silicate

grain dissolution in a petrocalcic horizon. *Soil Sci. Soc. Am. J.* 55:1625-1629.

Monger, H.C., L.A. Daugherty, W.C. Lindemann, and C.M. Liddell. 1991. Microbial precipitation of pedogenic calcite. *Geology* 19:997-1000.

(*Student advised or co-advised by Monger)

Book Chapters

Monger, H.C. 2014. Soils as generators and sinks of inorganic carbon in geologic time. pp. 27-36. in *Soil Carbon*. Progress in Soil Science, 27. eds. A.E. Hartemink and K. McSweeney. Springer International Publishing Switzerland. DOI 10.1007/978-3-319-04084-4_3.

Peters, D.P.C., S.A. Archer, B.T. Bestelmeyer, M.L. Brooks, J.R. Brown, A.C. Comrie, H.R. Gimblett, J.H. Goldstein, K.M. Havstad, L. López-Hoffman, H.C. Monger, G.S. Okin, A. Rango, O.E. Sala, C.E. Tweedie, E.R. Vivoni. 2013. Vulnerability of Ecosystem Services to Cumulative Threats That Result in Desertification. Pages 239-258. In: T.R. Seastedt and K.N. Suding, eds. *Ecosystem Functions and Services: Volume 5* In: R.A. Pielke, Sr. Editor-in-Chief. *Climate Vulnerability: Understanding and Addressing Threats to Essential Resources*. Elsevier.

Monger, H.C., R.J. Southard, and J.L. Boettinger. 2011. Classification of Soils. p. 33-1 to 34-1. Aridisols. In: P.M. Huang, Y. Li and M.E. Sumner (eds.) *Handbook of Soil Science*. 2nd Edition. CRC Press, Boca Raton.

Nordt, L., M.E. Collins, D.S. Fanning, and H.C. Monger. 2011. Classification of Soils. p. 33-1 to 34-1. Entisols. In: P.M. Huang, Y. Li and M.E. Sumner (eds.) *Handbook of Soil Science*. 2nd Edition. CRC Press, Boca Raton.

Durand, N., H.C. Monger, and M.G. Canti. 2010. Calcium carbonate features. In: G. Stoops, V. Marcelino and F. Mees (Eds), *Interpretation of Micromorphological Features of Soils and Regoliths*. Elsevier, pp. 149-194.

Peters, D.P.C., B.T. Bestelmeyer, A.K. Knapp, J.E. Herrick, H.C. Monger, and K.M. Havstad. 2009. Approaches to predicting broad-scale regime shifts using changing pattern-process relationships across scales. p 47-72. In: S. Miao, S. Carstenn, and M. Nungesser, eds. *Real World Ecology: Large-scale and Long-term Case Studies and Methods*. Springer, New York.

Monger, H.C., G.H. Mack, B.A. Nolen, and L.H. Gile. 2006. Regional setting of the Jornada LTER. p. 15-43. In: K. Havstad, Huenneke, L.F., and Schlesinger, W.H., eds. *Structure and Function of a Chihuahuan Desert Ecosystem: the Jornada Basin Long Term Ecological Research Site*. Oxford Univ. Press, Oxford.

Monger H.C. 2006. Soil development in the Jornada Basin. p.81-106. In: Havstad K,

Huenneke L.F., and Schlesinger W.H., eds. *Structure and Function of a Chihuahuan Desert Ecosystem: the Jornada Basin Long Term Ecological Research Site.*. Oxford Univ. Press, Oxford.

Gillette, D. and H.C. Monger. 2006. Eolian processes. In K. Havstad, Huenneke, L.F., and Schlesinger, W.H., eds. *Structure and Function of a Chihuahuan Desert Ecosystem: the Jornada Basin Long Term Ecological Research Site.*. Oxford Univ. Press, Oxford.

Monger, H.C., J.J. Martinez-Rios, S.A. Kresat. 2005. Arid and semiarid soils. p. 182-187. In D.I. Hillel (ed.) *Encyclopedia of Soils in the Environment*. Academic Press, London.

