

# CURRICULUM VITAE

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## Jessica L. Conroy

Department of Earth Science & Environmental Change  
University of Illinois at Urbana-Champaign  
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## EDUCATION

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|-------------|---|
| <b>2011</b> | Doctor of Philosophy, The University of Arizona<br>Major: Geosciences<br>Minor: Global Change                                 |
| <b>2006</b> | Master of Science, The University of Arizona<br>Major: Geosciences  |
| <b>2003</b> | Bachelor of Arts, <i>summa cum laude</i> , The College of Wooster<br>Major: Geology (with Honors)<br>Minor: Classical Studies |

## EMPLOYMENT

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| <b>2020-</b>     | Associate Professor, University of Illinois at Urbana-Champaign |
| <b>2013-2020</b> | Assistant Professor, University of Illinois at Urbana-Champaign |
| <b>2011-2013</b> | NSF Postdoctoral Fellow, Georgia Institute of Technology        |

## SELECT AWARDS AND HONORS

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- 2023** Arnold O. Beckman Award, UIUC Campus Research Board  
**2020** Campus Distinguished Promotion Award  
**2019** NSF CAREER award  
**2017** Kavli Frontiers of Science Fellow, National Academy of Sciences  
**2015, 2017, 2018, 2020, 2022 2023** List of Teachers Ranked as Excellent  
**2013** Arnold O. Beckman Award, UIUC Campus Research Board  
**2013** Selected participant, DISCCRS VIII (DISsertations initiative for the advancement of Climate Change ReSearch)  
**2011-2013:** NSF Postdoctoral Fellow  
**2003-2006:** NSF Graduate Research Fellow  
**2002:** Phi Beta Kappa

## PEER-REVIEWED PUBLICATIONS

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<sup>1</sup>Supervised graduate student <sup>2</sup>undergraduate students

### In Review/Revision

\***Conroy, J.L.**, Karamperidou, C.K., Grimley, D.A. Near-surface winds at the southern Laurentide ice margin through the last deglaciation. *In review at Quaternary Research*

\***Dendy, S.N.**, Guenther, W.R., Grimley, D.A., **Conroy, J.L.** Quantifying Pleistocene loess provenance in midcontinental North America using a mixing model: implications for glacial lobe evolution along the southern Laurentide Ice Sheet. *In review at Geosphere*

1. \***Grimley, D.A.**, Loope, H., Jacobs, P., Nash, A., **Dendy, S.**, **Conroy, J.L.** 2024. Updated chronology for Peoria Silt (loess) accumulation in Illinois and western Indiana from radiocarbon dating of terrestrial gastropod shells. *In press at Quaternary Research*
2. Konecky, B.L., McKay, N.P., Falster, G.M., Stevenson, S.L., Fischer, M.J., Atwood, A.R., Thompson, D.M., Jones, M.D., Tyler, J.J., DeLong, K.L., Martrat, B., Thomas, E.K., **Conroy, J.L.**, Dee, S.G., Jonkers, L., Churakova, O.V., Kern, Z., Opel, T, Porter, T.J., Sayani, H.R., Skrzypek, G., and Iso2k Project Members. 2023. Temperature-driven changes in the global water cycle during the past two millennia, *Nature Geoscience* 16, 997-1004. <https://doi.org/10.1038/s41561-023-01291-3>
3. <sup>1</sup>Murray, N.K., Muñoz, A.R., **Conroy, J.L.**, 2023. Machine learning solutions to regional surface ocean  $\delta^{18}\text{O}$  - salinity relationships for paleoclimatic reconstruction. *Paleoclimatology and Paleoceanography*. 38, e2023PA004612. <https://doi.org/10.1029/2023PA004612>
4. <sup>1</sup>Murray, N. K., **Conroy, J.L.**, <sup>2</sup>O'Brien, K., Grimm, E.C., Donovan, J.J. 2023. Holocene relationships between climate, waterfowl, and lacustrine nutrient cycling at Kettle Lake, North Dakota, USA, *The Holocene* 33(9). <https://doi.org/10.1177/095968362311764>
5. <sup>1</sup>Chen, M., **Conroy, J.L.**, Sanford, R., <sup>1</sup>Wyman, D.A., Chee-Sanford, J.C., Connor, L.M. 2023. Tropical lacustrine sediment microbial community response to an extreme El Niño event, *Scientific Reports* 13, 6868. <https://doi.org/10.1038/s41598-023-33280-2>
6. Dee, S. G., A. Bailey, **J.L Conroy**, A. Atwood, S. Stevenson, J. Nusbaumer, and D. Noone. 2023. Water isotopes, climate variability, and the hydrological cycle: recent advances and new frontiers. *Environmental Research: Climate* 2. Doi:10.1088/2752-5295/acbbe1.
7. **Conroy, J.L.**, <sup>1</sup>Murray, N. K., <sup>2</sup>Patterson, G.S., Schore, A.I.G., <sup>2</sup>Ikuru, I., Cole, J.E., Chillagana, D., Echeverria, F. 2023. Equatorial Undercurrent influence on seawater  $\delta^{18}\text{O}$  values in the Galápagos. *Geophysical Research Letters*. 50, e2022GL102074. <https://doi.org/10.1029/2022GL102074>

