

Carol M. Dehler

Utah State University, Department of Geosciences
(435) 797-0764, carol.dehler@usu.edu
www.usu.edu/geo/dehler
February 2024

EDUCATION

Ph.D., Earth and Planetary Sciences, 2001

Department of Earth & Planetary Sciences, University of New Mexico, Albuquerque, NM.
Dissertation advisors: Dr. Maya Elrick and Dr. Karl Karlstrom
Dissertation title: Facies analysis, cyclostratigraphy, and carbon-isotope stratigraphy of the Neoproterozoic Chuar Group, Grand Canyon, Arizona

MS, Geology, 1995

Geology Department, Northern Arizona University, Flagstaff, AZ.
Thesis advisor: Dr. David K. Elliott
Thesis title: Paleoenvironmental and stratigraphic analysis of the Lower Devonian Beartooth Butte Formation and associated strata, central-eastern Idaho

BA, Geology, 1991

Geology Department, Humboldt State University, Arcata, CA.
Undergraduate research: Biostratigraphic analysis of the Alturas Fm., Modoc County, CA.

PROFESSIONAL EXPERIENCE

2019-present	Full Professor, Utah State University, Logan, UT.
2011-2019	Associate Professor, Utah State University, Logan, UT.
2004-2010	Assistant Professor, Utah State University, Logan, UT.
2004-present	Affiliate Professor, Idaho State University, Pocatello, ID.
2002-2004	Visiting Professor, Idaho State University, Pocatello, ID.
2001-2006	Contract geologist, New Mexico Bureau of Mines & Geology, Socorro
1997-2001	Teaching Assistant and Instructor, University of New Mexico
1997-1998	Elderhostel Instructor, University of New Mexico
1994-1997	Geologist, United States Geological Survey, Flagstaff, AZ.
1995	Backcountry Interpreter. Grand Canyon Field Institute, Grand Canyon
1994-1995	Petrographic consultant, Indian Peaks Exploration, Golden Hill, CO.
1992-1994	Elderhostel Instructor, Northern Arizona University
1992-1994	Teaching Assistant, Northern Arizona University
1990-1991	Teaching Assistant, Humboldt State University
1989-1991	Geologic Assistant. Busch Geotechnical Consulting, Arcata, CA.
1989	Temporary Geologist. U.S.F.S., Sequoia National Forest, CA.

RESEARCH

AWARDS, FELLOWSHIPS, AND SCHOLARSHIP

- 2018 Geological Society of America Fellow
- 2018 College of Science Undergraduate Research Mentor of the Year, Utah State University, Logan, UT
- 2005 Gardner Junior Faculty Travel Fellowship, Utah State University, Logan, UT

PUBLICATIONS PEER-REVIEWED IN PRINT (*denotes student mentee)

Sundberg, F.A., *Cothren, H.R. and **Dehler, C.M.**, 2024. Cambrian trilobites from the Nounan Dolomite and lower St. Charles Formation (upper Marjuman to lower Sunwaptan; Miaolingian to Furongian Series), Smithfield Canyon, northern Utah. *Journal of Paleontology*, pp.1-30.

Dehler, C.M., Schmitz, M., *Bullard, A., Porter, S., Timmons, M., Karlstrom, K. and *Cothren, H., 2023. Precise U-Pb age models refine Neoproterozoic western Laurentian rift initiation, correlation, and Earth system changes. *Precambrian Research*, 396, p.107156.

Planavsky, N.J., Asael, D., Rooney, A.D., Robbins, L.J., Gill, B.C., **Dehler, C.M.**, *Cole, D.B., Porter, S.M., Love, G.D., Konhauser, K.O. and Reinhard, C.T., 2023. A sedimentary record of the evolution of the global marine phosphorus cycle. *Geobiology*, 21(2), pp.168-174.

Foster, J.R., Sroka, S.D., Howells, T.F., *Cothren, H.R., **Dehler, C.M.**, and Hagadorn, J.W., 2022. New Cambrian vermiform organisms from Burgess Shale-type deposits of the western United States. *Bulletin of Geosciences*, 97, p.3.

*Cothren, H.R., *Farrell, T.P., Sundberg, F.A., **Dehler, C.M.** and Schmitz, M.D., 2022. Novel age constraints for the onset of the Steptoean Positive Isotopic Carbon Excursion (SPICE) and the late Cambrian time scale using high-precision U-Pb detrital zircon ages. *Geology*, 50(12), pp.1415-1420.

*Isakson, V.H., Schmitz, M.D., **Dehler, C.M.**, Macdonald, F.A. and Adolph Yonkee, W., 2022. A robust age model for the Cryogenian Pocatello Formation of southeastern Idaho (northwestern USA) from tandem in situ and isotope dilution U-Pb dating of volcanic tuffs and epiclastic detrital zircons. *Geosphere*, 18(2), pp.825-849.

*Woltz, C.R., Porter, S.M., Agić, H., **Dehler, C.M.**, Junium, C.K., Riedman, L.A., Hodgskiss, M.S.W., Wörndle, S. and Halverson, G.P., 2021. Total organic carbon and the preservation of organic-walled microfossils in Precambrian shale. *Geology*, 49(5), pp.556-560.

Karlstrom, K.E., Mohr, M.T., Schmitz, M.D., Sundberg, F.A., Rowland, S.M., Blakey, R., Foster, J.R., Crossey, L.J., **Dehler, C.M.** and Hagadorn, J.W., 2020. Redefining the Tonto Group of Grand Canyon and recalibrating the Cambrian time scale. *Geology*, 48(5), pp.425-430.

Sundberg, F.A., Karlstrom, K.E., Geyer, G., Foster, J.R., Hagadorn, J.W., Mohr, M.T., Schmitz, M.D., **Dehler, C.M.** and Crossey, L.J., 2020. Asynchronous trilobite extinctions at the early to middle Cambrian transition. *Geology*, 48(5), pp.441-445.

*Pulsipher, M., and **Dehler, C.M.**, 2019. U-Pb detrital zircon geochronology, petrography, and synthesis of the middle Neoproterozoic Visingsö Group, Southern Sweden. *Precambrian Research*, 320, pp.323-333.

*Vandyk, T.M., Le Heron, D.P., Chew, D.M., Thirlwall, M., Amato, J.M., **Dehler, C.M.**, Hennig, J., Knott, T., Manning, C.J., Castonguay, S.R., Tofaif, S., Ali, D.O., Busfield, M.E., Doepke, D., 2018. Precambrian olistoliths masquerading as sills from Death Valley, California. *Journal of the Geological Society*. doi.org/10.1144/jgs2017-002

Rooney, A.D., Austermann, J., *Smith, E.F., Yang, L., Selby, D., **Dehler, C.M.**, Schmitz, M.D., Karlstrom, K.E., Macdonald, F.A., 2018. Coupled Re-Os and U-Pb geochronology of the Tonian Chuar Group, Grand Canyon. *Geological Society of America Bulletin*. doi.org/10.1130/B31768.1

Dehler, C.M., Gehrels, Porter, S.M., Heizler, M., G.E., Karlstrom, K.E., Cox, G., Crossey, L.J., and Timmons, J.M., 2017. Synthesis of the 780-740 Ma Chuar, Uinta Mountain, and Pahrump (ChUMP) groups, western U.S.A.: Implications for Laurentia-wide cratonic marine basins. *Geological Society of America Bulletin*, v. 129, no. 105/106, p. 607-624, doi.org/10.1130/B31532.1

Pogge von Strandmann, P.A.E., *Stüeken, E. E., Elliott, T., Poulton, S. W., **Dehler, C. M.**, Canfield, D. E. & Catling, D. C., 2015. Selenium isotope evidence for progressive oxidation of the Neoproterozoic biosphere: *Nature Communications*, p. 1-10, doi: 10.1038 DOI:038/ncomms101 DOI: 10.1038/ncomms1015710.1038/ncomms101

Dehler, C.M., 2014. Invited. Advances in Neoproterozoic biostratigraphy spark new correlations and insight into evolution of life: *Geology*, v. 42, no. 8, p. 731-732

Yonkee, W.A., **Dehler, C.M.**, Link, P.K., *Balgord, E.A., *Keeley, J., *Hayes, D.S., Fanning, C.M., Wells, M.L., and Johnston, S.M., 2014. Tectono-stratigraphic framework of Neoproterozoic to Cambrian strata, west-central U.S.: Protracted rifting, glaciation, and evolution of the North American Cordilleran margin: *Earth Science Reviews*, v. 136, p. 59-95.

*Mahon, R.C., **Dehler, C.M.**, Link, P.K., Karlstrom, K.E., Gehrels, G.G., 2014b, Detrital zircon provenance and paleogeography of the Pahrump Group and overlying strata, Death Valley, California. *Precambrian Research*, v. 251, p. 102-117

*Mahon, R.C., **Dehler, C. M.**, Karlstrom, K.E., Link, P.K., Gehrels, G.E., 2014a, Geochronologic and stratigraphic constraints on the Mesoproterozoic and Neoproterozoic Pahrump Group,

Death Valley, CA: A record of the assembly, stability and breakup of Rodinia: *Geological Society of America Bulletin*, v. 126, no. 5-6, p. 652-664

*Kingsbury-Stewart, E.M., *Osterhaut, S. L., Link, P.K., and **Dehler, C.M.**, 2013. Sequence stratigraphy and formalization of the middle Uinta Mountain Group (Neoproterozoic), central Uinta Mountains, Utah: A closer look at the western Laurentian Seaway at ca. 750 Ma. *Precambrian Research*, 236 (2013) 65–84

Dehler, C.M., *Anderson, K., and *Nagy, R., 2011, New descriptions of the cap dolostone and associated strata, Neoproterozoic Pocatello Formation, southeastern Idaho, U.S.A., in Evans, J.P., and Lee, J., eds., *Geologic Field Trips to the Basin and Range, Rocky Mountains, Snake River Plain, and Terranes of the U.S. Cordillera: Geological Society of America Field Guide 21*, p. 181–192, doi:10.1130/2011.0021(08)