Monger, H.C. 2003. Millennial-scale climate variability and ecosystem response at the Jornada LTER site. p. 341-369. In: D. Greenland, D.G. Goodin, and R.S. Smith (eds.) *Climate Variability and Ecosystem Response at Long-Term Ecological Research Sites*. Oxford University Press, New York.

Monger, H.C., R.E. Clemons, and S.A. Khresat. 2003. Regional setting and paleoclimate of the Pendejo Cave region. p. 17-23. In: R.S. MacNeish and J. Libby (eds.) *Pendejo Cave*. University of New Mexico Press, Albuquerque.

Clemons, R.E. and H.C. Monger. 2003. Source of carbonate lithic artifacts in Pendejo Cave. p. 191-198. In: R.S. MacNeish and J. Libby (eds.) *Pendejo Cave*. University of New Mexico Press, Albuquerque.

Monger, H.C. and E.F. Kelly. 2002. Silica minerals. p. 611-636. In: J.B. Dixon and D.G. Schluz (eds) *Soil Mineralogy with Environmental Applications*. Soil Sci. Soc. Am. Book Series, 7.

Monger, H.C. 2002. Arid soils. p. 84-88. In: Lal. R (ed.) *Encyclopedia of Soil Science*. Marcel-Dekker, New York

Monger, H.C. and L.P. Wilding. 2002. Soil inorganic carbon: composition and formation. p. 701-705. In: Lal. R (ed.) *Encyclopedia of Soil Science*. Marcel-Dekker, New York.

Monger, H.C. and J.J. Martinez-Rios. 2001. Inorganic carbon sequestration in grazing lands. p. 87-118. In: R.F. Follett et al.(eds) *The Potential of U.S. Grazing Lands to Sequester Carbon and Mitigate the Greenhouse Effect*. CRC Press, New York.

Monger, H.C., and R.A. Gallegos. 2000. Biotic and abiotic processes and rates of pedogenic carbonate accumulation in the Southwestern United States—relationship to atmospheric CO₂ sequestration. p. 273-289. In: R. Lal et al. (eds) *Global Climate Change and Pedogenic Carbonates*. Lewis Publishers, New York.

Nordt, L., M.E. Collins, D.S. Fanning, and H.C. Monger. 2000. Entisols. p. E224-E241. In: M. Sumner (ed.) *Handbook of Soil Science*. CRC Press, Boca Raton.

- Elliott, E.T., J.W. Heil, E.F. Kelly, and H.C. Monger. 1999. Soil structural and other physical properties. p. 74-88. In: P. Roberts et al. (eds) ***Standard Soil Methods for Long Term Ecological Research***. Oxford Univ. Press, New York.
- Grigal, D.F., J.C. Bell, R.J. Ahrens, R.D. Boone, E.F. Kelly, H.C. Monger, and D. Wedin. 1999. Site and landscape characterization for ecological studies. p. 29-54. In: P Robertson et al. (eds). ***Standard Soil Methods for Long Term Ecological Research***. Oxford Univ. Press, New York.
- Jarrell, W.M. D.E. Armstrong, D.F. Grigal, E.F. Kelly, H.C. Monger, D.A. Wedin. 1999. Soil water and temperature status. p. 55-73. In: P. Roberts et al. (eds) ***Standard Soil Methods for Long Term Ecological Research***. Oxford Univ. Press, New York.
- Monger, H.C. 1995. Pedology in arid lands archaeological research: An example from southern New Mexico-western Texas. 30-50. In: M.E. Collins (ed.) ***Pedological Perspectives in Archaeological Research***. Soil Sci. Soc. Am. Spec. Publ. 44. Madison, Wisconsin.
- Monger, H.C., L.A. Daugherty, and L.H. Gile. 1991. A microscopic examination of pedogenic calcite in an Aridisol of southern New Mexico. p. 37-60. In: W.D. Nettleton (ed.) ***Occurrence, Characteristics, and Genesis of Carbonate, Gypsum, and Silica Accumulations in Soils***. Soil Sci. Soc. Am. Publ. 26. Madison, Wisconsin.
- Bulletins, Guidebooks, Soil Survey
- Monger, H.C., L.H. Gile, J.W. Hawley, and R.B. Grossman. 2009. The Desert Project—An Analysis of Aridland Soil-Geomorphic Processes. ***NMSU Agri. Exp. Station Bulletin 798***, 76 pp.
- Gile, L.H., H.C. Monger, R.B. Grossman, R.J. Ahrens, J.W. Hawley, F.F. Peterson, R.P. Gibbens, J.M. Lenz, B.T. Bestelmeyer, and B.A. Nolen. 2007. ***A 50th Anniversary Guidebook for the Desert Project***. USDA-NRCS, National Soil Survey Center, Lincoln, NE. pp. 279.
- Buck, B.J., J.M. Kipp, Jr., and H.C. Monger. 1998. Eolian stratigraphy of intrabasinal fault depressions in the northern Hueco and southern Tularosa basins: evidence for neotectonic activity. p. 79-83. ***New Mexico Geological Society Guidebook***, 49th Field Conference, Las Cruces Country II, Socorro.
- Monger, H.C. and W.C. Lynn. 1996. Clay mineralogy at the Desert Project and the Rincon Surface study area. ***Soil Survey Investigations Rpt. 44***, USDA-NRCS, Lincoln, Nebraska.
- Gile, L.H., R.B. Grossman, J.W. Hawley, and H.C. Monger. 1996. Ancient soils of the Rincon surface, northern Dona Ana County. ***Soil Survey Investigations Rpt. 44***, USDA-NRCS, Lincoln, Nebraska.

