

## VITA

### STEVEN GEORGE DRIESE

#### Personal -

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#### Education -

1974-1977 Southern Illinois University, B.S. Geology  
1977 (summer) Southern Illinois University Field Camp  
1977-1979 University of Wisconsin-Madison, M.S. Geology  
1979-1982 University of Wisconsin-Madison, Ph.D. Geology

#### Professional Affiliations -

Society for Sedimentary Geology (SEPM); Secretary-Treasurer (1994-1996) and President (2009-2010); elected Honorary Member in 2015  
International Association of Sedimentologists (IAS)  
Geological Society of America (GSA; elected a Fellow in 1998)  
American Association for the Advancement of Science (AAAS; elected a Fellow in 2012)  
Geochemical Society  
Sigma Xi, the Scientific Society  
Soil Science Society of America (SSSA)  
National Association of Geoscience Teachers (NAGT)

#### Professional Experience -

1975 (summer) Exploration Geologist, Amoco Production Company, Texas Gulf Coast Exploration  
1976-1977 Laboratory and Field Assistant, Southern Illinois University, Acid mine drainage research  
1977 (summer) Field Geologist (GS-5), U.S. Geological Survey, and mineral resources appraisal program  
1977-1980 Graduate Teaching Assistant, University of Wisconsin-Madison, sedimentology, introductory geology  
1980-1982 Research Assistant, University of Wisconsin-Madison, completing Ph.D. Dissertation  
1982-1988 Assistant Professor, University of Tennessee-Knoxville, clastic sedimentology  
1983 (fall) Consultant, ARCO Oil and Gas Company  
1984 Consultant, Oak Ridge National Laboratory, DOE Sedimentary Rock

Program

1985-1999 Appointed to University of Tennessee- Oak Ridge National Laboratory Science Alliance Program

1988-1995 Associate Professor, University of Tennessee-Knoxville, paleopedology and clastic sedimentology

1989 (summer) Consultant, Cabot Oil & Gas Corporation

1989, 1996, 1998 (and 2003) Sigma Gamma Epsilon Outstanding Teacher Award (based on student votes)

1992-1993 Consultant, TVA Engineering Lab, Fluvial Aquifer Heterogeneity project

1994-1995 Appointed George Martin Hall Professor of Geological Sciences, University of Tennessee-Knoxville (one year, rotating appointment)

1995 Chancellor's Award for Research and Creative Achievement

1995-2004 Professor, University of Tennessee-Knoxville, paleopedology and clastic sedimentology

1997-2000 Associate Head, Department of Geological Sciences

1998 Elected Fellow of the Geological Society of America

1998-2002 Associate Editor, *Journal of Sedimentary Research*

1999-2004 Appointed as collaborating Faculty member in Center for Environmental Biotechnology, University of Tennessee

2000-2010 Editorial Board, *Sedimentary Geology*

2001-2002 Appointed George Martin Hall Professor of Geological Sciences, University of Tennessee-Knoxville (one year, rotating appointment)

2001-2004 Member of Research Center of Excellence (RCE) in Environmental Biotechnology funded by University of Tennessee

2001-2004 Member of Research Initiative Group for Interdisciplinary Study of Global Environmental Change funded by University of Tennessee

2002-2004 Associate Head, Department of Geological Sciences, Univ. of Tennessee

2002-2004 Editorial Board, *Geology*

2001 (Dec.) External reviewer for Geology Department Graduate Program, Brigham Young University

2003 (Feb.) External reviewer for Geology Department Ph.D. program, Baylor University

2004-2013 Professor and Chair of Geology Department, Baylor University

2006-2013 Associate Editor, *PALAIOS*

2008-2009 President-Elect of SEPM (Society for Sedimentary Geology)

2009-2010 President of SEPM (Society for Sedimentary Geology)

2010-2011 Past-President of SEPM (Society for Sedimentary Geology)

2011-2014 GSA Penrose Conference and Field Forums Committee, member-at-large

2012 Elected Fellow of American Association for the Advancement of Science (AAAS)

2012-2015 GSA liaison to U.S. National Committee for Soil Science ((USNC/SS)

2013-2016 Professor and Geosciences Graduate Program Director, Baylor University

2015 Awarded Honorary Membership of SEPM (Society for Sedimentary Geology)

2015 "Opponent" and Member of Ph.D. Dissertation Examining Committee of Dr. Sirle Liivamägi at the University of Tartu, Estonia, June 18, 2015.

2016 "Opponent" and Member of Ph.D. Dissertation Adjudication Committee of Dr. Lars Riber at the University of Oslo, Norway, April 29, 2016.

2016 Outstanding Professor for 2015-2016 academic years, in recognition of outstanding scholarship as a tenured Faculty member at Baylor University.  
2016-present Associate Dean for Research, Baylor Graduate School  
2017 Appointed to Committee of Visitors (COV) for review of NSF Earth Sciences Directorate, Review and Award Processes, April to July, 2017

**Other Professional Service -**

Review 6-12 submitted manuscripts per year for numerous professional geosciences journals.

Review grant proposals (2-8 per year) for National Science Foundation, Petroleum Research Fund, and other agencies as requested.

Reviewer for abstracts in sedimentology and sedimentary petrology submitted for 1985 southeastern section meeting of GSA in Knoxville, TN

Technical services chair for local organizing committee for SE GSA meeting in Knoxville, TN

Session co-chairman for sedimentology technical session at 1986 SE GSA meeting in Memphis, TN

Session co-chairman and co-organizer for SEPM technical session on the sedimentology of Paleozoic shelf deposits in the Appalachian region at 1986 AAPG/SEPM National meeting in Atlanta, GA

Reviewer for abstracts in sedimentary petrology submitted for 1986 GSA National meeting in San Antonio, TX

Served as judge for abstracts presented at 1986 SEPM Mid-year meeting in Raleigh, NC

Session co-chairman for sedimentology technical session at 1987 southeastern section meeting of GSA in Norfolk, VA

Reviewer for abstracts in sedimentary petrology submitted for 1987 GSA National meeting in Phoenix, AZ

Session co-chairman for sedimentary petrology technical session at 1987 GSA National meeting in Phoenix, AZ

Session co-chairman for mixed carbonate/siliciclastic depositional systems technical session at 1988 SEPM mid-year meeting in Columbus, OH

Co-leader for field trip, and co-editor for field guide on "Depositional History of Paleozoic Sequences, Southern Appalachians" for Midcontinent Section of SEPM, Knoxville, TN, October 7-9, 1988

Elected vice-chairperson of Society for Sedimentary Geology (SEPM) Bedforms Research Group,

1990-1991, and chairperson, 1991-1992

Session co-chairman for sedimentary petrology technical session at 1989 GSA National meeting in St. Louis, MO

Review Committee for Student Research Grant Proposals submitted to Southeastern Section of GSA, 1991-1992

Elected vice-President of Mid-continent section, Society for Sedimentary Geology (SEPM), 1991-1992 (President, 1992-1993)

Reviewer for abstracts in sedimentary petrology for 1991 GSA National meeting held in San Diego, CA

Reviewer for abstracts in sedimentary petrology for 1992 GSA National meeting held in Cincinnati, OH

Co-leader for field trip, and editor for field guide on "Paleosols, Paleoweathering Surfaces and Sequence Boundaries" for Midcontinent Section of SEPM, Knoxville, TN, October 9-11, 1992.

Co-leader for field trip, and editor for field guide on "Paleosols, paleoclimate and paleoatmospheric P(CO<sub>2</sub>); Paleozoic paleosols in central Pennsylvania" for International Association of Geochemistry and Cosmochemistry, 3rd International Symposium on Geochemistry of the Earth's Surface and SEPM (Society for Sedimentary Geology), Penn State Univ., August 5-6, 1993.

Member of U.S. organizing committee for 1996 Hall Symposium, 2nd International Symposium on the Silurian System, and field trip leader for same meeting.

Reviewer for abstracts in paleoclimatology and paleoceanography for 1993 GSA National meeting held in Boston, MA.

Co-taught short course (with C.I. Mora & D.E. Fastovsky) on "Geochemistry and Stable Isotopes of Paleosols" at GSA National Meeting in Boston, MA, on October 24, 1993.

Served as Secretary-Treasurer of SEPM (Society for Sedimentary Geology) national organization, 1994-1996.

Served as Field Trips co-chair and field guide editor for local organizing committee for SE GSA meeting in Knoxville, TN, 1994-1995

Co-convenor for symposium on Paleosols and Paleokarst of the Southeastern U.S., for SE GSA meeting in Knoxville, TN, April 1995.

Leader of Second International Silurian Symposium Field Trip, July, 1996, Knoxville, TN and vicinity.

Session co-chair for paleontology/paleobotany technical session at 1996 GSA Annual Meeting in Denver, CO.

Served on review panel for local chapter of Sigma Xi, 1994-1997.

Served on review panel for SEPM National Student Awards for grants in aid of research (Robert J. Weimer Awards), 1998.

Associate Editor, *Journal of Sedimentary Research*, 1998-2001.

Elected Second Vice-Chair of the Sedimentary Geology Division, Geological Society of America in 1999; was First Vice-Chair in 2001, Chair in 2002, past-Chair in 2003.

Editorial Board, *Sedimentary Geology*, 2000-2006

Editorial Board, *Geology*, 2002-2004

External Reviewer for Baylor Geology Department Self-Assessment, February 2003

Served as internal reviewer for Geography Department Review and Assessment, University of Tennessee, February 2004

Tenure and promotion external review for Dr. Dennis Terry, Temple University, Fall, 2004.

Tenure and promotion external review for Dr. Paul McCarthy, University of Alaska-Fairbanks, Fall, 2004.

Tenure and promotion review for external Dr. Jennifer Elick, Susquehanna University, Fall, 2004.

Promotion (to full professor) external review for Dr. John Diemer, University of North Carolina-Charlotte, Fall, 2004.

Promotion (to full Professor) external review for Dr. Catherine A. Rigsby, East Carolina University, Summer, 2005.

Tenure and promotion external review for Dr. Brian S. Currie, Miami University of Ohio, Summer, 2005.

Tenure and promotion external review for Dr. Kenneth Tobin, Texas A & M International University, Summer, 2006.

Promotion (to Reader) external review for Dr. Nathan Sheldon, Royal Holloway University of London, UK, Fall, 2006

Associate Editor, *PALAIOS*, 2006-2016.

Tenure and promotion external review for Dr. Marvin Bennett, III, Texas A & M International University, Summer, 2007.

Promotion (to full Professor) external review for Dr. G.S. (Lynn) Soreghan, University of Oklahoma, Summer, 2007.

Member of Peer Assessment Review Team for Geography Department, University of Tennessee-Knoxville (mid-cycle review), December 2007

Organized (with L.C. Nordt) GSA Pardee Symposium P2 at joint GSA-SSSA National Meeting in Houston, TX.

Organized (with L.C. Nordt) 2-day pre-meeting soils field trip at joint GSA-SSSA National Meeting in Houston, TX (not run due to insufficient enrollment, but guidebook was printed).

Tenure external review for Dr. Robert C. Walter at Department of Earth and Environment, Franklin and Marshall University, fall, 2009.

Tenure and promotion external review for Dr. Daniel Deocampo, Georgia State University, summer of 2010.

Promotion (to full Professor) external review for Dr. Stephen Hasiotis, University of Kansas, summer of 2010.

Promotion (to full Professor) external review for Dr. Paul McCarthy, University of Alaska-Fairbanks, summer of 2010.

Invited panelist for NSF-Sponsored Workshop held July 26-27, 2010 at Lake Tahoe, NV, examining “Grand Challenges in Sedimentary Geology and Paleobiology” and preparing a white paper for National Research Council study on New Research Opportunities in the Earth Sciences.

Organized (with L.C. Nordt, S.C. Atchley, S.I. Dworkin, D.J. Peppe) SEPM-NSF Workshop and Research Conference on “Paleosols and Soil Surface Analog Systems”, held in Holbrook, AZ at the Petrified Forest National Park, September 22-26, 2010.

Served as an invited panelist for NSF Critical Zone Observatories Program Review held from March 28-31, 2011, in Washington, DC, at NSF Headquarters.

Serving as “member-at-large” for the GSA Penrose Conferences and Field Forums Committee, for a term between July 1, 2011 and June 30, 2014.

Tenure and promotion external review for Dr. Daniel I. Hembree, Miami University of Ohio, Fall of 2011.

Lead Editor (with Lee C. Nordt) of SEPM (Society for Sedimentary Geology) Special Publication Volume No. 104 entitled “New Frontiers in Paleopedology and Terrestrial Paleoclimatology”

containing 16 contributed manuscripts.

Served a 3-year term as Geological Society of America (GSA) liaison to U.S. National Committee for Soil Science ((USNC/SS) from 1 July 2012 to 30 June 2015.

Served as invited panelist for NSF Critical Zone Observatories Program Accomplishment-Based Renewal (ABR) Panel held May 7, 2012 (teleconference).

Tenure and promotion external review for Dr. Nathan D. Sheldon, University of Michigan, Fall of 2012.

Promotion (to full Professor) external review for Dr. Chris Fedo, University of Tennessee-Knoxville, Fall of 2012.

Co-convener for “*Teaching Hydrogeology, Soils, Biogeochemistry, and Low-Temperature Geochemistry in the 21<sup>st</sup> Century*”, and “On the Cutting Edge” program, NSF-sponsored workshop held in Albuquerque, NM, June 5-9, 2013.

Promotion (to full Professor) external review for Dr. Neil J. Tabor, Southern Methodist University, Summer, 2013.

Co-organizer/officer (starting in fall of 2013) of a new “Soils and Soil Processes” Interdisciplinary Interest Group (IIG) promoting soil and paleosol-related research and technical sessions for the Geological Society of America: Chair-Elect from 2013-2015, became Chair in November of 2015 to September of 2016.

Tenure and promotion external review for Dr. Daniel O. Brecker, University of Texas at Austin, summer of 2014.

Promotion (to full Professor) external review for Dr. Jason A. Rech, Miami University of Ohio, Summer, 2014.

Served as “Opponent” and Member of the Ph.D. Dissertation Examining Committee of Ms. Sirle Liivamägi at the University of Tartu, Estonia on June 18, 2015.

Served as a panelist for the NSF Graduate Research Fellowship Program (GRFP) 2015-2016.

Served as “Opponent” and Member of Ph.D. Dissertation Adjudication Committee of Dr. Lars Riber at the University of Oslo, Norway, on April 29, 2016.

Promotion and tenure (to Associate Professor) external review for Dr. Dustin E. Sweet, Texas Tech University, Fall, 2016.

Served on GSA Ad-Hoc Committee for Organizational Structure for spring of 2017, reviewing GSA Divisions.

### **Current Research Interests -**

My primary current research investigates, from a geologic perspective, the paleoclimate and paleolandscape record of soils preserved as paleosols in the geologic record, using modern soil analogs where appropriate. I am also interested in studies of Quaternary climate records based on fluvial and lacustrine systems, buried soils, and speleothems (cave deposits), as well as applications of micromorphological studies of surficial materials to solving environmental and hydrogeological problems.

### **Refereed Publications -**

- 1) Driese, S.G., Byers, C.W., and Dott, R.H., Jr., 1981, Tidal deposition in the basal Upper Cambrian Mt. Simon Formation in Wisconsin: *Journal of Sedimentary Petrology*, v. 51, p. 367-381.
- 2) Driese, S.G., 1983, Diagenetic aspects of Morgan Formation (Pennsylvanian) shelf carbonates, northern Utah and Colorado: *Brigham Young University Geology Studies*, v. 30, p. 1-18.
- 3) Driese, S.G., 1983, *Exercises in Sedimentology*: a review: *Journal of Geological Education*, v. 31, p. 237.
- 4) McSween, H.Y., Jr., Fronabarger, A.K., and Driese, S.G., 1983, Ferromagnesian chondrules in carbonaceous chondrites: *in* King, E.A., (ed.), *Chondrules and Their Origins*: Houston, TX, Lunar and Planetary Institute, p. 195-210.
- 5) Driese, S.G., and Dott, R.H., Jr., 1984, Model for sandstone-carbonate "cyclothems" based on the upper member of the Morgan Formation (Middle Pennsylvanian) of northern Utah and Colorado: *American Association of Petroleum Geologists Bulletin*, v. 68, p. 574-597.
- 6) Driese, S.G., Carr, T.R., and Clark, D.L., 1984, Quantitative analysis of Pennsylvanian shallow-water conodont biofacies, northern Utah and Colorado, *in* Clark, D.L.(ed.), *Conodont Biofacies and Provincialism*: Geological Society of America Special Paper 196, p. 233-250.
- 7) Driese, S.G., 1985, Interdune pond carbonates, Weber Sandstone (Pennsylvanian-Permian), northern Utah and Colorado: *Journal of Sedimentary Petrology*, v. 55, p. 187-195.
- 8) Driese, S.G., and Dott, R.H., Jr., 1986, Model for sandstone-carbonate "cyclothems" based on the upper member of the Morgan Formation (Middle Pennsylvanian) of northern Utah and Colorado: Reply: *American Association of Petroleum Geologists Bulletin*, v. 70, p. 206.
- 9) Driese, S.G., 1987, An analysis of large-scale ebb-dominated tidal bedforms: evidence for tidal bundles in the Lower Silurian Clinch Sandstone of East Tennessee: *Southeastern Geology*, v. 27, p. 121-140.
- 10) Cudzil, M.R., and Driese, S.G., 1987, Fluvial, tidal and storm sedimentation in the Chilhowee Group (Lower Cambrian), northeastern Tennessee, U.S.A.: *Sedimentology*, v. 34, p. 861-883.
- 11) Easthouse, K.A., and Driese, S.G., 1988, Paleobathymetry of a Silurian shelf system: application of proximity trends and trace fossil distributions: *PALAIOS*, v. 3, p. 473-486.
- 12) Walker, D., Driese, S.G., and Hatcher, R.D., Jr., 1989, Paleotectonic significance of the quartzite of the Sauratown Mountains window, North Carolina: *Geology*, v. 17, p. 913-917.
- 13) Broadhead, T.W., Driese, S.G., and Harvey, J.L., 1990, Gravitational settling of conodont elements: Implications for paleoecologic reconstructions of conodont assemblages: *Geology*, v. 18, p. 850-853.
- 14) Brewer, R.C., Bolton, J.C., and Driese, S.G., 1990, A new classification of sandstone: *Journal of*



- Geological Education, v. 38, p. 343-347.
- 15) Broadhead, T.W., Driese, S.G., and Harvey, J.L., 1990, Fluorescent tracers for observation of transport behavior of skeletal sediment particles: *Journal of Paleontology*, v. 64, p. 843-844.
  - 16) Bolton, J.C., and Driese, S.G., 1990, The determination of substrate conditions from the orientations of solitary rugose corals: *PALAIOS*, v. 5, p. 479-483.
  - 17) Driese, S.G., and Foreman, J.L., 1991, Traces and related chemical changes in a Late Ordovician paleosol *Glossifungites* ichnofacies, southern Appalachians, USA: *Ichnos*, v. 1, p. 183-194.
  - 18) Walker, D., and Driese, S.G., 1991, Constraints on the position of the Precambrian-Cambrian boundary in the southern Appalachians: *American Journal of Science*, v. 291, p. 258-283.
  - 19) Foreman, J.L., Walker, K.R., Weber, L.J., Driese, S.G., and Dreier, R.B., 1991, Slope and basinal carbonate deposition in the Nolichucky Shale (Upper Cambrian), East Tennessee: Effect of carbonate suppression by siliciclastic deposition on basin-margin morphology: *in* Lomando, A.J., and Harris, P.M. (eds.), *Mixed Carbonate-Siliciclastic Sequences: SEPM Core Workshop No. 15*, Tulsa, OK, p. 511-539.
  - 20) Driese, S.G., Fischer, M.W., Easthouse, K.A., Marks, G.T., Gogola, A.R. and Schoner, A.E., 1991, Model for genesis of shelf sandstone sequences, southern Appalachians: paleoenvironmental reconstruction of an Early Silurian shelf system, *in* Swift, D.J.P., Oertel, G.F., Tillman, R.W., and Thorne, J.A. (eds.), *Shelf Sand and Sandstone Bodies: Geometry, Facies and Sequence Stratigraphy: International Association of Sedimentologists Special Publication No. 14*, p. 309-338.
  - 21) Mora, C.L., Driese, S.G., and Seager, P.A., 1991, Carbon dioxide in the Paleozoic atmosphere: evidence from carbon isotope compositions of pedogenic carbonate: *Geology*, v. 19, p. 1017-1020.
  - 22) Driese, S.G., and Foreman, J.L., 1992, Paleopedology and paleoclimatic implications of Late Ordovician vertic paleosols, southern Appalachians: *Journal of Sedimentary Petrology*, v. 62, p. 71-83.
  - 23) Driese, S.G., Mora, C.I., Cotter, E., and Foreman, J.L., 1992, Paleopedology and stable isotope geochemistry of Late Silurian vertic paleosols, Bloomsburg Formation, central Pennsylvania: *Journal of Sedimentary Petrology*, v. 62, p. 825-841.
  - 24) Driese, S.G., and Mora, C.I., 1993, Physico-chemical environment of pedogenic carbonate formation in Devonian vertic palaeosols, central Appalachians, U.S.A.: *Sedimentology*, v. 40, p. 199-216.
  - 25) Mora, C.I., and Driese, S.G., 1993, A steep, mid- to late Paleozoic decline in atmospheric CO<sub>2</sub>: evidence from the soil carbonate CO<sub>2</sub> paleobarometer: *Chemical Geology*, v. 107, p. 217-219.
  - 26) McReynolds, J.A., and Driese, S.G., 1994, Paleoenvironments and facies relationships of the Rome Formation (Lower Cambrian) along a segment of Haw Ridge in Anderson and Roane Counties, Tennessee: *Southeastern Geology*, v. 34, p. 1-24.
  - 27) Dorsch, J., Bambach, R.K., and Driese, S.G., 1994, Basin-rebound origin for the "Tuscarora unconformity" in southwestern Virginia and its bearing on the nature of the Taconic orogeny: *American Journal of Science*, v. 294, p. 237-255.
  - 28) Driese, S.G., Srinivasan, K., Mora, C.I., and Stapor, F.W., 1994, Paleoweathering of Monteagle Limestone preceding development of Lower Chesterian transgressive systems tract and sequence boundary in middle Tennessee and northern Alabama: *Geological Society of America Bulletin*, v. 106, p. 866-878.
  - 29) Walker, D., Simpson, E.L., and Driese, S.G., 1994, Paleogeographic influences on sandstone composition along an evolving passive margin: an example from the basal Chilhowee Group