8. Thompson, D.M., **Conroy, J.L.**, Stevenson, S., DeLong, K., Konecky, B., Dassié, E. 2022. Salinity information in coral  $\delta^{18}\text{O}$  records. *Geophysical Research Letters* doi:10.1029/2021GL096153
9. <sup>1</sup>Chen, M., **Conroy, J.L.**, Geyman, E.C., Sanford, R., Chee-Sanford, J.C., Connor, L.M., 2022. Stable carbon isotope values of syndepositional carbonate spherules and micrite record spatial and temporal changes in photosynthesis intensity, *Geobiology*, 20(5):667-689
10. Bush, M.B, Conrad, S., Restrepo, A., Thompson, D.M., Lofverstrom, M., **Conroy, J.L.** Human-induced ecological cascades: extinction, restoration, and rewilding in the Galápagos highlands. 2022. *Proceedings of the National Academy of Sciences*, 119(24): e2203752119
11. <sup>1</sup>Dendy, S.N., Guenther, W.R., Grimley, D.A., **Conroy, J.L.**, Counts, R.C. 2021. Detrital zircon geochronology and provenance of Pleistocene loess and contributing glacial sources, Midcontinental USA, *Quaternary Science Reviews* 273(6): 107201 <https://doi.org/10.1016/j.quascirev.2021.107201>
12. <sup>1</sup>Wyman, D.A., **Conroy, J.L.**, Osburn, M.R., Atwood, A.R. 2021. Coeval drying across the central tropical Pacific over the last millennium, *Paleoceanography and Paleoclimatology*, <https://doi.org/10.1029/2021PA004311>
13. <sup>1</sup>Chen, M., **Conroy, J.L.**, Sanford, R.S., Chee-Sanford, J.C., Connor, L.M. 2021. Interpreting lacustrine bulk sediment  $\delta^{15}\text{N}$  values using metagenomics in a tropical hypersaline lake system, *Journal of Paleolimnology*, 65(1): 151-168.
14. <sup>1</sup>Wyman, D.A., **Conroy, J.L.**, and Karamperidou C. 2020. The tropical Pacific ENSO-mean state relationship in climate models over the last millennium. *Journal of Climate*, 33(17):7539-7551 <https://doi.org/10.1175/JCLI-D-19-0673.1>
15. Konecky, B.L., McKay, N.P., Churakova (Sidorova), O.V., Comas-Bru, L., Dassié, E.P., DeLong, K.L., Falster, G.M., Fischer, M.J., Jones, M.D., Jonkers, L., Kaufman, D.S., Leduc, G., Managave, S.R., Martrat, B., Opel, T., Orsi, A. J., Partin, J.W., Sayani, H.R., Thomas, E.K., Thompson, D.M., Tyler, J.J., Abram, N.J., Atwood, A.R., **Conroy, J.L.**, Kern, Z., Porter, T.J., Stevenson, S.L., von Gunten, L., and the Iso2k Project Members. 2020. The Iso2k Database: A global compilation of paleo- $\delta^{18}\text{O}$  and  $\delta^2\text{H}$  records to aid understanding of Common Era climate, *Earth System Science Data*, <https://doi.org/10.5194/essd-2020-5>
16. Grimley, D.A., Counts, R., **Conroy, J.L.**, Wang, H., <sup>1</sup>Dendy, S.N., <sup>1</sup>Nield, C. 2020. Last glacial maximum ecology and climate from terrestrial gastropod assemblages in Peoria loess, western Kentucky, *Journal of Quaternary Science* <https://doi.org/10.1002/jqs.3206>
17. Grothe, P.R., Cobb, K.M., Liguori, G., Di Lorenzo, E., Capotondi, A., Lu, Y., Cheng, H., Edwards, R.L., Southon, J.R., Santos, G.M., Deocampo, D.M., Lynch-Stieglitz, J., Chen T., Sayani, H.R., Townsend, K., Hagos, M., O'Conner, G., Thompson, D.M., Toth, L.T., **Conroy, J.L.**, and Moore, A.L. 2020. Enhanced central Pacific El Niño-Southern Oscillation in recent decades. *Geophysical Research Letters*, doi:10.1029/2019GL083906

18. **Conroy, J.L.**, Karamperidou, C., Grimley, D.A., and Guenthner, W.R. 2019. Westerly winds across eastern and mid-continental North America during the Last Glacial Maximum: A new data-model assessment, *Quaternary Science Reviews*, 220:14-29.
19. <sup>1</sup>Schmitt, S.J., **Conroy, J.L.**, Flynn, T., Sanford, R., <sup>1</sup>Higley, M.C., and Fouke, B.W. 2019. Salinity, microbe, and carbonate mineral relationships in brackish to hypersaline lake sediments: a case study from the tropical Pacific coral atoll of Kiritimati. *The Depositional Record*, doi: 10.1002/dep2.71
20. <sup>1</sup>Higley, M.C., and **Conroy, J.L.** 2019. The hydrological response of surface water on Kiritimati Island, Kiribati to recent climate variability. *Hydrological Processes*, doi: 10.1002/hyp.13465
21. Curry, B.B., <sup>1</sup>Bruegger, A.R., **Conroy, J.L.** 2018. High stands and overflow history of glacial Lake Chicago and downstream impacts on Gulf of Mexico  $\delta^{18}\text{O}$  values. *Geology* 46 (7) doi:10.1130/G40170.1
22. Schaetzl R.J., Bettis E.A., Crouvi O., Fitzsimmons K.E., Grimley D.A., Hambach U., Lehmkuhl F., Marković S.B., Mason J.A., Owczarek P., Roberts H.M., Rousseau D.-D., Stevens T., Vandenberghe J., Zárate M., Veres D., Yang S., Zech M., **Conroy J.L.**, Dave A.K., Faust D., Hao Q., Obreht I., Prud'homme C., Smalley I., Tripaldi A., Zeeden C., Zech, R. 2018. Approaches and challenges to the study of loess – Introduction to the LoessFest Special Issue. *Quaternary Research*, **89**, 563-618. doi:10.1017/qua.2018.15
23. <sup>1</sup>Higley M.C., **Conroy, J.L.**, <sup>1</sup>Schmitt, S. 2018. Last millennium hydroclimate shifts in the central tropical Pacific. *Paleoceanography and Paleoclimatology*, doi: 10.1002/2017PA003233
24. <sup>1</sup>Martin, N.J., **Conroy, J.L.**, Noone, D., Cobb, K.M., Konecky, B., and Rea, S. 2018. Seasonal and ENSO influences on the stable isotopic composition of Galápagos precipitation. *Journal of Geophysical Research-Atmospheres*, doi:10.1002/2017JD027380
25. <sup>1</sup>Nash, T.A., **Conroy, J.L.**, Grimley, D.A., Guenthner, W.R., Curry, B.B. 2018. Episodic deposition of Illinois Valley Peoria Silt in association with Lake Michigan Lobe fluctuations during the Last Glacial Maximum. *Quaternary Research*, doi:10.1017/qua.2017.66
26. Thompson, D.M., **Conroy, J.L.**, Collins, A., Hlohowskyj, S., Overpeck, J.T., Riedinger-Whitmore, M., Cole, J.E., Bush, M.B., Whitney, H., Corley, T.L., Steinitz-Kannan, M. 2017. Tropical Pacific climate variability over the last 6000 years revealed from Bainbridge Crater Lake, Galápagos. *Paleoceanography* doi:10.1002/2017PA003089
27. **Conroy, J.L.**, Thompson, D.M., Cobb, K.M., Noone, D., and Rea, S. 2017. Spatiotemporal variability in the salinity-oxygen isotope relationship of seawater across the tropical Pacific Ocean. *Paleoceanography*, doi:10.1002/2016PA003073
28. **Conroy, J.L.**, Hudson, A.M., Overpeck, J.T., Liu, K.-B., Wang, L., and Cole, J.E. 2017. The primacy of multidecadal to centennial variability over late-Holocene forced change of the Asian Monsoon on the southern Tibetan Plateau. *Earth and Planetary Science Letters*. doi:10.1016/j.epsl.2016.10.044

