

Dustin E. Sweet

Curriculum Vitae

(updated 9/1/2020)

Department of Geosciences, Science Building, Room 318, Texas Tech University, Lubbock, TX 79409-1053

Contact information:

Name: Dustin Edman Sweet

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Education

2003-2009 University of Oklahoma, School of Geology and Geophysics, PhD. in Geology

Dissertation title: Glaciation in Equatorial Pangaea: Testing the hypothesis in the Pennsylvanian-Permian Fountain Formation (Colorado).

Advisor: Dr. Gerilyn S. Soreghan

2000-2003 Boise State University, Department of Geology, M.S. in Geology

Thesis title: Tectonostratigraphy of the Central Pequop Mountains, Elko County, Nevada.

Advisor: Dr. Walter S. Snyder

1996-2000 Boise State University, Department of Geology, B.S. in Geology

Thesis title: Jurassic Sedimentary Sequence in the Izee Terrane of West-Central, Idaho.

Advisor: Dr. C.J. Northrup

Employment & Appointments

2020-Present: Undergraduate Advisor, Department of Geosciences, Texas Tech University

2017-Present: Journal of Sedimentary Research, Associate Editor

2017-Present: Texas Tech University, Associate Professor

2017-2019: Geology Theme Leader, GSCO2, DOE Energy Frontier Research Center

2011-2017: Texas Tech University, Assistant Professor

2009-2011: Chevron Energy Technology Company, New Ventures

Courses Taught

Texas Tech University

Sedimentology & Stratigraphy, Sequence Stratigraphy, Sedimentary Geology of Carbonates, Sedimentary Processes, Field Geology of Carbonates, Field Methods in Sedimentary Geology, Hydrocarbon Exploration Methods, Application of Hydrocarbon Exploration Methods

University of Oklahoma

Stratigraphy and Structure for Petroleum Engineers

Boise State University

Sedimentary Petrology & Petrography, Sedimentation & Stratigraphy

Research Funding (Awards: \$425,718)

Sweet, D.E. (Principal 100% effort), Supplement from Capture and Storage of CO₂, Energy Frontier Research Center, Sponsored by the Department of Energy, **Awarded**, \$13,960 (August 1, 2018-July 31, 2019).

Sweet, D.E. (Principal 35% effort), Barnes, M.A., (Co-PI), Segvic, B., (Co-PI), Barnes, C.G., (Co-PI) and Sylvester, P. J. (Co-PI), Technical Response to the GSCO₂ Research Question "How do reservoir-scale geologic features relate to geomechanical and seismic properties of rocks?", Capture and Storage

- of CO₂, Energy Frontier Research Center, Sponsored by the Department of Energy, **Awarded**, \$222,880, (January 1, 2017-July 31, 2018).
- Sweet, D.E.** (Principal 100% effort), "Testing carbonate shelf geometry as a control on highstand delivery of siliciclastics to basin settings," Sponsored by the Petroleum Research Fund-American Chemical Society, Foundation, **Awarded**, \$110,000, (January 1, 2017-August 31, 2019)
- Bernard, C.R. (PI), Perry, G. (Co-PI), and **Sweet, D.E.**, (Co-PI, 40% effort), "Enhancing the capacities of undergraduates at the University of Guyana and Texas Tech University to support the oil and gas sector", 100,000 Strong in the Americas, **Awarded** \$24,740, (May 1, 2016-April 30, 2017)
- Sweet, D.E.** (Principal 100% effort), "CAREER: Building a proglacial fluvial proxy through SEM microtexture analysis to aid ancient glacier reconstruction," Sponsored by National Science Foundation, Federal, *Submitted July-2015, Declined \$559,672*
- Sweet, D.E.** (Principal 70% effort), Horita, J. (Co-Principal 30%), "Pleistocene loess-paleosol couplets on the Southern High Plains: Building a high-resolution climate record and sediment provenance," Sponsored by National Science Foundation, Federal, *Submitted May-2015, Declined \$318,130*
- Sweet, D.E.** (Principal 70% effort), Horita, J. (Co-Principal 30%), "Quaternary loess-paleosol couplets on the Southern High Plains: Building a high-resolution climate record and sediment provenance," Sponsored by National Science Foundation, Federal, *Submitted July-2014, Declined \$459,026*
- Sweet, D.E.** (Principal 70% effort), Horita, J. (Co-Principal 30%), "Quaternary loess-paleosol couplets on the Southern High Plains: Building a high-resolution climate record," Sponsored by National Science Foundation, Federal, *Submitted July-2013, Declined \$304,692.*
- Sweet, D.E.** (Principal 100% effort), "Survivability of glacially induced quartz grain microtextures during glacio-fluvial transport," Sponsored by National Science Foundation, Federal, **Awarded** \$49,943.00 (*originally requested \$140,859*). (August 1, 2013 - July 31, 2016).
- Sweet, D.E.** (Principal 100% effort), "Testing a Two Phase Subsidence Model for the Ancestral Rocky Mountains in the Taos Trough Region of Northern New Mexico," Proposal Stimulus Award—TTU Vice President of Research, University, *Submitted January-2013, Awarded \$4,195.*
- Sweet, D.E.** (Principal 100% effort), "Testing a Two Phase Subsidence Model for the Ancestral Rocky Mountains in the Taos Trough Region of Northern New Mexico," Sponsored by National Science Foundation, Federal, *Submitted July-2012, Declined \$115,036.*
- Sweet, D.E.** (Principal 100% effort), "Survivability of glacially induced quartz grain microtextures during glacio-fluvial transport," Sponsored by National Science Foundation, Federal, *Submitted January 2012, Declined \$ 144,437.*
- Gurrola, H. (Principal), Hardin, E. (Co-Principal), Horita, J. (Co-Principal), McIntyre, N. (Co-Principal), Rainwater, K. (Co-Principal), Ridley, M. (Supporting), Allen, L. J. (Supporting), Griffis-Kyle, K. (Supporting), **Sweet, D.E.** (Supporting), "Increasing interest in STEM: School-wide change through involvement in high profile scientific research," Sponsored by National Science Foundation, Federal, *Submitted September 2011, Declined \$1,499,925.*