- (uppermost Proterozoic to Lower Cambrian) of the south-central Appalachians: *Journal of Sedimentary Research*, v. A64, p. 807-814.
- 30) Broadhead, T.W., and Driese, S.G., 1994, Experimental and natural abrasion of conodonts in marine and eolian environments: *PALAIOS*, v. 9, p. 546-560.
  - 31) Dorsch, J., and Driese, S.G., 1995, The Taconic foredeep as sediment sink and sediment exporter: Implications for the origin of the white quartzarenite blanket (Upper Ordovician-Lower Silurian) of the central and southern Appalachians: *American Journal of Science*, v. 295, p. 201-243.
  - 32) Driese, S.G., Srinivasan, K., Mora, C.I., and Stapor, F.W., 1995, Paleoweathering of Monteagle Limestone preceding development of Lower Chesterian transgressive systems tract and sequence boundary in middle Tennessee and northern Alabama: Reply to Discussion: *Geological Society of America Bulletin*, v. 107, p. 998-1001.
  - 33) Driese, S.G., Simpson, E.L., and Eriksson, K.A., 1995, Redoximorphic paleosols in alluvial and lacustrine deposits, 1.8 Ga Lochness Formation, Mt. Isa, Australia: Pedogenic processes and implications for paleoclimate: *Journal of Sedimentary Research*, v. A65, p. 675-689.
  - 34) Caudill, M.R., Driese, S.G., and Mora, C.I., 1996, Preservation of a paleo-Vertisol and an estimate of Late Mississippian paleoprecipitation: *Journal of Sedimentary Research*, v. 66, p. 58-70.
  - 35) Mora, C.I., Driese, S.G., and Colarusso, L.A., 1996, Middle to Late Paleozoic atmospheric CO<sub>2</sub> from soil carbonate and organic matter: *Science*, v. 271, p. 1105-1107.
  - 36) Caudill, M.R., Driese, S.G., and Mora, C.I., 1997, Physical compaction of vertic palaeosols: Implications for burial diagenesis and palaeoprecipitation estimates: *Sedimentology*, v. 44, p. 673-685.
  - 37) Driese, S.G., Mora, C.I., and Elick, J.M., 1997, Morphology and taphonomy of root and stump casts of the earliest trees (Middle to Late Devonian), Pennsylvania and New York, U.S.A.: *PALAIOS*, v. 12, p. 524-537.
  - 38) Cotter, E., and Driese, S.G., 1998, Incised valley fills and other evidence of sea-level fluctuations affecting deposition of the Catskill Formation (Upper Devonian), Appalachian foreland basin of Pennsylvania: *Journal of Sedimentary Research*, v. 68, p. 347-361.
  - 39) Elick, J.M., Driese, S.G., and Mora, C.I., 1998, Very large plant and root traces from the Early to Middle Devonian: Implications for early terrestrial ecosystems and pCO<sub>2</sub> estimations: *Geology*, v. 26, p. 143-146.
  - 40) Driese, S.G., Caudill, M.R., and Srinivasan, K., 1998, Late Mississippian to Early Pennsylvanian paleokarst in east-central Tennessee: Field, petrographic, and stable isotope evidence: *Southeastern Geology*, v. 37, p. 189-204.
  - 41) Mora, C.I., Sheldon, B.T., Elliott, W.C., and Driese, S.G., 1998, An oxygen isotope study of illite and calcite in three Appalachian Paleozoic vertic paleosols: *Journal of Sedimentary Research*, v. 68, p. 456-464.
  - 42) Brett, C.E., Baarli, B.G., Chowns, T., Cotter, E., Driese, S., Goodman, W., and Johnson, M.E., 1998, Early Silurian condensed horizons, ironstones, and sequence stratigraphy in the Appalachian foreland basin, *in* Landing, E. (ed.), *Silurian cycles: Linkages of dynamic stratigraphy with atmospheric, oceanic, and tectonic changes*: *New York State Museum Bulletin* 491, p. 89-143.
  - 43) Dunagan, S.P., and Driese, S.G., 1999, Control of terrestrial stabilization on Late Devonian palustrine carbonate deposition: Catskill Magnafacies, New York: *Journal of Sedimentary Research*, v. 69, p. 772-783.

- 44) Mora, C.I., and Driese, S.G., 1999, Palaeoclimatic significance and stable carbon isotopes of Palaeozoic red bed paleosols, Appalachian Basin, USA and Canada: *in* Thiry, M., and Simon-Coinçon, R. (eds.), Palaeoweathering, palaeosurfaces and related continental deposits: International Association of Sedimentologists Special Publication No. 27, p. 61-84.
- 45) Driese, S.G., Mora, C.I., Stiles, C.A., Joeckel, R.M., and Nordt, L.C., 2000, Mass-balance reconstruction of a modern Vertisol: Implications for interpretations of geochemistry and burial alteration of paleoVertisols: *Geoderma*, v. 95, p. 179-204.
- 46) Ashley, G.R., and Driese, S.G., 2000, Paleopedology and paleohydrology of a volcanoclastic paleosol: Implications for Early Pleistocene paleoclimate record, Olduvai Gorge, Tanzania: *Journal of Sedimentary Research*, v. 70, p. 1065-1080.
- 47) Driese, S.G., Mora, C.I., and Elick, J.M., 2000, The paleosol record of increasing plant diversity and depth of rooting and changes in atmospheric pCO<sub>2</sub> in the Siluro-Devonian, *in* Gastaldo, R.A., and DiMichele, W.A. (eds.), Phanerozoic Terrestrial Ecosystems, A Short Course: New Haven, CT, The Paleontological Society Papers, v. 6, p. 47-61.
- 48) Driese, S.G., and Mora, C.I., 2001, Diversification of Siluro-Devonian plant traces in paleosols and influence on estimates of paleoatmospheric CO<sub>2</sub> levels, *in* Gensel, P.G., and Edwards, D. (eds.), Plants invade the land: Evolutionary and environmental perspectives: New York, Columbia University Press, p. 237-253.
- 49) Driese, S.G., McKay, L.D., and Penfield, C.P., 2001, Lithologic and pedogenic influences on porosity distribution and groundwater flow in fractured sedimentary saprolite: an application of environmental sedimentology: *Journal of Sedimentary Research*, v. 71, p. 843-857.
- 50) Stiles, C.A., Mora, C.I., and Driese, S.G., 2001, Pedogenic iron-manganese nodules in Vertisols: a new proxy for paleoprecipitation?: *Geology*, v. 29, p. 943-946.
- 51) Driese, S.G., and Mora, C.I., 2002, Paleopedology and stable isotope geochemistry of Late Triassic (Carnian-Norian) paleosols, Deep River Basin, North Carolina: Implications for paleoclimate and paleoatmospheric pCO<sub>2</sub>: *in* Renaut, R.W., and Ashley, G.M. (eds.), Sedimentation in continental rifts: SEPM Special Publication No. 73, p. 207-218.
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- 53) Tobin, K.J., and Driese, S.G., 2003, Echinoderm stabilization associated with a paleokarst surface at the Mississippian-Pennsylvanian boundary in Tennessee: *Journal of Sedimentary Research*, v. 73, p. 206-216.
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- 130) DiPietro, L.M., Driese, S.G., Nelson, T.W., and Harvill, J.L., 2017, Variations in late Quaternary wind intensity from grain-size partitioning of loess deposits in the Nenana River Valley, Alaska: *Quaternary Research*: v. 87, p. 258-274.

#### **Manuscripts in Review, in Revision, or in Preparation –**

- 131) Driese, S.G., Medaris, L.G., Jr., Kirsimäe, K., Somelar, P., and Stinchcomb, G.E., in revision, Geochemical constraints on duration of weathering for Neoproterozoic Baltic paleosol: to be submitted to *Precambrian Research*.
- 132) Beverly, E.J., Driese, S.G., Peppe, D.J., Blegen, N., Faith, J.T., and Tryon, C.A., in preparation, Reconstruction of Late Pleistocene paleoenvironments using bulk geochemistry of paleosols from the Lake Victoria Region: to be submitted to *Frontiers in Geosciences Special Issue*, edited by E.J. Beverly and G.E. Stinchcomb.
- 133) DiPietro, L.M., Driese, S.G., and Goebel, T., in preparation, Deposition and pedogenesis of periglacial sediments and buried soils at the Serpentine Hot Springs archaeological site, Seward Peninsula, AK: to be submitted to *Catena*.
- 134) Li, Z.-H., Driese, S.G., Buckles, J.A., Cheng, H., Harvill, J.A., Mora, C.I., Edwards, L.R., Horn, S.P., and Kocis, J., in revision, A 3300-year drought began abruptly at 6,000 yr BP in the southeastern USA: to be resubmitted to *Geology*.
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- 136) Lukens, W.E., Driese, S.G., Peppe, D.J., and Loudermilk, M., in review, Sedimentology, stratigraphy and paleoclimate at the Coffee Ranch Fossil Site in the Texas Panhandle: submitted to *Palaeogeography, Palaeoclimatology, Palaeoecology*.
- 137) Lukens, W.E., Lehmann, T., Driese, S.G., Peppe, D.J., Fox, D.L., and McNulty, K., in preparation, An Early Miocene Critical Zone at Karungu, western Kenya: Evidence for open habitats with few primate remains: to be submitted to *Frontiers in Geosciences Special Issue*, edited by E.J. Beverly and G.E. Stinchcomb.
- 138) Medaris, L.G., Jr., Driese, S.G., and Stinchcomb, G.E., in review, The Paleoproterozoic Baraboo paleosol revisited: Quantifying mass fluxes of weathering and metasomatism, chemical climofunctions, and atmospheric pCO<sub>2</sub> in a chemically heterogeneous protolith:

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- 139) Medaris, L.G., Jr., Driese, S.G., Stinchcomb, G.E., Fournelle, J.H., Lee, S., Xu, H., DiPietro, L.M., Gopon, P., and Stewart, E, in review, Mass fluxes of chemical weathering in North American sub-Cambrian paleosols: Implications for climatic conditions during formation of the Great Unconformity: submitted to Journal of Geology.
- 140) Michel, L.A., Driese, S.G., Fox, D., Garrett, N., McNulty, K.P., and Peppe, D.J., in revision, Paleopedological and geochemical interpretation of a late Early Miocene paleoforest time-slice, upper Hiwegi Fm., Rusinga Island, Lake Victoria: to be submitted to PALAIOS.
- 141) Mintz J.S., and Driese, S.G., in review, Reappraisal of climatic factors of soil formation in paleoclimate reconstructions from paleosols: submitted to Journal of Sedimentary Research.
- 142) Peppe, D.J., Beverly, E.J., Van Plantinga, A., Blegen, N., Driese, S.G., Faith, J.T., and Tron, C.A., in preparation, Geology of the Late Pleistocene Artifact- and Fossil-Bearing Wasiriya Formation, northeastern Lake Victoria Basin, western Kenya: to be submitted to Frontiers in Geosciences Special Issue, edited by E.J. Beverly and G.E. Stinchcomb.
- 143) Stewart, R.M., Koch, J., Carr, K., Beck, D., Stinchcomb, G.W., Driese, S.G., and Vento, F., in press, Chapter 4 - The Paleoindian occupation at Nesquehoning Creek (36CR142) Carbon County, Pennsylvania: in Gingerich, J.A.M. (ed.), In the Eastern Fluted Point Tradition, Volume II, p, 194-300.
- 144) Stinchcomb, G.E., Nordt, L.C., Lukens, W.E., Driese, S.G., and Peppe, D.J., in preparation, Extreme early Eocene precipitation and runoff inferred from fossil-soil geochemistry: to be submitted to Nature.

#### **Refereed Publications Reprinted in Special Publication Volumes -**

- 1) Driese, S.G., Byers, C.W., and Dott, R.H., Jr., 1987, Tidal deposition in the basal Upper Cambrian Mt. Simon Formation in Wisconsin, *in* Cant, D.J., and Hein, F.J. (eds.), Approaches to Interpretation of Sedimentary Environments: Society of Economic Paleontologists and Mineralogists Reprint Series No. 11, p. 199-213 (reprinted from Driese *et al.*, 1981, Journal of Sedimentary Petrology, v. 51, p. 367-381).
- 2) Driese, S.G., and Dott, R.H., Jr., 1990, Model for sandstone-carbonate "cyclothems" based on upper member of Morgan Formation (Middle Pennsylvanian) of northern Utah and Colorado, *in* Budd, D.A., and Harris, P.M. (eds.), Carbonate-Siliciclastic Mixtures: Soc. Econ. Paleont. Mineral. Reprint Series No. 14, p. 223-246 (reprinted from Driese and Dott, 1984, American Association of Petroleum Geologists Bulletin, v. 68, no. 5, p. 574-597).
- 3) Driese, S.G., 1990, Interdune pond carbonates, Weber Sandstone (Pennsylvanian-Permian), northern Utah and Colorado, *in* Budd, D.A., and Harris, P.M. (eds.), Carbonate-Siliciclastic Mixtures: Society of Economic Paleontologists and Mineralogists Reprint Series No. 14, p. 133-141 (reprinted from Driese, 1985, Journal of Sedimentary Petrology, v. 55, p. 187-195).
- 4) Sankey, J.T., Atchley, S., Nordt, L., Dworkin, S., and Driese, S., 2007, Vertebrates and paleoclimate from a *Chasmosaurus mariscalensis* bonebed, Late Cretaceous (late Campanian), Big Bend National Park, Texas, *in* *Ceratopsian Symposium Short Papers, Abstracts, and Programs*. Royal Tyrrell Museum of Paleontology, Drumheller, Alberta, September 22-23, 2007. pp. 134-139.

#### **Encyclopedia Article (peer-reviewed)**

- 1) Driese, S.G., 2009, Paleosols, pre-Quaternary, in Gornitz, V. (ed.), *Encyclopedia of Paleoclimatology and Ancient Environments*: New York, Kluwer Academic Publishers, p. 748-751.

### **Opinion/Editorial and Commentary Articles (not peer-reviewed)**

- 1) Young, M.H., Driese, S.G., and Brevik, E.C., 2014, Connecting modern soil and paleosol communities: Improving climate proxies and our understanding of Earth's Critical Zone: *GSA Today*, v. 24, no. 10, p. 28.
- 2) Driese, S.G., Young, M.H., and Brevik, E.C., 2014, Connecting modern soil and paleosol communities: Improving climate proxies and our understanding of Earth's Critical Zone: *CSA News*, v. 59, no. 10, p. 24-25.

### **Competitive Grants Received in Support of Research –**

- 1) ARCO Exploration, 1978-1981, \$19.2K, RA stipend and field support for doctoral dissertation in Utah and Colorado.
- 2) Appalachian Basin Industrial Associates, 1984, \$2.5K; 1986, \$2.5K; 1988, \$1K, (Funds for support of graduate student research in the Appalachian region)
- 3) Univ. of Tennessee Faculty Research Incentive Grant, 1985-1986, \$2K, "Sedimentology of Lower Paleozoic shelf deposits in the southern Appalachians"
- 4) Univ. of Tenn./Oak Ridge National Laboratory Science Alliance Research Incentive Award, 1985-1997, \$53K
- 5) Petroleum Research Fund, Grant 19731-AC2, 6/1/88-8/31/91, \$39.5K, "Calibration of 3-D-faciespattern to sedimentation processes on sandy siliciclastic shelves using the Silurian of the southern Appalachians as a natural laboratory"
- 6) University of Tennessee, College of Liberal Arts Research Incentive Award (with T.W. Broadhead), 12/9/88-6/30/89, \$11.1K, "Proposal for construction of a recirculating laboratory flume"
- 7) University of Tennessee, Faculty Professional Development Award, 1/23/90 to 6/30/91, \$1K, "Presentation of Paleosol research at 13th International Sedimentological Congress, Nottingham, England"
- 8) National Science Foundation, Earth Sciences Division (Geology & Paleontology), Grant EAR-9004300, (with T.W. Broadhead), 7/15/90-7/15/92, \$47K, "Experimental models for hydrodynamic transport of conodonts (Chordata) in shallow marine environments"
- 9) Petroleum Research Fund, Grant 25678-AC8-C, (with C.I. Mora), 6/1/92-8/31/94, \$43K, "Stable isotope composition of pedogenic carbonate in central and southern Appalachian red-bed sequences: monitor of elevated P<sub>CO2</sub> during the Paleozoic?"
- 10) National Science Foundation, Earth Sciences Division (Geology & Paleontology), Grant EAR-9206540, (with C.I. Mora), 7/1/92-7/1/94, \$99.5K, "Collaborative research: Morphology, geochemistry and stable isotope compositions of vertic paleosols as indicators of Paleozoic paleoclimate" (grant also includes an additional \$46K for collaborator D.E. Fastovsky of Univ. of Rhode Island; total amount of grant is therefore \$146K)
- 11) National Science Foundation, Earth Sciences Division, (Instrumentation and Facilities), Grant EAR-9206617, (with W.M. Dunne and C.I. Mora), 8/1/92-8/1/94, \$16.9K, "A cathodoluminescence microscope for investigating 3-dimensional fold evolution, pedogenic

- carbonate precipitation and metamorphic fluid-rock interaction" (grant is in addition to \$12K matching funds pledged by UTK Science Alliance, towards purchase of CL instrument).
- 12) National Science Foundation, Earth Sciences Division (Geology & Paleontology), Grant EAR-9418183, (with C.I. Mora), 2/1/95-2/1/98, \$185.6K, "Changes in paleosol morphology and geochemistry associated with mid-Paleozoic afforestation and decline in atmospheric pCO<sub>2</sub>"
  - 13) SARIF (Scholarly Research Activities Fund) Summer Graduate Research Assistantship award for Ph.D. student Jennifer M. Elick, 5/15/98 to 8/15/98, \$3K.
  - 14) National Science Foundation, Earth Sciences Division (Geology and Paleontology), Grant EAR-9814607 (with C. I Mora), 1/1/99-1/1/2002, \$144K, Collaborative research: Evaluating the climate sensitivity of Paleozoic paleoVertisols based on analysis of a modern Vertisol climosequence" (grant also includes an additional \$90K for collaborator Lee Nordt of Baylor University; total amount of grant is therefore \$234K).
  - 15) SARIF (Scholarly Research Activities Fund) Infrastructure and Equipment Fund award, \$100K, "Acquisition of a new X-ray fluorescence analyzer for determining chemistry of solid and synthetic materials", 6/1/00 to 8/1/00.
  - 16) Misra, K.C., Driese, S.G., Mora, C.I., Taylor, L.A., Labotka, T.C., and Hatcher, R.D., Jr., 6/1/00 to 8/31/01, \$118.6K, Acquisition of a wavelength dispersive, automated X-ray fluorescence (XRF) spectrometer system: National Science Foundation, Major Research Instrumentation (MRI) Program.
  - 17) Driese, S.G., 11/1/01 to 11/01/02, \$10.5K, Technical support for the NABIR Field Research Center: Department of Energy, Oak Ridge National Laboratory.
  - 18) Mora, C.I., Orvis, K.H., Cooper, L., Driese, S.G., Grebmeir, J., Grissino-Mayer, H.P., Harden, C.P., Horn, S.P., 2001-2006, \$500K, A new initiative for the study of global environmental change: University of Tennessee, President's Initiative for Teaching, Research, and Service (PITRS) Program.
  - 19) Ashley, G.R., and Hover, V.C., 2002, 6/1/02-6/1/03, Paleoclimate evidence from freshwater wetlands in East African Rift (note: although grant was awarded through Rutgers University, S.G. Driese helped write proposal and is included on the grant with an \$8K subcontract for field and laboratory expenses, together with Goman (Cornell), Owen (Hong Kong), and Renaut (Saskatchewan)): NSF Geology and Paleontology and International Programs (\$74K awarded for 1 year).
  - 20) Driese, S.G., 2007, with 4 University of Kansas Geology faculty members (Ludvigsen, G., Fowle, D.A., González, L.A., and Roberts, J.A., KU as lead institution), Collaborative Research: Actualistic calibration of the sphaerosiderite paleoclimate proxy: NSF Geobiology and Low-temperature Geochemistry program award EAR-0643152- \$373,647 awarded for three years, commencing 07/01/07 - (Note: Baylor University share of grant is \$118,967 for three years, commencing July 1, 2007).
  - 21) Driese, S.G., 2009, with the University of Tennessee-Knoxville as the lead institution (with Z.-H. Li as PI/PD, and S.P. Horn as co-PIs), Collaborative research: Pleistocene-Holocene climate variability of the southern Appalachian region, southeastern U.S.: NSF EAR 0823131 award from Paleo-Perspectives on Climate Change (P2C2) program, \$390,919 awarded for 3 years (Note: Baylor University share of grant for three years is \$61,057 commencing October 1, 2009).
  - 22) Driese, S.G., and Nordt, L.C., 2009, with the University of Texas-Austin as the lead institution (with D.O. Breecker as PI/PD), Collaborative research: Calibrating the paleosol

carbonate CO<sub>2</sub> paleobarometer for vertic paleosols by monitoring soil CO<sub>2</sub> in modern Vertisols: NSF EAR-0921356 award from Geobiology and Low-Temperature Geochemistry program, \$292,200 awarded for 3 years (Note: Baylor University share of grant for three years is \$96,957, commencing August 15, 2009).