29. Karamperidou, C., Jin, F.F., and **Conroy, J.L.** 2017. The Importance of ENSO Nonlinearities in Tropical Pacific Response to External Forcing. *Climate Dynamics*. doi:10.1007/s00382-016-3475-y
30. **Conroy, J.L.**, Noone, D., Cobb, K. M., Moerman, J.W., and Konecky, B.L. 2016. Paired stable isotopologues in precipitation and vapor: A case study of the amount effect within western tropical Pacific storms. *Journal of Geophysical Research-Atmospheres*. doi:10.1002/2015JD023844
31. **Conroy, J.L.**, Collins, A., Overpeck, J.T., Bush, M.B., Cole, J.E., and Anderson, D.J. 2015. A 400-year isotopic record of seabird response to eastern tropical Pacific productivity. *Geo: Geography and Environment*. doi:10.1002/geo2.11.
32. **Conroy, J.L.**, Thompson, D.M., Collins, A., Overpeck, J.T., Cole, J.E., and Bush, M.B. 2014. Climate influences on water and sediment properties of Genovesa Crater Lake, Galápagos *Journal of Paleolimnology*. doi: 10.1007/s10933-014-9797-z
33. **Conroy, J.L.**, Cobb, K.M., Lynch-Stieglitz, J., and Polissar, P.J. 2014. Constraints on the salinity-oxygen isotope relationship in the central tropical Pacific Ocean. *Marine Chemistry*. 161C pp. 26-33 doi: 10.1016/j.marchem.2014.02.001
34. Abraham, J.P., Baringer, M., Bindoff, N., Boyer, T., Cheng, L.J., Church, J.A., **Conroy, J.L.**, Domingues, C.M., Fasullo, J.T., Gilson, J., Goni, G., Good, S., Gorman, J.M., Gouretski, V., Isjii, M., Johnson, G.C., Kizu, S., Lyman, J.M., MacDonald A., W.J. Minkowycz, Moffitt, S.E., Palmer, M., Piola, A., Reseghetti, F., Trenberth, K.E., Velicogna, I., Wijffels, S.E., Willis, J. 2013. A review of global ocean heat content observations: Implications for climate change. *Review of Geophysics*. doi: 10.1002/rog.20022
35. Carolin, S., Cobb, K.M., Adkins, J.F., Clark, B. **Conroy, J.L.**, Lejau, S., Malang, J. and Tuen, A.A. 2013. Varied response of western tropical Pacific hydrology to abrupt climate changes. *Science*. 340(6140):1564-1566
36. **Conroy, J.L.**, Cobb, K.M., and D. Noone. 2013. Precipitation isotope variability across the tropical Pacific in the SWING2 model simulations. *Journal of Geophysical Research-Atmospheres*. doi: 10.1002/jgrd.50412
37. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., Liu, K.-B., Wang, L., and Ducea, M.N. 2013. Dust and temperature influences on glaciofluvial sediment deposition in southwestern Tibet during the last millennium. *Global and Planetary Change*. doi 10.1016/j.gloplacha.2013.04.009
38. Restrepo, A., Colinvaux, P., Bush, M., Correa-Metrio A., **Conroy, J.**, Gardner, M.R., Jaramillo, P., Steinitz-Kannan, M., and Overpeck, J.T. 2012. Impacts of climate variability and human colonization on the vegetation of the Galápagos Islands. *Ecology*. 93(8):1853-1866.
39. **Conroy, J.L.**, and Overpeck, J.T. 2011. Regionalization of present-day precipitation across the greater monsoon region of Asia. *Journal of Climate*. doi:10.1175/2011JCLI4033.1.
40. **Conroy, J.L.**, Overpeck, J.T., and J.E. Cole. 2010. El Niño/Southern Oscillation and changes in the zonal gradient of tropical Pacific sea surface temperature over the last 1200 years. *Pages News*. 18(1):32-34.

41. Bush, M.B., Colinvaux, P.A., Steinitz-Kannan, M., Overpeck, J.T., Sachs, J., Cole, J.E., Collins, A., **Conroy, J.L.**, Restrepo A., and Zhang, Z. 2010. Forty years of paleoecology in the Galápagos. *Galápagos Research*. p. 55-61.
42. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., and Steinitz-Kannan, M. 2009. Variable oceanic influences on western North American drought over the last 1200 years. *Geophysical Research Letters*. doi:10.1029/2009GL039558.
43. **Conroy, J.L.**, Restrepo, A., Overpeck, J.T., Steinitz-Kannan, M., Cole, J.E., Bush, M.B., and Colinvaux, P.A. 2009. Unprecedented recent warming of surface temperatures in the eastern tropical Pacific Ocean. *Nature Geoscience*. 2(1):46-50.
44. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., Shanahan, T.M., and Steinitz-Kannan, M. 2008. Holocene changes in eastern tropical Pacific climate inferred from a Galápagos lake sediment record. *Quaternary Science Reviews*. 27(11-12): 1166-1180.
45. Neff, J.C., Ballantyne, A.P., Farmer, G.L., Mahowald, N.M., **Conroy, J.L.**, Landry, C.C., Overpeck, J.T., Painter, T.H., Lawrence, C.R., Reynolds, R. 2008. Recent increases in eolian dust deposition due to human activity in the western United States. *Nature Geoscience*. 1(3): 189-195.