Gile, L.H., J.W. Hawley, R.B. Grossman, H.C. Monger, C.E. Montoya, and G.H. Mack. 1995. *Supplement to the Desert Project Guidebook, with emphasis on soil micromorphology*. New Mexico Bureau of Mines and Mineral Resources, Bulletin 142. Socorro.

Ditzler, C., D. Thomas, R. Cody, H.C. Monger, and J. Neeley. 1994. *Soil Survey of Chester County, Tennessee*. USDA-SCS, U.S. Government Printing Office, Washington, D.C., pp. 164.

Videos, Newsletters, Book Review

Monger, H.C. 2008. 50th Anniversary Desert Project tour brings students and scientists to Las Cruces and the Jornada. *Jornada Trails Newsletter* 12:1-3.

Weems, S. and H.C. Monger. 2006. Radiocarbon dating yields insights into banded vegetation formation. *Jornada Trails* 6:1-2

Monger, H.C., L.H. Gile, J.W. Hawley, J.B. Gleason, M. Ferrales. 2000. *Desert Soils: Unlocking the Past, Understanding the Future*. (30-minute video) NMSU Agricultural Communications.

Monger, H.C. 2000. Scientists visit Jornada Basin LTER as part of Desert Project Tour. *Jornada Trails* 6:1-2

Monger, H.C. 1999. Talks on remote sensing, long-term vegetation studies highlight the annual Jornada symposium. *Jornada Trails* 5:2-3.

Monger, H.C. 1999. Jornada Basin LTER holds its ninth annual science symposium. *The Network News* 12:1.

Monger, H.C. 1994. Review of *Semiarid Lands and Deserts—Soil Resources and Reclamation*, edited by J. Skujins. *Soil Science* 157:126-128.

James, W.C., G.H. Mack, and H.C. Monger. 1993. Paleosol classification. p. 9. INQUA/ISSA *Paleopedology Commission Newsletter no. 9*. Illinois State Geological Survey, Champaign, IL.

Monger, H.C. and D.R. Cole. 1993. Paleosols as indicators of paleoclimatic conditions. p. 25. INQUA/ISSA *Paleopedology Commission Newsletter no. 9*. Illinois State Geological Survey, Champaign, IL.

Proceedings

Monger, H.C. 2013. Soils and climate change—response and C sequestration potential. Torreon, Mexico. In Juan Martinez-Rios (ed.) Universidad Juarez del Estado de Durango, Conference Sept 2013.

