

## CURRICULUM VITAE

### ***H. Curtis Monger, Ph.D.***

Professor Emeritus

New Mexico State University,

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National Leader Soil Survey Standards, USDA-NRCS (retired)

### **EDUCATION**

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

### **PROFESSIONAL EXPERIENCE**

<b>USDA-NRCS National Leader of Soil Survey Standards (GS-15)</b>	2015 - 2021
National Soil Survey Center, Lincoln, Nebraska	

<b>Distinguished Achievement Professor</b>	2012 - 2015
New Mexico State University, Las Cruces, NM Department of Plant and Environmental Sciences	

<b>Professor</b>	2004 - 2012
Pedology and Environmental Science New Mexico State University, Las Cruces, NM Department of Plant and Environmental Sciences	

<b>Associate Professor</b>	1998 - 2004
Pedology New Mexico State University, Las Cruces, NM Dept. of Agronomy and Horticulture	

<b>Assistant Professor</b>	1992 - 1998
Pedology New Mexico State University, Las Cruces, NM Dept. of Agronomy and Horticulture	

<b>Project Director</b>	1990 - 1992
Department of Defense, Fort Bliss, Texas Geoarchaeology, Soils, Geomorphology, and Paleoclimate of Ft. Bliss	

<b>Soil Scientist</b>	1984
Oak Ridge National Laboratory Oak Ridge, TN and University of Tennessee, Knoxville, TN	

<b>Soil Scientist</b>	1981 - 1982
USDA-Soil Conservation Service	

Chester County, Tennessee

### **Primary Research Interests**

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

### **Professional Recognitions and Service**

2022	Outstanding Alumni 2022, Plant and Environmental Sciences, NMSU
2018	Chair, International Union of Soil Science, Commission 1.4, Soil Classification
2015	Fellow, Soil Science Society of America
2015	Faculty Appreciation Award, Dept. Plant and Environmental Sciences
2015	Meritorious Service Award, New Mexico State University
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 Cooperative Soil Survey 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-advised	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-advised	M.S. (2012)
Gordon Michaud	M.S. (2000)	David Rachal co-advised	Ph.D. (2012)
Marco Inzuna	Ph.D. (2002)	Darroc Goolsby co-advise	Ph.D. (2012)
Xiaoyun Liu	Ph.D. (2002)	Jeremy Klass co-advised	Ph.D. (2012)
Haiyang Xing	M.S. (2002)	Lauren Svejcar co-advised	M.S. (2012)
		Helena Deswood co-advised	M.S. (2014)
		Ella McKinney	M.S. (2015)
		Danny Itkin co-advise	Ph.D. (2023)
		John Begay co-advise	M.S. (2025)
		Gladys Ayamga co-advise	M.S. (2025)

### **Professional Activities**

2024	World Resource Base Board Member Excursion, Hokkaido, Japan
2023	World Resource Base Board Member Excursion, Catalonia, Spain
2022	World Resource Base Board Member Excursion, Reykjavik, Iceland
2022	World Resource Base Board Member Excursion, Juriquilla, Mexico
2022	Intl Union of Soil Science Research Forum Conf., Glasgow, Scotland
2020	NRCS Liaison to North Central Coop. Soil Survey Conf., Columbia, MO
2019	Intl Soil Classification Congress Scientific Committee, UNAM, Mexico
2018	Interdivisional Speaker and Convener, Intl Union Soil Science, Rio de Janeiro

2017	USDA-NRCS Liaison to European Geosciences Union Conf., Vienna, Austria
2016	USDA-NRCS Liaison to Intl Expert Consultation on Standards, Berlin, Germany
2016	USDA-NRCS Liaison to Intl Soil Classification Conference, South Africa
2015	USDA-NRCS Liaison to Intl Conference on Sustainable Food Security, Thailand
2015	Daniel Yaalon Symposium Scientific Committee, Vienna, Austria
2012-2014	Associate Editor, <i>Soil Science Society of America Journal</i>
2012-2013	Guest Co-Editor, <i>Spanish Journal of Soil Science</i>
2011-2018	International Union of Soil Science Working Group Universal Soil Classification
2012	Global Carbon Cycle and Deserts Conf. Collaborator, Beijing and Urumqi, China
2009-2015	Advisory Group to NRCS Soil Survey Division Director
2008	Lecturer and Micromorphology Session Chair, Inner Mongolia, Chengdu, China
2008	National Organizing Committee for Joint Geology/Soil Science conferences
2007	Tour Leader, 50 <sup>th</sup> Anniversary Desert Soil-Geomorphology Tour
2007	Co-chair, National Gypsum Task Force
2003	National Science Foundation, Geology and Paleontology Review Panel
2000-2002	Co-Chair, National Cooperative Soil Survey Research Needs Committee
1996-2006	Associate Editor, <i>Arid Land Research and Management</i>