## OTHER PUBLICATIONS

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**Conroy, J.** 2003. A high resolution Holocene paleoclimate record from western Ireland: evidence from population, biometric, and stable isotope values of freshwater mollusks. *16<sup>th</sup> Keck Symposium Volume*. p. 95-98.

## FUNDING

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### Active:

NSF-OCE-MG&G, **J. Conroy** (sole PI). CAREER: Ocean-atmosphere interactions through the lens of stable water isotopologues  
6/15/2019-5/31/2024, \$698k

**J. Conroy (lead PI)** with Christina Karamperidou (co-PI, University of Hawaii) NSF-P2C2. Collaborative Research: P2C2: A paleowind synthesis of models and data to constrain the response of extratropical atmospheric circulation to external forcing  
9/1/2022-8/31/2025, \$319k

**J. Conroy** (sole PI). UIUC Campus Research Board. Tropical Pacific climate variability from Kiritimati lagoon sediments: Bridging the gap between fossil coral and lake sediment inferences of past climate change. 1/1/2023-12/31/2024, \$30k

### Completed:

ACS-PRF-DNI, **J. Conroy** (sole PI). The role of sulfate reduction in microbial carbonate

formation across a restricted lagoonal carbonate facies: A modern analog investigation. 7/1/2017-6/30/2021 \$110k

NSF-EAR-GLD, **J. Conroy** (lead PI), W.R. Guenther, D.A. Grimley. Chronologies and mechanisms of last glacial loess deposition in the central lowlands of North America. 8/1/2016-7/31/2021 \$349.5k

NSF-EAR-P2C2, **J. Conroy** (sole PI). A terrestrial perspective of last millennium hydroclimate variability in the central tropical Pacific. 5/1/2016-4/30/2021 \$367.5k

NSF-AGS-P2C2, **J. Conroy** (lead PI, UIUC, with C. Karamperidou (lead PI) and F.F. Jin, U. Hawaii). Collaborative Research: The role of ENSO nonlinearities and asymmetries in modulating tropical Pacific climate. 5/15/2016-4/30/2020 \$133k to UIUC

BRIDGE (BiRmingham Illinois Partnership for Discovery, EnGagement, and Education) Award, **J. Conroy** (PI, UIUC with J. Bendle, PI, Birmingham). Unlocking new geochemical toolboxes for detecting climate change. 5/10/2018-5/31/2019 \$3.2k

UIUC Campus Research Board, **J. Conroy**. (sole PI). Development of a new, high-resolution paleoclimate record from Kiritimati lake sediments 5/1/2014-11/1/2015. \$27k

DOE-ARM, **J. Conroy**, (lead PI), K. Cobb, and D. Noone. Manus Water Isotope Investigation. 4/2013-4/2016. \$41k (facilities and logistics)

NSF-AGS-P2C2, K. Cobb, **J. Conroy** (co-PI), and D. Noone: Collaborative Research: Controls on Water Isotope Variability in the Tropical Pacific: A Strategy to Improve Paleoclimate Interpretations. 10/1/2012-9/30/2016 \$226k

NSF-AGS/EAR-PRF, **J. Conroy** (sole PI). Large-scale climate controls on water isotopes in the tropical Pacific: an integrated observational and modeling strategy to improve paleoclimate interpretations. 9/1/2011-8/31/2013. \$170k

## CONFERENCE PRESENTATIONS

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<sup>1</sup>Supervised graduate student <sup>2</sup> Supervised undergraduate student

1. Wallin, A., Conroy, J.L., Ford, T., Karamperidou, C. 2023. Recent wind stilling across Illinois. American Geophysical Union Fall Meeting, San Francisco, CA.
2. +Conroy, J.L. Murray, N.K., Chillagana, D., Echeverria, F., Colin, P., Noone, D., Cobb, K.M., Cole, J.E. 2023. Reflections on a decade of continuous stable water

- isotope monitoring in the tropical Pacific: What have we learned? American Geophysical Union Fall Meeting, San Francisco, CA.
3. Murray, N.K., **Conroy, J.L.**, Colin, P. 2024. The temporal seawater  $\delta^{18}\text{O}$  response to hydroclimate and ocean circulation in the Western Pacific Warm Pool. American Geophysical Union Ocean Sciences Meeting, New Orleans, LA.
  4. Grimley, D.A., **Conroy, J.L.** 2024. LAST GLACIAL MAXIMUM SUMMER TEMPERATURE GRADIENT IN THE CENTRAL USA FROM TERRESTRIAL GASTROPOD ASSEMBLAGES IN PEORIA SILT (LOESS). Geological Society of America Southeastern Section Meeting, Asheville, NC.
  5. Murray, N.K., **Conroy, J.L.**, Colin, P. 2023. Water isotopologue insights into tropical Pacific hydroclimate: seawater and precipitation  $\delta^{18}\text{O}$  in the Indo-Pacific Warm Pool. V.M. Goldschmidt Meeting, Lyon, France
  6. **Conroy, J.L.** Murray, N.K.<sup>1</sup>, Cole J.E., Chillagana, D., Echeverria F. 2023. Influence of the Pacific Equatorial Undercurrent on Galápagos Seawater  $\delta^{18}\text{O}$  Values. Annual V.M. Goldschmidt Conference, Lyon, France
  7. **Conroy, J.L.**, 2022 Common Era Hydroclimate Variability in the Central Tropical Pacific. AGU Fall Meeting, Chicago, IL **[INVITED]**
  8. **Conroy, J.L.** Murray, N.K.<sup>1</sup>, Cole J.E., Chillagana, D., Echeverria F. 2022. Influence of the Pacific Equatorial Undercurrent on Galápagos Seawater  $\delta^{18}\text{O}$  Values. AGU Fall Meeting, Chicago, IL.
  9. Cole, J.E., Thompson, D. Tudhope A.W., Dyez, K., Okun, J. Tripp C., **Conroy J.L.**, Jimenez, G. and Edwards, L.R. 2022. Galápagos Corals Reveal Unusually Strong Modern ENSO Compared to the Last Millennium. AGU Fall Meeting, Chicago, IL
  10. **Conroy, J.L.** Murray, N.K.<sup>1</sup>, Patterson, G.S.<sup>2</sup>, Schore, A.I.G.<sup>1</sup>, Ikuru, I.<sup>2</sup>, Cole J.E., Chillagana, D., Echeverria F. 2022. Galápagos seawater  $\delta^{18}\text{O}$  values: An Equatorial Undercurrent Proxy? Island Systems Integration Consortium All Hands Meeting, Cincinnati, OH
  11. **Conroy, J.L.**, Kiritimati Lakes: Windows into Past Atoll Hydrology, Microbial Community Dynamics, and Central Pacific Climate. 2021. AGU Fall Meeting, New Orleans, LA **[INVITED]**
  12. <sup>1</sup>Murray, N.K., Muñoz, A., **Conroy, J.L.** 2021. Surface ocean  $\delta^{18}\text{O}$  - salinity regions as revealed by machine learning. AGU Fall Meeting, New Orleans, LA
  13. Thompson, D.M., **Conroy, J.L.**, Williams, B., Konecky, B.L., Stevenson, S., DeLong, K.L., McKay, N., Dassie, E.P., Fischer, M., Jonkers, L., Martrat, B., Iso2K members. 2021. Salinity information from hydro-sensitive, biogenic marine carbonate  $\delta^{18}\text{O}$  records. AGU Fall Meeting, New Orleans, LA **[INVITED]**
  14. <sup>1</sup>Chen, M., Geyman, E., **Conroy, J.L.**, Sanford, R.A., Chee-Sanford, J.C., Connor, L.M. 2021. Stable carbon isotope values of syndepositional ooids and micrite record photosynthesis intensity. AGU Fall Meeting, New Orleans, LA
  15. <sup>1</sup>Chen, M., **Conroy, J.L.**, Sanford, R.A., Wyman, A., Chee-Sanford, J.C., Connor, L.M. 2021. Lacustrine sediment microbial community response to an extreme El Niño event. AGU Fall Meeting, New Orleans, LA