Advised Students

Graduate-16 MS students; 4-PhD Students

- 20) Jesse Hensley (M.S. in progress) *Thesis Title: TBD*
- 19) Justin Roeder (M.S. in progress) *Thesis Title: TBD*
- 18) Garrett Williamson (PhD. in progress) *Thesis Title: TBD*
- 17) John Brotherton (PhD. in progress) *Thesis Title: Late Paleozoic spatial and temporal subsidence patterns in intracratonic southwest Laurentia: Assessment of uplift, denudation, and demise of the Ancestral Rocky Mountains in modern south-central New Mexico*

- 16) Valerie Tewell (M.S. August 2020) *Thesis Title:* Testing Depositional and Provenance Models of the Quaternary Blackwater Draw Formation of the Southern High Plains
- 15) Cameron Ramsey (M.S. May 2020) *Thesis Title:* Subsidence Analysis of the Midland Basin and Eastern Shelf of West Texas: Implications for Ancestral Rocky Mountain Timing and Deformation
- 14) Khaled Chowdhury (PhD. August 2019) *Thesis Title:* Developing a 3-D basin subsidence model for the late Paleozoic Taos Trough, northern New Mexico
- 13) Dillon Bagnall (M.S. August 2019) *Thesis Title:* Characterizing facies and clay mineralogy of Guadalupian tidal deposits in SE New Mexico: Implications of Dolomitization
- 12) Katie Pevehouse (M.S. May 2019) *Thesis Title:* Characterization of weathering profiles across the Great Unconformity-St. Francis Mountains, SE Missouri
- 11) Daniel St.-Germain (M.S. December 2018) *Thesis Title:* Fusulinid occurrence density maps to assess paleogeographic models of the Northwest Shelf of the Delaware Basin region
- 10) Phillip Frederick (PhD. August 2017) *Thesis Title:* Stratigraphy and paleogeography of the Peratrovich Formation and Ladrones Limestone (Mississippian to Pennsylvanian) southeastern Alaska
- 9) Eric Friedman (M.S. August 2017) *Thesis Title:* Comparing siliciclastic content of ramp to rimmed carbonate slope deposits during relative sea level highstands
- 8) Daniel Pike (M.S. August 2017) *Thesis Title:* Cyclicity, Dune Migration and Wind Velocity in Lower Permian Eolian Strata, Manitou Springs, Colorado
- 7) Audrey Pattat (M.S. August 2017) *Thesis Title:* Assessing post-Miocene tilting of the Southern High Plains through paleoslope reconstructions of the Ogallala Formation
- 6) Jill Garcia (M.S. May 2017) *Thesis Title:* Pennsylvanian-Permian chronostratigraphy of the eastern Midland Basin: Implications for basin-filling evolution and paleogeography
- 5) Matthew Pippin (M.S. May 2016) *Thesis Title:* Progressive downstream overprinting of glacially induced quartz microtextures during fluvial saltation, Salmon River, British Columbia and Alaska
- 4) David Brannan (M.S. August 2015) *Thesis Title:* Fluvial overprinting of glacially induced microtextures on quartz grains derived from the Chitina Glacier, Alaska
- 3) Hollee Baird (M.S. May 2015) *Thesis Title:* Assessing Pleistocene climate on the Southern High Plains through geochemical and physical characteristics of paleosols archived in the Blackwater Draw Formation
- 2) Aaron Watters (M.S. August 2014) *Thesis Title:* Middle Pennsylvanian paleogeography of the Taos Trough region, Northern New Mexico
- 1) Gabrielle Dunne (M.S. May 2013) *Thesis Title:* A geochemical and sedimentologic approach to infer paleoclimatic from buried soils within playa fill, Southern High Plains, Texas

Undergraduate Theses

- 36) Sara Grannis (B.S. August 2019) *Thesis Title:* Grain-size and mineralogic characterization of experimentally created fault gouge during shear of 1 m³ sandstone block
- 35) Tom Carlson (B.S. August 2019) *Thesis Title:* Fusulinid biostratigraphy constrains early Permian deformation on the Northwest Shelf of the Permian Basin, SE New Mexico
- 34) James Thomas (B.S. May 2018) *Thesis Title:* The migration of the shelf margin during Pennsylvanian through middle Permian: Delaware basin in Culberson, Texas
- 33) Joel Negrych (B.S. May 2018) *Thesis Title:* Late Paleozoic evolution of the southern Delaware Basin in Jeff Davis and Presidio counties, Texas
- 32) Michael Avelar (B.S. May 2018) *Thesis Title:* Evolution of the Marathon Foreland Basin, Terrell County, Texas