- 23) Driese, S.G., 2010, Joint SEPM-NSF Workshop: Paleosols and Surface Soil Analog Systems: NSF EAR-1047609 award from Sedimentary Geology and Paleobiology program (\$20,000 awarded from 09/01/10 to 08/31/11).
- 24) Driese, S.G., and Dworkin, S.I., 2012, Hydrogen stable isotope analysis of speleothem fluid inclusions: Baylor University, Faculty Research Investment Program (FRIP), \$17,131 awarded for 1 year, commencing June 1, 2012.
- 25) Hockaday, W.C., Driese, S.G., Farmer, P.J., Lau, B.L.T., and Peppe, D.J., 2012, Early Career: Acquisition of a nuclear magnetic resonance facility for Earth Science research at Baylor University: NSF-EAR 1132124 award from Instrumentation and Facilities program, grant is for \$92,801, awarded from 09/01/12 to 08/31/13.
- 26) Peppe, D.J., and Driese, S.G., 2012, Collaborative research: IPG: Research on East African catarrhine and hominoid evolution: NSF- BCS 1241812 award from BCS-IPG program, grant is for \$152,906, awarded from 01/01/13 to 12/31/17.

#### **Grant Proposals Submitted -**

- 1) Driese, S.G., 1982, Proposal for a study of Pennsylvanian cyclic sedimentation - a comparison between sequences in the eastern and western United States: (submitted to Univ. of Tenn. Faculty Research, Development and Leave Award Program).
- 2) Eriksson, K.A., and Driese, S.G., 1983, A facies analysis of the Cambrian Chilhowee Group in Virginia and Tennessee: (submitted to the Petroleum Research Fund, American Chemical Society).
- 3) Driese, S.G., 1983, Proposal for a facies analysis of the Lodore Formation (Upper Cambrian), northern Utah and Colorado: (submitted to Univ. of Tenn. Faculty Research, Development and Leave Award Program).
- 4) Driese, S.G., 1984, Sedimentology of Lower Paleozoic shelf deposits in the southern Appalachians: (submitted to Petroleum Research Fund, American Chemical Society).
- 5) Driese, S.G., 1984, Presidential Young Investigator Awards: (submitted to National Science Foundation).
- 6) Driese, S.G., 1984, Sedimentology of Lower Paleozoic shelf deposits in the southern Appalachians: (submitted to Univ. of Tenn. Faculty Research, Development and Leave Award Program).
- 7) Driese, S.G., 1985, Depositional processes on terrigenous marine shelves: testing oceanographic models against process interpretations of a Silurian shelf sequence in Tennessee: (submitted to Petroleum Research Fund, American Chemical Society).
- 8) Driese, S.G., 1986, Early Silurian paleoenvironmental reconstruction of the Appalachian miogeocline: (submitted to Petroleum Research Fund, American Chemical Society).
- 9) Driese, S.G., 1987, Paleoenvironmental reconstruction of the Early Cambrian continental margin in East Tennessee: (submitted to the Petroleum Research Fund, American Chemical Society).
- 10) Driese, S.G., 1987, Dynamic (process-response) model of Early Silurian shelf and shoreface sedimentation: (submitted to National Science Foundation, Stratigraphy and Paleontology

Division of Earth Sciences).

- 11) Driese, S.G., 1987, Calibration of 3-D-facies pattern to sedimentation processes on sandy siliciclastic shelves using the Silurian of the southern Appalachians as a natural laboratory: (submitted to Petroleum Research Fund, American Chemical Society).
- 12) Driese, S.G., 1987, Tectonic significance of the stratigraphy and sedimentology of the Chilhowee Group (Latest Precambrian to Early Cambrian) of east Tennessee: implications for the opening of the Proto-Atlantic (Iapetus) ocean: (submitted to National Science Foundation, Stratigraphy and Paleontology Division of Earth Sciences).
- 13) Driese, S.G., and Broadhead, T.W., 1988, Proposal for construction of a recirculating laboratory flume: (submitted to College of Liberal Arts, Research Incentive Award Program).
- 14) Driese, S.G., and Misra, K.C., 1988, Tectonic and stratigraphic evolution of the Iapetus margin, southern Appalachians: (submitted to National Science Foundation, Stratigraphy and Paleontology Division of Earth Sciences).
- 15) Broadhead, T.W., and Driese, S.G., 1989a, Experimental models for hydrodynamic transport of conodonts (Chordata) in shallow marine environments: (submitted to National Science Foundation, Stratigraphy and Paleontology Division of Earth Sciences).
- 16) Broadhead, T.W., and Driese, S.G., 1989b, Experimental models for hydrodynamic transport of conodonts (Chordata) in shallow marine environments: (resubmitted to National Science Foundation, Stratigraphy and Paleontology Division of Earth Sciences).
- 17) Driese, S.G., 1989, Attendance at 13th International Association of Sedimentologists Congress, Nottingham, England: submitted to Faculty Professional Development Award Program).
- 18) Driese, S.G., and Mora, C.I., 1991, Stable isotope composition of pedogenic carbonate in central and southern Appalachian red-bed sequences: Monitor of elevated  $P_{CO_2}$  during the Paleozoic?: submitted to the Petroleum Research Fund, American Chemical Society for review at February 1992 panel meeting.
- 19) Mora, C.I., Driese, S.G., and Fastovsky, D.E., 1991, Collaborative research: Morphology, geochemistry and stable isotopic compositions of Paleozoic vertic paleosols as indicators of Paleozoic paleoclimate: submitted to National Science Foundation, Geology and Paleontology Division of Earth Sciences for review at March 1992 panel meeting.
- 20) Dunne, W.W., Driese, S.G., and Mora, C.I., 1991, A cathodoluminescence microscope for investigating 3-dimensional fold evolution, pedogenic carbonate precipitation and metamorphic fluid-rock interaction: submitted to National Science Foundation, Division of Earth Sciences, Instrumentation and Facilities for review at March 1992 panel meeting.
- 21) Wright, V.P., Driese, S.G., and Mora, C.I., 1993, Palaeozoic palaeoclimates and palaeoatmospheric composition of the U.K. and U.S.A.: submitted to NATO International Scientific Exchange Programmes, Collaborative Research Grant.
- 22) Driese, S.G., and Mora, C.I., 1994, Changes in the morphology and stable isotope compositions of paleosols accompanying a mid-Paleozoic decline in atmospheric  $CO_2$ : submitted to Petroleum Research Fund, American Chemical Society for review at November 1994 panel meeting.
- 23) Mora, C.I., and Driese, S.G., 1994, Changes in paleosol morphology and geochemistry associated with mid-Paleozoic afforestation and decline in atmospheric  $pCO_2$ : submitted to National Science Foundation, Geology and Paleontology Division of Earth Sciences for review at November 1994 panel meeting.
- 24) Ethridge, F.G., Sutton, S.J., Driese, S.G., and Mora, C.I., 1998, Collaborative research:

- Fountain Formation (Upper Paleozoic) paleosols in Colorado: Implications for floodplain reconstruction and paleoenvironments: submitted December 1, 1997 to National Science Foundation, Geology and Paleontology Division of Earth Sciences for review at March 1998 panel meeting.
- 25) Driese, S.G., and Drumm, E.C., 1998, Simulation of physical compaction in Vertisols: Implications for paleosol porosity evolution and models for Vertisol genesis: submitted January 15, 1998 to Petroleum Research Fund, American Chemical Society, for review at May 1998 panel meeting, resubmitted for November 1998 panel meeting.
  - 26) Driese, S.G., Mora, C.I., and Nordt, L.W., 1998, Collaborative research: Evaluating the climate sensitivity of Paleozoic paleoVertisols based on analysis of a modern Vertisol climosequence: submitted June 1, 1998 to National Science Foundation, Geology and Paleontology Division of Earth Sciences for review at October 1998 panel meeting.
  - 27) Taylor, L.A., Driese, S.G., Hatcher, R.D., Jr., McSween, H.Y., Jr., and Snyder, G.A., 1999, Acquisition of magnetic-sector, laser-ablation, ICP-mass-spectrometer for trace element and isotopic analyses: submitted February 16, 1999 to National Science Foundation, Major Research Instrumentation (MRI) Program, for review at May 1999 panel meeting.
  - 28) Driese, S.G., and McKay, L.D., 1999, Petrographic characterization of pore structure and hydraulic conductivity in sedimentary saprolite and their relationship to groundwater flow and contaminant migration: submitted in October 5, 1999 for UTK Professional Development Award for Faculty Research.
  - 29) Driese, S.G., 1999, Acquisition of a new X-ray fluorescence analyzer for determining chemistry of solid earth and synthetic materials: submitted on November 5, 1999 for UTK SARIF (Scholarly Activities Research Fund) Infrastructure and Equipment Award.
  - 30) Driese, S.G., and Mora, C.I., 1999, Collaborative research: Fountain Formation (Upper Paleozoic), Colorado: Channel-floodplain construction, paleoecology, paleoclimatology, and paleo-pCO<sub>2</sub> levels (collaborative research with Frank G. Ethridge and Sally J. Sutton, Colorado State University): submitted for December 1, 1999, NSF Geology and Paleontology Program (\$115,079 requested for 3 years).
  - 31) Driese, S.G., and McKay, L.D., 1999, Collaborative research: Sedimentologic and pedologic characterization of pore structure and hydraulic conductivity in sedimentary rock saprolite and their relationship to groundwater flow (collaborative research with Michael J. Vepraskas, North Carolina State University: submitted for December 1, 1999, NSF Geology and Paleontology Program (\$175,963 requested for 3 years).
  - 32) Misra, K.C., Driese, S.G., Mora, C.I., Taylor, L.A., Labotka, T.C., and Hatcher, R.D., Jr., 2000, Acquisition of a wavelength dispersive, automated X-ray fluorescence (XRF) spectrometer system: submitted January, 2000 to National Science Foundation, Major Research Instrumentation (MRI) Program, for review at May 2000 panel meeting (\$118,612 requested for 2 years).
  - 33) McKay, L.D., Driese, S.G., Baker, A.J., and Lenczewski, M.E., 2000, Southeast Regional Hazardous Substance Research Center: Fate and transport of creosote in fractured residual soils: submitted in March 2000 to Environmental Protection Agency for review at May 2000 panel meeting (\$651,226 requested for 5 years).
  - 34) McKay, L.D., and Driese, S.G., 2000, Collaborative research: Influence of depth-related pedogenic features and parent bedrock lithology on groundwater flow in sedimentary rock saprolite (collaborative research with Michael J. Vepraskas, North Carolina State University: submitted for December 1, 2000, NSF Hydrological Sciences Program (\$223,645 requested

- for 3 years).
- 35) Ashley, G.R., 2000, Paleoclimate evidence from freshwater wetlands in East African Rift (S.G. Driese helped write proposal and is included on the grant as a subcontract for field and laboratory expenses, together with Goman (Rutgers), Owen (Hong Kong), and Renaut (Saskatchewan)): submitted for December 1, 2000, NSF Geology and Paleontology Program (\$146,900 requested for 2 years).
  - 36) Perfect, E., Driese, S.G., McKay, L.D., and Baker, A.J., 2001, Influence of saprolite porosity and fracture networks on vadose zone hydrology: Multi-scale investigations: submitted for November 15, 2001, USDA-NRI Soils and Soil Biology Program (\$238,806 requested for three years).
  - 37) Mora, C.I., and Driese, S.G., 2001, Vertisol climo- and chronosequences in coastal Texas: Developing climate proxies to interpret paleosols in the geologic record: submitted for December 1, 2001, NSF Geology and Paleontology Program (\$235,309 requested for 3 years).
  - 38) Perfect, E., and Driese, S.G., 2002, Development and testing of a prefractal model for predicting soil hydrologic properties: submitted April 9, 2002, to Department of Energy, Basic Energy Sciences Program (\$269,180 requested for three years)
  - 39) Ashley, G.R., and Hover, V.C., 2002, Paleoclimate evidence from freshwater wetlands in East African Rift (note: although grant was awarded through Rutgers University, S.G. Driese helped write proposal and is included on the grant with an \$8K subcontract for field and laboratory expenses, together with Goman (Cornell), Owen (Hong Kong), and Renaut (Saskatchewan)): NSF Geology and Paleontology and International Programs (\$74K requested for 1 year).
  - 40) Driese, S.G., Harden, C.P., and Li, Z.-H., 2003, Interpreting climate record of Holocene and Pleistocene alluvial soils in the southeastern US using combined geochemical, pedologic, and geomorphic approaches: submitted for July 15, 2003, NSF Geology and Paleontology Program (\$198,077 requested for 3 years).
  - 41) Driese, S.G., and McKay, L.D., 2003, Genesis of saprolite (Cr Horizon) from weathered sedimentary rock: Influence of parent bedrock lithology, slope aspect, and pore-filling by pedogenic clays and Fe/Mn oxides: submitted for July 15, 2003, NSF Geology and Paleontology Program (\$188,251 requested for 3 years).
  - 42) Mora, C.I., and Driese, S.G., 2003, Collaborative Research: Vertisol climo- and chronosequences in coastal Texas: Developing climate proxies to interpret paleosols in the geologic record: submitted for July 15, 2003, NSF Geology and Paleontology Program (\$215,709 requested for 3 years).
  - 43) Horn, S.P., Driese, S.G., and Alvarado, G.E., 2003, Buried sediments, ancient plant fossils, and ice-age climates in Costa Rica: submitted for July 15, 2003, Women's International Science Collaboration (WISC) Program 2001-2003 (\$7990 requested for 1 year).
  - 44) Ashley, G.M., and Driese, S.G., 2004, Collaborative research: Geologic records of springs, wetlands and paleosols in the east African Rift, a high-resolution paleoclimate analysis: submitted for July 15, 2004, NSF Geology and Paleontology Program (\$250,362 requested for 2 years, with \$85,322 to go to Baylor University).
  - 45) Dunbar, J., Allen, P., Driese, S., and Dworkin, S., 2005, Sediment and nutrient trapping by aging flood control reservoirs: submitted to USDA-NRI, Watersheds Program (\$440,332 requested for 3 years, commencing September 1, 2005)



- 46) Driese, S.G., and Parker, D.F., 2005, Acquisition of a wavelength-dispersive XRF Instrument for Department of Geology, Baylor University: submitted to NSF Instrumentation and Facilities program (\$123,619 requested for one year, commencing January 1, 2006).
- 47) Driese, S.G., 2005, Technician Support: XRF and Other Analytical Instrumentation for Department of Geology, Baylor University: submitted to NSF Instrumentation and Facilities program (\$166,262 requested for three years, commencing January 1, 2006).
- 48) Driese, S.G., 2006, Evaluating evidence for high-frequency climate forcing of sedimentation and pedogenesis based upon Upper Mississippian paleosols in the U.S. Appalachian Basin and modern analog soils in Timor, Indonesia: submitted to ACS-PRF program 80,000 requested for two years, commencing January 1, 2007).
- 49) Driese, S.G., Ming, D.W., Runkel, A., and Ren, M., 2006, Pedogenic signatures of early Earth terrestrial weathering systems as partial analogs for past Martian weathering conditions: submitted to NASA, Mars Fundamental Research Program (\$244,413 requested for three years, commencing January 1, 2007).
- 50) Driese, S.G., and Parker, D.F., 2006, Acquisition of a wavelength-dispersive XRF instrument for Department of Geology, Baylor University: submitted to NSF Instrumentation and Facilities program (\$123,619 requested for one year, commencing January 1, 2007).
- 51) Driese, S.G., 2006, with 4 University of Kansas Geology faculty members (Ludvigsen, G., Fowle, D.A., González, L.A., and Roberts, J.A., KU as lead institution), Collaborative Research: Actualistic calibration of the sphaerosiderite paleoclimate proxy: submitted to NSF Geobiology and Low-temperature Geochemistry program (\$148,352 requested for three years, commencing June 1, 2007).
- 52) Driese, S.G., 2007, with Baylor University as the lead institution and S.P. Horn from the University of Tennessee as co-PI, Collaborative research: Differentiating paleoclimate and volcanogenic signatures in the Morrison Formation depositional basin, USA: submitted to NSF Sedimentary Geology and Paleobiology program (\$185,659 requested for two years, commencing June 1, 2007).
- 53) Dworkin, S.I., with R. Doyle (Biology), Z. Feng (Geology), S.G. Driese, R.S. King (Biology) MRI: Acquisition of a stable isotope mass spectrometer for paleoclimate and ecology research and training: submitted to NSF Major Research Instrumentation (MRI) program (\$342,185 for one year, commencing July 1, 2007).
- 54) Driese, S.G., 2007, with the University of Tennessee-Knoxville as the lead institution (with Z.-H. Li as PI/PD, and C.I. Mora and S.P. Horn as co-PIs), Collaborative research: Pleistocene-Holocene climate variability of the southern Appalachian region, southeastern U.S.: submitted to NSF Sedimentary Geology and Paleobiology program (\$56,794 requested for three years, commencing June 1, 2008).
- 55) Driese, S.G., 2008, with the University of Tennessee-Knoxville as the lead institution (with Z.-H. Li as PI/PD, and S.P. Horn as co-PIs), Collaborative research: Pleistocene-Holocene climate variability of the southern Appalachian region, southeastern U.S.: NSF EAR 0823131, submitted to NSF Paleo Perspectives on Climate Change (P2C2) program (\$61,057 requested for three years, commencing December 1, 2008).
- 56) Driese, S.G., and Atchley, S.C., 2008, Global implications for the rise of the Givetian (375 Ma) forests, Manokill Formation, Catskill State Park, New York, USA: NSF EAR- 0823508 submitted to NSF Paleo-Perspectives on Climate Change (P2C2) program (\$225,865 requested for three years, commencing July 1, 2008).
- 57) Driese, S.G., 2009, with the University of Tennessee-Knoxville as the lead institution (with

- Z.-H. Li as PI/PD, and S.P. Horn and D.M. Finklestein as co-PIs), Collaborative research: Multiproxy expression of the mid-Holocene Warm Period in the southern Appalachian region, southeastern U.S.: NSF BCS-0921183 submitted to NSF Geography and Spatial Science program (Note: Baylor University share of grant would be \$66,288 requested for three years, commencing August 1, 2008).
- 58) Driese, S.G., and Nordt, L.C., 2009, with the University of Texas-Austin as the lead institution (with D.O. Breecker as PI/PD), Collaborative research: Calibrating the paleosol carbonate CO<sub>2</sub> paleobarometer for vertic paleosols by monitoring soil CO<sub>2</sub> in modern Vertisols: NSF EAR-0921356 submitted to NSF Geobiology and Low-Temperature Geochemistry program (Note: Baylor University share of grant for three years is \$94,395, commencing June 1, 2009).
- 59) Driese, S.G., Bradley, W.L., Lau, B.L.T., Rushing, A., and Skurla, C., 2009, MRI-R2: Acquisition of an environmental SEM for Baylor University: submitted to NSF MRI-R2 program, grant is for one year totaling \$576,620, awarded from 06-01-10 to 05-31-11.
- 60) Park, K., Zhang, Goodman, Driese, S.G., and Lau, B.L.T., 2009, MRI-R2: Acquisition of high-pressure X-ray photoelectron spectroscopy: submitted to NSF MRI-R2 program, grant is for one year totaling \$785,351, awarded from 02-01-10 to 01-31-11.
- 61) Driese, S.G., 2010, Joint SEPM-NSF Workshop on Paleosols and Surface Soil Analog Systems: submitted to NSF Sedimentary Geology and Paleobiology program, grant is for one year requesting \$20,000, awarded from 09-01-10 to 08/31/11.
- 62) Hockaday, W.C., Driese, S.G., Farmer, P.J., Lau, B.L.T., and Peppe, D.J., 2011, Early Career: Acquisition of a nuclear magnetic resonance facility for Earth Science research at Baylor University: submitted to NSF-EAR Instrumentation and Facilities program, grant is for \$268,230, awarded from 08/01/11 to 08/01/12.
- 63) Cobb, G.P., Driese, S.G., Hockaday, W.C., Matson, C., and Trumble, S.J., 2012, MRI: Acquisition of Ion-Chromatograph Inductively Coupled Plasma Mass Spectrometer to Facilitate Integrated Environmental Assessments: submitted to NSF-EAR MRI program, grant is for \$353,147, awarded from 10/01/12 to 09/30/2014.
- 64) Driese, S.G., and Dworkin, S.I., 2012, Hydrogen stable isotope analysis of speleothem fluid inclusions: submitted to Baylor University Faculty Research Investment (FRIP) program, requested \$17,131, awarded from 06/01/12 to 05/31/13.
- 65) Driese, S.G., and DiPietro, L., 2012, Geoarchaeology of Owl Ridge: Using soils to understand the impacts of climate change on the peopling of the Americas, central Alaska, USA: submitted to Evolving Earth Foundation, requested \$3,000, awarded from 06/01/12 to 05/31/13.
- 66) Peppe, D.J., and Driese, S.G., 2012, Collaborative research: IPG: Research on East African catarrhine and hominoid evolution: submitted to NSF-BCS-IPG program, requested \$196,906, awarded from 01/01/13 to 12/31/17.
- 67) Driese, S.G., 2013, with St. Louis University as the lead institution (with A. Londoño as PI/PD), and with S.L. Forman, Univ., of Illinois-Chicago as co-PI): Collaborative research: Eolian, geomorphic and pedogenic record of the northern coastal Atacama desert: New insights into hydrologic and climate variability over the past 50 ka: NSF EAR-1323235 submitted to NSF Geomorphology program (note grant total is \$423,711 with Baylor University share of grant as \$89,012, commencing June 1, 2013).
- 68) Driese, S.G. (co-PI) with Nordt, L.C., Hockaday, W.C., and White, J.D., 2013, Southern Plains of Texas Critical Zone Observatory: Role of land cover/land biogeochemical and

hydrologic processes use changes in coupled biogeochemical and hydrologic processes (TAMU is lead institution with B. P. Mohanty as PI/PD): NSF EAR-Critical Zone Observatory, 09/01/13 through 08/31/18, \$4,999,776 requested, (Baylor subaward is \$659,819).