16. <sup>1</sup>Dendy, S. **Conroy, J.L.**, Grimley, D., Guenther, W., Kerr, P., Pigati, J.S. 2021. LGM ISOSCAPE OF CENTRAL NORTH AMERICA: IMPLICATIONS FOR AN ICE-PROXIMITY CLIMATE GRADIENT. GSA Connects, Portland, OR
17. <sup>1</sup>Dendy, S., Guenther, W., **Conroy, J.L.**, Grimley, D., Counts, R.C. 2021. DETRITAL ZIRCON GEOCHRONOLOGY AND PROVENANCE OF PLEISTOCENE LOESS AND CONTRIBUTING GLACIAL SOURCES, MIDCONTINENTAL USA. GSA Connects, Portland, OR
18. Grimley, D., Nash T.A., <sup>1</sup>Dendy, S., Rech, J.A. Curry, B., **Conroy, J.L.**, Guenther, W.R. 2021 UPDATED CHRONOLOGY OF PEORIA SILT ACCUMULATION IN ILLINOIS FROM RADIOCARBON DATING OF TERRESTRIAL GASTROPOD SHELLS AND VEGETATION. GSA Connects, Portland, OR
19. **Conroy, J.L.**, Thompson, D.M., DeLong, K.L., Stevenson, S., Konecky, B., Murray, N.K., Dassié, E.P., 2021. Leveraging seawater  $\delta^{18}\text{O}$  values to extract paleosalinity information from coral  $\delta^{18}\text{O}$  records, Tropical Pacific Observing Needs Workshop (online)
20. Cobb, K.M., and CLIVAR Water Isotopes Working Group (including **Conroy**), 2021. Water Isotope Observations as Dynamical Bridge from the Past to the Future, Tropical Pacific Observing Needs Workshop (online)
21. <sup>1</sup>Murray, N.K., Muñoz, A.R., **Conroy, J.L.** 2020. Applying neural network learning to deconvolve the  $\delta^{18}\text{O}$  - sea surface salinity relationship in the global ocean. American Geophysical Union Fall Meeting (online)
22. <sup>1</sup>Chen, M., **Conroy, J.L.**, Fouke, B. 2020. The distribution of organic matter in aragonite spherules: Insights into potential biotic mechanisms of spherule formation. Geological Society of America Annual Meeting (online)
23. <sup>1</sup>Chen, M., **Conroy, J.L.**, Fouke, B. 2020. The distribution of organic matter in aragonite spherules: Insights into potential biotic mechanisms of spherule formation. American Geophysical Union Fall Meeting (online)
24. <sup>1</sup>Wyman, D.A., **Conroy, J.L.**, Osburn M.R., Atwood, A.R. 2020. Reconstructing last millennium hydroclimate from Kiritimati sediments. American Quaternary Association Biennial meeting (online)
25. <sup>1</sup>Chen, M., **Conroy, J.L.**, Sanford, R., Chee-Sanford, J.C., Connor, L.M. 2019. Interpreting lacustrine bulk sediment  $\delta^{15}\text{N}$  values using metagenomics: A case study from a hypersaline lake system. American Geophysical Union Fall Meeting, San Francisco, CA.
26. <sup>1</sup>Murray, N., **Conroy, J.L.**, Punyasena, S. W., Grimm, E.C., Donovan, J.J. 2019. Mid-Holocene guano influences on eutrophication and lacustrine ecology at Kettle Lake, North Dakota. American Geophysical Union Fall Meeting, San Francisco, CA.
27. Falster, G., Konecky, B., McKay, N., Atwood, A.R., **Conroy, J.L.**, Fischer, M., Jones, M., Jonkers, L., Stevenson, S., Thompson, D.M., Tyler, J.J., and Pages Iso2K Project Members. 2019. New insights into spatial and temporal dynamics of the global water cycle from the Iso2k database. American Geophysical Union Fall Meeting, San Francisco, CA.