- 31) Katie Pevehouse (B.S. August 2017) *Thesis Title:* Chronostratigraphic Study of the Central Basin Platform and Delaware Basin in Loving, Ward and Winkler Counties, Texas
- 30) Richard Bloomer (B.S. August 2017) *Thesis Title:* Influence of the Marathon fold and Thrust Belt on sediment deposition in the southern Delaware Basin denoted by depths of Fusulinid biozone tops in Pecos County, TX
- 29) Eric Anderson (B.S. August 2017) *Thesis Title:* Chronostratigraphic evolution of the Eastern Shelf and Midland basin--Schleicher, Menard, Kimble and Concho Counties
- 28) Anthony Pedraza (B.S. August 2017) *Thesis Title:* Late Pennsylvanian to Early Permian evolution of the Ozona-Pecos Arch and its connection to the Central Basin Platform
- 27) Chris Spano (B.S. December 2016) *Thesis Title:* Structural Interpretation of the Matador Uplift and Late Paleozoic time periods in the Palo Duro Basin in Hale and Floyd County, TX
- 26) Sterling Lepard (B.S. May 2016) *Thesis Title:* Permian and Pennsylvanian Evolution of the Central Basin Platform in Upton and Crane Counties
- 25) Seth Martin (B.S. August 2016) *Thesis Title:* Evolution of Basin Fill within the southern Palo Duro Basin in Northwest Texas
- 24) Robert Nelson (B.S. August 2016) *Thesis Title:* Strawn through Wolfcampian shelf edge progradation of the northeastern Midland Basin and southeastern Palo Duro Basin, Kent, Dickens and Motley counties, west Texas.
- 23) Josh Newton (B.S. August 2016) *Thesis Title:* Transition of the Midland Basin to the Matador Arch in Bailey, Parmer and Cochran counties defined through reconstruction of depth to fusulinid biozones.
- 22) Daniel St-Germain (B.S. 2015) *Thesis Title:* Late Paleozoic development of the southern Midland Basin
- 21) Mason Villarreal (B.S. 2015) *Thesis Title:* Pennsylvanian-Permian evolution of the Midland Basin in Terry and Yoakum counties, Texas
- 20) Casey Shands (B.S. 2015) *Thesis Title:* Pennsylvanian uplift and early Permian subsidence of the Central Basin Platform in Ector and Midland Counties
- 19) Tyler Roy (B.S. 2015) *Thesis Title:* Pennsylvanian Development of the Horseshoe Atoll in the Midland Basin, Martin and Dawson Counties, West Texas
- 18) Alexander Geis (B.S. 2015) *Thesis Title:* Development of the Eastern Midland Basin Shelf within Tom Green County, Texas
- 17) Clinton Carr (B.S. 2015) *Thesis Title:* Chronostratigraphic Analysis of Irion and Reagan Counties, Texas
- 16) Joshua Sharkey (B.S. 2015) *Thesis Title:* Chronostratigraphic evolution of the Pennsylvanian-Permian eastern shelf of the Midland Basin within Sterling and Coke Counties, Texas
- 15) William Reeves (B.S. 2015) *Thesis Title:* Structure of the Ordovician Ellenberger Formation in Fisher and Nolan counties, Texas
- 14) Heather Barnes (B.S. 2015) *Thesis Title:* Chronostratigraphic Evolution of the Pennsylvanian-Permian Northern Shelf of the Midland Basin within Hockley County, Texas
- 13) James Duncan (B.S. 2015) *Thesis Title:* Development of the Horseshoe Atoll in the Northern Midland Basin, Howard and Mitchell Counties, Texas
- 12) Kendall Hamrick (B.S. 2015) *Thesis Title:* Development of the Wolfcamp Formation and Horseshoe Atoll in the Midland Basin, Borden and Scurry County, Texas
- 11) William Armstrong (B.S. 2015) *Thesis Title:* Late Paleozoic Development of the Northern Midland Basin Shelf in Lubbock and Lynn counties, TX
- 10) Ryan Robbins (B.S. December 2014) *Thesis Title:* Development of the Permian shelf in the Northern Midland Basin, Garza and Crosby counties, Texas

- 9) John Closuit (B.S. May 2014) *Thesis Title: Downstream grain-size distribution of sand bed load in a proglacial system Chitina River, Alaska*
- 8) Abner Godoy (B.S. May 2014) *Thesis Title: Thickness variations between the early Permian and Pennsylvanian stratigraphy in the northern Denver Basin*
- 7) Matt Terry (B.S. December 2013) *Thesis Title: Grain-size control of mudcracks in a kaolinite matrix*
- 6) Corbin Carsrud (B.S. May 2013) *Thesis Title: A Pennsylvanian Age for the Fountain Formation constrained by lithologic comparison of overlying eolian units*
- 5) Logan Worley (B.S. May 2013) *Thesis Title: Pennsylvanian and Permian isopach comparisons within the Paradox Basin, Utah*
- 4) Hollee Baird (B.S. December 2012) *Thesis Title: Stable Inorganic Carbon and Oxygen Isotope Geochemistry of buried soils in Playa Wetland cores in the Southern High Plains*
- 3) Bryce Mathis (B.S. December 2012) *Thesis Title: Deciphering Paleogeography of the Ancestral Rockies in the Taos Trough Region through Soft-Sedimentary Folds and Provenance Analysis: Sangre de Cristo Mountains, New Mexico*
- 2) Aaron Watters (B.S. May 2012) *Thesis Title: Early Permian Wind Parameters Recorded in the Lyons Formation, Manitou Springs, Colorado*
- 1) Clyde Findlay (B.S. May 2012) *Thesis Title: Modeling Competency through Volume Expansion of Fine-grained Debris Flows Housed within the Fountain Formation, Colorado*

Publications

Peer Reviewed Papers (*indicates advised student author)

- 28) Chowdhury, N.U.M.K.* and **Sweet, D.E.**, 2020, Subsurface stratigraphy and basin-fill architecture of the late Paleozoic eastern Taos trough, northern New Mexico, U.S.A. *The Mountain Geologist*, v. 53, p. 149-176.
- 27) Pevehouse, K.J.*, **Sweet, D.E.**, Šegvić, B., Monson, C.C., Zanoni, G., Marshak, S., and Barnes, M.A., 2020, Paleotopography controls weathering of Cambrian-aged profiles beneath the Great Unconformity, St. Francois Mountains, Se Missouri, U.S.A. *Journal of Sedimentary Research*, v. 90, p. 629-650.
- 26) Tarokh, A., Mahknenko, R.Y., Kim, K., Zhu, X., Popovics, J.S., Šegvić, B., and **Sweet, D.E.**, 2020, Influence of CO₂ injection on the poromechanical response of Berea Sandstone. *International Journal of Greenhouse Gas Control*, v. 95.
- 25) Stine, J.M., **Sweet, D.E.**, Geissman, J.W., Baird, H.*, and Ferguson, J.F., 2020, Climate and provenance variation across the mid-Pleistocene Transition revealed through sedimentology, geochemistry and rock magnetism of the Blackwater Draw Formation, Southern High Plains, Texas, U.S.A: in Waitt, R. (ed.), *Ice-Age Climates-Glaciers, Flood, Lakes, and Wind: Interdisciplinary Quaternary science round the world to honor Stephen C. Porter*. The Geological Society of America, Special Paper 548.
- 24) Brotherton, J.L.*, Chowdhury, N.U.M.K.*, and **Sweet, D.E.**, 2020, A synthesis of late Paleozoic sedimentation in central and eastern New Mexico: Implications for timing of Ancestral Rocky Mountains deformation, in Henderson, C.M. Snyder, W.S., and Ritter, S.M. (eds.), *Late Paleozoic and Early Mesozoic tectono-stratigraphy and biostratigraphy of Western Pangea*. SEPM Special Publication 113.
- 23) Garcia, J.*, **Sweet, D.E.**, and Barrick, J.E., 2020, Pennsylvanian-early Permian chronostratigraphic evolution of the Eastern Shelf of the Midland Basin: Implications for subsidence patterns across the Ancestral Rocky Mountains, in Henderson, C.M. Snyder, W.S., and Ritter, S.M. (eds.), *Late*

Paleozoic and Early Mesozoic tectono-stratigraphy and biostratigraphy of Western Pangea. SEPM Special Publication 113.