Dehler, C.M., Fanning, C.M., Link, P.K., *Kingsbury, E., *Rybczynski, D., 2010. Maximum depositional age and provenance of the Uinta Mountain Group and Big Cottonwood Formation, northern Utah: Paleogeography of rifting western Laurentia. *Geological Society of America Bulletin*, ahead of print doi: 10.1130/B30094, p. 1686-1699

Johnston, D.T., Poulton, S., **Dehler, C.M.**, Porter, S.M., Husson, J., Canfield, D., Knoll, A.K., 2010. An emerging picture of Neoproterozoic ocean chemistry: Insights from the Chuar Group, Grand Canyon, U.S.A. *Earth and Planetary Science Letters*, v. 290, p. 64-73

*Nagy, R., Porter, S., **Dehler, C.M.**, Shen, Y., 2009. Biotic turnover driven by eutrophication before low-latitude glaciation. *Nature Geoscience, Letters*, v. 2, p. 415-418

Pitblado, B.L., **Dehler, C.M.**, Neff, H., Nelson, S.T. and Eggett, D., 2008. Pilot study experiments in sourcing quartzite, Gunnison basin, Colorado. *Geoarcheology*, Vol. 23, No. 6, 742-778

Pitblado, B.L., Neff, H., Nelson, S.T., **Dehler, C.M.**, 2008. AD-ICP-MS vs. LA-ICP-MS analysis of quartzite sources, Gunnison basin Colorado. *Current Research in the Pleistocene*, v. 24, p. 133-136

Dehler, C.M., Porter, S.M., *De Grey, L.D., Sprinkel, D.A., *Brehm, A., 2007, The Neoproterozoic Uinta Mountain Group revisited: A synthesis of recent work on the Red Pine Shale and related undivided clastic strata, Northeastern Utah: in Link, P.K., and Lewis, R.S., eds., *Proterozoic Geology of western North America and Siberia, Society of Sedimentary Geology Special Publication 86*, p. 151-166

Pitblado, B. L. and **Dehler, C.M.**, 2006. Sourcing quartzite from the Early Holocene Chance Gulch Site, Gunnison basin, Colorado. *Current Research in the Pleistocene*, v. 23, p. 1-3

Dehler, C.M., Elrick, M.E., Bloch, J.D., Karlstrom, K.E., Crossey, L.J., DesMarais, D., 2005. High-resolution $\delta^{13}\text{C}$ stratigraphy of the Chuar Group (~770-742 Ma), Grand Canyon: Implications for mid-Neoproterozoic climate change, *Geological Society of America Bulletin*, v. 117, no. 1/2, p. 32-45

Dehler, C.M., Elrick, M.E., Karlstrom, K.E., Smith, G.A., Crossey, L.J., Timmons, J.M., 2001. Neoproterozoic Chuar Group (~800-742 Ma), Grand Canyon: A record of cyclic marine deposition during global cooling and supercontinent rifting. *Sedimentary Geology*, v. 141-142, p. 465-499

Karlstrom, K.E., Bowring, S. A., **Dehler, C.M.**, Knoll, A.H., DesMarais, D.J., Weil, A.B., Sharp, Z.D., Geissman, J.W., Elrick, M.B., Timmons, M.J., Crossey, L.J., Davidek, K.L., 2000. Chuar Group of the Grand Canyon: Record of breakup of Rodinia, associated change in the global carbon cycle, and ecosystem expansion by 740 Ma. *Geology*, v. 28, no. 7, p. 619-622

Timmons, J.M., Karlstrom, K.E., **Dehler, C.M.**, Geissman, J.W., Heizler, M.T., 2001. Proterozoic multistage (~1.1 and ~8.0 Ga) extension in the Grand Canyon Supergroup and establishment of northwest and north-south tectonic grains in the southwestern United States. *Geological Society of America Bulletin*, v. 113, no. 2, p. 163-180

PUBLICATIONS IN REVIEW

Farrell, T.P., Cothorn, H.R.* , Sundberg, F.A., Schmitz, M.D., **Dehler, C.M.**, Landing, E., Hagadorn, J.W., Karlstrom, K.E., Crossey, L.J., Revision of the late Cambrian timescale and the duration of the SPICE event using a novel Bayesian age modeling approach. *In Review GSA Bulletin*

Foster, John R., Sundberg, F. A., Cothorn, H.R.* , **Dehler, C.M.**, and Hagadorn, J.W.. Paleoenvironmental distribution of middle Cambrian (Wuliuan) trilobite-dominated paleocommunities of the southwestern U.S.A. *In Review Journal of Paleontology*.

PUBLICATIONS SUBMITTED

Dehler, C.M., Sundberg, F, Karlstrom, K., Hagadorn, J, , Crossey, L, Schmitz, M, Rowland, S and Hagadorn, J.. The Cambrian of the Grand Canyon: Refinement of a classic stratigraphic model *Submitted to GSA Today March 14th, 2024.*

Hagadorn, J. and **Dehler, C.M.**, Precambrian seagrass meadows in the Grand Canyon? *Submitted to Geology May 15th, 2024*

PUBLICATIONS IN PREPARATION (*denotes student mentee)

*Blocher, E., **Dehler, C.M.**, Timmons, J.M., Hagadorn, J.W., *Mohr, M., Schmitz, M., Karlstrom, K.E., *Pulsipher, in prep. The Oldest Sedimentary Rocks in the Grand Canyon: Implications for Mesoproterozoic Earth History. *For Submission to Precambrian Research, Spring 2024.*

Dehler, C.M., *Ellison, M.E., Schmitz, M., and Yonkee, A.Y., Recalibrating the Cryogenian of Southeastern Idaho. *For submission to Geology, Summer 2024*

Dehler, C.M., Yonkee, A., *Hayes, D., *Kubina, R., and Balgord, E. The Marionoan Deglaciation Record in Utah and Idaho, *For Submission to Precambrian Research Fall 2024*

MAPS AND OPEN-FILE REPORTS (*denotes student mentee)

*Cothren, H and **Dehler, C.M.**, *in prep.* Geologic Map of the Naomi Peak Quadrangle, Cache County, Utah. 1:24,000. Utah Geological Survey.

*McKenney, D., **Dehler, C.M.**, and *DeGrey, L.D., *under revision*, Geologic Map of the Warren Draw 7.5-minute Quadrangle, Dagget County, Utah: 1:24,000. Utah Geological Survey.

*DeGrey, L.D., **Dehler, C.M.**, Pederson, J., *Tressler, C., and P.K.Link, 2020. Geologic Map of the Swallow Canyon 7.5-minute Quadrangle, Dagget County, Utah, and Moffatt County, Colorado: 1:24,000. Miscellaneous Publication 171DM, Utah Geological Survey, 2 plates and one booklet.

*Osterhout, S., Link, P.K., **Dehler, C.M.**, *Kingsbury-Stewart, E., 2016. Geologic map of the Mount Powell Quadrangle, Duchesne and Summit Counties, Utah: 1:24,000. Miscellaneous Publication 16-5DM, Utah Geological Survey.

*Kingsbury-Stewart, E., Link, P.K., **Dehler, C.M.**, *Osterhout, S., 2015, Geologic map of the Kings Peak 7.5-minute Quadrangle, central Uinta Mountains, Utah: 1:24,000. Miscellaneous Publication 15-3, Utah Geological Survey.

Dehler, C., Pederson, J.L., and Wagner S., 2005. Geology of the Lake McMillan South 7.5' quadrangle, Eddy County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 111, scale 1:24,000.

Dehler, C., Pederson, J.L., and Wagner S., 2005. Geology of the Seven Rivers 7.5' quadrangle, Eddy County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 98, scale 1:24,000.

Dehler, C. and *McLin, K. D., 2002, Geology of the Carlsbad East 7.5' quadrangle, Eddy County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 60, scale 1:24,000.

Dehler, C. and *McLin, K. D., 2002, Geology of the Carlsbad West 7.5' quadrangle, Eddy County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 59, scale 1:24,000.

Wiley, B.H., **Dehler, C.M.**, Ghazi, S.A., Kuo, L-C., Rauzzi, S.L., 2002. Geologic description, sampling, and petroleum source rock potential of the Awatubi and Walcott members, Kwagunt Formation, Chuar Group, Sixtymile Canyon section, Grand Canyon, Arizona. Arizona Geological Survey Open-file report 02-01, 84 p.

Lucchitta, I., Smith, S.J., **Dehler, C.M.**, Finkel, R.C., Hanks, T.C., Davis, S.W., and M.E. Davis, 1997. Late-Pleistocene to Early Holocene deposits, processes, vegetation, and climate from Oak Cave, southern Utah. USGS Open-File Report, 22 p.

Lucchitta, I., **Dehler, C.M.**, Davis, M.E., Basdekas, P.G., and Burke, K.J., 1996. Quaternary geologic map of the Tanner Creek-Unkar Creek area, eastern Grand Canyon, AZ.; U.S. Geological Survey Open-File Report, scale 1:5000.

Lucchitta, I., Basdekas, P.G., Bohannon, R.G., Rieck, H.J., and **Dehler, C.M.**, 1995. Geologic map of the Cane Springs quadrangle, Mohave County, AZ.; U.S. Geological Survey Open-File Report, 95-86, scale 1:24,000.

Lucchitta, I., **Dehler, C.M.**, and Basdekas, P.G., 1995. Geologic map of the Cane Springs southeast quadrangle, Mohave County, AZ.; U.S. Geological Survey Open-File Report, 95-48, scale 1:24,000.

Lucchitta, I., **Dehler, C.M.**, Davis, M.E., Basdekas, P.G., and Burke, K.J., 1995. Quaternary geologic map of the Palisades Creek-Comanche Creek area, eastern Grand Canyon, AZ; U.S. Geological Survey Open-File Report, 95-832, scale 1:5000.

INVITED BOOK CHAPTERS

Dehler, C.M., Porter, S.M., and Timmons, J.M., 2012. The Neoproterozoic Earth system revealed from the Chuar Group of Grand Canyon in Timmons, J.M. and Karlstrom, K.E., eds., *Grand Canyon Geology: Two Billion Years of Earth's History: Geological Society of America Special Paper 489*, p. 49-72.