28. **Conroy, J.L.**, Karamperidou, C., Grimley, D.A., and Guenther, W.R. 2019. Westerly winds across the North American mid-continent during the Last Glacial Maximum. American Geophysical Union Fall Meeting, San Francisco, CA.
29. <sup>1</sup>Dendy, S.N., Guenther, W.R., Grimley, D.A., **Conroy, J.L.**, and Counts, R.C. 2019. Detrital Zircon Geochronology and Provenance of Quaternary Loess in Central North America. Geological Society of America Abstracts with Programs.
30. Atwood, A., Konecky, B., McKay, N. **Conroy, J.**, Fischer, M., Jones, M., Jonkers, L. Stevenson, S., Thompson, D., Tyler, J., and Iso2k Project Members. 2019. **PAGES Iso2k**: A global synthesis of water isotope proxies from multiple archives over the Common Era. CLIVAR Water Isotopes Workshop, Boulder, CO.
31. <sup>1</sup>Wyman, D.A., **Conroy, J.L.**, Osburn M.R., Atwood, A.R. 2019. Reconstructing last millennium hydroclimate from Kiritimati sediments using lipid biomarkers. International Union for Quaternary Research 20<sup>th</sup> Congress, Dublin, Ireland.
32. <sup>1</sup>Chen, M., **Conroy, J.L.**, Sanford, R., Chee-Sanford, J.C., Connor, L.M., <sup>2</sup>Sivapalan, V. 2018. Microbially-mediated nitrogen isotope fractionation in hypersaline lakes. American Geophysical Union Fall Meeting, Washington, D.C.
33. <sup>1</sup>Higley, M.C. and **Conroy, J.L.** 2018. Sediment characteristics and chronology of aeolian sediments on a tropical Pacific coral atoll. Geological Society of America Abstracts with Programs. Vol. 50, No. 6
34. <sup>1</sup>Dendy, S.N., Grimley, D.A., Guenther, W., and **Conroy, J.L.** 2018. U-Pb age density distributions as an indicator of glacial loess provenance in midwestern North America. Geological Society of America Abstracts with Programs. Vol. 50, No.6
35. Grimley, D.A., <sup>1</sup>Dendy, S., **Conroy, J.L.**, Pigati, J. 2018. Last glacial climatic and ecological gradients in the central USA based on fossil terrestrial gastropod assemblages. Geological Society of America Abstracts with Programs. Vol. 50, No. 6
36. **Conroy, J.L.**, Karamperidou, C., Grimley, D.A., and Guenther, W.R. 2018. Westerly winds across the North American mid-continent during the Last Glacial Maximum: A new data-model assessment. Geological Society of America Abstracts with Programs. Vol. 50, No. 6 **[INVITED]**
37. **Conroy, J.L.**, <sup>1</sup>Wyman, D.A., Bell, L.J. 2018. Assessing bias in the representation of ENSO in precipitation stable isotope values. Annual V.M. Goldschmidt Conference, Boston, MA **[INVITED]**
38. Thompson, D.M., **Conroy, J.**, Konecky, B., McKay, N., Stevenson, S. 2018. Indo-Pacific hydroclimate change over the past 2000 years: new insights from the Iso2k synthesis. Annual V.M. Goldschmidt Conference, Boston, MA **[INVITED]**
39. <sup>2</sup>Sivapalan, V. and **Conroy, J.L.** 2018. Biogeochemical insights into controls on lacustrine stable nitrogen isotope ratios. North-Central Geological Society of America Conference, Ames, IA.
40. <sup>1</sup>Higley, M. and **Conroy, J.L.** 2018. The hydrological response of surface water on Kiritimati, Kiribati, to recent climate variability. North-Central Geological Society of America Conference, Ames, IA.

41. <sup>1</sup>Dendy, S., **Conroy, J.L.**, Grimley, D.A., Loope, H. 2018. Regional paleoclimate inferences from Succineidae gastropod stable isotope analysis in Last Glacial Maximum loess: Ward Quarry, Plainfield, and Clayton Sections. North-Central Geological Society of America Conference, Ames, IA.
42. Grimley, D.A., Lebel, C., <sup>1</sup>Dendy, S., **Conroy, J.L.**, and Loope, H. 2018. Paleoenvironmental and paleoclimatic inferences from gastropod assemblages in last glacial loess: Illinois, Indiana, and Kentucky. North-Central Geological Society of America Conference, Ames, IA.
43. Curry, B.B., Wang, H., Lowell, T., Bates, B., Norris, N., and **Conroy, J.L.** 2018. Last glacial loess deposition in central Illinois abruptly slows at ca. 18750 cal yr BP in response to the Kankakee Torrent. North-Central Geological Society of America Conference, Ames, IA.
44. Wilkins, B.P., Woo, D. Li, J., Michalski, G., Kumar, P., **Conroy, J.L.**, Keefer, D.A., Keefer, L.L., Hodson, T.O. 2017. Nutrient Concentrations and Stable Isotopes of Runoff from a Midwest Tile-Drained Corn Field. American Geophysical Union Fall Meeting, New Orleans, LA.
45. <sup>1</sup>Wyman, D.A., **Conroy, J.L.**, Karamperidou, C. 2017. Last Millennium ENSO-Mean State Interactions in the Tropical Pacific. American Geophysical Union Fall Meeting, New Orleans, LA.
46. Konecky, B.L., Partin, J.W., **Conroy, J.L.**, Fisher, M., Jones, M., Jonkers, L., McKay, N., Stevenson, S., Thompson, D.M., Tyler, J.J., Churakova, O., Comas-Bru, L., Dee S. DeLong, K., Falster, G., Martrat, B. 2017. Global Synthesis of Common Era Hydroclimate using Water Isotope Proxies from Multiple Archives: First Results from the PAGES Iso2k Project. American Geophysical Union Fall Meeting, New Orleans, LA.
47. **Conroy, J.L.**, Thompson, D.M., Dassie, E.P., Stevenson, S., Konecky, B., DeLong, K., Sayani, H., Partin, J.W., Abram, N.J., Martrat, B. 2017. Salinity information in coral  $\delta^{18}\text{O}$  records. American Geophysical Union Fall Meeting, New Orleans, LA.
48. Thompson, D.M., **Conroy, J.L.**, <sup>1</sup>Wyman, D.A., Read, D. 2017. Spatial  $\delta^{18}\text{O}_{\text{sw}}$ -SSS relationship across the western tropical Pacific Ocean. American Geophysical Union Fall Meeting, New Orleans, LA.
49. **Conroy, J.L.**, <sup>1</sup>Nash, T.A., Grimley, D.A., Guenther, W.R., and Curry, B.B. 2017. Loess accumulation and hydroclimate variability in association with Lake Michigan Lobe fluctuations during the Last Glacial Maximum. Geological Society of America Abstracts with Programs. Vol. 49, No. 6.
50. **Conroy, J.L.**, Hudson, A.M., Overpeck, J.T., Liu, K.B., Wang, L., and Cole, J.E. 2017. The primacy of internal variability over late Holocene forced change of the Asian monsoon on the southern Tibetan Plateau. Past Global Changes (PAGES) Open Science Meeting, Zaragoza, Spain.
51. **Conroy, J.L.**, Collins, A.F., Bush, M.B., Overpeck, J.T., Cole, J.E., Anderson, D.J. 2017. A 400-year isotopic record of seabird response to eastern tropical Pacific productivity. Past Global Changes (PAGES) Open Science Meeting, Zaragoza, Spain.