- 22) Monson, C.C., **Sweet, D.E.**, Segvic, B., Zanoni, G., Balling, K., Wittmer, J.M., Ganis, G.R., and Cheng, G., 2019, The Late Ordovician (Sandbian) Glasford structure: A marine-target impact crater with a possible connection to the Ordovician meteor event. *Meteoritics and Planetary Science*, v. 54, p. 2927-2950.
- 21) Pike, J.D.* and **Sweet, D.E.**, 2018, Environmental drivers of cyclicity recorded in lower Permian eolian strata, Manitou Springs, Colorado, western United States. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 499, p. 1-12
- 20) **Sweet, D.E.**, 2017, Fine-grained debris flows in coarse-grained alluvial systems: Paleoenvironmental implications for the Late Paleozoic Fountain and Cutler formations, Colorado, U.S.A. *Journal of Sedimentary Research*, v. 87, p. 763-779.
- 19) **Sweet, D.E.**, and Brannan, D.K*, 2016, Proportion of glacially induced to fluvially induced quartz grain microtextures along the Chitina River, SE Alaska. *Journal of Sedimentary Research*, v. 86, p. 749-761.
- 18) **Sweet, D.E.** and Watters, A.J.*, 2015, Middle Pennsylvanian composite stratigraphic section of Holman Grade records cyclic fluvio-deltaic sedimentation within the Taos trough axis, in Lindline, J., Petronis, M., and Zebrowski, J. (eds.), *Geology of the Las Vegas Region*. New Mexico Geological Society Field Conference Guidebook 66, p. 229-239.
- 17) Soreghan, G.S., **Sweet, D.E.**, Thomson, S.N., Kaplan, S.A., Marra, K.R., Balco, G., and Eccles, T.M., 2015, Geology of Unaweep Canyon and its role in the drainage evolution of the northern Colorado Plateau. *Geosphere*, v. 11, no.2, p. 320-341.
- 16) **Sweet, D.E.**, Carsrud, C.R.* and Watters, A.J.*, 2015, Proposing an entirely Pennsylvanian age for the Fountain Formation through new lithostratigraphic correlation along the Front Range. *The Mountain Geologist*, v. 52, no. 2, p. 43-70.
- 15) Soreghan, G.S., **Sweet, D.E.** and Heavens, N.G., 2014, Evidence for Glaciation in the late Paleozoic Ancestral Rocky Mountains, and Implications for Upland Glaciation in Tropical Pangea. *Journal of Geology*, v. 122, p. 137-163.
- 14) Soreghan, G.S. and **Sweet, D.E.**, 2013, New Views on late Paleozoic climate and tectonics in the Ancestral Rocky Mountains, in Abbott, L.D., and Hancock, G.S., (eds.), *Classic Concepts and New Directions: Exploring 125 Years of GSA Discoveries in the Rocky Mountain Region*. Geological Society of America Field Guide 33, p. 295-330.
- 13) Balco, G., Soreghan, G.S., **Sweet, D.E.** and Marra, K.R., 2013, Cosmogenic-nuclide burial ages for Pleistocene sedimentary fill in Unaweep Canyon, Colorado, USA. *Quaternary Geochronology*, v. 18, p. 149-157.
- 12) Sweet, A.C., Soreghan, G.S., **Sweet, D.E.**, Soreghan, M.J., and Madden, A.S., 2013, Permian dust in Oklahoma: Source and origin for Middle Permian (Flowerpot-Blaine) redbeds in Western Tropical Pangea. *Sedimentary Geology*, v.284-285, p. 181-196.
- 11) **Sweet, D.E.** and Soreghan, G.S., 2012, Estimating magnitudes of relative sea-level change in a coarse-grained fan delta system: Implications for Pennsylvanian glacioeustasy. *Geology*, V. 40, 979-982.
- 10) Soreghan, G.S., Keller, G.R., Gilbert, M.C., Chase, C.G., and **Sweet, D.E.**, 2012, Load-induced subsidence of the ancestral Rocky Mountains recorded by preservation of Permian landscapes. *Geosphere*, V. 8, no. 3, p. 654-668.
- 9) **Sweet, D.E.** and Soreghan, G.S., 2010, Application of quartz sand microtextural analysis to infer cold-climate weathering for the equatorial Fountain Formation (Pennsylvanian-Permian, Colorado). *Journal of Sedimentary Research*, v. 80, p. 666-677.

- 8) **Sweet, D.E.** and Soreghan, G.S., 2010, Late Paleozoic tectonics and paleogeography of the Ancestral Front Range: Structural, stratigraphic and sedimentological evidence from the Fountain Formation (Manitou Springs, Colorado). *Geological Society of America Bulletin*, v. 122, p. 575-594.
- 7) Soreghan, G.S., Soreghan, M.J., Poulsen, C.J., Young, R.A, **Sweet, D.E.** and Davogustto, O.C., 2009, Anomalous cold in Pangaeen tropics: Reply to Discussion. *Geology*, p. e193-e194.
- 6) Soreghan, G.S., Soreghan, M.J., **Sweet, D.E.**, and Moore, K.D., 2009, Alluvial fan or proglacial outwash? An alternative interpretation for the proximal Cutler Formation (upper Paleozoic, Paradox Basin). *Journal of Sedimentary Research*, v. 79, p. 495-522.
- 5) Soreghan, G.S., **Sweet, D.E.**, Marra, K.R., Eble, C.F., Soreghan, M.J., Elmore, R.D., Kaplan, S.A., and Blum, M.D., 2009, An exhumed Late Paleozoic canyon in the Rocky Mountains: Reply to Discussion. *Journal of Geology*, v. 117, p. 215-220.
- 4) **Sweet, D.E.** and Soreghan, G.S., 2008, Polygonal Cracking in Coarse Clastics Records Cold Temperatures in the Equatorial Fountain Formation (Pennsylvanian-Permian, Colorado). *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 268, no. 3-4, p. 193-204.
- 3) Soreghan, G.S., Soreghan, M.J., Poulsen, C.J., Young, R.A, **Sweet, D.E.** and Davogustto, O.C., 2008, Anomalous cold in Pangaeen tropics. *Geology*, v. 36, No. 8, p. 659-662.
- 2) Moore, K.D., Soreghan, G.S. and **Sweet, D.E.**, 2008, Stratigraphic and structural relations in the proximal Cutler Formation of the Paradox Basin: Implications for the timing of movement on the Uncompahgre fault. *The Mountain Geologist*, v. 45, no. 2, p. 49-68.
- 1) Soreghan, G.S., **Sweet, D.E.**, Marra, K.R., Eble, C.F., Soreghan, M.J., Elmore, R.D., Kaplan, S.A., and Blum, M.D., 2007, An exhumed Late Paleozoic canyon in the Rocky Mountains. *Journal of Geology*, v. 115, p. 473-481.