### Teaching

2005-2015	Introductory Environmental Science (110G)
1992-2015	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

Kimsal, C.R., Enrique R. Vivoni, Osvaldo E. Sala, H. Curtis Monger, and Owen P. McKenna  
 (in press) Hydrologic dynamics of ephemeral playas in a dryland environment.  
**Water Resources Research.**

Monger, H.C., and J.W. Hawley. 2025. The USDA Desert Soil-Geomorphology Project (1957-1972) *Advances in Agronomy* 192. ISSN 0065-2113, <https://doi.org/10.1016/bs.agron.2025.03.002>.

Monger, C. and M. Bronnikova. 2025. Soil memory of bioclimatic changes in the northern Chihuahuan Desert, USA. *CATENA* 254. doi.org/10.1016/j.catena.2025.108944

Jung, P., Laura Biegel-Williams, Stefan Dultz, Carina Neff, Gunnar Heibrock, Curtis Monger, Nicole Pietrasik, Lena Keller, Julia Hale, Jan Friedek, Timo Schmidt, Georg Guggenberger, and Michael Lakatos, 2024. Hard shell, soft blue-green core ecology, processes and modern applications of calcification in terrestrial cyanobacteria *iSCIENCE*-D-24-08224R2. doi.org/10.1016/j.isci.2024.111280

Nyachoti, S.K., V.H. Garcia, C. Monger, C. Tweedie, T.E. Gill, L. Jin, L. Ma. 2024. Uranium-series and strontium isotope systematics in soil carbonates from dryland Critical Zones: Implications for soil inorganic carbon storage and transformation. *Geochimica et Cosmochimica Acta*, 377:34-51.

Monger, C., E. Michéli, F. Aburto, D. Itkin. 2024. Soil classification as a tool for contributing to sustainability at the landscape scale and forecasting impacts of management practices in agriculture and forestry. *Soil & Tillage Research*, 244, 106216.  
<https://doi.org/10.1016/j.still.2024.106216>.

Itkin\*, D., R. Poch, C. Monger, U. Shaanan, J. Bolòs, O. Crouvi, N. Ben Hagai, and H. Goldfus. 2022. Pedology of archaeological stone-wall bench terraces. *Geoderma* 428 (2022) 116129. <https://doi.org/10.1016/j.geoderma.2022.116129>

Lal R, Monger C, Nave L, Smith P. 2021 The role of soil in regulation of climate. *Phil. Trans. R. Soc. B* 376: 20210084. <https://doi.org/10.1098/rstb.2021.0084>

Lal R, Johan Bouma, Eric Brevik, Lorna Dawson, Damien J. Field, Bruno Glaser, Ryusuke Hatano, Alfred E. Hartemink, Takashi Kosaki, Bruce Lascelles, Curtis Monger, Cristine Muggler, Georges Martial Ndzana, Stefan Norra, Xicai Pan, Remigio Paradelo, Laura Bertha Reyes-Sánchez, Taru Sandén, Bal Ram Singh, Heide Spiegel, Junta Yanai, Jiabao Zhang. 2021. Soils and sustainable development goals of the United Nations: An International Union of Soil Sciences perspective. *Geoderma Regional*. e00398.  
<https://doi.org/10.1016/j.geodrs.2021.e00398>.