52. <sup>1</sup>Higley, M.C., **Conroy, J.L.**, <sup>1</sup>Schmitt, S. 2017. Last millennium meridional shifts in hydroclimate in the central tropical Pacific. Past Global Changes (PAGES) Open Science Meeting, Zaragoza, Spain.
53. Karamperidou, C. and **Conroy, J.L.** 2017. Using multi-resolution proxies to assess ENSO impacts on the mean state of the tropical Pacific. Past Global Changes (PAGES) Open Science Meeting, Zaragoza, Spain.
54. <sup>1</sup>Higley, M.C., **Conroy, J.L.** 2017. Hydrological response of lakes on Kiritimati Island, Kiribati, to recent climate variability. Northeastern-North Central Geological Society of America Annual Meeting, Pittsburgh, PA.
55. Karamperidou, C., and **Conroy, J.L.** 2016. Using multi-resolution proxies to assess ENSO impacts on the mean state of the tropical Pacific. American Geophysical Union Fall Meeting, San Francisco, CA.
56. <sup>1</sup>Higley, M.C., **Conroy, J.L.**, <sup>1</sup>Schmitt, S. 2016. Medieval aridity in the central tropical Pacific. American Geophysical Union Fall Meeting, San Francisco, CA.
57. **Conroy, J.L.**, Hudson, A.M., Overpeck, J.T., Liu, K.-B., Wang, L., and Cole, J.E. 2016. The Primacy of Multidecadal to Centennial Variability Over Late Holocene Forced Change of the Asian Monsoon on the Southern Tibetan Plateau. American Geophysical Union Fall Meeting, San Francisco, CA. **[INVITED]**
58. <sup>1</sup>Schmitt, S., **Conroy, J.L.**, Sanford, R., Flynn, T., and Fouke, B. 2016. Response of microbial community structure to environmental gradients within interior atoll lakes of Kiritimati, Republic of Kiribati, Northern Line Islands, Pacific Ocean Midwest Geobiology 2016 Symposium, Cincinnati, OH.
59. Grimley, D.A., <sup>1</sup>Nash, T.A., **Conroy, J.L.**, Wong, H., and Curry, B.B. 2016. Episodic deposition of last glacial (OI2) Peoria Loess along the Illinois Valley in association with Lake Michigan Lobe ice margin fluctuations. International Quaternary Association Loessfest, Eau-Claire, WI.
60. **Conroy, J.L.**, <sup>1</sup>Nash, T.A., Grimley, D.A., Guenther, W.R., and Curry, B.B. 2016. Forward proxy model insights into controls on the stable oxygen isotopic composition of gastropod carbonate in Illinois Valley loess deposits. International Quaternary Association Loessfest, Eau-Claire, WI.
61. **Conroy, J.L.**, Hudson, A.M., Overpeck, J.T., Liu, K.-B., Wang, L., and Cole, J.E. 2016. The Primacy of Multidecadal to Centennial Variability Over Late Holocene Forced Change of the Asian Monsoon on the Southern Tibetan Plateau. American Quaternary Association biennial meeting, Santa Fe, NM. **[INVITED]**
62. <sup>1</sup>Nash, T.A., **Conroy, J.L.**, and Grimley, D.A. 2016. The formation of the Jules soil and its implication for the Last Glacial Maximum climate of west-central Illinois. North-Central Geological Society of America Annual Meeting, Champaign, IL.
63. <sup>1</sup>Martin, N.J., **Conroy, J.L.** Noone, D., Cobb, K.M., Konecky, B. 2016. Capturing climate variability in stable isotopic proxies from the eastern equatorial Pacific: What can and can't stable isotopes record? North-Central Geological Society of America Annual Meeting, Champaign, IL.