Extended Abstracts

- 5) Soreghan, G.S., Soreghan, M.J. and **Sweet, D.E.**, 2009, Hypothesized glaciation in tropical Pangaea: The challenge of assessing upland glaciation. 27th International Association of Sedimentary Geology, Abstracts and Programs.
- 4) Schiappa, Tamra A., Snyder, W.S., Trexler, J.H., Davydov, V.I., and **Sweet, D.E.**, 2003, Depositional Architecture of Basins of the Upper Paleozoic Antler Foreland, Northern Pangaea: Examples from Nevada, USA. XVth International Congress on Carboniferous and Permian Stratigraphy, Abstracts and Programs, p. 468-469.
- 3) Snyder, Walter S., Schiappa, Tamra A., Trexler, James H., Cashman, P., Davydov, V.I., **Sweet, D.E.**, 2003, Permo-Carboniferous tectonostratigraphic framework for Western North America: Implications for global correlation. XVth International Congress on Carboniferous and Permian Stratigraphy, Utrecht Netherlands, Abstracts and Programs, p. 510-512.
- 2) **Sweet, D.E.** and Snyder, W.S., 2002, Middle Pennsylvanian through Early Permian Tectonically Controlled Basins: Evidence from the Central Pequop Mountains, Northeast Nevada. AAPG Hedberg Research Conference-Late Paleozoic Tectonics and Hydrocarbon Systems of Western North America—The Greater Ancestral Rocky Mountains, p. 74-77.
- 1) Snyder, W. S., Trexler, J. H., Jr., Davydov, V. I., Cashman, P., Schiappa, T. A., and **Sweet, D.E.**, 2002, Upper Paleozoic Tectonostratigraphic Framework for the Western Margin of North America. AAPG Hedberg Research Conference-Late Paleozoic Tectonics and Hydrocarbon Systems of Western North America-The Greater Ancestral Rocky Mountains, p. 58-61.

Abstracts (*indicates advised student authors)

- 58) Stine, J.M., Geissman, J.W., **Sweet, D.E.**, and Ferguson, J.F., 2019, The role of climate in the

- development of salt-withdrawal minibasins in terrestrial settings. 81st EAGE Conference and Exhibition. doi: 10.3997/2214-4609.201901291
- 57) Stine, J.M., Geissman, J.W., **Sweet, D.E.**, and Ferguson, J.F., 2019, Using rock magnetic properties to study the Pleistocene paleoclimatic conditions of the Southern High Plains, West Texas, AGU, Fall Meeting Supplement.
- 56) **Sweet, D.E.**, Chowdhury, N.U.Md.K.*, Bortherton, J.L., 2019, A fundamental change in subsidence across the Ancestral Rocky Mountains at the Pennsylvanian-Permian Boundary (Invited Presentation), GSA Abstracts with Programs, v. 51, No. 5, doi: 10.1130/abs/2019AM-334660.
- 55) Brotherton, J.L.*, Yoshinobu, A.S., and **Sweet, D.E.**, 2019, Preliminary investigation of pre-early Permian deformation associated with the Ancestral Rocky Mountains orogeny, Sacramento Mountains, New Mexico, GSA Abstracts with Programs, v. 51, No. 5, doi: 10.1130/abs/2019AM-339859
- 54) Ramsey, C.E.* and **Sweet, D.E.**, 2019, Tectonic subsidence of the Midland Basin and Eastern Shelf: Informing Ancestral Rocky Mountain evolution, GSA Abstracts with Programs, V. 51, No. 5, doi: 10.1130/abs/2019AM-332824.
- 53) Tewell, V.* and **Sweet, D.E.**, 2019, Grain-size analysis of the Quaternary Blackwater Draw Formation, Southern High Plains, TX: Evidence from a newly cored interval. GSA Abstracts with Programs, V. 51, No. 5. doi: 10.1130/abs/2019AM-339419
- 52) Barnes, M.A., **Sweet, D.E.**, and Ewing, T.E., 2019, The Granite Rhyolite Province of North America. GSA Abstract with Programs, V. 51.
- 51) Segvic, B., Zaroni, G., **Sweet, D.E.**, and Moscariello, A., 2018, Clay mineralogy and the origin of unconventional Paleozoic shale reservoirs from the North American Midcontinent. Mid-European Clay Conference, Zagreb, Croatia.
- 50) Zaroni, G., Segvic, B., Coe, J., and **Sweet, D.E.**, 2018, Smectite stability in alternating mudstone-sandstone facies from the Pennsylvanian Hoxbar Group (Anadarko Basin, Oklahoma). Mid-European Clay Conference, Zagreb, Croatia.
- 49) Diaby, M., Zaroni, G., **Sweet, D.E.**, and Segvic, B., 2018, Clay minerals as Quaternary climate change indicators in the Southern High Plains, West Texas. Annual Meeting of the Texas Academy of Science, Midland, Texas.
- 48) Zaroni, G., Segvic, B., Moscariello, A., and **Sweet, D.E.**, 2018, Trace Element Geochemistry of Late Pennsylvanian Shales of the Anadarko Basin (OK) – Implications for Sediment Provenance and Shale Diagenesis. AAPG, ACE 2018 Annual convention and exhibition.
- 47) Cheng, G., Marshak, S., Monson, C.C., **Sweet, D.E.**, Segvic, B., and Lundstrom, C.C., 2018, Mesoscopic and microscopic deformation in the Glasford Meteorite impact structure, Illinois: Impact fracking in carbonate bedrock. GSA Abstracts with Programs, v. 50.
- 46) Stine, J., Geissman, J.W., **Sweet, D.E.**, and Ferguson, J.F., 2018, Paleoclimatic variation revealed by rock magnetic data from Plio-Pleistocene sediments of the Fisher Valley Basin: A high-fidelity record of paleoclimatic conditions for the Colorado Plateau. GSA Abstract with Programs, v. 50.
- 45) Stine, J., Geissman, J.W., and **Sweet, D.E.**, 2018, Rock Magnetic cyclostratigraphy of the Pliocene and Quaternary sediments of the Fisher Valley Basin, Utah. AAPG, ACE 2018 Annual convention and exhibition.
- 44) Stine, J., Ferguson, J.F., Geissman, J.W., and **Sweet, D.E.**, 2017, Analysis of the variations in rock magnetic properties of the Quaternary Blackwater Draw (Eolian) Formation, West Texas. EOS transactions, AGU, Fall Meeting Supplement.
- 43) Brotherton, J.L.* and **Sweet, D.E.**, 2017, Unroofing sequence in the Orogrande Basin: Preliminary assessment of the rate of denudation of the Pedernal uplift, southern New Mexico. GSA abstracts with Programs, v. 49, No. 6, doi: 10.1130/abs/2017AM-298615