Dehler, C.M., and Ford, T.D., 2002. Grand Canyon Supergroup: Nankoweap Formation, Chuar Group, and Sixtymile Formation. In: Beus and Morales (eds.), *Grand Canyon Geology*, Oxford Press, Edition 3, 448 p

Grader, G., and **Dehler, C.M.**, 1999. Devonian Stratigraphy in east-central Idaho: New perspectives from the Lemhi Range and Bayhorse area, Geological Society of America 1999 Rocky Mountain Section Guidebook, 31-56

*DeGrey, L.D., and **Dehler, C.M.**, 2005. Stratigraphy and facies analysis of the eastern Uinta Mountain Group, Utah-Colorado border region. In, **Dehler, C.M.**, Pederson, J.L., Sprinkel, D.A., and Kowallis, B.J., editors, *Uinta Mountain Geology: Utah Geological Association Publication 33*, p. 31-47

Dehler, C.M., and Sprinkel, D.A., 2005. Revised stratigraphy and correlation of the Uinta Mountain Group, north eastern Utah. In, **Dehler, C.M.**, Pederson, J.L., Sprinkel, D.A., and Kowallis, B.J., editors, *Uinta Mountain Geology: Utah Geological Association Publication 33*, 17-30

Dehler, C.M., Sprinkel, D.A., and Porter, S., 2005. Neoproterozoic Uinta Mountain Group of northeastern Utah: Pre-Sturtian Geographic, Tectonic, and Biologic Evolution. In Pederson, J., and **Dehler, C.M.**, eds., *Interior Western U.S.: Geological Society of America Field Guide 6*, p. 1-25

BOOKS AND FIELD GUIDES EDITED

Jiang, G.Q., and **Dehler, C.M.**, 2022. Field Excursions from Las Vegas, Nevada, Geological Society of America Field Guide 63, 125 p. doi.org/10.1130/FLD063

Dehler, C.M., Pederson, J.L., Sprinkel, D.A., and Kowallis, B.J., editors, 2005. *Uinta Mountain Geology: Utah Geological Association Publication 33*, 448 p.

Pederson, J., and **Dehler, C.M.**, editors, 2005. *Interior Western U.S.: Geological Society of America Field Guide 6*, 524 p

PUBLICATIONS TOWARDS PUBLIC OUTREACH

Dehler, C.M. and Porter, S.M., 2009, contributors to Capsizing in Canyons, *Nature Geoscience Backstory*, v. 2, p. E-10.

Dehler, C.M., Porter, S., and Karlstrom, K.E., 1999. Along the Shores of Chuar Beach. *Boatman's Quarterly Review*, v. 12, no. 3, p. 31-36.

Timmons, J.M., Karlstrom, K.E., and **Dehler, C.M.**, 1999. Grand Canyon Supergroup: Six unconformities makes one "Great Unconformity"—a record of supercontinent assembly and disassembly, *Boatman's Quarterly Review*, v. p. 28-32.

ABSTRACTS (*denotes student mentee)

2020-current

*Clevenger, J., and **Dehler, C.M.**, 2023. Newly identified microbialite reefs of the Grand Canyon Cambrian Tonto Group. *Geological Society of America Abstracts with Programs. GSA Connects 2023.*

*Farrell, T., *Cothren, H., Sundberg, F., Schmitz, M, **Dehler, C.**, Karlstrom, K., 2023. Bayesian age modeling of the late Cambrian time scale and the duration of the SPICE carbon isotope excursion. *Geological Society of America Abstracts with Programs. GSA Connects 2023.*

*Woltz, C., Porter, S., **Dehler, C.M.**, and Reidman, R., 2023. Evaluating the effects of preservation on eukaryotic diversity patterns of the late tonian chuar and uinta mountain groups of western Laurentia. *Geological Society of America Abstracts with Programs. GSA Connects 2023.*

*Norman, M, and **Dehler, C.M.**, 2023. Considering the Drumian Carbon Isotope Excursion (DICE) at the Drumian GSSP, Western-Central Utah. *Capitol on the Hill Undergraduate Symposium. 2024.*

*Norman, M., **Dehler, C.M.**, and *Cothren, H., 2022. A DICE-Y Situation: Considering the Drumian Carbon Isotope Excursion (DICE) at the Drumian GSSP, Western-Central Utah *Geological Society of America Abstracts with Programs. Vol 54, No. 5*
doi: 10.1130/abs/2022AM-383807

*Cothren, H., Sundberg, F., *Farrell, T., Schmitz, M. D., and **Dehler, C.M.**, 2022. The Reliability of The Spice as a Global Correlation Tool: Case Study From Northern Utah. *Geological Society of America Abstracts With Programs. Vol. 54, No. 2. Doi: 10.1130/Abs/2022cd-373954*

Dehler, C.M., Hagadorn, J., Rowland, S., Sundberg, F., Rose, E., Foster, J., *Farrell, T., Schmitz, M.D., *Kirchner, K., Karlstrom, K.E., Crossey, L.J., and *Cothren, H., 2022. Dicing and Spicing Up the Cambrian: Chemostratigraphy of the Tonto Group, Grand Canyon Area, Arizona and Nevada. *Geological Society of America Abstracts with Programs. Vol. 54, No. 2,*
doi: 10.1130/abs/2022CD-374369

Dehler, C.M., Yonkee, A., Schmitz, M.D., Sundberg, F., *Cothren, H., and *Ellison, M.E., 2022. Neoproterozoic-Cambrian Age Model and Subsidence Analysis of the North American Cordilleran Margin, Northern Utah and Southeast Idaho. *Geological Society of America Abstracts with Programs. Vol. 54, No. 2, doi: 10.1130/abs/2022CD-374331*

*Norman, M., **Dehler, C.M.**, and *Cothren, H., 2022. A Dice-Y Situation: Considering The Drumian Carbon Isotope Excursion (Dice) At The Drumian GSSP, Western-Central Utah. Geological Society of America *Abstracts with Programs*. Vol 54, No. 5 doi: 10.1130/abs/2022AM-383807

*Cothren, H., *Farrell, T., Sundberg, F., Schmitz, M. and **Dehler, C.M.**, 2021. Needs More Spice: Revisiting the Steptoean Positive Isotopic Carbon Excursion in Western Laurentia. Geological Society of America *Abstracts with Programs*. Vol 53, no. 6 doi: 10.1130/abs/2021am-365311

*Farrell, T., *Cothren, H., Crossey, L., **Dehler, C.M.**, Foster, J., Hagadorn, J., Karlstrom, K., Sundberg, F.A., Schmitz, M., and Webster, M., 2021. Numerical Calibration of Western Laurentian Cambrian Stratigraphic Successions into the Global Geologic Time Scale. Geological Society Of America *Abstracts With Programs*. Vol 53, No. 6 Doi: 10.1130/Abs/2021am-368486

2015-2019

Dehler, C., and Hagadorn, 2019. Have You Seen Me? 'Ribbon Structures' From The Carbon Canyon Member Of The Late Tonian Chuar Group. Geological Society of America *Abstracts with Programs*. Vol. 51, No. 5, ISSN 0016-7592 doi: 10.1130/abs/2019AM-340959

Dehler, C. (invited), Schmitz, M., *Bullard, A., Blakey, R., Karstrom, K., and Timmons, M., 2019. Late Tonian Paleogeography Of Southwestern North America. Geological Society of America *Abstracts with Programs*. Vol. 51, No. 5, ISSN 0016-7592, doi: 10.1130/abs/2019AM-340459

Timmons, M.J.; Karlstrom, K.E.; *Lathrop, M.E.; *Mohr, M., Schmitz, M.; **Dehler, C.**, *Anderson, J.; and L.Crossey, 2019. A Glimpse Within The Great Unconformity: Parsing The Mesoproterozoic Record Of Erosion, Sedimentation And Deformation Preserved In The Grand Canyon Unkar Group. Geological Society of America *Abstracts with Programs*. Vol. 51, No. 5; ISSN 0016-7592 doi: 10.1130/abs/2019AM-340738

Schmitz, M., Trayler, R., Mohr, M., **Dehler, C.M.**, Karlstrom, K., Crossey, L., Hagadorn, J., and Timmons, M., 2019. Bayesian Age Modeling and Integrative Chronostratigraphy Of The Chuar And Tonto Groups Of The Grand Canyon. Geological Society of America *Abstracts with Programs*, Vol. 51, No. 5, ISSN 0016-7592 doi: 10.1130/abs/2019AM-341258

Kubina, R., **Dehler, C.M.**, and Yonkee, A, 2018. Newly Discovered Stratigraphic Record of a Snowball Earth Deglaciation, Carrington Island, Utah. Geological Society of America Abstract, upcoming National Meeting, November 2018.

Woltz, C. R., Porter, S. M., **Dehler, C. M.**, Junium, C. K., Hodgskiss, M.S.W., Wörndle, S. and Halverson, G.P., 2018. Total Organic Carbon and the Preservation of Precambrian Organic-Walled Microfossils in Shales. Geological Society of America Abstract, upcoming National Meeting, November 2018.

Karlstrom, K, Schmitz, M., Hagadorn, J., **Dehler, C.M.**, and Crossey, L., 2018. Tandem U-Pb Detrital Zircon Dating to Calibrate the Tempo and Dynamics of the Cambrian Tonto Group Transgression in Western Laurentia. Geological Society of America Abstract, upcoming National Meeting, November 2018.