- 69) Nordt, L.C. (PI/PD), Atchley, S.C., Driese, S.G., Dworkin, S.I., and Hockaday, W.C., 2013, ELT collaborative research: Earth system response to climate change: Deep time Critical Zone Observatory at Petrified Forest National Park, Arizona: NSF EAR Sedimentary Geology and Paleobiology, Earth-Life Transitions program, \$1.5 M total requested, with \$930,507 share for Baylor University, 09/01/13 through 08/31/17.
- 70) Driese, S.G., and DiPietro, L.M., 2013, Doctoral Dissertation Improvement Grant: Contextualizing lithic assemblage variability in eastern Beringia – a pedological approach to central Alaskan Geoarchaeology: NSF BCS-1419207 submitted to Archaeology program, \$27,700 requested, 06/01/14 to 05/31/15.
- 71) Forman, S.L., and Driese, S.G. (plus other investigators at other institutions), 2014, Geoarchaeological study of Pleistocene relict beaches, west Lake Turkana, Kenya: submitted to Leakey Foundation, \$50K requested.
- 72) Driese, S.G., 2014, Exploratory stable isotope study of speleothem annual layers deposited during Middle Holocene 4.2 ka Mega-drought event and 5.2 ka *Tsuga* Decline, Raccoon Mountain Cave, Tennessee using SIMS: submitted to NSF Paleo Perspectives on Climate Change (P2C2) program (\$47,585 requested for one year, commencing June 1, 2015).
- 73) Driese, S.G., and Letourmy, Y., 2014, Impact of Carboniferous vegetation evolution on paleosols, Joggins Formation, Nova Scotia: Evolving Earth Foundation, \$2,000 requested, 06/01/2014 to 05/31/2015.
- 74) Driese, S.G., and Lukens, W.E., 2014, Biogeochemical reconstruction of a late Miocene landscape: Evolving Earth Foundation, \$1,925 requested, 06/01/2014 to 05/31/2015.
- 75) Driese, S.G., 2015, STEPPE PROPOSAL: Interdisciplinary Terrestrial Research Workshop: Integrated Approaches to Terrestrial Paleoenvironmental Reconstructions, \$7500 requested, 01/01/2016 to 03/31/2016.
- 76) Driese, S.G. (co-PI) with Forman, S.L., 2015, CNH-S: Investigating the response between middle to late Holocene hydrologic variability and social restructuring in the Middle Atlantic region, USA: (Murray State University, KY is lead institution with G.E. Stinchcomb as PI/PD): submitted to NSF EAR-CNH-1518387, 05/01/15 through 04/30/18, \$396,787 requested, (Baylor subaward amount is \$186,203).
- 77) Driese, S.G., 2016, Preliminary proposal: Ideas Lab on origin of life: submitted to NSF EF-Cross-EF Activities.

#### **Non-Competitive Grants Awarded or Administered -**

- 1) Tennessee Valley Authority, Graduate Intern Program, Agreement #TV-80107V, 05/06/91 to 08/15/94, \$150K, "Relationship between facies and hydraulic conductivities of fluvial and alluvial fan deposits"

#### **Technical Reports -**

Driese, S.G., and Dott, R.H., Jr., 1985, Geologic characteristics of sandstone deposits, *in* Croff, A.G., and others, Evaluation of Five Sedimentary Rocks Other Than Salt for High-level

Waste Repository Siting Purposes: Oak Ridge National Laboratory, CF - 85/2, v. 2, Appendix E, p. E.3-1 to E.3-115.

### **Laboratory Manuals -**

- 1) Driese, S.G., 1985, Sedimentary rocks: the product of surficial processes, *in* Misra, K.C. (ed.), *Laboratory Exercises in Physical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 41-56.
- 2) Driese, S.G., 1985, Sedimentary facies and environments, *in* Walker, K.R., and Broadhead, T.W. (eds.), *Laboratory Exercises in Historical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 1-16.
- 3) Driese, S.G., and McLaughlin, R.E., 1985, Pennsylvanian deltaic coal-forming environments, *in* Walker, K.R., and Broadhead, T.W. (eds.), *Laboratory Exercises in Historical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 113-128.
- 4) Driese, S.G., 1991, Siliciclastic sedimentary facies and environments, *in* Walker, K.R., Broadhead, T.W., and Bryan, J.R. (eds.), *Laboratory Exercises in Historical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 1-17.
- 5) Driese, S.G., 1991, Pennsylvanian deltaic coal-forming environments, *in* Walker, K.R., Broadhead, T.W., and Bryan, J.R. (eds.), *Laboratory Exercises in Historical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 129-144.
- 6) Driese, S.G., 1997, Sedimentary rocks: the product of surficial processes, *in* Misra, K.C. (ed.), *Laboratory Exercises in Physical Geology*: Winston-Salem, NC, Hunter Textbooks, Inc., p. 47-62.

### **Published Field Guides -**

- 1) Driese, S.G., and Walker, D. (ed.), 1988, Depositional History of Paleozoic Sequences, Southern Appalachians: Field Trip Guidebook, Society of Economic Paleontologists and Mineralogists Midcontinent Section, Volume 6: University of Tennessee, Department of Geological Sciences, Studies in Geology No. 19, 135 p.
- 2) Driese, S.G., Mora, C.I., and Walker, K.R. (eds.), 1992, Paleosols, Paleoweathering Surfaces, and Sequence Boundaries: Field Trip Guidebook, Society for Sedimentary Geology Midcontinent Section, Volume 10: University of Tennessee, Department of Geological Sciences, Studies in Geology No. 21, 115 p.
- 3) Driese, S.G. (ed.), 1993, Paleosols, Paleoclimate and Paleoatmospheric CO<sub>2</sub>; Paleozoic Paleosols of Central Pennsylvania: Field Trip Guidebook, International Association of Geochemistry and Cosmochemistry, 3rd International Symposium on Geochemistry of the Earth's Surface and SEPM (Society for Sedimentary Geology): University of Tennessee, Department of Geological Sciences, Studies in Geology No. 22, 137 p.
- 4) Driese, S.G. (compiler), 1995, Guidebook for Field Trip Excursions, Southeastern Section, GSA: University of Tennessee, Studies in Geology No. 24, 224 p.
- 5) Driese, S.G., 1996, Depositional history and facies architecture of a Silurian foreland basin, eastern Tennessee, *in* Broadhead, T.W. (ed.), *Sedimentary environments of Silurian Taconica: Fieldtrips to the Appalachians and southern craton of eastern North America*: University of Tennessee, Department of Geological Sciences, Studies in Geology No. 26, p. 68-106.

### **Published Short Course -**

- 1) Mora, C.I., Fastovsky, D.E., and Driese, S.G., 1993, Geochemistry and Stable Isotopes of Paleosols: A short course manual for the Annual Meeting of the Geological Society of America Convention: University of Tennessee, Department of Geological Sciences, Studies in Geology No. 23, 65 p.

### **Unpublished Short Course -**

- 1) Driese, S.G., and Nordt, L.C., 2012, Methods of Identification, Characterization, and Interpretation of Paleosols Preserved in Cores: A short course prepared for ExxonMobil Corp., July 25-26, 2012, 50 p.

### **Other Non-refereed Publications -**

- 1) Driese, S.G., Schoner, A.E., and McDonald, C.J., 1984, Sedimentology of the Poor Valley Ridge Member of the Clinch Sandstone (Lower Silurian), northeastern Tennessee and southwestern Virginia: Morgantown, WV, Appalachian Basin Industrial Associates Program, v. 6, p. 47-75.
- 2) Driese, S.G., 1986, Fairweather and storm shelf sequences, Rockwood Formation (Silurian), East Tennessee: Morgantown, WV, Appalachian Basin Industrial Associates Program, v. 10, p. 133-175.
- 3) Driese, S.G., Fischer, M.W., Easthouse, K.A., and Marks, G.T., 1987, Model for genesis of shelf sandstone sequences, southern Appalachians: paleoenvironmental reconstruction of an Early Silurian shelf system, in proceedings volume for 18th Annual Appalachian Petroleum Geology Symposium, *Rifts, Ramps, Reefs and Royalties*, p. 18-23.
- 4) McReynolds, J.A., and Driese, S.G., 1988, Paleoenvironments and facies relations of the Lower Cambrian Rome Formation on the U.S. Department of Energy Reservation, Oak Ridge Area in Roane and Anderson Counties, Tennessee: Morgantown, WV, Appalachian Basin Industrial Associates Program, v. 14, p. 187-196.

### **Abstracts and Invited Papers -**

- 1) Driese, S.G., 1979, Depositional environment of the Upper Cambrian Mt. Simon Formation in western Wisconsin (abst.): Geological Society of America, Abstracts with Programs, v. 11, p. 228.
- 2) Driese, S.G., 1980, Shallow marine trace assemblages in a Cambrian tidal sand body (abst.): American Association of Petroleum Geologists Bulletin, v. 64, p. 701.
- 3) Driese, S.G., Konopka, E.H., and Dott, R.H., Jr., 1982, Repetitive Pennsylvanian (Upper Carboniferous) eolian quartz sandstone and shallow marine carbonate deposition, northern Utah and northwestern Colorado, U.S.A. (abst.): 11th International Congress on Sedimentology, Hamilton, Ontario, Abstracts, p. 112.
- 4) Dott, R.H., Jr., Byers, C.W., Driese, S.G., Fielder, G.W., and Haddox, C.A., 1982, Large-scale Cambro-Ordovician bedforms in north-central U.S.A. (abst.): 11th International Congress on Sedimentology, Hamilton, Ontario, Abstracts, p. 73.

- 5) Driese, S.G., 1982, Model for sandstone-carbonate "cyclothems": the upper Morgan Formation, Utah and Colorado (abst.): Geol. Soc. America, Abst. w/Prog., v. 14, p. 447.
- 6) Driese, S.G., Carr, T.R., and Clark, D.L., 1983, Quantitative analysis of Pennsylvanian conodont biofacies patterns, northern Utah and Colorado (abst.): Geol. Soc. America, Abst. w/Prog., v. 15, p. 230.
- 7) Driese, S.G., 1984, Sedimentology of interdune carbonates, Weber Sandstone (Pennsylvanian-Permian), northern Utah and Colorado (abst.): 1st Annual Mid-year Meeting of Society of Economic Paleontologists and Mineralogists, San Jose. CA, Abstracts Volume I, p. 27.
- 8) Dott, R.H., Jr., Konopka, E.H., Kerr, D.R., and Driese, S.G., 1984, Pennsylvanian orthoquartzite-carbonate suite of western United States - sedimentology and paleogeography (abst.): 1st Annual Mid-year Meeting of S.E.P.M., San Jose, CA, Abstracts Volume I, p. 26-27.
- 9) Driese, S.G., 1985, Marine shelf storm deposits, Rockwood Formation (Silurian), east Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 17, p. 89.
- 10) Cudzil, M.R., and Driese, S.G., 1985, Sedimentary environments of the Lower Cambrian Chilhowee Group, northeastern Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 17, p. 86.
- 11) Chan, M.A., Kocurek, G., Driese, S.G., and Dott, R.H., Jr., 1985, Overview of complexities in eolian and marine interactions (abst.): 2nd Annual Mid-year Meeting of S.E.P.M., Golden, CO, Abstracts Volume II, p. 17.
- 12) Schoner, A.E., and Driese, S.G., 1985, Sedimentology of the Clinch Sandstone at Beans Gap, Grainger County, Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 17, p. 134.
- 13) Driese, S.G., 1986, Fairweather and storm shelf sequences, Rockwood Formation (Silurian), East Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 18, p. 218-219.
- 14) Driese, S.G., Fischer, M.W., Easthouse, K.A., and Schoner, A.E., 1986, Tidal and storm wave deposition in Lower Silurian shelf sequences, East Tennessee (abst.): Am. Assoc. Petrol. Geologists Bull., v. 70, p. 583-584.
- 15) Cudzil, M.R., and Driese, S.G., 1986, The Erwin Formation (Lower Cambrian) of northeast Tennessee: evidence for a storm-dominated shelf (abst.): Am. Assoc. Petrol. Geologists Bull., v. 70, p. 578.
- 16) Driese, S.G., Fischer, M.W., and Easthouse, K.A., 1986, Silurian siliciclastic and carbonate storm-shelf sequences, East Tennessee (abst.): 3rd Annual Mid-year Meeting of S.E.P.M., Raleigh, NC, Abstracts Volume III, p. 31.
- 17) Driese, S.G., 1987, An analysis of large-scale, ebb-dominated tidal bedforms: evidence for tidal bundles in the Lower Silurian Clinch Sandstone of east Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 19, p. 82.
- 18) Skelly, R.L., and Driese, S.G., 1987, Sedimentary environments of a fluvial-to-marine transition: the Lower Cambrian Chilhowee Group, southeast Tennessee (abst.): Geol. Soc. America, Abst. w/Prog., v. 19, p. 129-130.
- 19) Driese, S.G., and Easthouse, K.A., 1987, Paleobathymetric reconstruction of an Early Silurian shelf system, southern Appalachians (abst.): 4th Annual Mid-year Meeting of S.E.P.M., Austin, TX, Abstracts Volume IV, p. 23.
- 20) Skelly, R.L., Driese, S.G., and Cudzil, M.R., 1987, Facies variability within a fluvial-to-marine transition: examples from the Lower Cambrian Chilhowee Group, East Tennessee (abst.): 4th Annual Mid-year Meeting of S.E.P.M., Austin, TX, Abstracts Volume

IV, p. 78.

- 21) Driese, S.G., and Bolton, J.C., 1988, Model for genesis of shoreface and shelf sandstone sequences deposited within a Silurian foreland basin, southern Appalachians (abst.): presented at 1988 SEPM Research Conference "Shelf Sedimentation: Events and Rhythms", held in Santa Cruz, CA, June 26 - July 1, 1988. (Abstracts Volume, p. 16).
- 22) Driese, S.G., and Bolton, J.C., 1988, Model for genesis of shoreface and shelf sandstone sequences deposited within a Silurian foreland basin, southern Appalachians (abst.): 5th Annual Meeting of S.E.P.M., Columbus, OH, Abstracts Volume V, p. 15-16.
- 23) McReynolds, J.A., and Driese, S.G., 1988, The Rome Formation of East Tennessee is a mixed carbonate and siliciclastic sequence, a different perspective (abst.): 5th Annual Mid-year Meeting of S.E.P.M., Columbus, OH, Abstracts Volume V, p. 35.
- 24) Driese, S.G., and Walker, D., 1989, Constraints on the location of the Precambrian-Cambrian boundary in the southern Appalachians: Geol. Soc. America, Abst. w/Prog., v. 21, no. 3, p. 13.
- 25) Driese, S.G., and Foreman, J.L., 1989, Sedimentology and geochemistry of Late Ordovician paleosols, Juniata Formation, southern Appalachians: Geol. Soc. America, Abst. w/Prog., v. 21, no. 2, p. 11-12.
- 26) Bolton, J.C., and Driese, S.G., 1989, Evaluating tectonic vs. eustatic controls in terrigenous shelf sequences: A new approach: Geol. Soc. America, Abst. w/Prog., v. 21, no. 3, p. 4-5.
- 27) Brewer, R.C., Bolton, J.C., and Driese, S.G., 1989, Classification of sandstone: Is there an ideal scheme? Discussion and proposal: Geol. Soc. America, Abst. w/Prog., v. 21, no. 3, p. 5.
- 28) Walker, D., and Driese, S.G., 1989, Paleogeographic significance of the quartzites of Pilot Mountain, Surry County, North Carolina: Geol. Soc. America, Abst. w/Prog., v. 21, no. 3, p. 63.
- 29) Broadhead, T.W., and Driese, S.G., 1989, Taphonomic processes and distribution of conodonts in peritidal environments: 28th International Geological Congress Meeting, Washington, DC, Abstracts Volume 1, p. 203.
- 30) Walker, D., and Driese, S.G., 1989, Distribution of Lower Cambrian fluvial and progradational marine facies along the frontal Blue Ridge: the Chilhowee Group of East Tennessee: Am. Assoc. Petrol. Geologists Bull., v. 73, no. 3, p. 423.
- 31) Gogola, A.R., and Driese, S.G., 1989, Physical evidence for a sequence-bounding unconformity: The Ordovician-Silurian boundary in the southern Appalachians: Geol. Soc. America, Abst. w/Prog., v. 21, no. 6, p. 79-80.
- 32) Driese, S.G., and Foreman, J.L., 1989, Eustatic and sedimentological controls on the development of paleosols: examples from Upper Ordovician strata, southern Appalachians: Geol. Soc. America, Abst. w/Prog., v. 21, no. 6, p. 128.
- 33) Driese, S.G., and Bolton, J.C., 1990, Stratigraphic distribution and depositional setting for "Clinton-type" ironstones, Lower Silurian of eastern Tennessee: Geol. Soc. America, Abst. w/Prog., v. 22, no. 2, p. 12-13.
- 34) Neton, M.J., Driese, S.G., and Walker, D., 1990, Conglomerate deposits of the Grandfather Mountain Formation (Late Proterozoic), NW North Carolina: Insight into rifting of the Grenville continent: Geol. Soc. America, Abst. w/Prog., v. 22, no. 4, p. 53.
- 35) Driese, S.G., Foreman, J.L., Cotter, E., Nickelsen, R.P. and Gray, M.B., 1990, Depositional, pedogenic and diagenetic controls on palaeovertebral development, Palaeozoic of central and southern Appalachians: Abstracts for 13th International Sedimentological Congress, Nottingham, England, p. 141-142.