- 42) Pevehouse, K.J.* and **Sweet, D.E.**, 2017, Assessing the utility of well cuttings to characterize weathering profiles of crystalline basement. GSA abstracts with Programs, v. 49, No. 6, doi: 10.1130/abs/2017AM-305504
- 41) **Sweet, D.E.**, Barnes, M.A., Marshak, S., Barnes, C.G., and Rothfolk, A., 2017, Preservation of paleotopography of the granite-rhyolite province of the midcontinent, USA: A burial and exhumation history. GSA abstracts with Programs, v. 49, No. 6, doi: 10.1130/abs/2017AM-303019
- 40) Stine, J.* , **Sweet, D.E.**, and Geissman, J.W., 2017, Rock magnetic cyclostratigraphy and magnetic polarity stratigraphy of the Quaternary Blackwater Draw Formation, west Texas. GSA abstracts with Programs, v. 49, No. 6, doi: 10.1130/abs/2017AM-305656
- 39) **Sweet, D.E.**, Stine, J.* , and Geissman, J.W., 2017, The effect of the mid-Pleistocene transition on the character of sedimentation on the southern high plains. GSA abstracts with Programs, v. 49, No. 6, doi: 10.1130/abs/2017AM-298799
- 38) Friedman, E. T.* and **Sweet, D.E.**, 2016, Preliminary Results: Comparing siliciclastic content of ramp to rimmed carbonate slope deposits during relative sea level highstands. GSA Abstracts with Programs, v. 48, no. 7.
- 37) Pattat, A.N.* and **Sweet, D.E.**, 2016, Assessing post-Miocene tilting of the southern High Plains through paleoslope reconstructions of the Ogallala Formation. GSA Abstracts with Programs, v. 48, no. 7.
- 36) Frederick, P.A. Jr.* , **Sweet, D.E.**, and Rohr, D.M., 2016, Facies analysis and age relationships of Late Devonian-Middle Pennsylvanian carbonates of the southern Alexander Terrane, SE Alaska. GSA Abstracts with Programs, v. 48, no. 7.
- 35) Chowdhury, Nur Uddin Md. Khaled* and **Sweet, D.E.**, 2016, Constructing a subsidence model for the eastern portion of the Taos trough through correlation of backstripped geohistory curves. GSA Abstracts with Programs, v. 48, no. 7.
- 34) Pike, J. Daniel* and **Sweet, D.E.**, 2016, Cyclicity, dune migration and wind velocity in lower Permian eolian strata, Manitou Springs, Colorado. GSA Abstracts with Programs, v. 48, no. 7.
- 33) Garcia, J.* and **Sweet, D.E.**, 2016, Reconstructing the evolution of the Midland Basin with chronostratigraphic surfaces derived from fusulinid biostratigraphy. GSA Abstracts with Programs, v. 48, no. 7.
- 32) **Sweet, D.E.**, 2016, Subsidence analysis and sedimentology indicates a wrench basin for the western portion of the Taos trough. GSA Abstracts with Programs, v. 48, no. 7.
- 31) **Sweet, D.E.**, 2016, Fine-grained debris flows in a coarse-grained alluvial system: paleoenvironmental implications of the Fountain and Cutler Formations, Colorado. GSA Abstracts with Programs, v. 48, no. 7.
- 30) Garcia, J.* and **Sweet, D.E.**, 2016, Late Paleozoic evolution of west Texas revealed through fossils. National ESRI user conference. San Diego, California.
- 29) Garcia, J.* and **Sweet, D.E.**, 2016, Using Fusulinid Biostratigraphy to reconstruct Pennsylvanian-Early Permian History of the Midland Basin. Southwest Section-American Association of Petroleum Geologists, Annual Meeting. Abilene, Texas.
- 28) Sweet, D.E.**, 2015, PABZT: Permian Basin Archival of Biostratigraphic Tops. West Texas Geological Society, Fall Symposium: The Permian basin: Past, Present, and Future.
- 27) Baird, H.C.* and **Sweet, D.E.**, 2014, Relative precipitation variations archived in Quaternary paleosols on the southern High Plains. GSA Abstracts with Programs, v. 46, no. 6.
- 26) Brannan, D.K.* and **Sweet, D.E.**, 2014, Preliminary Assessment: Fluvial overprinting of glacially-induced microtextures on quartz grains derived from the Chitina River, Alaska. GSA Abstracts with Programs, v. 46, no. 6.