*Provow, A.W., Newell, D.L., Mahan, K.H., Yonkee, A., *Pulsipher, M.A., Ault, A.K., **Dehler, C.M.**, 2017. Documenting the Nature and Timing of Fluid-Rock Interaction in Neoproterozoic

Siliciclastic Rocks of Northern Utah. Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-305825

*Lathrop, E. C., **Dehler, C. M.**, *Anderson, J. C., Karlstrom, K.E., Hagadorn, J., *Pulsipher, M.A., Crossey, L. J., Timmons, J. M., and Newell, D., 2017. Not-so-boring Bass: C-isotope stratigraphy and facies analysis of the Mesoproterozoic Bass Formation, Grand Canyon, AZ. Geological Society of America *Abstracts With Programs*. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-303484

*Lathrop, E. C., **Dehler, C. M.**, Karlstrom, K.E., Crossey, L. J., *Anderson, J. C., *Pulsipher, M.A., & Timmons, J. M., 2016. Capturing Changes in the Mesoproterozoic Earth System: $\delta^{13}\text{C}_{\text{carb}}$ and $^{87}\text{Sr}/^{86}\text{Sr}$ Stratigraphy of the ~1254 Ma Bass Formation, Grand Canyon Supergroup, AZ., USA. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 7.

*Anderson, J. C., Karlstrom, K.E., Asmerom, Y., Polyak, V.J., Crossey, L.J., & **Dehler, C.M.**, 2016. Testing a Marine Signature for the Neoproterozoic Chuar Group of Grand Canyon Using Sr Isotopic Data. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 7.

*Pulsipher, M.A., *Rowe, F.E. & **Dehler, C.M.**, 2016. U-Pb Detrital Zircon Geochronology and Petrography of the Middle Neoproterozoic Visingsö Group, Southern Sweden. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 7.

*Bullard, A.R., **Dehler, C. M.**, & Schmitz, M., Getting Younger With Age: New Id-Tims U-Pb Detrital Zircon Age Constraints On Neoproterozoic Sedimentary Successions, Southwestern U.S., 2016. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 7

*Martin, W. C., **Dehler, C.M.**, & Link, Paul K., 2016. Petroleum Source Rock Potential and Structural Setting of Neoproterozoic Basins, Utah And Arizona. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 7

Hubbard, M.S., **Dehler, C.M.**, Mapani, B., and Foster, D., 2016. The Steilrandberg of Namibia: relict or reentrant? International Geological Congress, Capetown, Sept. 2016.

Rooney, A., Austermann, J., Selby, D., **Dehler, C.**, Karlstrom, K., & Macdonald, F., 2016. New Re-Os organic-rich shale and sulphide geochronology data from the Pre-Sturtian Chuar Group, Grand Canyon. European Geosciences Union.

*Isakson, V. H., Schmitz, M. D., **Dehler, C. M.**, M., Francis A., and Yonkee, A., 2016. Revised Age Constraints for Cryogenian Glacial Deposits in the Pocatello Formation, Southeastern Idaho. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 6.

*Bullard, A.R., **Dehler, C. M.** & Schmitz, M.D., 2016. ID-TIMS U-Pb Detrital Zircon Geochronology of Neoproterozoic Sedimentary Successions in the Southwestern United States. Geological Society of America *Abstracts With Programs*. Vol. 48, No. 6.

Stewart, E. K., Havholm, K. G., Galston, L., Zambito Iv, J., and **Dehler, C.M.**, 2015. Microbially Induced Sedimentary Structures And Large Sand Stromatolites in the Terrestrial and Marine/Lacustrine-Transitional Bayfield Group (Proterozoic),

Wisconsin. Geological Society of America *Abstracts with Programs*. Vol. 47, No. 5, p.28

Yonkee, A., **Dehler, C.M.**, Link, P. K., *Balgord, E., *Keeley, J. A., Wells, M. L., Fanning, C. M., and Johnston, S. M., 2015. Tectono-Stratigraphic Framework of Neoproterozoic to Early Paleozoic Strata, Western US: Protracted Rifting and Evolution of the Western Laurentia Margin. Geological Society of America *Abstracts with Programs*. Vol. 47, No. 7, p.859.

Stewart, E. K., Debruyne, J., Zambito Iv, J., Mclaughlin, P. and **Dehler, C. M.**, 2015. New Detrital Zircon Age Data from Baraboo Interval Quartzites, Southern Wisconsin. Geological Society of America *Abstracts with Programs*. Vol. 47, No. 5, p.2.

Link, P. K., Stewart, E. K., **Dehler, C.M.**, and *Osterhout, S., 2015. Neoproterozoic Transcontinental Rivers and a Possible Jacobsville/Bayfield Group -- Uinta Mountain Group Connection. Geological Society of America *Abstracts with Programs*. Vol. 47, No. 5, p.28.

2010-2014

Dehler, C. M., Gehrels, G., Porter, S. M., , Cox, G., Heizler, M. T., Karlstrom, K. E., Crossey, L.J., and Timmons, J. M., 2014. ChUMP (Chuar-Uinta Mountain-Pahrump) Strata Of The Western U.S. Record Cretaceous – Like Ocean Anoxic Events (OAEs) Before Snowball Earth Geological Society Of America *Abstracts with Programs*. Vol. 46, No. 6, p.627

Porter, S. M., **Dehler, C. M.**, and *Moore, J. L., *Riedman, L., 2013. Possible Scale-Bearing Protists In The Mid-Neoproterozoic Chuar Group, Grand Canyon, And Uinta Mountain Group, Utah. Geological Society of America *Abstracts with Programs*. Vol. 45, No. 7, p.693

*Potter, K. E., Link, P. K., Shervais, J. W., and **Dehler, C. M.**, 2013. Detrital Zircons From The Kimama Corehole, Central Snake River Plain: Provenance Change Between 6.1 And 4.9 Ma As The Paleo-Wood River System Meets The Axial Volcanic Zone. Geological Society of America *Abstracts With Programs*. Vol. 45, No. 5, p.8

*Yearsly, S. and **Dehler, C. M.**, 2013. Facies and Provenance Changes in The Cap-Carbonate Interval (Ca. 685-<665 Ma) Of The Neoproterozoic Pocatello Formation, Scout Mountain Area, Southeast Idaho. Geological Society of America *Abstracts with Programs*. Vol. 45, No. 5, p.5.

Link, P.K., Yonkee, A., **Dehler, C. M.**, Mahoney, J. B., *Balgord, E., *Keeley, J. A., *Mahon, R.C., 2012. Cryogenian to Ordovician Detrital-Zircon Provenance of the Rifting Cordilleran Margin, Montana, Idaho and Utah. Geological Society of America *Abstracts With Programs*. Vol. 44, No. 7, p.378.

*Mahon, R. C., **Dehler, C.M.**, Karlstrom, K.E., and Link, P.K., 2012. Detrital Zircon Provenance, Age Constraints and Revised Stratigraphy of the Mesoproterozoic and Neoproterozoic Pahrump Group (Supergroup?), Death Valley Region, California Geological Society Of America *Abstracts With Programs*. Vol. 44, No. 6, p.82.

Dehler, C.M., Karlstrom, K.E., Gehrels, G. E., Timmons, J. M., and Crossey, L.J., 2012. Stratigraphic Revision, Provenance, and New Age Constraints of the Nankoweap Formation and Chuar Group, Grand Canyon Supergroup, Grand Canyon Arizona. Geological Society of America *Abstracts With Programs*. Vol. 44, No. 6, p.82

*Balgord, E.A., **Dehler, C.M.**, Yonkee, W.A., Link, P.K., *Keeley, J.A., *Hayes, D.S., *Osterhout, S.L., *Richey, D., 2011. Fitful rifting, glaciations, and the birth of the Cordilleran Miogeocline: A Neoproterozoic-Cambrian detrital zircon record from northern Utah and southern Idaho. Geological Society of America *Abstracts with Programs*. Vol. 43, No. 5, p.205

Dehler, C.M., Crossey, L.J., *Fletcher, K., Karlstrom, K.E., Williams, M.L., Jercinovic, M., Gehrels, G., *Pecha, M., and Heizler, M., 2011. ChUMP Connection (Chuar-Uinta Mountain- Pahrump): Geochronologic Constraints For Correlating Ca. 750 Ma Neoproterozoic Successions of Southwestern Laurentia. GSA *Abstracts with Programs*, Vol. 43, No.4, p 55.

Dehler, C.M., *Hayes, D.S., and *Nagy, R.M., 2011. Possible Pre-Cryogenian Eutrophication Event Recorded In ~770-742 Ma Strata Of Uinta Mountain Group, Utah, USA. AGU Abstract.

*Hayes, D.S., and **Dehler, C.M.**, 2011. A New Locality of Neoproterozoic Tube Structures in Northern Utah: Insight into Genesis and Age of a Cap Carbonate. Geological Society of America *Abstracts with Programs*, Vol. 43, No. 4, p. 56.

Link, P.K., **Dehler, C.M.**, Yonkee, A., and *Keeley, J., 2011. Systematic Regional Patterns in Detrital-zircon Populations from Cryogenian, Ediacaran, and Cambrian Northern Utah Thrust Belt. Geological Society of America *Abstracts with Programs*, Vol. 43, No. 4, p. 56.

*Nagy, R. M., and **Dehler, C.M.**, 2011. New and Unexpected Cryogenian Microfossil Findings from Southeastern Idaho and the Death Valley Region of California. Geological Society of America *Abstracts with Programs*, Vol. 43, No. 4, p. 12.

*Nagy, R.M., and **Dehler, C.M.**, 2011. Organic-Walled Microfossils from Neoproterozoic Cap Carbonate Units and Associated Strata of the Western United States. GSA Abstract National Meeting.

*Osterhout, S.L., Link, P. K., And **Dehler, C. M.**, 2011. Facies Control on Detrital Zircon Provenance Signatures, Neoproterozoic Red Castle Formation, Uinta Mountains, Utah, Geological Society of America *Abstracts With Programs*, Vol. 43, No. 4, P. 55.

*Richey, D., *Hayes, D.S., Yonkee, A., **Dehler, C.M.**, and Link, P.K., 2011. Maximum Depositional Age and Provenance of Neoproterozoic Diamictite Units in Central Utah. Geological Society of America *Abstracts with Programs*, Vol. 43, No. 4, p. 56.

Dehler, C.M., Crossey, L.J., *Fletcher, K., Karlstrom, K.E., Williams, M.L., Jercinovic, M., Gehrels, G., *Pecha, M., and Heizler, M., 2011. ChUMP Connection (Chuar-Uinta Mountain- Pahrump): Geochronologic Constraints For Correlating Ca. 750 Ma Neoproterozoic Successions of Southwestern Laurentia. Geological Society of America *Abstracts with Programs*, Vol. 43, No. 4, p. 55.