- 36) Broadhead, T.W., and Driese, S.G., and Harvey, J.L., 1990, Influence of differential gravitational settling on the distribution of conodonts: Abstracts for 13th International Sedimentological Congress, Nottingham, England, p. 142-143. (Paper presented by Driese.)
- 37) Dorsch, J., Driese, S.G., and Bambach, R.K., 1990, Basin rebound origin for the "Tuscarora unconformity" in southwestern Virginia: Evidence for a two-stage accretionary history during the Taconic Orogeny?: Geol. Soc. America, Abst. w/Prog., v. 22, no. 6, p. 45.
- 38) Driese, S.G., and Foreman, J.L., 1991, *Glossifungites*-ichnofacies traces and chemical changes in a Late Ordovician paleosol, Juniata Formation, southern Appalachians: Geol. Soc. America, Abst. w/Prog., v. 23, no. 1, p. 24.
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- 40) Broadhead, T.W., Driese, S.G., Huettl, T.C., Corbin, M.C., and Jager, M.G., 1991, Simulation of factors affecting abrasion of small sediment grains: A bulk sediment approach: Geol. Soc. America, Abst. w/Prog., v. 23, no. 1, p. 11.
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- 42) Mora, C.I., Driese, S.G., and Seager, P.G., 1991, CO<sub>2</sub> in the Paleozoic atmosphere: evidence from carbon-isotope compositions of pedogenic carbonate: Geol. Soc. America, Abst. w/Prog., v. 24, no. 6, p. 352-353.
- 43) Broadhead, T.W., and Driese, S.G., 1991, Conodonts - unlikely candidates for abrasive destruction in marine environments: Geol. Soc. America, Abst. w/Prog., v. 24, no. 6, p. 345. (Abstract was accepted but not presented orally at meeting)
- 44) Driese, S.G., Tobin, K.J., Mora, C.I., Caudill, M.R., Glumac, B., Sherwood, S.C., and Dorsch, J., 1992, Paleopedology and stable isotope geochemistry of Mississippian claystone paleosols, Pennington Fm., Tennessee: Geol. Soc. America, Abst. w/Prog., v. 24, no. 2, p. 13.
- 45) Dorsch, J., and Driese, S.G., 1992, Marine red beds deposited in shoreface to inner offshore environments: The "lower" Juniata Formation of southwestern Virginia: Geol. Soc. America, Abst. w/Prog., v. 24, no. 2, p. 13.
- 46) Neton, M.J., and Driese, S.G., 1992, Insight into rifting of the Grenville continent: Conglomerates as clues to tectonics and sedimentation of the Grandfather Mountain Formation (Upper Proterozoic), NW North Carolina: Geol. Soc. America, Abst. w/Prog., v. 24, no. 2, p. 55.
- 47) Broadhead, T.W., and Driese, S.G., 1992, Experimental and natural abrasion of conodonts in marine and eolian environments: Fifth North American Paleontological Convention, Abstracts and Program; The Paleontological Society Special Publication No. 6, p. 38.
- 48) Dorsch, J., and Driese, S.G., 1992, Nearshore to lower shoreface deposits of the "upper" Tuscarora Sandstone of southwestern Virginia: a retrogradational parasequence intimately related to Taconic tectonism: AAPG-SEPM Annual Meeting, Abstracts Volume, p. 32.
- 49) Driese, S.G., and Mora, C.I., 1992, Physico-chemical environment of pedogenic carbonate formation in Devonian vertic paleosols, central Pennsylvania: Geol. Soc. America, Abst. w/Prog., v. 24, no. 7, p. A228.
- 50) Caudill, M.R., Driese, S.G., Mora, C.I., and Fastovsky, D.E., 1992, Influence of paleotopography and superimposed pedogenic conditions on an Upper Pennsylvanian



- paleosol complex; Round Knob Shale (Pittsburgh reds), eastern Ohio: Geol. Soc. America, Abst. w/Prog., v. 24, no. 7, p. A287.
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  - 56) Srinivasan, K., Driese, S.G., Mora, C.I., and Stapor, F.W., 1992, Pedogenesis and early diagenesis of a marine carbonate platform preceding development of a Chesterian transgressive systems tract: Geol. Soc. America, Abst. w/Prog., v. 24, no. 7, p. A287.
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- 159) Shunk, A.J., Driese, S.G., 2008, Multiple proxy evidence from paleosols for abrupt Late Neogene warming at the Gray Fossil site, northeastern TN, USA: joint GSA-SSSA National Meeting in Houston, TX.
- 160) Mintz, J.S., Driese, S.G., and White, J.D., 2009, Environmental and ecological variability of Middle Devonian (Givetian) forested paleosols in the Catskill region, Appalachian basin, New York: presented at Northeastern section GSA meeting in Portland, ME.
- 161) Sankey, J.T., Atchley, S.C., Nordt, L.C., Driese, S.G., Dworkin, S.I., Longrich, N., Fricke, H. 2009, A less diverse Late Cretaceous vertebrate fauna in Texas due to warmer and drier paleoclimates: evidence from vertebrates, paleosols, and isotopes: Advances in Western Interior Late Cretaceous Paleontology and Geology, Abstracts with Program, p. 43. May 22-23, 2009. St. George, Utah.
- 162) Jirsa, M.A., and Driese, S.G., 2009, Neoproterozoic weathering and atmospheric pO<sub>2</sub> inferred from a paleosaprolitic unconformity between granite-greenstone and superjacent conglomerate in the Boundary Waters Canoe Area, NE Minnesota: 55<sup>th</sup> Annual Institute for Lake Superior Geology meeting in Ely, MN, May 2009.
- 163) Messner, T.C., Stinchcomb, G., Stewart, M., and Driese, S.G., 2009, Layer upon layer of late Woodland: Reconstructing the paleoenvironment and its relationship to landform evolution in the upper Delaware Valley: presented at Society of American Archaeologists Annual Meeting, Atlanta, GA.
- 164) Driese, S.G., Ludvigson, G.A., Roberts, J.A., Fowle, D., González, L.A., McKay, L.D., and Vulava, V.M., 2009, Formation of historical pedogenic siderite in PAH-contaminated alluvial clay soils, Tennessee, USA: Part I: Insights from field relationships and micromorphology: presented at GSA Annual Meeting in Portland, OR, October 2009.
- 165) Ludvigson, G.A., Driese, S.G., Smith, J.J., González, L.A., Roberts, J.A., Fowle, D., McKay, L.D., and Vulava, V., 2009, Formation of historical pedogenic siderite in PAH-contaminated alluvial clay soils, Tennessee, USA: Part II: Stable isotopic data on modern analog for a deep-time paleoclimate proxy: presented at GSA Annual Meeting in Portland, OR, October 2009.



- 166) Mintz, J.S., Driese, S.G., and Ludvigson, G.A., 2009, Seasonal influence of changing hydrology on pedogenic carbonate formation in Vertisols, Dance Bayou, Brazoria County, TX: Implications for quantification of past atmospheric pCO<sub>2</sub>: presented at GSA Annual Meeting in Portland, OR, October 2009.
- 167) Stinchcomb, G.S., Messner, T., Driese, S.G., Nordt, L.C., and Stewart, R.M., 2009, Floodplain response to Late Holocene climate change and human land-use at the Manna Site (36PI04), Upper Delaware Valley, PA: presented at GSA Annual Meeting in Portland, OR, October 2009.
- 168) Wright, T.C., Mintz, J.S., and Driese, S.G., 2009, Estimating Middle Devonian soil ages using point-counting of pedogenic clays in paleosols: presented at GSA Annual Meeting in Portland, OR, October 2009.
- 169) Driese, S.G., Jirsa, M.A., Ren, M., Schmitz, M.D., and Parker, D.F., 2010, Neoproterozoic paleoweathering of tonalite and metabasalt: implications for reconstructions of 2.69 Ga early soil ecosystems and paleoatmospheric chemistry: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 170) Beverly, E.J., Ashley, G.M., Driese, S.G., and Sikes, N.S., 2010, New insights into spatial variability of rift basin paleosols using sedimentology, paleopedology, and soil geomorphology, Olduvai Gorge, Tanzania: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 171) Breecker, D.O., Michel, L.A., Mintz, J.S., Driese, S.G., and Nordt, L.C., 2010, Soil CO<sub>2</sub> measurements in modern Vertisols and implications for estimations of paleoatmospheric CO<sub>2</sub> from pedogenic carbonates: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 172) Harlow, H., Mintz, J.S., and Driese, S.G., 2010, Recognition of Acadian orogeny tectophases in terrestrial strata and correlation with the marine in the middle Devonian stratigraphy of the Appalachian basin in Catskill State Park, New York, USA: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 173) Mintz, H.E., Dunbar, J.A., Gunnell, A.R., Stinchcomb, G.E., Mintz, J.S., and Driese, S.G., 2010, Stream Valley Resistivity in Central Texas: Laying the Foundation for Multi-Disciplinary Research: Society of Exploration Geophysicists ( SAGEEP), Symposium on the Application of Geophysics to Engineering and Environmental Problems, v. 23, p. 751.
- 173) Mintz, J.S., Driese, S.G., Harlow, R.H., and Wright, T.C., 2010, Strong seasonality during early forestation on tectonically influenced landscapes in the Middle Devonian, Appalachian Basin, New York: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 174) Stinchcomb, G.E., Driese, S.G., and Nordt, L.C., 2010, Soil geomorphology and stratigraphy reveal mid- to late Holocene channel instability along the Delaware River, USA: presented at GSA Annual Meeting in Denver, CO, October 2010 (GSA Abstracts with Programs Vol. 42, No. 5).
- 175) Mintz, J.S., Driese, S.G., Ludvigson, G.A., and Breecker, D.O., 2010, Influence of changing hydrology on pedogenic calcite precipitation in Vertisols, Dance Bayou, Brazoria County, TX: Implications for estimating paleoatmospheric pCO<sub>2</sub>: talk presented at fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2010.
- 176) Dyar, M.D., Carosino, M.L., Tucker, J.M., Speicher, E.A., Brown, E.A., Clegg, S.M., Wiens, R.C., Barefield, J.E., Delaney, J.S., Ashley, G.M., and Driese, S.G., 2011, Error

- analysis for remote laser-induced breakdown spectroscopy analysis using combinations of igneous, sedimentary and phyllosilicate samples: talk presented at 42<sup>nd</sup> Lunar and Planetary Science Conference, Houston, TX, March, 2011.
- 177) Mintz, J.S., Driese, S.G., Harlow, R.H., Wright, T.C., and Atchley, S.C., 2011, Middle Devonian landscapes, climates and the correlation of continental strata in the northern Appalachian basin: talk presented at the Northeastern Section GSA Meeting in Pittsburg, PA, in March, 2011.
- 178) Mintz, J.S., Driese, S.G., Harlow, R.H., Wright, T.C., and Atchley, S.C., 2011, Sequence stratigraphic analysis of Middle Devonian fluvial deposits and correlation with marine accommodation trends in the Appalachian basin, New York, USA: talk presented at the Annual Meeting of the American Association of Petroleum Geologists in Houston, TX, April 2011.
- 179) Breecker, D.O., Michel, L.A., Yoon, J., Mintz, J.S., Driese, S.G., and Nordt, L.C., 2011, Toward calibrating the paleosols carbonate CO<sub>2</sub> barometer for paleoVertisols: talk presented in August of 2011 at the International Goldschmidt Conference in Prague, Czech Republic: *Mineralogical Magazine*, v. 75 (3), p. 577.
- 180) Driese, S.G., Nordt, L.C., Mintz, J.S., Robinson, A.E., and Miller, W.F., 2011, The overlooked soil-forming factors: Distinguishing influences of soil age and hydrology from climate influences on Vertisols, and application to paleosols: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 181) Driese, S.G., Nordt, L.C., Stinchcomb, G.E., Graf, K.E., Goebel, T., and Waters, M.R., 2011, Applications of soil micromorphology, pedology and geochemistry to interpreting potential for disturbance of stratigraphic context at geoarchaeological sites: Texas Vertisols and Alaskan Gelisols: Developing International Geoarchaeology (DIG) Conference meeting, Knoxville, TN; Abstracts p. 21-22, September 23, 2011.
- 182) Beverly, E.J., Ashley, G.M., and Driese, S.G., 2011, High-resolution paleoenvironmental and paleoclimatic reconstruction of a Pleistocene catena using paleopedology and geochemistry of lake margin paleo-Vertisols, Olduvai Gorge, Tanzania: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 183) Meier, H., Driese, S.G., Nordt, L.C., Dworkin, S.I., and Forman, S., 2011, Interpretation of dynamic Late Quaternary climate and landscape variability based upon paleosol macro- and micromorphology and stable isotopes of soil organic matter, Owl Creek, central Texas, USA: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 184) Michel, L.A., Peppe, D.J., Driese, S.G., McNulty, K.P., Lehmann, T., Dunsworth, H.M., and Harcourt-Smith, W.E.H., 2011, Paleoenvironmental reconstruction of early Miocene catarrhine localities using fossil forest paleosols from Rusinga Island, Lake Victoria, Kenya: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 185) Nordt, L.C., Driese, S.G., and Dworkin, S.I., 2011, Terrestrial paleoclimate futures: Gambling on investments in modern analogs: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 186) Stinchcomb, G.E., Driese, S.G., Messner, T.C., and Nordt, L.C., 2011, Climatic and human controls on Holocene vegetation changes in eastern Pennsylvania based on the isotopic composition of soil organic carbon: Developing International Geoarchaeology (DIG) Conference meeting in Knoxville, TN, September 23-24, 2011, p. 41-42.

- 187) Stinchcomb, G.E., Driese, S.G., Messner, T.C., and Nordt, L.C., 2011, Climatic and human controls on Holocene vegetation changes in eastern Pennsylvania based on the isotopic composition of soil organic carbon: GSA Annual Meeting in Minneapolis, MN, October 2011. (GSA Abstracts with Programs Vol. 43, No. 5).
- 188) Stinchcomb, G.E., Peppe, D.J., and Driese, S.G., 2011, Precipitation and time are factors influencing modern and past magnetic susceptibility enhancement within alluvial soils along the Delaware River Valley, USA: Fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2011.
- 189) Villarreal, M.A., Ludvigson, G.A., Fowle, D.A., González, L.A., Roberts, J.A., Smith, J.J., Driese, S.G., and McKay, L.D., 2011, Actualistic calibration of the pedogenic siderite paleoclimate proxy: GSA Annual Meeting in Minneapolis, MN, October 2011. GSA Abstracts with Programs Vol. 43, No. 5.
- 190) Stinchcomb, G. E., Messner, T. C., Driese, S.G., Nordt, L. C., and Stewart, R. M., 2012, Pre-colonial (A.D. 1100-1600) sedimentation related to prehistoric maize agriculture and climate change in eastern North America: Paper presented at Middle Atlantic Archaeological Conference, March 22 - 25, 2012, Virginia Beach, Virginia.
- 191) Jenkins, K., Tyler Faith, J., Tryon, C., Peppe, D., Nightingale, S., Ogondo, J., Roure Johnson, C., and Driese, S.G., 2012, New excavations of a late Pleistocene bonebed and associated MSA artifacts, Rusinga Island, Kenya: Archaeological Society meeting, Memphis, TN, April 2012.
- 192) Medaris, G., Jr., Driese, S.G., Boerboom, T., and Jirsa, M., 2012, Granitic saprolites in the Lake Superior region: K-metamorphism, intensity vs. magnitude of weathering, and estimates of atmospheric pCO<sub>2</sub>: 58<sup>th</sup> Annual Institute on Lake Superior Geology Proceedings, v. 58, p. 60-61.
- 193) Driese, S.G., Nordt, L.C., Stinchcomb, G.E., and Kuijper, K., 2012, Towards reconstructing climate and ecosystem for paleoVertisols using bulk geochemistry: poster presented at June 2012 International Goldschmidt Conference in Montreal, Canada: Mineralogical Magazine, v. 76, p. 1663.
- 194) Driese, S.G., Nordt, L.C., Stinchcomb, G.E., and Kuijper, K., 2012, Construction of a fully searchable database integrating soil characterization data and whole-soil geochemical data: invited keynote talk presented at June 2012 International Goldschmidt Conference in Montreal, Canada: Mineralogical Magazine, v. 76, p. 1662.
- 195) Driese, S.G., Li, Z.-H., Cheng, H., Stinchcomb, G.E., Kocis, J.J., Horn, S.P., and Boehm, M. S., 2012, Speleothem micromorphology improves interpretations of floodplain paleoclimate records and enhances interpretations of the timing and structure of the mid-Holocene warm period: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 196) Beverly, E.J., Peppe, D. J., Faith, J.T., Driese, S.G., Tryon, C., Blegen, N., Patterson, D., and Horner, W.H., 2012, Paleoenvironmental context of Late Quaternary archaeological and paleontological sites in Kenya's Lake Victoria Basin: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 197) Culbertson, A., Driese, S.G., and Dworkin, S.I., 2012, Paleoclimate records from late Pennsylvanian paleosols: A comparative application of multiple geochemical proxies: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 198) DiPietro, L.M., Driese, S.G., Stinchcomb, G.E., Graf, K.E., Goebel, T., Younie, A.M., and

- Gillispie, T.E., 2012, First Americans archaeology and climate: soil chemistry and its applications to geoarchaeology in central Alaska: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 199) Horner, W.H., Michel, L.A., Peppe, D.J., Driese, S.G., McNulty, K.P., Lehmann, T., Dunsworth, H., and Harcourt-Smith, W.H.E., 2012, Determining depositional heterogeneity through clay mineralogy and particle size analysis of early Miocene paleo-forest paleosol, Hiwegi Formation, Rusinga Island, Kenya: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 5.
- 200) Ludvigson, G.A., González, L.A., Fowle, D.A., Roberts, J.A., Driese, S.G., Villarreal, M. A., and Suarez, M., 2012, What's the low down on soil-formed siderite?: Modern process studies and validation of deep time terrestrial paleoclimate proxy: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 201) Meier, H.A., Nordt, L.C., Forman, S.L., and Driese, S.G., 2012, Late Quaternary alluvial history of the Owl Creek drainage basin: a geomorphic response to environmental change: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 202) Michel, L.A., Peppe, D.J., McNulty, K.P., Driese, S.G., Lehmann, T., Nightingale, S., Horner, W.H., and Dunsworth, H., 2012, Seeing the apes through the trees: paleoecological reconstruction of *Proconsul* and *Dendropithecus* site, Rusinga Island, Kenya: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 203) Nordt, L.C., Driese, S.G., Waters, M.R., and Forman, S.L., 2012, Abrupt eco-climate transitions during pre-Clovis occupation along the Gulf Coastal Plain of Texas: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7. (Invited)
- 204) Stinchcomb, G.E., Nordt, L.C., Driese, S.G., AND Dworkin, S.I., 2012, Soil and paleosol informatics: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7.
- 205) Stinchcomb, Messner, T.C., Stewart, R.M., Driese, S.G., Nordt, L.C., and Allen, P.M., 2012, Prehistoric Anthropogenic Event II (AE-II) and its influence on Earth surface processes along the Middle Delaware River Valley, USA: GSA Annual Meeting in Charlotte, NC, November 2012. GSA Abstracts with Programs Vol. 44, No. 7. (Invited)
- 206) Li, Z.-H., Cheng, H., and Driese, S.G., 2012, Episodic drought during mid-Holocene warm period revealed by speleothem carbon and oxygen isotopes and UV fluorescence in southern Appalachians, USA: Fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2012.
- 207) Ludvigson, G.A., Ludvigson, G.A., González, L.A., Fowle, D.A., Roberts, J.A., Driese, S.G., Suarez, M., and Villarreal, M. A., 2012, The paleoclimatic record of pedogenic siderites: Validation by modern process studies and new application to the Cretaceous Arctic: Fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2012.
- 208) Michel, L.A., Peppe, D.J., McNulty, K.P., Driese, S.G., Lutz, J., Nightingale, S., Maxbauer, D., Horner, W.H., DiPietro, L.M., Lehmann, T., Dunsworth, H., Harcourt-Smith, W.H.E., and Ogando, J., 2012, Paleoclimatic and paleoecological reconstruction of early Miocene terrestrial equatorial deposits, Rusinga and Mfangano Islands, Lake Victoria, Kenya: Fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2012.
- 209) Driese, S.G., Li, Z.-H., and Cheng, H., 2013, Speleothem micromorphology enhances interpretations of the timing and structure of the mid-Holocene warm period: Presented at

- South-Central GSA Meeting in Austin, TX, April 2013.
- 210) Driese, S.G., Nordt, L.C., Culbertson, A.V., and Beverly, E.J., 2013, Multi-proxy approaches to interpreting climate and soil duration in the deep-time geologic record using Vertisols: Presented at South-Central GSA Meeting in Austin, TX, April 2013.
  - 211) Driese, S.G., 2013, Introduction to USDA Soil Taxonomy, soil characterization data, and NRCS websites: invited talk presented at “Teaching Soils, Hydrology and Low-Temperature Geochemistry in the 21<sup>st</sup> Century” NSF Workshop held in Albuquerque, NM from June 5-9, 2013.
  - 212) Driese, S.G., 2013, Soil under the microscope: invited classroom-based mini-workshop presented at “Teaching Soils, Hydrology and Low-Temperature Geochemistry in the 21<sup>st</sup> Century” NSF Workshop held in Albuquerque, NM from June 5-9, 2013.
  - 213) Driese, S.G., 2013, Field-based Soil Description: invited field-based mini-workshop presented at “Teaching Soils, Hydrology and Low-Temperature Geochemistry in the 21<sup>st</sup> Century” NSF Workshop held in Albuquerque, NM from June 5-9, 2013.
  - 214) DiPietro, L.M., Driese, S.G., and Graf, K., 2013, The Dry Creek Site: A geological perspective on site formation and stratigraphic integrity in central Alaska: Presented at Paleo-American Odyssey, held in Santa Fe, NM, October 17-17, 2013.
  - 215) Driese, S.G., Li, Z.-H., Cheng, H., Harvill, J.L., and Sims, J., 2013, High-resolution rainfall records for Middle and late Holocene based upon speleothem annual UV fluorescent layers, Raccoon Mountain Cave, TN: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 216) Ashley, G.M., Beverly, E.J., Sikes, N.E., and Driese, S.G., 2013, Paleosol diversity in the Olduvai Basin, Tanzania: effects of geomorphology, parent material, depositional environment, and groundwater: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 217) Beverly, E.J., Peppe, D.J., Faith, J.T., Tryon, C., Blegen, N., Driese, S.G., and Arellano, L.N., 2013, Paleosol-based evidence for late Pleistocene paleoenvironments of the Lake Victoria region: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 218) Faith, J.T., Peppe, D.J., Tryon, C., Beverly, E.J., Blegen, N., Driese, S.G., Garrett, N., O’Brien, H., Patterson, D., and Van Plantinga, A., 2013, Late Quaternary paleoenvironments in the Lake Victoria Basin, Kenya: Climatic and biogeographic implications: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 219) Ludvigson, G.A., González, L.A., Fowle, D.A., Roberts, J.A., Driese, S.G., and Suarez, M., 2013, Recent progress on the pedogenic siderite paleoclimate proxy: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 220) Michel, L.A., Peppe, D.J., Driese, S.G., McNulty, K.P., Fox, D.L., and Garrett, N., 2013, Equatorial paleoenvironment leading into the Miocene Climatic Optimum: Lessons learned from Rusinga and Mfangano Islands, Lake Victoria, Kenya: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 221) Nordt, L.C., and Driese, S.G., 2013, Geochemical thresholds bracket pH stability fields in soils and paleosols: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 222) Okafor, B., Breecker, D.O., Driese, S.G., Nordt, L.C., and Warden, J., 2013, Investigating evaporation and soil water movement by measuring the stable isotope composition of water in Vertisols: Presented at 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30).
  - 223) Breecker, D.O., Driese, S.G., Nordt, L.C., Beverly, E., and Huntington, K., 2013, Seasonal variations in the carbon isotope composition of soil-respired CO<sub>2</sub> and the dominance of

- root/rhizosphere respiration in desert soils: Presented at Fall American Geophysical Union (AGU) meeting in San Francisco, CA, December 2013.
- 224) Beverly, E.J., Driese, S.G., Arellano, L.N., and Peppe, D.J., 2014, Late Pleistocene paleocatena with linear gilgai from the Lake Victoria region: Presented at 51<sup>st</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 6, 2014.
- 225) Harvill, J.L., Sims, J., and Driese, S.G., 2014, Nonlinear time series for modeling ancient climates: Presented at session "*Ordered Data Analysis, Models and Health Research Methods: An International Conference in Honor of H.N. Nagaraja for His 60th Birthday*" for the HNN Conference in March 2014 at University of Texas at Dallas.
- 226) Driese, S.G., Nordt, L.C., and Waters, M.R., 2014, Analysis of site formation history and potential disturbance of stratigraphic context at the Debra L. Friedkin archaeological site in central Texas, USA: Invited Paper presented at Society for American Archaeology meeting in Austin, TX, April 24, 2014.
- 227) Ballard, J.P., Horn, S.P., Lane, C., Li, Z.-H., Driese, S.G., and Lowell, T.V., 2014, Late Glacial fire and nitrogen dynamics at lacustrine sites in Alabama and Michigan: evidence of an acid rain event?: Presented at Association of American Geographers Annual Meeting in Tampa, FL, April 8-12, 2014.
- 228) Lemieux, P., Valente, M.J., Horn, S.P., Li, Z.-H., and Driese, S.G., 2014, Pollen in stalagmites and flowstones from caves in the eastern U.S.: Presented at Association of American Geographers Annual Meeting in Tampa, FL, April 8-12, 2014.
- 229) Faith, J.T., Tryon, C.A., Peppe, D.J., Beverly, E.J., Blegen, N., Blumenthal, S., Chritz, K.L., Driese, S.G., and Patterson, D., 2014, Late Pleistocene archaeology and paleoenvironments of Karungu in the Lake Victoria Basin, Kenya: Presented at Paleoanthropology Society Annual Meeting in Calgary, Alberta, Canada, April 8-9, 2014.
- 230) Driese, S.G., Li, Z.-H., Cheng, H., Harvill, J.L., and Sims, J., 2014, High-resolution rainfall records for Middle and late Holocene based on speleothem annual UV fluorescent layers integrated with stable isotopes and U/Th dating, Raccoon Mountain Cave, TN, USA: Presented at the International Goldschmidt Geochemistry Conference in Sacramento, CA (June 12, 2014).
- 231) Stinchcomb, G.E., Williamson, F.C., Messner, T.C., Stewart, R.M., Allen, P.M., Driese, S.G., and Nordt, L.C., 2014, Paleoclimate proxies also record human impact signals: Presented at the International Goldschmidt Geochemistry Conference in Sacramento, CA (June 13, 2014).
- 232) Lehmann, T., Peppe, D.J., Driese, S.G., Jenkins, K., Sanders, W.J., and McNulty, K.P., 2014, New fieldwork at Karungu (early Miocene; Lake Victoria, Kenya): Preliminary paleontological and geological results: Poster presented at Society of Vertebrate Palaeontologists 74<sup>th</sup> Annual Meeting in Berlin, Germany (November 5-8, 2014).
- 233) Driese, S.G., Peppe, D.J., Beverly, E.J., DiPietro, L.M., Lehmann, T., and McNulty, K.P., 2014, Miocene paleo-Oxisol-Vertisol formed on basalt records long duration of tropical weathering in Lake Victoria region of western Kenya preceding rapid subsidence and onset of lake-basin formation: Invited paper presented at 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 234) Driese, S.G., Nordt, L.C., and Young, M.H., 2014, Linking modern and fossil soils: Forecasting future soil changes based on paleosol records: Invited paper to be presented to 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).