- 25) Soreghan, G. S., **Sweet, D.E.**, 2013, The Case for Upland Ice in Low-Latitude Late Paleozoic Pangaea. GSA Abstracts with Programs, v. 45, no. 7.
- 24) Watters, A. J.* , **Sweet, D.E.**, 2013, Early Pennsylvanian Paleogeographic analysis of the Taos trough, New Mexico. GSA Abstracts with Programs, v. 45, no. 7.
- 23) **Sweet, D.E.**, Carsrud, C. T.* , Watters, A. J.* , (2013). Proposing an entirely Pennsylvanian age for the Fountain formation exposed along the Front Range, Colorado. GSA Abstracts with Programs, v. 45, no. 7.
- 22) Carsrud, C.* , Watters, A. J.* , **Sweet, D.E.**, (2013). A Pennsylvanian Age for the Fountain Formation constrained by lithologic comparison of overlying eolian units. GSA Abstracts with Programs, v. 45, no. 3. pp. 13.
- 21) Baird, H.* , **Sweet, D.E.**, Horita, J., 2013, Carbonate Stable Isotopes from Soil Cores from Playa Lakes, Southern High Plains, Texas, GSA Abstracts with Programs, v. 45, no. 3, pp. 27.
- 20) Mathis, B. A.* , **Sweet, D.E.**, 2013, Deciphering Early Pennsylvanian paleogeography of the ancestral Rocky Mountains in the Taos trough region through soft-sedimentary fold analysis: Sangre de Cristo Mountains, New Mexico. GSA Abstracts with Programs, v. 45, no. 3, pp. 12.
- 19) **Sweet, D.E.**, 2013, Load-induced subsidence model of the core Ancestral Rocky Mountains: The hypothesis and preliminary tests. GSA Abstracts with Programs, v. 45, no. 3., pp. 67.
- 18) Dunne, G.* , **Sweet, D.E.**, Barnes, M., Baird, H.* , Hudnall, W., 2013, Whole-rock geochemical climate signatures of paleosols recovered from playa cores, southern High Plains, Texas. GSA Abstracts with Programs, v. 45, no. 3, pp. 71.
- 17) Watters, A.J.* and **Sweet, D.E.**, 2012, Early Permian Wind Parameters recorded in the Lyons Formation, Manitou Springs, Colorado. GSA Abstracts with Programs, v. 44, no. 6.
- 16) Findlay, C.P. III* and **Sweet, D.E.**, 2012, Modeling competency through volume expansion of fine-grained debris flows housed within the Fountain Formation, Colorado. GSA Abstracts with Programs, v. 44, no. 6.
- 15) Soreghan, G.S. and **Sweet, D.E.**, 2010, Evidence for Upland Glaciation in Western Tropical Pangaea
- 14) **Sweet, D.E.** and Soreghan, G.S., 2009, Magnitude of early Pennsylvanian (Morrow-Atokan) eustatic change: Constraints from a fan-delta setting. AAPG Annual Meeting—Programs with Abstracts.
- 13) Soreghan, G.S., Soreghan, M.J., Hamilton, M.A. and **Sweet, D.E.**, 2008, Ice, dust and cold in the Late Paleozoic tropics. AAPG Annual Meeting—Programs with Abstracts.
- 12) **Sweet, D.E.** and Soreghan, G.S., 2007, SEM textures of quartz from the upper Paleozoic Fountain Formation (Manitou Springs, Colorado) suggest a possible glacial influence on sedimentation. GSA Abstracts with Programs, v. 39, no. 6.
- 11) Soreghan, G.S. (Lynn), **Sweet, D. E.**, Marra, Kristen R., Eble, Cortland F., Soreghan, Michael J., Elmore, R. Douglas, Kaplan, Sara A., and Blum, Michael D., 2006, A Paleozoic Landscape in the Rocky Mountains. GSA Abstracts with Programs, v. 38, no. 6.
- 10) **Sweet, D.E.** and Soreghan, G.S., 2005, Periglacial Features in the Paleoequatorial Fountain Formation (Permo-Pennsylvanian, Colorado)?. Eos Transactions, AGU, 86(52), Fall Meeting Supplement, PP11B-1466.
- 9) Soreghan, G.S., Soreghan, M.J., Eble, C.F., **Sweet, D.E.**, Davogustto, O., Young, R.A. and Elmore, R.D., 2005, Late Paleozoic Deglaciation in Western Equatorial Pangaea. Eos Transactions, AGU, 86(52), Fall Meeting Supplement, T11D-0466.
- 8) **Sweet, D.E.**, and Soreghan, G.S., 2005, Periglacial Features in the Fountain Formation (Permo-Pennsylvanian, Colorado)?. GSA Abstracts with Programs, v. 37, no. 5.
- 7) Kaplan, S.A., Soreghan, G.S., **Sweet, D.E.**, and Blum, M.D., 2005, The History of the Ancestral Gunnison River Through Western Unaweep Canyon and Gateway (Colorado). GSA Abstracts with Programs, v. 37, no. 5.

- 6) Soreghan, G.S., Marra, K.R., **Sweet, D.E.**, Eble, C.F., and Soreghan, M.J., 2005, Preliminary Results of Deep Drilling in Western Unaweep Canyon (Colorado): A Paleozoic to Cenozoic History Revealed. GSA Abstracts with Programs, v. 37, no. 5.
- 5) **Sweet, D.E.** et al., 2004, Style and Spatial Distribution of the C5 Unconformity (Desmoinesian) in Eastern Nevada: Implications for the Destruction of the Ely Basin and Initiation of the Hogan Basin. GSA Abstracts with Programs, v. 36, no. 5.
- 4) **Sweet, D.E.**, Snyder, Walter S., Trexler, J.H. Jr., 2002, Middle Pennsylvanian through Early Permian Regional Tectonic Unconformities in Northeastern and Eastern Nevada. GSA Abstracts with Programs, v. 34, no. 6.
- 3) Elias, E., **Sweet, D.E.**, and Northrup, C.J., 2002, Structural Analysis of the Variscan Nappe Zone, Porto Corallo, Sardinia, Italy: GSA Abstracts with Programs, v. 34, no. 6.
- 2) **Sweet, D.E.**, Snyder, W.S., Davydov, V.I., Trexler, J.H.Jr., and Groves, J.R., 2001, Upper Paleozoic Tectonic Unconformities in the Central Pequop Mountains, Nevada. GSA Abstracts with Programs, v. 33, no. 5, P47.
- 1) **Sweet, D.E.**, 2000, A Jurassic Sedimentary Sequence in the Izee Terrane of West-Central, Idaho. GSA Abstracts with Programs, v. 32, no. 5, p. A40.