Dehler, C.M., *Hayes, D.S., and *Nagy, R.M., 2011. Possible Pre-Cryogenian Eutrophication Event Recorded In ~770-742 Ma Strata Of Uinta Mountain Group, Utah, USA. AGU Abstract.

*Hayes, D. S., and **Dehler, C.M.**, 2011. Description and Stable Isotope Record Of Newly Discovered Neoproterozoic (Cryogenian?) Tube Structures, Northern Utah. AGU Abstract.

*Hayes, D. and **Dehler, C.M.**, 2010. Stratigraphic, microfossil, and geochemical analysis of the Neoproterozoic Uinta Mountain Group, Utah: Evidence of biotic change driven by eutrophication? Geological Society of America *Abstracts with Programs*, Vol. 42, No. 5, p. 297.

*Kirkham, K. and **Dehler, C.M.**, 2010. Looks are deceiving: Stable isotope data from the Pocatello Formation cap-carbonate sequence and its implications for cap-carbonate correlations. Geological Society of America *Abstracts with Programs*, Vol. 42, No. 5, p. 299.

*Osterhaut S., Link, P.K., and **Dehler, C.M.**, 2010. Stratigraphy and depositional facies in the Neoproterozoic formation of Red Castle, Mount Powell Quadrangle, High Uintas Wilderness, Utah. Geological Society of America *Abstracts with Programs*, Vol. 42, No. 5, p. 309.

*Hayes, D.S., and **Dehler, C.M.**, 2010. Stratigraphic, microfossil, and geochemical analysis of the Neoproterozoic Uinta Mountain Group: Evidence of biotic change driven by eutrophication. International Conference and Field Meeting on Precambrian Life, Time and

Environment: Evolving Concepts and Modern Analogues, University of Lucknow, Lucknow, India, Feb. 2010. Sponsored by International Global Correlations Project 512, p. 1-2.

2005-2009

*Bucceri, J., *Jackson, M., *Morris, L., **Dehler, C.M.**, and Pitblado, B., 2009.

Geologic Mapping of the Curecanti Area: An investigation of the relationship between a prehistoric quarry and its geologic setting. Abstract, Rocky Mountain Archeological Conference.

Dehler, C.M., Fanning, C.M., and Link, P.K., 2009. Getting better with age: New U-Pb SHRIMP data from the "Sturtian" Scout Mountain diamictite-cap sequence, Pocatello Fm., Idaho. Geological Society of America *Abstracts with Programs*, Vol. 41, No. 7, p. 591.

Pitblado, B. and **Dehler, C.M.**, 2009. Fingerprinting archeological and geologic quartzite samples using ICP-MS techniques. Geological Society of America *Abstracts with Programs*, Vol. 41, No. 7, p. 436.

*Kirkham, K., **Dehler, C.M.**, and Link, P.K., 2009. Investigating a Sturtian cap-carbonate sequence, Scout Mountain Member, Pocatello Formation, Idaho. *Geological Society of America Abstracts with Programs*, Vol. 41, No. 6, p. 45.

Dehler, C.M., and Link, Paul, 2009. Getting younger with age: Maximum depositional age of the Sturtian Scout Mountain diamictite and cap carbonate, Pocatello Fm, Idaho. *Geological Society of America Abstracts with Programs*, Vol. 41, No. 6, p. 45.

*Keeley, J. A., Link, P. K., and **Dehler, C.M.**, 2009. Detrital zircon analysis of the Neoproterozoic to Cambrian Brigham Group in the southern Portneuf Range, Southeast Idaho. *Geological Society of America Abstracts with Programs*, Vol. 41, No. 6, p. 45.

*Kirkham, K., and **Dehler, C.M.**, 2009. Paleoenvironmental analysis of a cap-carbonate sequence, Neoproterozoic (~680 Ma) Pocatello Formation, Idaho, Utah State University Student Showcase, March 31, Page 72.

*Kirkham, K., **Dehler, C.M.**, *Sallay, S., 2008. Scrutiny of a diamictite to cap-carbonate contact: Neoproterozoic Scout Mountain Member, Pocatello Formation, Idaho, Eos Trans. American Geophysical Union, 89(53), Fall Meet. Suppl., Abstract PP33A-1530.

Dehler, C.M., 2008. The Chuar Group-Uinta Mountain Group-Pahrump Group connection revisited: A snapshot of the infra-Sturtian Earth system. Geological Society of America *Abstracts with Programs*, Vol. 40., No. 1, p. 36.

*Kingsbury, E., Link, P.K., Fanning, C.M., & **Dehler, C.M.**, 2008. Detrital zircon populations in the Neoproterozoic (Cryogenian) Uinta Mountain Group: The Laurentian barcode. Geological Society of America *Abstracts with Programs*, Vol. 40., No. 1, p. 77.

*Nagy, R., Porter, S., **Dehler, C.M.**, & Shen, Y., 2008. Evidence for eutrophication in the >742±6 Ma Chuar Group, Grand Canyon, and possible implications for Neoproterozoic glaciation. Geological Society of America *Abstracts with Programs*, paper 125-3.

*Osterhaut, S., *Kingsbury, E.K., Link, P.K., & **Dehler, C.M.**, 2008. A stroll along a Neoproterozoic shoreline, up Gilbert Peak, Kings Peak Quadrangle, Uinta Mountains, Utah Geological Society of America *Abstracts with Programs*, Vol. 40, No. 1, p. 69.

- *Rybczynski, D., & **Dehler, C.M.**, 2008, Second-order sequences in the Uinta Mountain Group and their paleogeographic significance, American Association of Petroleum Geologists Rocky Mountain Rendezvous. Honorable mention best poster.
- *Rybczynski, D., **Dehler, C.M.**, Link, P.K., & Fanning, C.M., 2008. A mid-Neoproterozoic western interior seaway: A 766 Ma transgression recorded at the Utah-Colorado Border, U.S.A. Geological Society of America *Abstracts with Programs*, Vol. 40, No. 1, p. 59.
- *Babb, S.L., *Daley, L.M., & **Dehler, C.M.**, 2008. Petrographic mapping of sandstones from the Neoproterozoic Jesse Ewing Canyon Formation Uinta Mountains, Utah . Undergraduate Research Day at the State Capitol, Posters on the Hill, Salt Lake City Utah.
- *Daley, L.M., *Babb, S.L., & **Dehler, C.M.**, 2008. Petrographic mapping of sandstones from the Neoproterozoic Jesse Ewing Canyon Formation Uinta Mountains, Utah. Utah Conference on Undergraduate Research. Utah Valley State College.
- *Kingsbury, E., Link, P.K., **Dehler, C.M.**, Fanning, C.M., 2007. Neoproterozoic Uinta Mountain Group of Kings Peak Quadrangle: A marine-fluvial interface. American Association of Petroleum Geologists *Abstracts with Programs*, Rocky Mountain Section Meeting, p. 44.
- *Kingsbury, E. M., Link, P. K., **Dehler, C.M.**, & Fanning, M., 2007. A Neoproterozoic (<770 Ma) shoreline in the High Uintas Wilderness, Uinta Mountain Group, northeastern Utah: Evidence for a pre-Sturtian interior seaway. Geological Society of America *Abstracts with Programs*, Vol. 39, No. 6, p. 221.
- *Myer, C.M., **Dehler, C.M.**, 2007. Paleogeography, climate and the carbon cycle of the mid-Neoproterozoic Red Pine Shale, Uinta Mountains, Northeastern Utah. *AAPG Abstracts with Programs*, Rocky Mountain Section Meeting, p. 50.
- *Rybczynski, D., **Dehler, C.M.**, *Brehm, A., 2007. Subdividing the undifferentiated eastern Uinta Mountain Group, Northeastern Utah. *AAPG Abstracts with Programs*, Rocky Mountain Section Meeting, p. 54-55.
- *Rybczynski, D., **Dehler, C.M.**, Fanning, C.M., Link, P.K., & *Brehm, A., 2007. Confessions of a Rodinian intracratonic basin: Analyzing the undivided eastern Uinta Mountain Group, Northeastern Utah. Geological Society of America *Abstracts with Programs*, Vol. 39, No. 6, p. 221.
- *Brehm, A.,M., & **Dehler, C.M.**, 2006. The new and improved Neoproterozoic Jesse Ewing Canyon Formation, basal Uinta Mountain Group, northeastern Utah and northwestern Colorado. Geological Society of America *Abstracts with Programs*, Vol. 38, No. 7, p. 494.
- Dehler, C.M.**, Link, P.K., & Fanning, C.M., 2006. Transverse and longitudinal sediment transport in the east-trending mid-Neoproterozoic Uinta Mountain Group and Big Cottonwood Basin, northern Utah, Geological Society of America *Abstracts with Programs*, Vol. 38, No. 7, p. 410.
- Pitblado, B.L., **Dehler, C.M.**, Nelson, S.T., *Myer, C., *Merriman, C.W., and *Porter, J., 2006. Experiments in sourcing Rocky Mountain Late Paleoinian quartzite. Electronic paper presented at the 71st Annual Meeting of the Society for American Archaeology, San Juan, Puerto Rico. <http://www.saa.org/meetings/esymposium/217/10.pdf>.
- Brehm, A., **Dehler, C.M.**, 2005. Reevaluation of the Neoproterozoic Jesse Ewing Canyon Formation, Eastern Uinta Mountain Group, Northeastern Utah: Geological Society of America *Abstracts with Programs*, Vol. 37, No. 7, p. 217.

Dehler, C.M., Link, P.K., & Fanning, C.M., 2005. Mid-Neoproterozoic strata of northern Utah and southern Idaho: Dating and correlation of the Uinta Mountain Group and Pocatello Formation. *Geological Society of America Abstracts with Programs*, Vol. 37, No. 7, p. 218.