- 235) Arellano, L., Beverly, E. J., Peppe, D.J., Driese, S.G., Faith, J.T., and Tryon, C., 2014, Using paleosols to reconstruct the paleoclimate of Late Pleistocene archaeological sites in the Lake Victoria Basin, Kenya: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 236) Beverly, E.J., Driese, S.G., Peppe, D.J., Faith, J.T., Tryon, C., Johnson, C.R., Michel, L.A., and Sharp, W., 2014, Pleistocene hominin paleoenvironmental reconstructions: sedimentology, micromorphology and stable isotopes of riverine tufas from the Rusinga and Karungu regions of western Kenya: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 237) DiPietro, L.M., Driese, S.G., and Goebel, T., 2014, Latest Pleistocene climate amelioration on the Seward Peninsula of Alaska in association with a Buried Fluted Point Complex: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 238) Harlow, R.H., Atchley, S.C., Nordt, L.C., Dworkin, S.I., and Driese, S.G., 2014, Depositional and Climatic Evolution of the Late Triassic Chinle Formation: A Basin Scale Comparison, Southwestern United States: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 239) Letourmy, Y., Driese, S.G., Gibling, M.R., and McCarthy, P.J., 2014, Paleoclimatic and paleoenvironmental reconstruction of the Late Paleozoic ice age in an equatorial setting: Interpretations from Carboniferous paleosols at Joggins Fossil Cliffs, Nova Scotia, Canada: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 240) Li, Z.-H., \*Driese, S.G., Stinchcomb, G.E., Kocis, J.J., Horn, S.P., Buckles, J., Rowe, H., and Cheng, H., 2014, Earlier “4.2 ka event” in the eastern U.S. is possible at 4.5 ka: Middle Holocene mega-droughts identified using stable isotopes and micromorphology of speleothems and  $\delta^{13}\text{C}$  of coeval SOM: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014: \*Driese will present the paper).
- 241) Lukens, W.E., and Driese, S.G., 2014, Lithostratigraphy and paleogeomorphology of the Upper Miocene Ogallala Formation (c. 6.6 Ma) in the Texas Panhandle: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 242) Michel, L.A., Peppe, D.J., Driese, S.G., and McNulty, K.P., 2014, Treatment methods for bulk soil geochemical proxy applications: lessons learned from Miocene paleosols of the Lake Victoria region: 2014 GSA Abstracts w/Programs, v. 46, no. 6, Annual Meeting in Vancouver, BC (October 19-22, 2014).
- 243) Beverly, E.J., Driese, S.G., Peppe, D.J., Arellano, L.N., Blegen, N., Faith, J.T., and Tryon, C., 2014, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: Soil-Forming Processes and their Rates: Workshop and Field Trip in the Mojave Desert, October 26-31, 2014.
- 244) Ballard, J.P., Horn, S.P., Driese, S.G., Lane, C.S., Li, Z.-H., and MacLennan, E., 2014, A late Glacial and Holocene paleofire record from Cahaba Pond, Alabama: Southeastern Archaeology Conference, November 12-15, 2014, Greenville, South Carolina.
- 245) Driese, S.G., and Nordt, L.C., 2015, Applying the Critical Zone concept to reconstruction of ancient terrestrial systems: Invited paper presented in session “Earth history: Innovative approaches to studying critical transitions” at the 2015 Annual Meeting of the American Association for the Advancement of Science (AAAS) in San Jose, CA (February 13, 2015).
- 246) Stinchcomb, G.E., Driese, S.G., Forman, S.L., and Messner, T.C., 2015, Development and

- Application of a Holocene grain-size paleoflood proxy for the Middle Atlantic region, USA: talk presented at 2015 AAG Annual Meeting in Chicago, IL, April 21-25, 2014.
- 247) Lukens, W.E., Driese, S.G., and Nordt, L.C., 2015, Landscape and climate reconstruction at Coffee Ranch, TX: Insights into environments directly preceding C4 grass expansion: poster presented at Paleoecology Symposium Research Workshop, Cleveland Museum of Natural History, September 11-12, 2015.
- 248) Beverly, E.J., Driese, S.G., Peppe, D.J., Arellano, L., Blegen, N., Faith, J.T., Tryon, C.A., 2015, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: poster presented at Paleoecology Symposium Research Workshop, Cleveland Museum of Natural History, September 11-12, 2015.
- 249) Driese, S.G., and Ashley, G.M., 2015, Paleoenvironmental reconstruction of a paleosol catena, the Zinj archaeological level, Olduvai Gorge, Tanzania: talk presented GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 250) Driese, S.G., Horn, S.P., Ballard, J.P., Li, Z.-H., and Boehm, M.S., 2015, Micromorphological interpretation of Late Pleistocene to Holocene paleoenvironmental history of Anderson Pond, Tennessee, USA: abstract presented at GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 252) Letourmy, Y., and Driese, S.G., 2015, Can alluvial stratigraphy be used as a tool to differentiate climatic from tectonic controls on soil drainage fluctuations? Application to the Pennsylvanian Joggins Fossil Cliffs of Nova Scotia, Canada: poster presented at GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 253) Lukens, W.E., Stinchcomb, G.E., Nordt, L.C., and Driese, S.G., 2015, A new pedotransfer function for estimating soil pH in paleosols: talk presented at GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 254) Michel, L.A., Tabor, N.J., Myers, T.S., Driese, S.G., and Peppe, D.J., 2015, Comparative study of precipitation proxies from modern North American soils and paleosols from Rusinga and Mfangano Islands, Lake Victoria, Kenya: talk presented at GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 255) Stinchcomb, G.E., Nordt, L.C., Driese, S.G., Lukens, W.E., Williamson, F.C., and Tubbs, J.D., 2015, A data-driven empirical model that predicts paleoclimate for a diverse range of conditions for paleosols: talk presented at GSA Annual Meeting in Baltimore, MD, November 1-4, 2015.
- 256) Beverly, E.J., Snell, K., Peppe, D.J., Driese, S.G., Faith, J.T., and Tryon, C.A., 2016, Reconstruction of Late Pleistocene paleoenvironments using stable and clumped isotopes from the Lake Victoria Region: submitted to American Association of Physical Anthropology (AAPA) Annual Meeting in Atlanta, GA.
- 257) Driese, S.G., and Nordt, L.C., 2016, Vertisols and alluvial stratigraphic models: indicators of discharge variability: invited talk presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 258) Driese, S.G., Medaris, L.G., Jr., Kirsimäe, K., Somelar, P., and Stinchcomb, G.E., 2016, Geochemical constraints on duration of weathering for Neoproterozoic Baltic paleosol: abstract presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 259) DiPietro, L.M., Nelson, T.W., Driese, S.G., and Harvill, J.L., 2016, Post-LGM wind intensities from grain size partitioning of late Quaternary loess at the Dry Creek archaeological site, Nenana Valley, Alaska: poster presented at GSA Annual Meeting in Denver, CO (September 25-28).



- 260) Letourmy, Y., and Driese, S.G., 2016, Climatic vs. tectonic control on soil drainage fluctuations: Using alluvial stratigraphy concepts at Joggins Fossil Cliffs, Nova Scotia, Canada: abstract presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 261) Lukens, W.E., Lehmann, T., Kingston, J.D., Fox, D.L., Deino, A.L., Peppe, D.J., and Driese, S.G., 2016, Early Miocene paleoenvironments near Karungu, western Kenya: abstract presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 262) Peppe, D.J., McNulty, K.P., Deino, A.L., Michel, L.A., McCollum, M.S., Driese, S.G., Dunsworth, H.M., Harcourt-Smith, W.E.H., Jenkins, K.E., and Lehmann, T., 2016, Early Miocene paleoenvironments of the Hiwegi Formation on Rusinga Island (equatorial Africa, Lake Victoria, Kenya) and their implications for hominoid evolution: abstract presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 263) Tanner, B.R., Horn, S.P., Boehm, M.S., Driese, S.G., Young, R.S., Ballard, J.P., Li, Z.-H., Lane, C., and Martin, L., 2016, Radiocarbon ages of Southern Appalachian wetland deposits show low accumulation during the Middle Holocene: abstract presented at GSA Annual Meeting in Denver, CO (September 25-28).
- 264) Michel, L.A., McNulty, K.P., Lehmann, T., Novello, A., Peppe, D.J., Driese, S.G., and Fox, D.L., 2017, Revisiting the Early Miocene paleoenvironment of Rusinga Island, Lake Victoria, Kenya based on paleosol and paleontological analysis: AAAP meeting, New Orleans, LA, April 20, 2017.
- 265) Peppe, D.J., Deino, A.I., McNulty, K.P., McCollum, M.S., Mitchell, A.L., Driese, S.G., Dunsworth, H.M., Fox, D.L., Harcourt-Smith, W.E.H., Jenkins, K., Lehmann, T., and Michel, L.A., 2017, Revised geochronology of the Early Miocene faunas from Rusinga Island and Mfangano Island (Lake Victoria, Kenya): Implications for Miocene hominoid evolution and faunal succession: AAAP meeting New Orleans, LA, April 20, 2017.
- 266) Driese, S.G., Medaris, L.G., Jr., and Stinchcomb, G.E., 2017, Applications of  $\tau\text{P}_2\text{O}_5$  and  $\tau\text{Fe}_2\text{O}_3$  as indicators of microbial biocycling and redox processes in Precambrian paleosols and paleosaprolites: abstract presented at South-Central Section of GSA meeting in San Antonio, TX, March 13, 2017.
- 267) Lukens, W.E., and Driese, S.G., 2017, The late Miocene Critical Zone at Coffee Ranch, TX: Paleoclimate, paleovegetation and paleosols: abstract presented at South-Central Section of GSA meeting in San Antonio, TX, March 13, 2017.
- 268) Wiest, L.A., Esker, D., and Driese, S.G., 2017, Implications for diverse bioerosion traces on fossil assemblages: A case study from Waco Mammoth National Monument: poster presented at South-Central Section of GSA meeting in San Antonio, TX, March 14, 2017.
- 269) Wiest, L.A., Lukens, W.E., Driese, S.G., Tubbs, J.D., Leslie, C., and Letourmy, Y., 2017, An ichnological proxy for the response and recovery of soil fauna across the K-Pg extinction interval: Big Bend National Park: abstract presented at South-Central Section of GSA meeting in San Antonio, TX, March 13-14, 2017.

#### **Other Invited Lectures -**

- 1) Driese, S.G., 1984, "Sedimentology of the Clinch Sandstone (Lower Silurian) in Northeast Tennessee and Southwest Virginia" (talk presented at the Department of Geology, Vanderbilt University, January 26, 1984).
- 2) Driese, S.G., 1984, "Sedimentology of the Poor Valley Ridge Member of the Clinch Sandstone (Lower Silurian), Northeastern Tennessee and Southwest Virginia" (talk presented

- at the 6th Meeting of the Appalachian Basin Industrial Associates in Columbus, OH, March 22, 1984).
- 3) Driese, S.G., 1985, "Fairweather and Storm Shelf Sequences, Rockwood Formation (Lower Silurian), East Tennessee" (talk presented at the Department of Geology, College of William & Mary, Williamsburg, VA, October 24, 1985).
  - 4) Driese, S.G., 1985, "Tidal Bundles - Can They be Recognized in the Ancient?" (talk presented at the Department of Geology, College of William & Mary, Williamsburg, VA, October 25, 1985).
  - 5) Driese, S.G., 1986, "Fairweather and Storm Shelf Sequences, Rockwood Formation (Lower Silurian), East Tennessee" (talk presented at the 10th Meeting of the Appalachian Basin Industrial Associates in Hagerstown, MD, April 25, 1986).
  - 6) Driese, S.G., 1986, "Silurian Siliciclastic and Carbonate Storm Shelf Sequences, East Tennessee" (talk presented at the Department of Geology, Georgia State University, Atlanta, GA, May 9, 1986).
  - 7) Driese, S.G., 1987, "Model for Genesis of Shelf Sandstone Sequences, Southern Appalachians: Paleoenvironmental Reconstruction of an Early Silurian Shelf System" (talk presented at the 18th Annual Appalachian Petroleum Geology Symposium in Morgantown, WV, March 25, 1987).
  - 8) Driese, S.G., 1987, "Model for Genesis of Shelf Sandstone Sequences, Southern Appalachians: Paleoenvironmental Reconstruction of an Early Silurian Shelf System" (talk presented at the Department of Geology, University of Georgia, Athens, GA, April 8, 1987).
  - 9) Driese, S.G., 1987, "Model for Genesis of Shelf Sandstone Sequences, Southern Appalachians: Paleoenvironmental Reconstruction of an Early Silurian Shelf System" (talk presented at the Department of Geological Sciences, Virginia Polytechnic Institute & State University, Blacksburg, VA, May 14, 1987).
  - 10) Driese, S.G., 1989, "Eustatic and Sedimentological Controls on the Development of Paleosols; Examples from Upper Ordovician Strata, Southern Appalachians" (talk presented at Clemson University, Clemson, SC, October 26, 1989).
  - 11) Driese, S.G., 1989, "Eustatic and Sedimentological Controls on the Development of Paleosols; Examples from Upper Ordovician Strata, Southern Appalachians" (talk presented at the Department of Geology, Appalachian State University, Boone, NC, November 16, 1989).
  - 12) Driese, S.G., 1991, "Carbon Dioxide in the Paleozoic Atmosphere: Evidence from <sup>13</sup>C-Isotopic Compositions of Pedogenic Carbonate" (Talk presented at Department of Geology, Southern Illinois University, Carbondale, IL, April 5, 1991).
  - 13) Driese, S.G., 1991, "Carbon Dioxide in the Paleozoic Atmosphere: Evidence from <sup>13</sup>C-Isotopic Compositions of Pedogenic Carbonate" (Talk presented at Department of Geology, University of Arkansas, October 18, 1991).
  - 14) Driese, S.G., 1993, "Paleopedology and Paleoclimatic Implications of Paleozoic Vertic Paleosols, Appalachian Basin" (Talk presented at Department of Geological Sciences, Virginia Tech University, Blacksburg, VA, February 4, 1993).
  - 15) Driese, S.G., 1994, "Stable Isotope Composition of Pedogenic Carbonate in Central and Southern Appalachian Redbed Sequences: Monitor of Elevated p(CO<sub>2</sub>) During the Paleozoic Era?" (Talk presented at Department of Geology, University of Georgia, Athens, GA, April 21, 1994).
  - 16) Driese, S.G., 1995, "Evolution and Diversification of Siluro-Devonian Land Plants: Influence

- on Paleosol Morphology and Chemistry" (Talk presented at Department of Geology, University of Cincinnati, Cincinnati, OH, April 19, 1995).
- 17) Driese, S.G., 1995, "Calibration of a Steep, Mid-Paleozoic Decline in Atmospheric CO<sub>2</sub>: Evidence From Paleosols and the Soil Carbonate Paleobarometer" (Talk presented to Department of Earth Sciences, Colorado State University, Fort Collins, CO, October 5, 1995).
  - 18) Driese, S.G., 1995, "Evolution and Diversification of Siluro-Devonian Land Plants: Influence of Paleosol Morphology and Chemistry" (Talk presented to Sigma Xi Chapter of Colorado State University, Fort Collins, CO, October 6, 1995).
  - 19) Driese, S.G., 1998, "New Insights From Old Dirt: Paleozoic Paleosols and Their Quaternary Counterparts" (Talk presented to Department of Geology and Geophysics, University of Oklahoma, Norman, OK, January 29, 1998).
  - 20) Driese, S.G., 1998, "Soil and Paleosol Micromorphology Applied to Interpretations of Soil Genesis" (Talk presented to Paleopedology class at Department of Geological Sciences, Rutgers University, Piscataway, NJ, February 24, 1998).
  - 21) Driese, S.G., 1998, "New Insights From Old Dirt: Paleozoic Paleosols and Their Quaternary Counterparts" (Talk presented to Department of Geological Sciences, Rutgers University, Piscataway, NJ, February 25, 1998).
  - 22) Driese, S.G., 1998, "From Soil to Paleosol": (Talk presented to Department of Geology, Baylor University, Waco, TX, March 25, 1998).
  - 23) Driese, S.G., 1998, "From Soil to Paleosol": (Talk presented to Department of Soil and Crop Sciences, Texas A & M University, College Station, TX, March 25, 1998).
  - 24) Driese, S.G., 1998, "Mass-balance reconstruction of a modern Vertisol: Implications for interpretations of geochemistry and burial alteration of paleoVertisols": (Talk presented to Department of Geology, Ohio University, Athens, OH, November 6, 1998).
  - 25) Driese, S.G., 1999, "Mass-balance reconstruction of a modern Vertisol: Implications for interpretations of geochemistry and burial alteration of paleoVertisols": (Talk presented to Department of Geosciences, University of Nebraska, Lincoln, NE, September 10, 1999).
  - 26) Driese, S.G., 1999, "Mass-balance reconstruction of a modern Vertisol: Implications for interpretations of geochemistry and burial alteration of paleoVertisols": (Talk presented to Department of Geology, University of Kentucky, Lexington, KY, October 21, 1999).
  - 27) Driese, S.G., 2001, "Paleoclimate interpretations of ancient Vertisols based on actualistic studies of modern Vertisol climo- and chronosequences in Texas": (Talk presented to Department of Geological Sciences, University of Oregon, Eugene, OR, February 2, 2001).
  - 28) Driese, S.G., 2002, "The evolution of a freshwater wetland in a semi-arid environment, Lobo Swamp, Kenya, East Africa": (Talk presented to the Department of Geography, University of Tennessee, Knoxville, TN, September 26, 2002).
  - 29) Driese, S.G., 2002, Soil and paleosol micromorphology short course taught at the University of Kansas, Department of Geology, Lawrence, KS, November 6, 2002.
  - 30) Driese, S.G., 2002, "The evolution of a freshwater wetland in a semi-arid environment, Lobo Swamp, Kenya, East Africa": (Talk presented to the Department of Geology, University of Kansas, Lawrence, KS, November 7, 2002).
  - 31) Driese, S.G., 2002, "Climate research in East Africa": (Talk presented to Knoxville Chapter of American Association of University Women, Knoxville, TN, November 11, 2002).
  - 32) Driese, S.G., 2002, "The evolution of a freshwater wetland in a semi-arid environment, Lobo Swamp, Kenya, East Africa": (Talk presented to the Department of Earth Sciences,

