Kathryn Elaine Snell

Assistant Professor, Director of CU Boulder Earth Systems Stable Isotope Lab
Department of Geological Sciences, University of Colorado Boulder
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Research Interests

Paleoclimatology, paleoaltimetry and tectonics, stable isotope geochemistry, sedimentology

1. Education

2002 B.A. cum laude, Geology with Distinctions, The Colorado College
2004 – 2011 Ph.D., Earth Sciences, University of California, Santa Cruz

2. Employment

2015-Present Assistant Professor of Geological Sciences, CU Boulder
2014 Senior Postdoctoral Scholar, California Institute of Technology
2011-2013 Postdoctoral Scholar, California Institute of Technology
Advisors: Dr. John Eiler and Dr. Brian Wernicke
2009 Visiting Professor, Block 3, The Colorado College
2004-2010 Teaching and Research Assistant, UC Santa Cruz
2003-2004 GIS Research Assistant, GeoMap NW, University of Washington, Seattle, WA
2003 Hydrologic Technician, USDA Forest Service, Priest Lake, ID

3. Current funded projects:

2018 - 2020 National Science Foundation Low Temperature Geochem and Geobio grant:
A predictive framework for micro-scale carbonate diagenesis: Towards more accurate reconstructions of global climate and environmental change (Co-PI; Lead is Postdoc Miquela Ingalls) EAR-1826805 - $184,321

2018 - 2021 National Science Foundation SedGeo and Paleobio grant:
Collaborative Research: Assessing the sensitivity of high-altitude environments to globally warm climate as recorded by lacustrine microbialite carbonates (Lead PI; 3 co-PIs including CU Co-PI E. Trower) EAR-1826850 - $317,570 /$598,733 (CUB/Total)

4. Research and Creative Work

Peer-reviewed Publications:

Lukens, WE, Fox, DL, **Snell, KE**, Wiest, LA, Layzell, AL, Uno, KT, Polissar, PJ, Martin, RA, Fox-Dobbs, K, Peláez-Camponaes, P. *Accepted*. Pliocene paleoenvironments in the Meade Basin, southwest Kansas. *Journal of Sedimentary Research*.

Lunt, D.J., Huber, M., Anagnostou, E., Baatsen, M.L.J., Caballero, R., DeConto, R., Dijkstra, H.A., Donnadieu, Y., Evans, D., Feng, R., Foster, G., Gasson, E., von der Heydt, A.S., Hollis, C.J., Inglis, G.N., Jones, S.M., Kiehl, J., Kirtland Turner, S., Korty, R.L., Kozdon, R., Krishnan, S., Ladant, J.B., Langebroek, P., Lear, C.H., LeGrande, A.N., Littler, K., Markwick, P., Otto-Bliesner, B. Pearson, P., Poulsen, C.J., Salzmann, U., Shields, C., **Snell, K.E.,** Starz, M., Super, J., Tabor, C., Tierney, J., Tourte, G.J.L., Tripati, A., Upchurch, G.R., Wade, B.S., Wing, S.L., Winguth, A.M.E., Wright, N., Zachos, J.C., and Zeebe, R. 2017. DeepMIP: experimental design for model simulations of the EECO, PETM, and pre-PETM. *Geoscientific Model Development*. 10: 889-901. DOI: 10.5194/gmd-10-889-2017.

Fox, DL, Martin, RA, Roepke, E, Fetrow, AC, Femal, B, Uno, KT, Fox-Dobbs, K, **Snell, KE**, Haveles, AW, Polissar, PJ. 2015. Biotic and Abiotic Forcing During the Transition of Modern Grassland Ecosystems: Evolutionary and Ecological Responses of Small Mammal Communities Over the Last 5 Million Years. *In P. D. Polly, J. J. Head, & D. L. Fox (Eds.), Earth-Life Transitions: Paleobiology in*

the Context of Earth System Evolution. Paleontological Society Papers v. 21. Yale Press, New Haven, CT. p. 197-218.

Snell, KE, Koch, Pl, Eiler, JM, Druschke, P. 2014. High elevation of the Nevadaplano during the Late Cretaceous. *Earth and Planetary Science Letters.* 386: 52–63. DOI: 10.1016/j.epsl.2013.10.046

Snell, KE, Thrasher, B, Eiler, JM, Koch, PL, Sloan, LC, Tabor, N, Dettman, D. 2013. Hot summers in the Bighorn Basin during the early Paleogene. *Geology,* 41: 55-58. DOI: 10.1130/G33567.1

Clyde, WC, Ting, S, **Snell, KE**, Bowen, GJ, Tong, Y, Koch, PL, Qian, L, Wang, Y. 2010. New paleomagnetic and stable isotope results from the Nanxiong Basin, China: Implications for the K/T Boundary and the timing of Paleocene mammalian turnover. *Journal of Geology*, 118: 131-143. DOI: 10.1086/649893

Clyde, WC, Tong, Y, **Snell, KE**, Bowen, GJ, Ting, S, Koch, PL, Li, Q, Wang, Y, and Meng, J. 2008. An integrated stratigraphic record from the Paleocene of the Chijiang Basin, Jiangxi Province (China): Implications for mammalian turnover and Asian block rotations. *Earth and Planetary Science Letters*, 269: 553-563. DOI: 10.1016/j.epsl.2008.03.009

Myrow, PM, **Snell, KE**, Hughes, N, Paulsen, T., Heim, N, Parcha, S. 2006. Cambrian depositional history of the Zanskar Valley region of the Indian Himalaya: Tectonic implications. *Journal of Sedimentary Research*, 76: 364-381. DOI: 10.2110/jsr.2006.020

Non-Peer Reviewed Publications and Government Reports:

Kenworthy, J.P., V. L. Santucci, M. McNerney, and **K. Snell**. 2005. Paleontological Resource Inventory and Monitoring, Upper Columbia Basin Network. National Park Service TIC# D-259.

Works In Review or Post-Review Revision:

Snell, KE, Fricke, HC, Clyde, WC, Zeigler, M, Abels, H, Eiler, JM. *In Review.* Large temperature changes on land during Early Eocene hyperthermals. *Paleoclimatology and Paleoceanography*.

Rasmussen, DM, Foreman, BZ, Fricke, HC, **Snell, KE**, Gipson, L, Housen, B. *In Review.* Increased weathering, sediment bypass, and progradation inferred from changes in fluvial deposition near the Paleocene–Eocene boundary (Huerfano Basin, Colorado, USA). *Basin Research*.