Fanning, M.C., & **Dehler, C.M.**, 2005. Constraining depositional ages for Neoproterozoic siliciclastic sequences through detrital zircon ages: A ca. 770 Ma maximum age for the lower Uinta Mountain Group. *Geological Society of America Abstracts with Programs*, Vol. 37, No. 7, p. 42.

*Myer, C.A., *Merriman, C., Pitblado, B., & **Dehler, C.M.**, 2005. Petrographic and geochemical sourcing of culturally modified quartzite in the Gunnison basin, Colorado. *Geological Society of America Abstracts with Programs*, Vol. 37, No. 7, p. 276.

2000-2004

*De Grey, L. D. & **Dehler, C.M.**, 2004. Stratigraphic investigations of the Neoproterozoic Uinta Mountain Group: Combating the Curse of the Proterozoic Sandstone: *Geological Society of America, Abstracts with Programs*, Vol. 36, No. 5, p. 570.

Dehler, C.M. & Pederson, J.L., 2004. Geologic mapping in the Carlsbad Area, southeastern New Mexico: Implications for water issues in the lower Pecos Region. *Geological Society of America, Abstracts with Programs*, Vol. 36, No. 5, p. 579.

*De Grey, L. D., **Dehler, C.M.**, & Link, P. K., 2004. Stratigraphy and Facies analysis of the Neoproterozoic Uinta Mountain Group, Swallow Canyon Quadrangle, Utah-Colorado Border Region: *Geological Society of America, Abstracts with Programs*, Vol. 36, No. 4, p. 50.

Dehler, C.M., Sprinkel, D.A., Porter, S., Waanders, G., Crossey, L.J., *DeGrey, L.D., & Link, P.K., 2004. The Neoproterozoic Uinta Mountain Group revisited: A synthesis of recent work on the Red Pine Shale and related undivided clastic strata, Northeastern Utah. *Geological Society of America, Abstracts with Programs*, Vol. 36, No. 4, p. 88.

Williams, M.L., Crossey, L.J., Jercinovic, M. J., Bloch, J. D., Karlstrom, K. E., **Dehler, C. M.** Heizler, M. T., Bowring, S.A., & Goncalves, P., 2003. Dating Sedimentary Sequences: In Situ U/Th-Pb Microprobe Dating of Early Diagenetic Monazite and Ar-Ar Dating of Marcasite Nodules: Case Study From Neoproterozoic Black Shales in the Southwestern U.S, *Geological Society of America Abstracts with Programs*, Vol. 35, No. 6, p. 595.

*Langenburg, E.S., Liddell, D.W., & **Dehler, C.M.**, 2002. Geochemistry and sequence stratigraphy of the Middle Cambrian Wheeler Formation: Support for trilobite chronostratigraphy. *Geological Society of America, Abstracts with Programs*, Vol. 34, no. 6, p. 414.

Dehler, C.M., Crossey, L.J., Atudorei, V., Karlstrom, K.E., & Bloch, J.B., 2002. Characterization of the Red Pine Shale, Uinta Mountain Group, northeastern Utah. *Geological Society of America, Abstracts with Programs*, Vol. 34, no. 6, p. 272.

Dehler, C.M., Elrick, M.E., Crossey, L.J., Karlstrom, K.E., 2002. Lithostratigraphic and chemostratigraphic relationships in the Neoproterozoic Chuar Group, Grand Canyon: Implications for controls on C-isotope variability of Neoproterozoic Oceans? *Geological Society of America, Abstracts with Programs*, Vol. 34, no. 4, p. A-18.

*Langenburg, E.S., Liddell, D.W., **Dehler, C.M.**, and Atudorei, V., 2002. High-resolution chemostratigraphic correlation within and beyond the Middle Cambrian Wheeler Formation. Geological Society of America, *Abstracts with Programs*, Rocky Mountain Section Meeting, Vol. 34, no. 4, A-50.

Crossey, L.J., **Dehler, C.M.**, Bloch, J.B., *Dodson, Crystal, and Atudorei, V., 2002. Stratigraphic, mineralogical and geochemical analysis of the Red Pine Shale, Uinta Mountain Group, NE Utah. Geological Society of America, *Abstracts with Programs*, Vol. 34, no. 4, p. A-18.

Dehler, C.M., and Elliott, D.K., 2002. Marine-to-non-marine microvertebrate correlation in Lower Devonian strata of central-eastern Idaho. Geological Society of America, *Abstracts with Programs*, Vol. 34, no. 4, p. A-52.

Dehler, C.M., Elrick, M.E., DesMarais, D., Karlstrom, K.E., and Sharp, Z., 2001. A high-resolution C-isotope record from the mid-Neoproterozoic (~800-742 Ma) Chuar Group, Grand Canyon. Earth Systems International Meeting, Edinburgh, Scotland.

Crossey, L.J., Timmons, M.J., Ashby, J., Rampe, J., Tyson, A., Johnson, S., Marshall, K., **Dehler, C.M.**, and Prave, A., 2001. Petrologic approaches to correlate Late Mesoproterozoic to Neoproterozoic stratigraphic successions in western North America. Geological Society of America, *Abstracts with Programs*, Vol. 33, no. 5, p. A-42.

*Langenburg, E.S., and **Dehler, C.M.**, 2001. Interfacing geochemical and petrographic data from the Chuar Group dolomites: Was mid-Neoproterozoic seawater chemistry preserved during early diagenesis/dolomitization? Geological Society of America, *Abstracts with Programs*, Vol. 33, no. 5, p. A-43.

*McKenney, D., and **Dehler, C.M.**, 2001. Petrographic analysis of the Carbon Canyon and Carbon Butte sandstones, Chuar Group, eastern Grand Canyon: Possible provenance changes. Geological Society of America, *Abstracts with Programs*, Vol. 33, no. 5, p. A-43.

Dehler, C.M., Prave, A., Crossey, L.J., Karlstrom, K.E., 2001. Linking mid-Neoproterozoic successions in the western United States: The Chuar Group-Uinta Mountain Group-Pahrump Group connection (CHUMP). Geological Society of America *Abstracts with Programs*, Vol. 33, no. 5, p. A-20.

Bloch, J., Crossey, L.J., and **Dehler, C.M.**, 2001. Lithostratigraphic variations in the Neoproterozoic Chuar Group, Grand Canyon- Insights into provenance from geochemical and petrographic analysis of shales. Geological Society of America, *Abstracts with Programs*, Vol. 33, no. 5, p. A-21.

Dehler, C.M., Elrick, M.B., Karlstrom, K.E., Crossey, L.J., and G.A., Smith, 2000. Cyclostratigraphy of the mid-Neoproterozoic Chuar Group (~800-742 Ma), Grand Canyon: A record of climatic and tectonic transitions into the Sturtian glacial and during Rodinia breakup. Geological Society of America *Abstracts with Programs*, Vol. 32, no. 7, p. A-375.

Crossey, L.J., **Dehler, C.M.**, and Atudorei, V., 2000. Paleoenvironmental and C-isotope analysis of the Red Pine Shale, Uinta Mountain Group, NE Utah: Offshore deposition in a Neoproterozoic Sea. Geological Society of America *Abstracts with Programs*, Vol. 32, no. 7, p. A-375.

Pre-2000

Dehler, C.M., DesMarais, D. J., Bowring, S., Sharp, Z., Karlstrom, K.E., Elrick, M.E., 1999. Chuar Group (1.1-0.74 Ga), Grand Canyon: Carbon-isotope systematics at the onset of Sturtian glaciation. Geological Society of America *Abstracts with Programs*.

Dehler, C.M., 1998. Facies analysis and environmental interpretation of the middle Chuar Group (Proterozoic): Implications for the timing of Rodinian breakup. American Association of Petroleum Geologists *Abstracts with Programs*, Annual Meeting: 12.

Dehler, C. M. and Elrick, M.E., 1998. Implications for paleoenvironments and areal extent of the Chuar basin from facies analyses of the middle Chuar Group (Neoproterozoic), Grand Canyon. Geological Society of America *Abstracts with Programs*, Vol. 30, no. 6, p. 7.

Timmons, M.J., Karlstrom, K.E., and **Dehler, C.M.**, 1998. Structure and sedimentary tectonics of the Chuar Group and Butte Fault, Grand Canyon: Evidence for a Neoproterozoic growth fault. Geological Society of America *Abstracts with Programs*, Vol. 30, no. 6, p. 38.

Dehler, C.M., 1994. Controls on cyclic sedimentation in Upper Silurian-Lower Devonian mixed siliciclastic-carbonate sequences of central-eastern Idaho; Geological Society of America *Abstracts with Programs*, Vol. 26, No. 7, pp. A-91, A-241.

Elliott, D.K., and **Dehler, C.M.**, 1994. Early Devonian microvertebrates from central-eastern Idaho; Abstracts of Papers, Journal of Vertebrate Paleontology, 14(3), p. 24A.

Shapiro, R., **Dehler, C.M.**, and Flynn, J., 1993. Transgressive reef sequences of the Devonian Devils Gate Limestone, Nevada; Geological Society of America *Abstracts with Programs*, Vol. 25, No. 5, p. A145.

INVITED PRESENTATIONS

2024-Denver Museum of Natural History and Science, 2024. The Earth was completely frozen? Twice?

2020-International Commission on Stratigraphy, Subcommittee on Cryogenian Stratigraphy:

2020-A More Complete Cryogenian Record of SE Idaho, U.S.A.

Pacific SEPM Fall.

2020-Utah Geological Survey. The Geology of the Islands of the Great Salt Lake: Insight into an ancient global frozen Earth

2019-Rio Tinto Natural History Museum. The Geology of the Islands of the Great Salt Lake: Insight into an ancient global frozen Earth

2018-Utah State University, Logan UT. *Science Unwrapped* (Public Lecture Series), College of Science--Powers of Ten as it relates to Geology. Title TBA.

2017-Utah Valley University, Provo, UT. Once upon a (Precambrian) time in the Grand Canyon.

2016-Boise State University, Boise, ID. ChUMP: A middle Neoproterozoic Cretaceous-like record of Snowball Earth beginnings.