- University of Memphis, Memphis, TN, November 14, 2002).
- 33) Driese, S.G., Soil and paleosol micromorphology short course taught at the University of Memphis, Department of Earth Sciences, Memphis, TN, November 14, 2002.
  - 34) Driese, S.G., 2003, Spoke to the Earth Science Club at the J.T. O'Connor Senior Citizen Center, January 6, 2003. The topic was Paleoenvironment studies of spring-fed wetlands in Kenya.
  - 35) Driese, S.G., 2003, "Paleoclimate reconstructions at different spatial and temporal scales using soils and paleosols: examples from the East African rift valley of Kenya": (Talk presented at Texas A & M University, Department of Soil and Crop Sciences, February 5, 2003).
  - 36) Driese, S.G., 2003, "Modern-ancient analogs - Are they useful for interpreting paleosols?": (Talk presented at 40<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 7, 2003).
  - 37) Driese, S.G., 2004, "Applications of micromorphology to solving environmental problems: Case studies of environmental pedology and geology": (talk presented at Geology 5050 colloquium for Baylor University Geology Department colloquium, September 3, 2004).
  - 38) Driese, S.G., 2004, "Applications of micromorphology to solving environmental problems: Case studies of environmental pedology and geology": (talk presented at Texas A & M University, Department of Soil and Crop Sciences, September 29, 2004).
  - 39) Driese, S.G., 2005, "Distinguishing climate and time in the soil record using modern Vertisol climo- and chronosequences from Texas, and application to interpreting Paleozoic paleosols in the Appalachian basin": (talk presented at 42<sup>nd</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 10, 2005).
  - 40) Driese, S.G., 2005, "Distinguishing climate and time in the soil record using modern Vertisol climo- and chronosequences from Texas, and application to interpreting Paleozoic paleosols in the Appalachian basin": (talk presented at Miami University of Ohio, Department of Geology, April 1, 2005).
  - 41) Driese, S.G., 2005, "Distinguishing climate and time in the soil record using modern Vertisol climo- and chronosequences from Texas, and application to interpreting Paleozoic paleosols in the Appalachian basin": (talk presented at University of Texas-Dallas, Department of Geological Sciences, April 22, 2005).
  - 42) Driese, S.G., 2006, "Pedogenic signatures of early terrestrial ecosystems based on micromorphological and geochemical study of Precambrian-Cambrian paleo-weathering surfaces formed on granite": (talk presented at 43<sup>rd</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 2, 2006).
  - 43) Driese, S.G., 2006, "Multi-proxy approaches to interpreting climate and time in the geologic record using soils": talk presented at the University of California-Davis, Department of Land, Air and Water Resources, November 29, 2006).
  - 44) Driese, S.G., 2007, "Multi-proxy approaches to interpreting time in the geologic record using soils": (talk presented at 44<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 1, 2007).
  - 45) Driese, S.G., 2008, "Micromorphology of floodplain soils at the Buttermilk Creek Archaeological Site near Salado, Bell County, Texas": (talk presented at 45<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 7, 2008).
  - 46) Driese, S.G., 2008, "Applications of soil micromorphology, pedology and geochemistry to interpreting a possible pre-Clovis (13-17 kyr) archaeological site at Buttermilk Creek, Bell

- County, Texas”: (talk presented as 16<sup>th</sup> Kansas Geological Survey Stratigraphic Research Seminar in Lawrence, KS, November 11, 2008).
- 47) Driese, S.G., 2009, “Formation of historical pedogenic siderite in a US EPA Superfund site, Chattanooga, TN”: (talk presented at 46<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 5, 2009).
  - 48) Mintz, J.M. (with S.G. Driese, W. Miller, and J. Wiedenfeld as co-authors), 2009, “Micromorphologic assessment of pedogenesis in hydromorphic vertisols from bottomland hardwood forests, Old Ocean, Brazoria County, Texas, USA”: (talk presented at 46<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 5, 2009).
  - 49) Stinchcomb, G. (with A. Trendell, S.G. Driese, L.C. Nordt and Z.-H. Li as co-authors), 2009, “Floodplain soil geomorphology at the Williams Creek section, Axtell, TX: Implications for Late Holocene Fluvial Dynamics and Paleoclimate”: talk presented at 46<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, February 5, 2009).
  - (50) Nordt, L., and Driese, S., 2010, Pedosystem science approach to characterizing and interpreting the fossil record of soils: SEPM-NSF Workshop on Paleosols and Soil Surface Analog Systems, Petrified Forest National Park, Arizona, September 21-25, 2010.
  - 51) Driese, S.G., and Nordt, L.C., 2010, Abundance of paleo-Vertisols in the Phanerozoic rock record: Product of preservation, recognition, or paleoclimate?: SEPM-NSF Workshop on Paleosols and Soil Surface analog Systems, Petrified Forest National Park, Arizona, September 21-25, 2010.
  - 52) Driese, S.G., 2010, “Soil CO<sub>2</sub> measurements in modern Vertisols and implications for estimations of paleoatmospheric CO<sub>2</sub> from pedogenic carbonates”: talk presented at Department of Geography and Earth and Planetary sciences combined colloquium at University of Tennessee-Knoxville, October 15, 2010.
  - 53) Driese, S.G., 2010, “Multi-proxy approaches to interpreting climate and time in the geologic record using soils”: talk presented at the University of Texas at Austin, Department of Geosciences, November 8, 2010).
  - 54) Driese, S.G., 2011, “New research opportunities in “deep-time” paleopedology”: (talk presented at 48<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 3, 2011).
  - 55) Driese, S.G., 2011, “New research opportunities in studies of “deep-time” using paleosols and proposed interface with NSF Critical Zone studies”: (talk presented to NSF Earth Sciences, Earth Surface Processes Directorate in Arlington, VA, by Dr. Steven G. Driese and Dr. Gail M. Ashley on March 31, 2011.)
  - 56) Driese, S.G., 2011, “Investigations of Evidence for the Earliest Humans in the Americas at the Debra L. Friedkin Site near Salado, TX”: (talk presented to Waco Gem and Mineral Society on November 7, 2011).
  - 57) Driese, S.G., Nordt, L.C., Mintz, J.S., Robinson, A.E., and Miller, W.F., 2012, The overlooked soil-forming factors: Distinguishing influences of soil age and hydrology from climate influences on Vertisols, and application to paleosols: (talk presented at 49<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 2, 2012).
  - 58) Driese, S.G., 2012, “Multi-proxy approaches to interpreting climate and time in the geologic record using Vertisols”: talk presented to Soil Sciences class at Iowa State University, Ames, IA, Department of Agronomy, March 29, 2012).

- 59) Driese, S.G., 2012, “Using major-element oxide ratios in paleosols to interpret paleoclimate”: Invited Pierre Colloquium talk presented at Iowa State University, Ames, IA, Departments of Agronomy, and Geological and Atmospheric Sciences, March 29, 2012).
- 60) Driese, S.G., 2012, “Using major-element oxide ratios in paleosols to interpret paleoclimate”: Invited talk presented at Texas A & M University, College Station, TX Departments of Agronomy and Agricultural Engineering, October 24, 2012).
- 61) Driese, S.G., 2013, “Soil Morphology, Micromorphology, and Geochemistry of the type Trinity series at Richland Creek Wildlife Management Area, Fairfield, TX”: (talk presented at 50<sup>th</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 7, 2013).
- 62) Driese, S.G., 2013, “High-resolution rainfall records for Middle and Late Holocene based upon speleothem annual UV fluorescent layers, Raccoon Mountain Cave, TN”: (talk presented at University of Texas at San Antonio on September 20, 2013).
- 63) Driese, S.G., 2013, “Use of speleothems for high-resolution rainfall records for Middle and Late Holocene, Raccoon Mountain Cave, TN”: (talk presented to Waco Gem and Mineral Club on November 4, 2013).
- 64) Driese, S.G., 2014, “Integration of buried soil and speleothem carbon isotope records for interpreting Middle Holocene paleo-drought conditions”: (talk presented at 51<sup>st</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 6, 2014).
- 65) Driese, S.G., 2015, “Applying the Critical Zone concept to reconstruction of ancient terrestrial systems”: (talk presented at 52<sup>nd</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 5, 2015).
- 66) Driese, S.G., 2015, “Paleosols and paleoenvironments of the early Miocene deposits near Karungu, Lake Victoria, Kenya”: (invited talk presented for International Year of Soils Symposium at Texas Tech University in Lubbock, TX, on November 6, 2015).
- 67) Driese, S.G., 2015, “Integrating high-resolution speleothem records of Holocene paleo-floods with floodplain-paleosol records, Tennessee valley”: (invited talk presented at the Tennessee River Paleofloods Workshop in Chattanooga, TN on December 9, 2015).
- 68) Driese, S.G., 2016, “The search for evidence of life in ancient soil systems: Precambrian paleosols”: (talk presented at 53<sup>rd</sup> Annual Soil Survey and Land Resource Workshop in College Station, TX, on February 4, 2016).
- 69) Driese, S.G., 2017, “Geochemical constraints on duration of weathering for Neoproterozoic Baltic Paleosol”: (invited talk presented for Low-Temperature Geochemistry class at Smith College in Northampton, MA on Tuesday AM, March 7, 2017).
- 70) Driese, S.G., 2017, “From soil to paleosol: the challenges of interpreting paleoclimate, paleolandscape, and paleoatmospheric chemistry in deep time”: (invited talk presented at 5 Colleges Lecture at Smith College in Northampton, MA on Tuesday PM, March 7, 2017).

**Department, College and University Service (at the University of Tennessee) -**

1982-1989	Graduate Admissions & Assistantship Committee (Chairman, 1983-1987)
1982-1985	Undergraduate Major Revision Committee
1982-1986	ORNL Contract Oversight Committee
1982-1985	Technical Services Chairman for 1985 SEGSA Meeting
1986-2002	Coordinator for Rock Preparation Laboratory

1986-1987 Graduate Program Committee  
 1986-1987 Appalachian Basin Industrial Associates Account Coordinator  
 1987-1988 Chairman of Structural Geology Search Committee  
 1984 Served as judge for Hilton Smith Fellowships  
 1986 Participated in enrollment management user walk-through for SAMS (Student Academic Management Services)  
 1987-1990 College of Liberal Arts Curriculum Committee  
 1988-1990 Discretionary Funds Committee (Chairman)  
 1989-1991 Ad-Hoc Space Allocation Committee (Chairman)  
 1989-1992 Faculty Mentor assigned to Dr. Hazel Delcourt  
 1990 Teaching Review Committee for Dr. Harry Y. McSween, Jr.  
 1990-1992 Member of Hydrogeology Search Committee  
 1990-1991 Graduate Program Committee  
 1991 Chair of Teaching Review Committee for Dr. Thomas W. Broadhead  
 1991-1995 Director of Undergraduate Studies (1991-1994), Undergraduate Program Committee  
 1992 Teaching Review Committee of Dr. Paul Delcourt  
 1992-2002 Director of UT-K geology field camp program  
 1993-2004 Graduate Admissions & Assistantship Committee  
 1994-1997 Admissions Committee for UT-K Chapter of Sigma Xi  
 1994-2002 Director of Graduate Studies (1995-1998), Graduate Program Committee  
 1994 Chair of Teaching Review Committee for Dr. Kenneth R. Walker  
 1994-1996 Ad-Hoc Space Allocation Committee (Chairman)  
 1997-2000 College of Arts and Sciences Tenure and Promotion Committee  
 1997-2000 Associate Head, Department of Geological Sciences  
 1998 Chair of Teaching Review Committee for Dr. G. Michael Clark  
 1998-1999 Member of University-level faculty advisory group for APEC-identified focus area *Environment, Natural Resources, and Species Preservation* for UTK  
 1998-1999 Member of Search Committee for Carbonate Sedimentology Faculty position  
 1999-2000 Member of Search Committee member for Environmental Geochemistry Faculty position  
 1999-2001 Appointed member of Interdisciplinary Council for Environment and Natural Resources  
 1999 Teaching Review Committee for Dr. G. Michael Clark  
 2000 Teaching Review Committee for Dr. G. Michael Clark  
 2001 Member of Search Committee member for Hydrogeology Faculty position  
 2001 Cumulative 5 yr. Review Committee for Dr. Jan Simek, Dept. of Anthropology  
 2001 Teaching Review Committee for Dr. Ted C. Labotka  
 2002 Cumulative 5 yr Review Committee for Dr. Ted C. Labotka  
 2002 Chair of Teaching Review Committee for Dr. Larry D. McKay  
 2002-2004 Associate Head, Department of Earth and Planetary Sciences  
 2003 Chair of Ad-Hoc Space Allocation Committee  
 2003 Chair of Teaching Review Committee for Dr. Edmund Perfect  
 2004 Member of UT-K Assessment Review Team for Geography Department, UT-K  
 2004 Cumulative 5 yr Review Committee for Dr. G. Michael Clark  
 2007 Member of Peer Assessment Review Team for Geography Department, UT-K (mid-cycle review)

### **Department, College and University Service (at Baylor University) -**

2004-2013	Chair of Department of Geology
2006	Member of Search Committee for Associate Vice President for Development
2006-2007	Member of Search Committee for Dean of College of Arts and Sciences
2006-2007	Member of tenure and promotion review committee for of Dr. Kieran McNulty, Department of Anthropology, Forensic Science, and Archaeology
2008-2010	Member of tenure and promotion review committee for of Dr. Andrew K. Scherer, Department of Anthropology, Forensic Science, and Archaeology
2008, 2009	Gave presentation to untenured science faculty at Baylor University on <i>“Navigating the peer-review process and publishing in peer-reviewed journals”</i>
2009	Member of Search Committee for Associate Vice President for Human Resources
2009 -2010	Member of the Baylor University School of Engineering and Computer Science (ECS) Strategic Steering Committee
2009 -2011	Member of the Baylor University Institute of Archaeology Planning Committee
2009-2015	Member of tenure and promotion Departmental review committee for Dr. Sascha Usenko, Department of Environmental Science
2010-2016	Member of tenure and promotion Departmental review committee for Dr. Rebecca Sheesley, Department of Environmental Science
2010-2011	Member of Search Committee for Chair Search for Department of Environmental Science
2011-2013	Member of the Baylor University Tenure Committee (UTC)
2013	Gave presentation to STEM graduate student at Baylor University on <i>“Navigating the peer-review process and publishing in peer-reviewed journals”</i>
2013-2016	Graduate Program Director for the Baylor University Geosciences Department
2014-2016	Member of University Research Committee (URC)
2016-present	Associate Dean for Research, Baylor University Graduate School
2016-2017	A & S College Curriculum Review Task Force
2017	Reviewer for Glasscock Endowment Proposals

### **Courses Taught on a Regular Schedule (at the University of Tennessee, 1982-2004) -**

Geology 101 – Physical Geology
Geology 102 – Historical Geology
Geology 108 – Honors Historical Geology
Geology 340 – Stratigraphy and Sedimentation
Geology 440 – Geology Field Camp Course (7-10 days/year; course discontinued by Department after Summer of 2002)
Geology 544 – Paleopedology
Geology 545 – Sandstone Petrology/Physical Sedimentology
Geology 590 – Special Problems in Geology: Various Graduate Seminars w/topics in Sedimentology; Field Trip to Skidaway and/or Sapelo Islands, GA; Field Trip to Florida Keys
Geology 640 – Doctoral Seminar in Sedimentary Geology (various topics)
Geology 660 – Doctoral Seminar in Geochemistry (Global Geochemical Cycles)



Geology 670 – Doctoral Seminar in Structural Geology (Tectonics and Sedimentation)

**Courses Taught on a Regular Schedule (at Baylor University, 2004-present) -**

Geology 5339 – Sandstone Petrology (3 hours) taught every two years in the spring semester.

Geology 5340 – Paleopedology (3 hours) taught every two years in the fall semester.

Geology 5342 – Micromorphology of Soils and Paleosols (3 hours) taught every two years in the fall semester.

Geology 5V90 – Seminar in Grant Proposal Writing (2 hours) taught every year in the fall semester.

Geology 43C1 – Undergraduate Capstone Colloquium (3 hours) taught every year in the spring semester.

**Graduate Student Theses Supervised to Completion (at the University of Tennessee) -**

- 1) Cudzil, M.R., 1985, Depositional environments of the Chilhowee Group, northeast Tennessee: M.S. Thesis, University of Tennessee, 164 p.
- 2) Schoner, A.E., 1985, Sedimentology and sedimentary petrography of the Lower Silurian Clinch Sandstone at Beans Gap, Grainger County, Tennessee: M.S. Thesis, University of Tennessee, 227 p.
- 3) Easthouse, K.A., 1987, The paleoenvironmental analysis of the Lower Silurian Rockwood Formation at Green Gap, Whiteoak Mountain, southeastern Tennessee: M.S. Thesis, University of Tennessee, 218 p.
- 4) Fischer, M.W., 1987, Sedimentology of the Clinch Sandstone (Lower Silurian) along Clinch Mountain, northeastern Tennessee: M.S. Thesis, University of Tennessee, 156 p.
- 5) Marks, G.T., 1987, The lithology and paleoenvironmental interpretation of the Clinch Sandstone at Powell Mountain, southwestern Virginia: M.S. Thesis, University of Tennessee, 260 p.
- 6) Skelly, R.L., 1987, Depositional environments of the Chilhowee Group, Bean Mountain, Tennessee: M.S. Thesis, University of Tennessee, 211 p.
- 7) McReynolds, J.A., 1988, Paleoenvironments and facies relations of the Lower Cambrian Rome Formation on the U.S. Department of Energy Reservation, Oak Ridge Area in Roane and Anderson Counties, Tennessee: M.S. Thesis, University of Tennessee, 121 p.
- 8) Gogola, A.R., 1990, Depositional and diagenetic history of the basal transgressive sandstone of the Clinch and Rockwood Formations (Lower Silurian) in eastern Tennessee: M.S. Thesis, University of Tennessee, 147 p.
- 9) Walker, J.D., 1990, Tectonic significance of the stratigraphy and sedimentology of the Chilhowee Group (Latest Precambrian to Early Cambrian) of east Tennessee: Implications for the opening of the Proto-Atlantic (Iapetus) ocean: Ph.D. Dissertation, University of Tennessee, 275 p.
- 10) Neton, M.J., 1992, Late Proterozoic rifting of Laurentia: Source and deposition of conglomerate units of the Grandfather Mountain Formation, North Carolina Blue Ridge: M.S. Thesis, University of Tennessee, 180 p.
- 11) Bolton, J.C., 1992, Depositional history of the Red Mountain Formation in northwest Georgia and northern Alabama: Ph.D. Dissertation, University of Tennessee, 210 p.
- 12) Corbin, M.C., 1993, Bedform development in carbonate skeletal sand: Influence of fluid velocity and grain size in flume experiments: M.S. Thesis, University of Tennessee (co-

- directed by T.W. Broadhead), 104 p.
- 13) Dorsch, J.O., 1993, Tectonics and sedimentation of the Taconic Molasse in southwestern Virginia: Ph.D. Dissertation, University of Tennessee, 248 p.
  - 14) Caudill, M.R., 1996, Paleoclimate, burial compaction and perched water tables; Carboniferous vertic paleosols, Ohio and Tennessee: Ph.D. Dissertation, University of Tennessee, 171 p.
  - 15) Ansley, J.E., 1997, The sedimentology and stratigraphy of the York River Formation (Lower Devonian) at Anse-à-Brillant, Gaspé Bay, Québec, Canada: M.S. thesis, University of Tennessee, 115 p.
  - 16) Dunagan, S.P., 1998, Lacustrine and palustrine carbonate sedimentation and diagenesis in the Morrison Formation (Upper Jurassic), east-central Colorado, U.S.A.: Implications for depositional patterns, paleoecology, paleohydrology, and paleoclimatology: Ph.D. dissertation, University of Tennessee, (co-directed by K.R. Walker), 276 p.
  - 17) Elick, J.M., 1999, Paleoenvironmental interpretation of terrestrial deposits: The Cap-aux-Os and Fort Prével Members, Battery Point Formation (Early-Middle Devonian), Gaspé Bay, Québec: Ph.D. dissertation, University of Tennessee, 198 p.
  - 18) Humbert, S.E., 2001, Subaerial paleokarst in upper Pennington Formation limestones (Upper Mississippian), Big South Fork National Recreation Area, Tennessee: M.S. Thesis, University of Tennessee, 143 p.
  - 19) Stiles, C.A., 2001, Pedogenic relationships in a Texas Vertisol climosequence defined by geochemical mass balance of whole soil and chemistry of iron-manganese nodules: Ph.D. Dissertation, University of Tennessee (co-directed with C.I. Mora), 264 p.
  - 20) Smith, K.H., 2001, Influence of illuviated clays and soil cements on hydraulic conductivity in sedimentary saprolite: M.S. Thesis, University of Tennessee, (co-directed with L.D. McKay), 111 p.
  - 21) Robinson, A.C., 2002, A chronosequence study of modern Vertisols and application to Paleozoic paleoVertisols: M.S. Thesis, University of Tennessee, 177 p.
  - 22) Ober, E.G., 2003, The paleohydrological history of coal underclays based on Pennsylvanian paleosols in eastern Tennessee: M.S. Thesis, University of Tennessee, 108 p.
  - 23) Shunk, A.J., 2003, Evidence for abrupt latest Miocene-earliest Pliocene climate shift recorded by sinkhole paleolake at Gray Fossil Site, northeastern Tennessee: M.S. Thesis, University of Tennessee, 79 p.
  - 24) Smith, S.A., 2003, Sedimentation, pedogenesis, and paleodrainage straddling the Neogene-Quaternary boundary: A perspective from an infilled sinkhole lake: The Gray Fossil Site, northeastern TN: M.S. Thesis, University of Tennessee, 66 p.
  - 25) Schultz, B.S., 2005, Morphological, textural, geochemical, and mineralogical properties of dolostone-derived residuum in Knox County, Tennessee: M.S. Thesis, University of Tennessee, 117 p.