Stolt, Mark, Anthony T. O'Geen, Dylan E. Beaudette, Patrick J. Drohan, John M. Galbraith, David L. Lindbo, H. Curtis Monger, Brian A. Needelman, Michel D. Ransom, Martin C. Rabenhorst, and Joey N. Shaw. 2021. Changing the hierarchical placement of soil moisture regimes in Soil Taxonomy. *Soil Sci. Soc. Am. J.*  
<https://doi.org/10.1002/saj2.20219>

Rattan Lal, Eric C. Brevik, Lorna Dawson, Damien Field, Bruno Glaser, Alfred E. Hartemink, Ryusuke Hatano, Bruce Lascelles, Curtis Monger, Thomas Scholten, Bal Ram Singh, Heide Spiegel, Fabio Terribile, Angelo Basile, Yakun Zhang, Rainer Horn, Takashi Kosaki and Laura Bertha Reyes Sánchez. 2020. Managing Soils for Recovering from the COVID-19 Pandemic. *Soil Syst.* 4, 46; doi:10.3390/soilsystems4030046

Khormali\*, Farhad, Curtis Monger. 2020. Hot desert soils—Global distribution and unique characteristics. *Geoderma Regional* Volume 23.  
<https://doi.org/10.1016/j.geodrs.2020.e00330>.

Ji, W., N. P. Hanan, D. M. Browning, H. C. Monger, D. P. C. Peters, B. T. Bestelmeyer, S. R. Archer, C. W. Ross, B. M. Lind, J. Anchang, S. S. Kumar, and L. Prihodko. 2019. Constraints on shrub cover and shrub–shrub competition in a U.S. southwest desert. *Ecosphere* 10(2):e02590. 10.1002/ecs2.2590

Itkin\*, Danny, Onn Crouvi, H. Curtis Monger, Uri Shaanan, Haim Goldfus. 2018. Pedology of archaeological soils in tells of the Judean foothills, Israel. *Catena*. 168:47-61.  
<https://doi.org/10.1016/j.catena.2018.03.014>.

Salley, Shawn, H. Curtis Monger, Joel R. Brown. 2016. Completing the Land Resource

Hierarchy. *Rangelands*. Volume 38, Issue 6, December 2016, Pages 313-317

Itkin\*, D, Goldfus H, and Monger HC. 2016. Human induced calcretisation in anthropogenic soils and sediments: Field observations and micromorphology in a Mediterranean climatic zone, Israel. *Catena* 146: 48-61.

Brevik, EC, Richter D, Verrecchia EP, Ryan J, Poch RM, Crouvi O, Sauer D, Waroszewski J, Solleiro-Rebolledo E, Monger HC, Ottner F, and Targulian V. 2016. The influence of Dan H. Yaalon: His impact on people. *Catena* 146:147-154.

Stout B, Lal R, Monger C. 2016. Carbon capture and sequestration: The roles of agriculture and soils. *Int J Agric & Biol Eng*, 9(1): 1 – 8

Wang\*, J., C Monger, X Wang, M Serena, B Leinauer. 2016. Carbon sequestration in response to grassland–shrubland–turfgrass conversions and a test for carbonate biomineralization in desert soils, New Mexico, USA. *SSSAJ* 80:1591-1603. doi:10.2136/sssaj2016.03.0061

Monger, H.C., Rebecca A. Kraimer, Sa'eb Khresat, David R. Cole, Xiujun J. Wang, Jiaping P. Wang. 2015. Sequestration of inorganic carbon in soil and groundwater. *Geology* 43:375-378. doi:10.1130/G36449.1.

Monger, H.C., O.E. Sala, M. Duniway, H. Goldfus, I.A. Meir, R.M. Poch, H.T., and E.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 20<sup>th</sup> Century, Chihuahuan Desert, New Mexico, USA. *Ecosphere*: March 2012, Volume 3(3) Article 21 [www.esajournals.org](http://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 C<sub>4</sub> 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, CO<sub>2</sub>, and plant abundance—Reply. *Nature* 372:626.

Cole, D.R. and H.C. Monger. 1994. Influence of atmospheric CO<sub>2</sub> on the decline of C<sub>4</sub> 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 and his postdocs or visiting sabbatical scientists)

#### Books and Chapters

Soil Science Division Staff. 2017. *Soil Survey Manual*. C. Ditzler, K. Scheffe, and H. C. Monger (eds.) USDA Handbook 18. Government Printing Office, Washington, D.C.

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-

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***. 2<sup>nd</sup> 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***. 2<sup>nd</sup> 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.

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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.

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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. Schluzer (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.

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## RESEARCH SUPPORT

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- \$79,865 from USDA-NRI to H.C. Monger to study "Holocene grassland dynamics based on soil carbonate C-13 values, Chihuahuan Desert" (1996 to 1998).
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