2014-University of California, Santa Barbara, CA. The Neoproterozoic glacial record in Idaho and Utah: Implications for the timing of Snowball Earth glaciations

2014-University of California, Riverside, CA. The mid-Neoproterozoic ChUMP (ChuarUinta Mountain-Pahrump) record of SW Laurentia and the global changes from 740-780 Ma.

2014-Chico State University, Chico, CA. Secrets and Curses of Proterozoic Strata in Death Valley, California.

2009-Utah State University, Logan, UT. Characterization of a cap-carbonate sequence, Neoproterozoic (~665 Ma) Pocatello Formation, southeastern Idaho (Presented with Katie Kirkham—undergraduate research).

2009-Brigham Young University, Provo, UT. Maximum depositional age and provenance of the Uinta Mountain Group and Big Cottonwood Formation, northern Utah: Paleogeography of rifting western Laurentia.

2008-Utah State University, Logan, UT. The Chuar Group-Uinta Mountain Group-Pahrump Group connection revisited: A “snapshot” of the infra-Sturtian Earth system.

2007-University of Nevada, Las Vegas, NV. Neoproterozoic records from Grand Canyon and the Uinta Mountains: an evolving view of climate change and tectonic setting at ~800-750 Ma.

2007-Idaho State University, Pocatello, ID. Are Proterozoic Sandstones Cursed?

2006-Utah State University, UT. Neoproterozoic records from Grand Canyon and the Uinta Mountains: an evolving view of climate change and tectonic setting at ~800-750 Ma.

2005-HASS, Utah State University, UT. Sourcing the origin of stone raw materials from the 8,000 year-old Chance Gulch archaeological site, Gunnison Basin, Colorado.

2005-University of Oregon, OR. Neoproterozoic records from Grand Canyon and the Uinta Mountains: an evolving view of climate change and tectonic setting at ~800-750 Ma.

2005-Utah Geological Association, UT. Neoproterozoic records from Grand Canyon and the Uinta Mountains: an evolving view of climate change and tectonic setting at ~800-750 Ma.

2004-University of Laverne, CA. Superclimate changes in Precambrian rocks of the Grand Canyon? Idaho State University, 2003. Talk title: C-isotope anomalies in the Chuar Group and Neoproterozoic paleoclimate.

2002-Utah State University. Permianland: News from the backreef of New Mexico.

2002-Idaho State University. Neoproterozoic Uinta Mountain Group and correlative successions: Windows into Neoproterozoic Earth History.

2000-Idaho State University. Neoproterozoic Chuar Group (~800-742 Ma), Grand Canyon: A record of cyclic marine deposition during global cooling and supercontinent rifting.

Utah State University. Is there evidence in Proterozoic rocks of Grand Canyon of an Earth covered in ice?

2000-Utah State University. From supercontinent rifting to a “snowball” Earth? Insight from the Chuar Group (~800-742 Ma), Grand Canyon

GRANTS AND CONTRACTS FUNDED

2020-2023 National Science Foundation, Sedimentary Geology and Paleobiology Program. Collaborative Research: Cambrian system of western Laurentia: redefining the chronology of supercontinent breakup, marine transgression, and global paleobiogeography. Project Investigators: Mark Schmitz, Karl Karlstrom, **Carol Dehler**, and James Hagadorn. Requesting \$179,000 to USU.

2020-2021 EDMAP, Reston, VA. “Bedrock mapping of the Naomi Peak Quadrangle, Cache County, Utah: A documentation of the Earth system during the development of the Northern Cordilleran passive margin, Northern Utah (late Neoproterozoic through Ordovician), Project Investigator: **C. Dehler**. \$17,000

- 2015-2016** Research Catalyst Grant, Utah State University. Mid-Neoproterozoic Laurentia-Baltica Connection: Testing global ocean-climate behaviors and their relationship with biotic evolution before global glaciation. **C. Dehler**. \$17,908
- 2014-2016** Chesapeake Oil and Gas. Structural setting, source rocks, and petroleum potential of mid-Neoproterozoic extensional basins, Utah and Arizona. **C. Dehler**. \$63,552
- 2011-2012** EDMAP, Reston, VA. "Geologic Map and Stratigraphy of the Neoproterozoic Uinta Mountain Group, Eastern High Uinta Mountains, Utah: In Search of a Global Timeline", Project Investigator: **C. Dehler**. \$5,415.
- 2008-2011** National Science Foundation, Tectonics Program. "Collaborative Research: Neoproterozoic Rifting of Utah: Geochronology, Tectonics, Sequence Stratigraphy", Project investigators: Paul K. Link, **C. Dehler** and A. Yonkee. EAR0819759. \$280,439 (Dehler: \$88,931).
- 2007-2011** National Science Foundation, Archeology Program, "Petrographic and ICP-MS analysis of Quartzite Sources in the Upper Gunnison Basin, Colorado", PIs: Bonnie Pitblado, **C. Dehler**. BCS0728664, \$180,381 (Dehler: \$46, 114).
- 2007-2008** EDMAP Reston, VA. "Geologic map of the Neoproterozoic Uinta Mountain Group, Goslin Mountain area, Daggett County, Utah", Project investigator: **C. Dehler**. \$14,639.
- 2006-2007** EDMAP, Reston, VA. "Jesse Ewing Canyon Formation, Uinta Mountain Group, Utah and Colorado: Tectonic and environmental setting of an incipient rift basin", Project investigator: **C. Dehler**. \$8,500.
- 2005-2006** New Faculty Grant, Utah State University. "Basin analysis and geochronology of the Neoproterozoic Uinta Mountain Group, northeastern Utah", Project investigator: **C. Dehler**. \$15,000.
- 2005-2006** National Science Foundation ADVANCE Seed Grant, Utah State University. "Sourcing the Origin of Stone Raw Materials from the 8,000 Year-Old Chance Gulch Archaeological Site, Gunnison Basin, Colorado", Project investigators: Bonnie Pitblado, **C. Dehler**. \$8000.
- 2005** Utah Geological Survey, Salt Lake City, UT. "Geochronology of the Uinta Mountain Group". Project investigator: **C. Dehler**. \$18,000
- 2004-2005** EDMAP, Reston, VA. "Geologic Map of the Swallow Canyon Quadrangle: Understanding the Neoproterozoic Uinta Mountain Group, Uinta Mountains, northeastern Utah", Project investigator: **C. Dehler**. \$12,000
- 2002-2003** EDMAP, Reston, VA. "Geologic Map of the Warren Draw Quadrangle: Understanding the Neoproterozoic Uinta Mountain Group, Uinta Mountains, northeastern Utah", Project investigator: **C. Dehler**. \$12,000.
- 1992-2001** Graduate Research Grants to **C. Dehler** from: Geological Society of America; Colorado Scientific Society; Society of Sedimentary Geology; Donegan Consultants; Regents Financial Aid Grant, Arizona Trust Fund; Wyoming Geological Association; Friday Lunch Clubbe, Northern Arizona University.

TEACHING AND MENTORING

COURSES TAUGHT

<p>Undergraduate Courses: Earth through Time Earth through time lab Geologic Field Excursions Field Methods Field Camp Field Camp Coordinator Facies Analysis Planet Earth Sedimentology and Stratigraphy Grand Canyon Geology Seminar Sedimentary Petrology</p>	<p>Graduate Courses: Facies Analysis Deep Time Grand Canyon Geology Seminar Sedimentary Petrology Geochemical Applications to the Sedimentary Record The Sedimentary Record Tectonics and Sedimentation Advanced General Geology</p>
--	---

STUDENT RESEARCH ADVISEMENT

PhD advisor

Dawn Hayes 2010-2013, Utah State University. Two scenes from Utah’s stratigraphic record: Neoproterozoic snowball Earth, before and after. (*full-time at Anadarko in Midland, Texas, head of facies analytical group*)

Master’s advisor (13 students)

Joe Clevenger 2022- . Utah State University. Enigmatic Dolostones in the Cambrian Bright Angel Shale, Tonto Group.

Hannah Cothren 2020-2022. Utah State University. Bedrock mapping of the Naomi Peak Quadrangle, Cache County, Utah: A documentation of the Earth system during the development of the Northern Cordilleran passive margin, Northern Utah (*PhD program*)

Kenny Kehoe 2016-2021. Utah State University. Lithological and Geochemical Characterization of Ramp Sediments and a Depositional Model of the Ordovician Garden City Formation, Northeastern Utah. (*APTIM Hill Airforce Base*).

Matt Ellison 2018-2020. Utah State University. Stratigraphic analysis of the Cryogenian Pocatello Formation in the context of a new age model: A Sturtian and Marinoan glacial record. (*Geologist Environmental Firm UT*)

Erin Lathrop 2015-2017. Utah State University. Capturing changes in the Mesoproterozoic carbon cycle: C-isotope stratigraphy of the ~1254 Ma Bass Formation, Grand Canyon Supergroup, AZ., USA. (*GIS specialist*)

Abigail Bullard 2015-2016. ID-TIMS geochronology of the Neoproterozoic Chuar, Uinta Mountain, and Pahrump groups, southwestern U.S. (*Geologist Environmental Firm in California*)

Dawn Hayes 2008-2010. Utah State University. "Stratigraphic, microfossil, and geochemical analysis of the Neoproterozoic Uinta Mountain Group, Utah: Evidence of biotic change driven by eutrophication?" (*Leader of Facies Team, Anadarko Oil and Gas, Houston, TX.*)

Dan Rybczynski 2006-2009. Utah State University. "Correlation, paleogeography, and provenance of the eastern Uinta Mountain Group, Goslin Mountain area, northeastern Utah." (*Northern Oil & Gas, Arkansas*).

Esther Kingsbury 2006-2008. Idaho State University. "Sequence stratigraphic analysis of the Neoproterozoic Uinta Mountain Group, Kings Peak area, northeastern Utah." (*Precambrian Geologist, Wisconsin Survey, pursuing PhD 2023*).

Caroline Brehm 2005-2008. Utah State University. "Sedimentology, stratigraphy, and geochemistry of the Neoproterozoic Red Pine Shale, Uinta Mountains, northeastern Utah: Implications for paleogeography, carbon cycle, and climate change during the Neoproterozoic of western Laurentia." (*Geologist, Anadarko in Denver, CO*).