- Monger, H.C. 2008. Intercontinental movement and micromorphic transformations of matter. In Xiubin He (ed) *Soil Micromorphology: Micro-Investigations on the Earth's Critical Zone*. Chengdu, China, September 11-16, 2008.
- Monger , H.C. and D.R. Cole. 2006. Scale, paleoclimate, and ^{13}C in pedogenic carbonate—from the microbe to the biome. In *Transactions of the 18th World Congress of Soil Science*. Philadelphia, Pennsylvania, USA, July 2006.
- Monger, H.C. 2002. Pedogenic carbonate: links between biotic and abiotic CaCO_3 . p. 897-1 to 897-9. In: *Transactions of the 17th World Congress of Soil Science*, Bangkok, Thailand.
- Rawajfih, Z., S.A. Khresat, B.J. Buck, and H.C. Monger. 2002. Management of arid soils of the Badia region of northeastern Jordan for sustainable agriculture. In: *Transactions of the 17th World Congress of Soil Science*, Bangkok, Thailand.
- Wilding, L.P., H.C. Monger, and L.R. Drees. 2002. Soil diversity, properties, and processes in arid and semiarid environments: advances in the knowledge base. p. 38-59. In: A. Faz, R. Ortiz, and A.R. Mermut (eds) *Sustainable Use and Management of Soils in Arid and Semiarid Regions*. Quaderna Editorial/Interlibro, Spain.
- Monger, H.C., J.J. Martinez-Rios, R.A. Gallegos. 2001. Carbon sequestration and global warming. p 1-7. In: J.M. Navarro, C.S. Calzada, and A. Martinez-Rios (eds.) *Memoria de la XIII Semana Internacional de Agronomia*. Torreon, Mexico
- Monger, H.C. 2000. The making of a desert. In: *Dreaming Back the Desert*. Border Book Festival, Las Cruces.
- Kipp, Jr., J.M. and H.C. Monger. 1999. Geoarchaeological relationships at a Mimbres culture site in the North Mill Area, Muir Ranch, New Mexico. p. 71-84. In: M. Stowe and M. Slaughter (compilers) *Archaeology of the Jornada Mogollon: Proceedings from the 10th Jornada Mogollon Conference*. Geo-Marine Inc. Press, El Paso.
- Monger, H.C. 1999. Natural cycles of desertification in the Chihuahuan Desert, North America. p. 209-223. In: I.R. Traylor et al. (eds.) *Proceedings for the Fifth International Conference on Desert Development*. Texas Tech University, Lubbock.
- Buck, B.J. and H.C. Monger. 1998. An eolian and isotopic record of biogeomorphic change in the southwestern United States. In *Transactions of the 16th World Congress of Soil Science*. Montpellier, France, August 20-26, 1998.
- Monger, H.C. 1996. Natural cycles of desertification in the Chihuahuan Desert, North America. In *Proceedings of the Fifth International Conference on Desert Development*. Lubbock, Texas. August 12-17, 1996. Texas Tech University.
- Monger, H.C. and D.R. Cole. 1994. Stable isotopes in arid paleosols of southern New Mexico as

indicators of climate change and the effects of atmospheric CO₂ on plant communities. p. 224-225. In *Transactions—15th World Congress of Soil Science*, Vol. 5b. International Society of Soil Science. Acapulco, Mexico. July 10-16, 1994.

Technical Reports

Monger, H.C. 2014. Inventory of Carbon Sequestration Organisms and Biomineralization at White Sands National Monument and Guadalupe Mountains National Park. U.S. National Park Service Report.

Monger, H. Curtis, Yanhua Feng, Katie Laney. 2010. Geomorphology of White Sands Missile Range Archaeological Project Area. Technical geoarchaeological report to R. Christopher Goodwin & Associates, Inc. 241 East 4th Street, Suite 100, Frederick, Maryland 21701. pp. 24.