#### **Graduate Student Theses Supervised to Completion (at Baylor University) -**

- 1) Kahmann, J.A., 2008, High-frequency climate forcing of Upper Mississippian Pennington Formation paleosols at Pound Gap, Kentucky, USA: Ph.D. dissertation, 134 p. (married, J.A. Kahmann-Robinson)
- 2) Shunk, A.J., 2009, Late Tertiary paleoclimate and stratigraphy of the Gray Fossil Site (eastern TN) and the Pipe Creek Sinkhole (north-central IN): Ph.D. dissertation, 98 p.

- 3) Mintz, J.S., 2011, Rise of the Givetian (385 Ma) Forests, Northern Appalachian Basin, Catskill State Park, New York, U.S.A.: Ph.D. Dissertation, 143 p.
- 4) Stinchcomb, G.E., 2012, Climatic and human influences on the Holocene alluvial history and paleoenvironment of the Middle Delaware River Valley, USA: Ph.D. dissertation, co-supervised with Lee C. Nordt, 167 p.
- 5) Culbertson, A.V., 2013, Detailed paleoclimate records from Late Pennsylvanian polygenetic paleosols: North-central Texas, USA: M.S. Thesis, 35 p.
- 6) Jennings, D.S., 2014, Paleopedology of paleo-wetland and barite-bearing, hydric paleosols in the Morrison Formation (Upper Jurassic-Lower Cretaceous), North Central Wyoming, USA: A multianalytical approach: Ph.D. dissertation, 169 p.
- 7) Michel, L.A., 2014, Field, micromorphologic and stable isotopic comparative study of modern and ancient soils from Riesel, Texas and Rusinga Island, Kenya: Ph.D. Dissertation, co-supervised with Daniel J. Peppe, 112 p.
- 8) Beverly, E.J., 2015, Reconstruction of Late Pleistocene paleoenvironments of the Lake Victoria region using paleosols and freshwater tufa: Ph.D. Dissertation, co-supervised with Daniel J. Peppe, 209 p.

#### **Graduate Student Theses Currently Under Supervision (at Baylor University) -**

- 1) DiPietro, L.M., in progress, High-latitude paleopedology: Paleoclimatological and geoarchaeological applications in Alaska: Ph.D. dissertation.
- 2) Letourmy, Y., in progress, Impact of Carboniferous vegetation evolution on paleosols, Joggins Formation, Nova Scotia, Canada: Ph.D. Dissertation.
- 3) Lukens, W.E., in progress, Paleoenvironment at the dawn of C4 herbivory in the southern Great Plains: Ph.D. Dissertation.
- 4) Wiest, L.A., in progress: Reconstruction of biotic response across critical transitions in Earth's history: Tornillo basin, Williston basin, & Waco Mammoth National Monument: Ph.D. Dissertation.

#### **Post-Doctoral Research Associates (University of Tennessee) -**

- 1) Joeckel, R.M., 1994-1996, NSF-funded Post-Doctoral Research Fellowship in Earth Sciences: "Paleoclimate study of Pennsylvanian paleosols".
- 2) Stiles, C.A., 2001-2002, University of Tennessee, Initiative for study of global change.

#### **Undergraduate B.S. Theses Supervised to Completion (University of Tennessee) -**

- 1) Harding, S.D., 1995, The stratigraphy and paleoenvironments of paleosols and associated strata of the lower Pennington Formation (Upper Mississippian) at Sparta, Tennessee (Senior Honors Thesis), 41 p.
- 2) Penfield, C.W., 1999, Petrographic, mineralogical, and chemical characterization of soil and saprolite at the SWASA-7 site, Oak Ridge National Laboratory, Tennessee (Senior Honors Thesis), 39 p.
- 3) Jacobs, J.R., 2000, Determination of parent material of a paleosol in the lower portion of the Pennington Formation (Senior Honors Thesis), 24 p.
- 4) Batey, B., 2002, Microscale distribution of colloid tracers retained in saprolite (Senior Honors

Thesis, co-directed with Dr. Larry D. McKay).

#### **Undergraduate B.S. Theses Currently Supervised or Completed (Baylor University) -**

- 1) Dixon, A., 2008, Provenance and the early diagenetic alteration of volcanoclastic material incorporated in Late Jurassic fluvial channel sandstone deposits, Morrison Formation near Capitol Reef National Park, Utah: B.S. Thesis, 26 p.
- 2) Wright, T.C., 2009, Quantification of pedogenic clay in Middle Devonian Catskill paleosols and estimation of relative soil ages: B.S. Thesis, 24 p.
- 3) Harlow, R.H., 2010, Paleosol geochemistry and terrestrial sequence stratigraphy: Using molecular weathering ratios for sequence-stratigraphic and paleoclimatic interpretations of the Middle Devonian (Givetian) Manorkill Formation, Catskill State Park, New York, USA: B.S. Thesis, 52 p.
- 4) Landers, T.C., 2011, Influence of Late Holocene climate change on floodplain deposition, erosion, and soil formation along Williams Creek, central Texas, USA: B.S. Thesis, 27 p.
- 5) Kuijper, K.E., 2012, Analysis of the CIA-K geochemical proxy for Alfisols using the Baylor soil geochemical database: B.S. Senior Thesis, 41 p.
- 6) Horner, W.H., 2012, Determining depositional heterogeneity through clay mineralogy and particle size analysis of an early Miocene paleo-forest paleosol, Hiwegi Formation, Rusinga Island, Kenya: B.S. Thesis, 32 p.
- 7) Boggess, A., 2014, A micromorphological and stable isotopic analysis of a Quaternary flowstone from Crystal Cave, Kutztown, PA, USA: B.S. Thesis, 34 p.
- 8) McNeill, J., 2015, Origin and significance of clay minerals at the Dry Creek Site, central Alaska: B.S. Thesis, 33 p.
- 9) Barton, M., 2016, Using paleosols from the UNESCO World Heritage Joggins Fossil Cliffs to reconstruct paleoenvironment and paleoclimate of the Carboniferous of Nova Scotia: BS Thesis, 37 p.

#### **Graduate Student Thesis Committees Served on by Driese (University of Tennessee) -**

- 1) Smith, E., Jr., 1984, Late Quaternary vegetational history at Cupola Pond, Ozark National Scenic Riverways, southeastern Missouri (M.S. Thesis).
- 2) Beets, J., 1985, Structural analysis of the Hunter Valley, Wallen Valley, and Whiteoak Mountain fault intersection in northeastern Tennessee (M.S. Thesis).
- 3) Scales, A., 1985, Geochemical and petrologic characterization of the Glamorgan coal seam: implications for paleoenvironmental reconstruction in southeastern Pike County, Kentucky (M.S. Thesis).
- 4) Simonson, J., 1985, The stratigraphy, carbonate petrology, depositional environments, and paleoecology of the Middle Ordovician Moccasin Formation near Thorn Hill, Tennessee (M.S. Thesis).
- 5) Kozar, M., 1986, The stratigraphy, petrology, and depositional environments of the Maryville Limestone (Middle Cambrian) in the vicinity of Powell and Oak Ridge, Tennessee (M.S. Thesis).
- 6) Howze, B., 1987, Stratigraphy and Sedimentology of the Middle Ordovician Sevier Shale basin near Avens Bridge, Washington County, Virginia (M.S. Thesis).
- 7) Robert, L., 1987, The structural geology of the Hartford "window" - Newport Quadrangle,

- Tennessee (M.S. Thesis).
- 8) Lewis, J., 1988, Structural geology and finite strain analysis of the Precambrian Thunderhead Sandstone along the Greenbriar fault and the Roundtop klippe: Great Smoky Mountains, Tennessee (M.S. Thesis).
  - 9) Walters, R., 1988, Structural geometries, fabrics and stratigraphic relationships in the Cades Cove region, Great Smoky Mountains National Park, Tennessee (M.S. Thesis).
  - 10) Weber, L., 1988, The depositional environments and post-depositional alteration of the Upper Conasauga strata (Nolichucky Shale and Maynardville Formation) in east Tennessee (Ph.D. Dissertation).
  - 11) Royall, P.D., 1988, Late-Quaternary paleoecology and paleoenvironments of the Western Lowlands, southeast Missouri (M.S. Thesis).
  - 12) Faulkerson, J., 1989, Depositional history of the Porter's Creek Clay of the Upper Mississippi Embayment using chemical, stratigraphic and trace fossil data (M.S. Thesis).
  - 13) Miller, B., 1989, A stratigraphic and geochemical study of the Jellico coal horizon in the northeastern portion of the Tennessee coal belt (M.S. Thesis).
  - 14) Reeves, D., 1991, Clay mineralogy and early diagenesis in the Yazoo Formation (Upper Eocene) and undifferentiated Midway Group (Paleocene) (M.S. Thesis).
  - 15) Quinn, M., 1991, Two lithotectonic boundaries in western North Carolina: Geologic interpretation of a region surrounding Sylva, Jackson County (M.S. Thesis).
  - 16) Webb, H., 1992, Are Cretaceous kaolins reworked Tertiary kaolins? (M.S. Thesis).
  - 17) Couzens, B., 1992, Kinematic interactions between thrust sheets and cover at the juncture of the southern and central Appalachians (M.S. Thesis).
  - 18) Connelly, J., 1993, Structural development, strain history, and timing of deformation in the eastern Great Smoky Mountains (Ph.D. Dissertation).
  - 19) McClellan, E., 1993, Tectonic evolution of the Einunnfjellet-Savalen area, Hedmark Fylke, central-southern Norwegian Caledonides (Ph.D. Dissertation).
  - 20) Rankey, E., 1993, Carbonate platform response to episodic tectonism and eustasy: the Middle Cambrian limestones of the lower and middle Conasauga Group, East Tennessee (M.S. Thesis).
  - 21) Roberson, K., 1993, Diagenesis and paleohydrology of Middle Ordovician peritidal carbonates immediately overlying the post-Knox unconformity in East Tennessee (Ph.D. Dissertation).
  - 22) Srinivasan, K., 1993, Depositional history, sequence stratigraphy and diagenesis of the Maryville Limestone (Middle Cambrian), southern Appalachians (Ph.D. Dissertation).
  - 23) Steinhaff, D.M., 1993, Sequence stratigraphy and comparative diagenesis of Middle Ordovician shelf to shelf-edge limestones, the Copper Creek allochthon, East Tennessee (Ph.D. Dissertation).
  - 24) Richards, I., 1994, A combined petrologic and stable isotopic study of fluid-rock interaction in regional and contact metamorphic rocks: Lone Mountain, Esmeralda County, Nevada (Ph.D. Dissertation).
  - 25) Tobin, K., 1994, Early diagenesis of selected Middle Ordovician buildup deposits and oolite shoals from the southern Appalachians (Ph.D. Dissertation).
  - 26) Geddes, D., 1995, Structure, stratigraphy, and geotechnical investigation of part of the western Blue Ridge foothills, Monroe County, Tennessee (M.S. Thesis).
  - 27) Sheldon, B., 1995, An oxygen isotope study of illitization and diagenesis in Appalachian basin vertic paleosols (M.S. Thesis).

- 28) Thorbjornsen, K., 1995, Three-dimensional development of a natural thrust-related fold (M.S. Thesis).
- 29) Stefaniak, A., 1996, The stratigraphy and depositional history of the Middle Cambrian Rutledge Limestone, East Tennessee (M.S. Thesis).
- 30) Glumac, B., 1997, The transition from Middle and Upper Cambrian "Grand Cycle" subtidal carbonate deposition to Upper Cambrian peritidal deposition in the Southern Appalachians (Ph.D. Dissertation).
- 31) Tolliver, R., 1998, Diatom succession across the Late Pleistocene/Holocene interval: Examples from the southeastern U.S. (Ph.D. Dissertation).
- 32) King, D., 1998, Interpretation of stable isotope compositions of pedogenic carbonate in Late Silurian to Late Devonian paleosols, Appalachian basin (M.S. Thesis).
- 33) Ottinger, G., 1999, Paleoenvironmental and diagenetic relationships of the Honaker Dolomite and Nolichucky Formation transition (Cambrian, Conasauga Group), southern Appalachians (M.S. Thesis).
- 34) Hogan, J.P., 2000, Outcrop-scale contribution to regional deformation (M.S. Thesis).
- 35) Miller, D.L., 2000, Occurrence and stable isotope compositions of soil carbonate and organic matter within a climatic transect of modern Vertisols along the Coastal Prairie region of Texas (M.S. Thesis).
- 36) Pitner, A.H., 2000, Influence of immiscible matrix entry and aqueous diffusion on distribution of TCE contamination in fractured shale saprolite (M.S. Thesis).
- 37) Rollins, R.P., 2000, A sedimentological investigation into the anthropogenic effects in the Tallapoosa River Basin, Georgia (M.S. Thesis).
- 38) Lenczewski, M., 2001, Biodegradation of TCE in fractured shale and saprolite (Ph.D. Dissertation).
- 39) Sherwood, S.C., (Dept. of Anthropology, UT), 2001, The geoarchaeology of Dust Cave: a Late Paleoinian through Middle Archaic site in the western middle Tennessee River valley: (Ph.D. Dissertation).
- 40) Montes, C., 2001, Structure of the Cordillera Oriental of Colombia: a foreland fold-thrust belt, or the transpressive southern Caribbean Plate boundary?: (Ph.D. Dissertation).
- 41) Chen, Z., 2001, Diagenesis of the Mt. Simon Sandstone in the Illinois basin: SIMS oxygen isotope and  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of authigenic potassium feldspar: (Ph.D. Dissertation).
- 42) Pollock, M., 2002, Morphology of molar-tooth structures in Precambrian carbonates: influence of substrate rheology and implications for genesis: (M.S. Thesis).
- 43) Dean, W.G., 2003, Relative biodiversity trends of the Cenozoic Caribbean region: Investigations of possible causes and issues of scale using a biostratigraphic database of corals, echinoids, bivalves and gastropods: (Ph.D. Dissertation).
- 44) Heath, M.A., II, 2003, Structural modeling of the Middle Ordovician syncline in the Athens, Englewood, Etowah, and Mecca 7.5 minute quadrangles, eastern Valley and Ridge, Tennessee: (M.S. Thesis).
- 45) Luckow, C.J., 2003, Evolution of the Kuban Basin, northwestern Caucasus region, Russia, based on seismic reflection data: (M.S. Thesis).

**Geology Graduate Student Thesis Committees Served on by Driese (at Baylor University):**

- 1) Orosz, M., 2005, A comparison of depth-to-carbonate climofunctions for Alfisols and Vertisols in Texas: (M.S. Thesis).

- 2) Bongino, J., 2007, Late Quaternary history of the Waco Mammoth Site: Environmental reconstruction and interpreting the cause of death: (M.S. Thesis).
- 3) Cleveland, D., 2007, Fluvial sequence stratigraphy and paleoclimate of the Upper Triassic (Norian-Rhaetian) Chinle strata, New Mexico: (Ph.D. Dissertation).
- 4) Amidu, S., 2008, Geoelectric studies of seasonal hydrodynamics of Vertisols, soil moisture dynamics underneath a cedar elm tree and salinity variations in Lake Whitney, Texas, USA: (Ph.D. Dissertation).
- 5) Ball, N.H., 2009, Depositional controls on the reservoir quality within the Doe Creek Member, Upper Cretaceous (Cenomanian-Turonian) Kaskapau Formation at Valhalla Field, northwestern Alberta, Canada: (M.S. Thesis).
- 6) Clark, S., 2009, Abundance and character of organic matter in Cretaceous rocks of central Texas: (M.S. Thesis).
- 7) Douglas, S.W., 2010, Depositional systems analysis of the Jurassic Norphelet Formation, deep water eastern Gulf of Mexico: A sedimentologic investigation of aeolian facies, their relationship to reservoir quality, and their accumulation history: (M.S. Thesis).
- 8) Damman, A., 2011, The reef structure and formation of the Edwards Limestone bioherms in central Texas and an investigation of Bermudan reefs as a potential modern analog: (M.S. Thesis).
- 9) Dhillon, R.S., 2011, Influence of climate and the expansion of C4 grasses on sequence-scale cyclicity and landscape development during the late Miocene to Pleistocene of West Texas: (M.S. Thesis).
- 10) Barclay, C.J., 2012, Regional reservoir characterization and sequence stratigraphy of the Jean Marie Member of the Redknife Formation, Northern British Columbia: (M.S. Thesis)
- 11) Ahr, S.W., 2012, Age, genesis, and archaeological geology of the sandy mantle on the Gulf Coastal plain of Texas: (Ph.D. Dissertation).
- 12) Trendell, A.M., 2012, Lithofacies heterogeneity, fluvial style variations, and floodplain vegetation distributions: Deposition and diagenesis of the Lower Chinle Formation at Petrified Forest National Park, Arizona: (Ph.D. Dissertation).
- 13) Meier, H.A., 2014, Analysis of deposition, erosion, and landscape stability during the late Quaternary using multi-proxy evidence from Owl Creek, a low-order stream in central Texas: (Ph.D. Dissertation).
- 14) Wegert, D.J., 2014, Lithospheric magmatism in southern Colorado and northern New Mexico: (Ph.D. dissertation).
- 15) Morgan, R.F., 2015, Investigations in blastoid phylogenetics, speciation, and the sedimentology of an echinoderm-defined stratotype: (Ph.D. Dissertation).
- 16) Prince, K.C., 2015, Petrophysical facies mapping of the Pennsylvanian Cline Shale, Midland Basin, West Texas: (M.S. Thesis).
- 17) Longbottom, T., in progress, Paleosol organic matter characterization: paleoecological applications and diagenetic effects: (Ph.D. Dissertation).
- 18) Harlow, R.H., in progress, Depositional and climatic evolution of the late Triassic Chinle Basin: Deconvolution of the causal mechanisms for terrestrial sedimentation, Chinle Fm., southwestern United States: (Ph.D. Dissertation).
- 19) Bolles, K., in progress, Texas Drought Project (TXDP): Reconstructing Late Holocene extreme climate variability from a landscape perspective: (Ph.D. Dissertation).
- 20) Taormina, R., in progress, Quaternary fluvial geomorphology, pedology, and geoarchaeology in central Texas: (Ph.D. Dissertation).

- 21) Ogonda, K.O., in progress, Paleoclimate and paleoenvironmental reconstruction of the Early Miocene fossil site Koru 16 (Nyanza Province, western Kenya) and its implications for hominoid evolution: (M.S. Thesis).

**Graduate Student Thesis Committees Served on by Driese (at Baylor University) as an “Outside Reader”:**

- 1) Williamson, Forrest C., 2014, On the measurement of blinding in randomized, controlled trials: (Ph.D. Dissertation: Department of Statistical Sciences, Baylor University).
- 2) Sims, Justin R., 2016, Modeling nonlinear, nonstationary, vector time series: Methods and applications: (Ph.D. Dissertation: Department of Statistical Sciences, Baylor University).

**Graduate Student Thesis Committee Member, While Holding an Adjunct Appointment at the University of Tennessee in the Department of Earth & Planetary Sciences:**

- 1) Kocis, J.J., 2011, Late Pleistocene and Holocene hydroclimate change in the southeastern United States: sedimentary, pedogenic and stable carbon isotope evidence in Tennessee River floodplain paleosols: (Department of Earth & Planetary Sciences, University of Tennessee-Knoxville, M.S. thesis, 87 p.).
- 2) Ballard, J.P., 2015, Evidence of Late Quaternary fires from charcoal and siliceous aggregates in lake sediments in the eastern U.S.A.: (Department of Geography, University of Tennessee-Knoxville, Ph.D. dissertation, 213 p.).

**Graduate Student Thesis Committee Member, While Holding an Adjunct Appointment at Rutgers University in the Department of Geological Sciences:**

- 1) Beverly, E.J., 2011, High-resolution paleoenvironmental and paleoclimatic reconstruction of a Pleistocene catena and climosequence using paleopedology and geochemistry of lake margin paleo-Vertisols, Olduvai Gorge, Tanzania: M.S. Thesis, Department of Earth and Planetary Sciences, Rutgers University, 101 p.

**Graduate Student Thesis Committee Member, While Holding an Adjunct Appointment at the University of Houston in the Department of Geological Sciences:**

- 1) Famubode, O., 2014, Stratigraphic and sedimentologic analysis of Cretaceous deposits, Utah: Ph.D. dissertation, Department of Earth and Atmospheric Sciences, University of Houston.

**Graduate Student Thesis Committee in which Driese served as an “Opponent”, for the University of Tartu, Estonia, on June 18, 2015:**

- 1) Liivamägi, S., 2015, Neoproterozoic Baltic paleosol: geology and paleoenvironmental interpretation: Ph.D. Dissertation, University of Tartu, Estonia: *Dissertationes Geologicae Universitatis Tartuensis* Number 38, 94 p.

**Graduate Student Thesis Committee in which Driese served as an “Opponent” and Adjudication Committee Member, for the University of Oslo, Norway, on April 29, 2016:**



1) Riber, L., 2016, Petrographical and mineralogical changes in altered basement rocks on the Utsira High, North Sea – processes of regolith formation and comparison with analogous weathering sections: Ph.D. Dissertation, University of Oslo, Norway, 185 p.

**Graduate Student (Ph.D.) Sigrid Somelar from the University of Tartu, Estonia, hosted by Driese from January 4, 2016 to June 30, 2016 as a non-degree-seeking student.**

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