Andy Brehm 2005-2007. Utah State University. "Re-evaluation of the Neoproterozoic Jesse Ewing Canyon Formation, eastern Uinta Mountain Group, northeastern Utah." (*Geologist, Anadarko in Denver, CO*).

Laura DeGrey 2002-2005. Idaho State University. "Geologic map and stratigraphic characterization of the Neoproterozoic eastern Uinta Mountain Group." (*Geologist. Kinross Gold Corp, Washington*)

Elizabeth Langenburg 2000-2002. Utah State University. Graduated: Spring 2002. Sequence stratigraphy and C-isotope Stratigraphy of the Cambrian Wheeler Fm., Utah". (*Endowed Chair, Western Washington University, CO*)

Undergraduate research advisor (21 students)

Ethan Harrow 2024. Exploring the cap carbonate from Winters Pass, Nevada.

Michelle Norman 2020-current. Minigrant recipient 2022, Goldwater nominee 2023, URCO recipient 2024, Peak Scholarship proposal submitted, 2024.

Joseph Bingham 2020-2021. Organic carbon isotope stratigraphy of the Spence Shale. (*Now in graduate school at*)

Rachel Kubina 2017-2020. Detrital zircon geochronology and C-isotope stratigraphy of the Marinoan(?) cap dolostone and associated clastics, Carrington Island, Great Salt Lake, UT. (URCO project) (*Now geologist in Salt Lake City, UT*)

Mikaela Pulsipher 2015-2018. Research for Utah State University Undergraduate Research and Creative Opportunities (URCO) project. Neoproterozoic Visingsö Group, Sweden. (*Now a Paleontologist for Grand Canyon National Park*)

Lizzy Griffin 2015-2017. Organic-carbon isotope stratigraphy of the 766 Ma Moosehorn Lake formation, Uinta Mountain Group and Carbon isotope stratigraphy of the cap carbonate (End Marinoan Glaciation) on Frary Peak, Antelope Island, Utah.

Fallon Rowe 2015-2016. Research for Utah State University Undergraduate Research and Creative Opportunities (URCO) project. Neoproterozoic Visingsö Group, Sweden.

Sara Yearsley 2013. Weber State University. Research for NSF-funded project on Neoproterozoic glaciations and rifting.

Garrett Brinkerhoff 2013-2014. Research for Utah State University Summer Undergraduate Research and Creative Opportunities (SURCO) project. Ordovician Swan Peak Fm, UT. (*Now a mining geologist in Bisbee, AZ.*)

Dave Richey 2012. Utah State University. "Paleogeography and age of the Sheeprock Group, UT" (*Now with Anadarko in Denver, CO.*)

Jerome Buceri 2009-2010. Research for Archeology National Science Foundation project.

Melissa Jackson 2009-2010. Research for Archeology National Science Foundation project.

Layne Morris 2009-2010. Research for Archeology National Science Foundation project.

Katie Kirkham 2008-2009. Research for Utah State University Undergraduate Research and Creative Opportunities (URCO) project, Minigrant project, Eccles Scholarship Research. Neoproterozoic National Science Foundation project. Snowball Earth: Pocatello Fm, ID

Ryan Jensen 2009. Research for Neoproterozoic National Science Foundation project.

Scott Sallay 2008. Research for Neoproterozoic National Science Foundation project.

Jed Jenkins 2008-2009. Research for Neoproterozoic National Science Foundation project.

Shannon Babb 2007-2008. Research for Utah State University Undergraduate Research and Creative Opportunities (URCO) project. Neoproterozoic Jesse Ewing Canyon Fm, UT.

Lynsie Daley 2007-2008. Research for Utah State University Undergraduate Research and Creative Opportunities (URCO) project. Neoproterozoic Jesse Ewing Canyon Fm, UT.

Maggie Olson 2001-2002. Utah State University. Devonian Conodonts of Idaho.

Danette McKenney 2000-2001. Utah State University. Geologic Map of the Warren Draw Quadrangle.

Graduate supervisory committee member (41 students):

4 PhD (Geology, Biology USU)

32 MS (Geology USU)

3 MS (Geology, Idaho State University)

1 MS (Geology, University of California, Santa Barbara)

1 PhD (Geology, University of California, Santa Barbara)

1 PhD (Geology, Boise State University)

TEACHING RECOGNITION

- 1998-1999 Outstanding Teaching Assistant Award, University of New Mexico, Albuquerque, NM.
- 1991-1992 Teacher of the Year Scholarship, Northern Arizona University, Flagstaff, AZ.

SERVICE

DEPARTMENTAL SERVICE

- Museum Director, May 1, 2021-current
- Undergraduate Research Coordinator, 2017-current
- Undergraduate Advisor, 2017-current
- Geology Club Advisor, 2004-current
- Graduate Advising Committee, 2016
- Rock Preparation Laboratory Manager, 2015-current
- Ombudperson, 2014-2017
- Undergraduate Teaching Fellow supervisor, 2011-2013
- Undergraduate Teaching Fellow supervisor, 2004-2010
- Distinguished lecture series organizer, 2004-2008

PROFESSIONAL CONTRIBUTIONS

- Grand Canyon Field Forum 2021: The Great Unconformity and Mesoproterozoic, Neoproterozoic and Cambrian systems in Grand Canyon
- International Commission on Stratigraphy (ICS), Cryogenian Sub-commission vice chair-2020-current: <https://www.cryogenian.org/>
- Association of Women Geoscientists Field trip leader (invited), Antelope Island, UT. 2018
- Geological Society of America Sloss Award committee, 2015-2018
- Participant Cryogenian GSSP Field trip, Australia, 2018
- Participant Cryogenian GSSP meeting, Toulouse France, 2017
- Participant Cryogenian GSSP Field trip, Death Valley, 2014
- ICS, Cryogenian Sub-commission voting member-2014-2019
- Field trip co-leader (invited), Pacific Section of SEPM in Death Valley, CA. 2014
- Field trip leader: Geological Society of America, Rocky Mountain meeting, Logan, UT, 2011
- “Cryogenian ("Sturtian") Diamictite, Cap Carbonate, and Volcanic Rocks of Southeastern Idaho.”
- Field trip co-leaders Josh Keeley (student) and Paul Link.
- Technical Chairperson
- Theme session:* Geological Society of America, Rocky Mountain meeting, Logan, UT, 2011, Neoproterozoic–Early Paleozoic Tectonic and Climatic Evolution of the Cordilleran Margin. Co-conveners: Adolph Yonkee and Paul Link.

Geological Society of America field trip Chairperson for Salt Lake City National Meeting 2005.
 Organize and coordinate all meeting field trips. Edit field trip guidebook.
 Geological Society of America field trip leader for Salt Lake City National Meeting 2005.
 Organize and lead geology field trip of ~30 participants. Write guidebook article.
 Geological Society of America Geoventures fieldtrip leader, Grand Canyon river trip, April 2002.
 Organize and lead geology field trip through the Grand Canyon.
 Technical Chairperson
Theme session, Geological Society of America Rocky Mountain, Orem, UT., 2009. Proterozoic geology of western U.S. Co-chair: Paul K. Link.
Theme session, Geological Society of America National Meeting, Salt Lake City, UT, 2005.
 Refining the Global Neoproterozoic Geologic Record. Co-chairs: Frank Corsetti and Paul Link.
Symposium, Geological Society of America Rocky Mountain Meeting, Cedar City, UT, 2002.
 Proterozoic Paleogeography and Paleoclimate. Co-chair: Paul Link.
Theme session, Geological Society of America Rocky Mountain Meeting, Cedar City, UT, 2002.
 Devonian correlations in the Great Basin. Co-chair: Dave Elliott.
Symposium, Geological Society of America Rocky Mountain/South Central Meeting, Albuquerque, NM. 2001. Meso- to Neoproterozoic of the Western US: Record of Supercontinent Assembly and Breakup, and a Snowball Earth? Co-chair: Karl Karlstrom.
Technical Session, Geological Society of America National Meeting, Reno, NV, 2000.
 Precambrian Potpourri.

Reviewer

<p>Journals <i>Earth and Planetary Science Letters</i> <i>Geochimica et Cosmochimica Acta</i> <i>Geological Society of America Bulletin</i> <i>Geological Society of America Guidebooks</i> <i>Geology</i> <i>Geosphere</i> <i>Journal of Sedimentary Geology</i> <i>Precambrian Research</i> <i>Sedimentary Geology</i></p>	<p>Proposals <i>National Geographic</i> <i>National Science Foundation</i> <i>Petroleum Research Fund</i></p> <p>Books <i>Regional Guidebooks</i> <i>Physical Geology textbook</i></p>
<p>National Science Foundation Proposal Review Panel Spring 2023, Fall 2015, Spring 2015</p>	

OUTREACH

- 2021 Geology Museum Preview Movie made in March of 2021
<https://www.youtube.com/watch?v=7oYbB7tcc>
- 2020 USA Today Video: <https://www.usu.edu/today/story/usu-geologist-gets-to-the-bottom-of-the-cambrian-explosion-trilobite-evolution-in-grand-canyon>
- 2019 Geominutes Video: <https://www.youtube.com/watch?v=CHWbZFtwfyQ>
<https://www.youtube.com/watch?v=CHWbZFtwfyQ&t=1s>

2019 Co-creator of Geominutes on Geoscience Webpage: <https://geo.usu.edu>
2018-current Outreach to Mount Logan Middleschool, Logan, UT.
2018-2019 Outreach to Native American students, USU Blanding campus, UT.
2017-2018 Outreach to Whitehorse Highschool, White Horse, UT.
2012-2020 Geologic outreach to Hillcrest Elementary School, Logan, UT
2016 'Ask a Geologist' programs, Grand Canyon National Park
2013-2016 Science Fair coordinator Hillcrest Elementary School (K-5) , Logan, UT
2013-2014 Geology outreach to Isla Vista Elementary School, Goleta, CA
2009-2011 Geologic outreach Dolores Dore Eccles Center for Child Education, USU