Invited Presentations

- 9) **Sweet, D.E.** (invited Talk), Geological Society of America National Meeting, "A fundamental change in subsidence across the Ancestral Rocky Mountains at the Pennsylvanian-Permian Boundary" (September 2019).
- 8) **Sweet, D.E.** (Invited Talk), Department Colloquium, University of Oklahoma, Norman, OK, "Tale of Two Basins: Subsidence histories of the Taos Trough and Midland Basin, and implications for Ancestral Rocky Mountains tectonics" (April 25, 2019)
- 7) **Sweet, D.E.** (Invited Talk), Luncheon Keynote Speaker, PBS-SEPM, Midland, TX, "PABZT: Permian Basin Archival of Biostratigraphic Tops" (January 17, 2017).
- 6) **Sweet, D.E.** (Invited Talk), Department Seminar, New Mexico State University, Las Cruces, NM, "Unaweep Canyon: An Enigmatic Landform" (November 2, 2016).
- 5) **Sweet, D.E.** (Invited Talk), Geological Society of America National Meeting "Subsidence analysis and sedimentology indicates a wrench basin for the western portion of the Taos trough", (September 2016).
- 4) **Sweet, D.E.** (Invited Talk), University Seminar, University of Guyana, Georgetown, Guyana, "Pleistocene climatic conditions archived in paleosols of the Southern High Plains" (August 2, 2016)
- 3) **Sweet, D.E.** (Invited Talk), Climate Science Center, Texas Tech University, Lubbock, TX, "Pleistocene climatic conditions archived in paleosols of the Southern High Plains" (March 3, 2015).
- 2) **Sweet, D.E.** (Invited Talk), Department Seminar, University of Texas-Dallas, Richardson, TX, "The Ancestral Rocky Mountains: New Perspectives on an Enigmatic Orogenic Event," (October 18, 2013).
- 1) **Sweet, D.E.** (Invited Talk), Luncheon Keynote Speaker, PBS-SEPM, Midland, TX, "The Ancestral Rocky Mountains: New Perspectives on an Enigmatic Orogenic Event," (April 16, 2013).

Scientific Reviews

Associate Editor

Journal of Sedimentary Research (2017-present)

National Science Foundation Panelist

2016 NSF Post-Doc Panelist

Manuscripts

Geology (n=2), Geomicrobiology (n=1), Canadian Journal of Earth Sciences (n=2), Geosciences (n=1), Sedimentary Geology (n=1), Journal of Geology (n=1), Journal of Sedimentary Research (n=2), Tectonics (n=2), Polish Polar Research (n=1), Earth Surface Processes and Landforms (n=1), Geografiska Annaler (n=1), The Journal of Scanning Microscopies (n=1), Texas Bureau of Economic Geology (n=1), Palaeogeography, Palaeoclimatology, Palaeoecology (n=1), Geological Society of London special Publications (n=1), Progress in Physical Geography (n=1), Palaois (n=1), Plos One (n=1), SEPM Books (n=1), Lithosphere (n=1)

Proposals

External Entity Proposals (n=8), National Science Foundation Proposals (n=7)

Awards and Honors

- Ben Hare Most Outstanding Graduate Research, 2009
- Outstanding Paper of the Year, *The Mountain Geologist*, 2008
- University of Oklahoma Graduate College Outstanding Teaching Award, 2007
- DeGolyer Presidential Fellow, University of Oklahoma, 2007
- Geochemistry Faculty search committee, graduate representative, 2007
- Student Advisory Committee, School of Geology & Geophysics, 2006
- Stan Cunningham Excellence in teaching award, 2003-2004
- Teaching assistant of the year, Boise State Geology Club Award, 2001-2002
- Will Burnham Scholarship: academic year 1999-2000, 2001-2002
- Dean's List with Honors: spring 1997, Fall 1998, Fall 1999, Spring 2000

Chevron Energy Technology Projects

- Prospect mapping and maturation in west Africa [January-March, 2011]
- Regional upper Cretaceous paleogeographic maps of west Africa (southern Gabon, Republic of Congo, Angola) [April-December, 2010]
- Assessed the prospectivity of a post salt Cretaceous deepwater sandstone play in the Republic of Congo through the integration of seismic, well and analog data [January-March, 2010]
- Lower Congo Basin Presalt Play Risk GENV Workshop, Presented paleogeographic maps and finalized the workshop workflow and results report [September-October, 2009]
- Created Neocomian-Aptian (presalt) paleogeography of the western Atlantic margin (Lower Congo Basin) through the integration of 2-D seismic, 3-D seismic, well data, analogue and models [April-December, 2009]
- Utilized 2-D seismic, climate models and geologic literature to assess paleogeography, paleoclimate, regional stratigraphy, basin formation, structure, and petroleum systems in Baffin Bay (Greenland)—intern project [April-June, 2008]
- Utilized 2-D seismic and well data to determine sand delivery pathways as reservoir risk assessment for 2007 Caribe Bid round in Rioacha Field and surrounding region (Columbia)—intern project [May-August, 2007]

Short Courses & Workshops

- Hedberg Research Conference-Late Paleozoic Tectonics and Hydrocarbon Systems of western Pangaea [2003]
- Late Paleozoic Icehouse Workshop, National Science Foundation sponsored [2004]
- Sequence stratigraphy, Instructors: Kirt Campion (ExxonMobil) & Art Donovan (BP) [2005]
- Continental trace fossils, SEPM short course, Instructor: Stephen Hasiotis [2005]
- Predictive stratigraphy, St. Anthony Falls Laboratory, Instructor: Marty Perlmutter & Chris Paola [2007]
- Rift Fill workshop, Chevron Energy Technology Center, Instructor: Christopher Scholz [2008]
- RiskOG Risk and Uncertainty School, Chevron Exploration Review Team and Rose & Associates, Instructors: Truett Enloe (Chevron) & Bob Otis (Rose & Associates) [2009]
- Applied Subsurface Geologic Mapping, Subsurface Consultants & Associates, Instructor: Siamak Agah [2009]
- Earth Science Pathways Training, Chevron Energy Technology Company [2009]
- Seismic Fundamentals, Texseis, Inc., Instructor: Mike Graul [2009]
- Interpretation of 3D Seismic Data, Nautilus, Instructor: Alistair Brown [2010]
- Applied Petroleum Geochemistry, Chevron Energy Technology Company, Instructors: Joe Curiale, Richard Parrish and Fang Lin [2010]
- Formation Evaluation, Chevron Energy Technology Company, Instructor: Barry Reik [2010]
- Tying Seismic Data to Wells, Chevron Energy Technology Company, Instructor: Jennifer Zhang and Patrick Ditty [2010]