Laney, K.I. and H.C. Monger. 2010. Chapter 16. Geomorphological Studies at Santa Teresa Airport Runway Expansion Project, Dona Ana County, New Mexico. In *Results of Data Recovery Excavations at Site LA 267878, Santa Teresa Airport, Dona Ana County, New Mexico*, by David T. Kirkpatrick, pp. 213-242. Human Systems Research Report No. 2009-19, Human Systems Research, Las Cruces.

Monger, H.C. 1996. Geomorphic setting and processes at archaeological sites along the proposed Samalyuca pipeline. Centro de Investigaciones Arqueologicas, El Paso, TX.

Monger, H.C. 1995. Soil-geomorphic context of paleoindian sites and paleoenvironmental records on Holloman Air Force Base. Geo-Marine, Inc., El Paso, TX.

Monger, H.C. (ed). 1995 Geomorphic and palynologic investigations, Fort Bliss Military Installation, Texas. Fort Bliss Environmental Management Office, Fort Bliss, TX.

Monger, H.C. and B.J. Buck, 1995. Eolian evolution and paleoenvironmental changes during the late Quaternary in the Fort Bliss maneuver areas and vicinity. Fort Bliss Environmental Management Office, Fort Bliss, TX.

Monger, H.C. and B.J. Buck, 1994. Eolian landscape evolution in the central basin of Fort Bliss. Geo-Marine, Inc., Plano, TX.

Monger, H.C. 1994. Geomorphic overview of the Mesilla and El Paso valleys. In G.R. Seymour, D.A. Phillips, W.J. Poague. Archaeological Sample Survey of Elephant Butte Irrigation District and El Paso County Water Improvement District No. 1 New Mexico and Texas. SWCA Archaeological Report Number 94-5. Albuquerque, New Mexico.

Monger, H.C. 1994. Geomorphic setting of a Folsom site on the Holloman Air Force Base. Human Systems Research, Inc., Tularosa, NM.

- Monger, H.C., C.A. Hill, and C.M. Schluter. 1994. A comparison of petrographic textures, calcite/silica deposits, Yucca Mountain, Nevada. *In* D.E. Livingston (ed.) Quarterly Report No. 2. Nuclear Waste Project Office, State of Nevada. TRAC, 56 pp.
- Hill, C.A., H.C. Monger, C.M. Schluter, R.S. Harmon, R.A. Schmitt, and Y.G. Liu. 1994. Calcite/opal deposits at Yucca Mountain, Nevada: Pedogenic or hypogene? *In* D.E. Livingston (ed.) Quarterly Report No. 2. Nuclear Waste Project Office, State of Nevada. TRAC, 78 pp.
- Monger, H.C. et al. 1993. Soil-geomorphic and Paleoclimatic Characteristics of the Fort Bliss Maneuvre Areas, Southern New Mexico and Western Texas , Historic and Natural Resources Report No. 10. Cultural Resources Branch, Environmental Management Division, Directorate of Environment, U.S. Army Air Defense Artillery Center, Fort Bliss, Texas.
- Hill, C.A., C.M. Schluter, and H.C. Monger. 1993. Criteria for the recognition of pedogenic/supergene and nonpedogenic/hypogene deposits and their relationship to the origin of calcite/opal deposits at Yucca Mountain. Special Report No. 14, Nuclear Waste Project Office, State of Nevada. October, 37 pp.
- Monger, H.C. 1992. Adobe source area and original land surface at the Rayado study site. Human Systems Research, Inc., Tularosa, NM.
- Monger, H.C. 1991. The cementing agent of regolith at the Navajo Mine, Northwest New Mexico. Buchanan Consultants, Ltd., Farmington, New Mexico.
- Monger, H.C., D.T. Kirkpatrick, and L.A. Daugherty. 1989. Soil analysis at the McSween Site: Implications for locating the McSween House. *In* D.T. Kirkpatrick (ed.) Archaeological test excavations at the Alexander McSween Site, Lincoln State Monument, Lincoln County, New Mexico. Human Systems Research, Inc., Tularosa, NM.
- Monger, H.C. 1988. Soil stratigraphy in selected areas of the Fort Bliss Maneuver Area I. Univ. of Texas at El Paso. El Paso, TX.