64. Grimley, D.A., <sup>1</sup>Nash, T.A., **Conroy, J.L.**, Wang, H., Miao, X. and Curry, B.B. 2015. Revisiting the Jules Geosol and Gastropod Paleocology in Last Glacial Maximum Loess, Western Illinois. Geological Society of America Annual Meeting, Baltimore, MD.
65. <sup>1</sup>Higley, M.C., **Conroy, J.L.** 2015. A Geochemical Archive of Climate Variability in Kiritimati Island Lake Sediment. Geological Society of America Annual Meeting, Baltimore, MD.
66. Karamperidou, C. and **Conroy, J.L.** 2015. The importance of ENSO nonlinearities in tropical Pacific response to external forcing. American Geophysical Union Fall Meeting, San Francisco, CA.
67. <sup>1</sup>Martin, N.J., **Conroy, J.L.**, Noone, D., Cobb, K.M., Konecky, B.L., Rea, S. 2015. Amount Effect, Altitude, and Moisture Source Influences on Precipitation Isotopic Variability in the Galápagos Islands. American Geophysical Union Fall Meeting, San Francisco, CA.
68. Konecky, B.L., Noone, D., Nusbaumer, J., **Conroy, J.L.** Cobb, K.M. 2015. Water Isotope Tracers of Indo-Pacific Atmospheric Circulation: A Modern Take on Past Dynamics. American Geophysical Union Fall Meeting, San Francisco, CA.
69. **Conroy, J.L.**, Thompson, D.M., <sup>1</sup>Martin, N.J., Cobb, K.M., and Noone, D. 2015. Spatiotemporal variability in the salinity-oxygen isotope relationship of seawater across the tropical Pacific Ocean. American Geophysical Union Fall Meeting, San Francisco, CA.
70. Cobb, K.M., **Conroy, J.L.**, Moerman, J., Bosma, C., Everitt, L., Stevenson, S., Noone D., Grothe, P., Schneider, N., Merrifield, M., Farnsworth, M. 2015. Precipitation and Seawater Isotopic Variability from Hawaii to the equator: the 2014-2015 ENSO cycle. American Geophysical Union Fall Meeting, San Francisco, CA.
71. **Conroy, J.L.**, and Karamperidou, C. 2015. The mean state of the tropical Pacific on multidecadal to centennial timescales: strength of the Bjerknes feedback and ENSO influences. XIX International Quaternary Association Congress, Nagoya, Japan. **[INVITED]**
72. **Conroy, J.L.**, Noone, D., and Cobb, K.M. 2015. Water vapor and precipitation isotope variability associated with western tropical Pacific convective storms. International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers. International Atomic Energy Agency, Vienna, Austria.
73. <sup>1</sup>Nash, T.A., **Conroy, J.L.**, and Grimley, D.A. 2015. A multi-proxy climate reconstruction of western Illinois based on late Wisconsin Episode loess. North-Central Section, Geological Society of America. Madison, WI.
74. **Conroy, J.L.** Noone, D., Cobb, K.M., Moerman, J.W., and Konecky, B.L. 2014. Paired vapor-precipitation isotope data from Manus, Papua New Guinea. American Geophysical Union Fall Meeting, San Francisco, CA.
75. Collins, A., **Conroy J.L.**, Bush M.B., Overpeck, J.T. 2014. A 2000-year high-resolution lacustrine record of El Niño Southern Oscillation from the center of the Eastern Equatorial Pacific region (Genovesa Crater Lake, Galapagos Islands) American Geophysical Union Fall Meeting, San Francisco, CA.

76. **Conroy, J.L.**, Cobb, K.M., and Lynch-Stieglitz, J. 2013. A new stable water isotope-salinity dataset from the central tropical Pacific. American Geophysical Union Fall Meeting, San Francisco, CA.
77. **Conroy, J.L.**, Cobb, K.M., and Noone, D. 2013. Evaluation of precipitation isotope variability across the tropical Pacific in SWING2 simulations and observations. Goldschmidt 2013, Florence, Italy.
78. **Conroy, J.L.** 2013. Climate variability across the Tibetan Plateau during the last millennium. 13<sup>th</sup> Seminar of the International Association for Tibetan Studies, Ulaanbaatar, Mongolia. **[INVITED]**
79. **Conroy, J.L.**, Mandia, S., and Abraham, J.P, Moffitt, S.E., and Tootle, G.E. 2012. Environmental Litigation and the Role of Climate Scientists. American Geophysical Union Fall Meeting, San Francisco, CA.
80. **Conroy, J.L.**, Overpeck, J.T., Bush M.B., and Cole, J.E. 2012. Evaluating the spatial signatures and seasonality of hydroclimate proxies from Galápagos lake sediments. American Quaternary Association Biennial Meeting, Duluth, MN. **[INVITED]**
81. **Conroy, J.L.**, Hudson, A.M., Overpeck, J.T., Cole, J.E., Liu, K.-B., and Wang, L. 2011. Reconstructing 20th century summer precipitation on the south-central Tibetan Plateau. American Geophysical Union Fall Meeting, San Francisco, CA.
82. **Conroy, J.L.**, Thompson, D.M., Overpeck, J.T., Bush M.B., and Cole, J.E. 2011. Improving Holocene climate reconstructions from Galápagos lake sediments: New insights from long-term lake monitoring. American Geophysical Union Fall Meeting, San Francisco, CA. **[INVITED]**
83. **Conroy, J.L.**, Overpeck, J.T., Liu, K.-B., and Wang, L. 2010. A century of blowing dust in southwestern Tibet. American Geophysical Union Fall Meeting, San Francisco, CA.
84. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., Collins, A., Bush, M.B., and M. Steinitz-Kannan. 2009. Assessing the El Niño/Southern Oscillation proxy potential of the sediment record from Genovesa Crater Lake, Galápagos. American Geophysical Union Fall Meeting, San Francisco, CA.
85. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., Bush, M.B., and M. Steinitz-Kannan. 2009. Insights into past tropical Pacific climate variability derived from Genovesa Crater Lake, Galápagos. NCCR Climate Summer School, Grindelwald, Switzerland.
86. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E., and M. Steinitz-Kannan. 2009. Variable oceanic teleconnections to western North American drought over the last 1200 years. PAGES Young Scientist and Open Science Meetings, Corvallis, OR.
87. **Conroy, J.L.**, and Overpeck, J.T. 2008. Regionalization of Tibetan Plateau precipitation and its relation to the Asian Monsoon. American Geophysical Union Fall Meeting, San Francisco, CA.
88. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E. and M. Steinitz-Kannan. 2006. Warming of the eastern equatorial Pacific over the last two centuries and implications for tropical Pacific-western North American drought teleconnection. American Geophysical Union Fall Meeting, San Francisco, CA.

89. **Conroy, J.L.**, Overpeck, J.T., Cole, J.E. and M. Steinitz-Kannan. 2006. Warming of the eastern equatorial Pacific over the last two centuries and implications for tropical Pacific-western North American drought teleconnection. 2<sup>nd</sup> International Young Scientists' Global Change Conference, Beijing, China. **[INVITED]**
90. **Conroy, J.L.**, Overpeck, J.T., Steinitz-Kannan, M., and J.E. Cole. 2006. Insights into tropical Pacific variability from a Galápagos lake sediment record. American Quaternary Association XIX Biennial Meeting, Bozeman, MT.
91. **Conroy, J.**, Overpeck, J.T., and M. Steinitz-Kannan. 2005. Holocene precipitation variability in the Galápagos Islands. 18<sup>th</sup> North American Diatom Symposium, Mobile, AL.
92. **Conroy, J.**, Patterson, W.P., and M.A. Wilson. 2003. A high-resolution Holocene paleoclimate record from western Ireland: Evidence from population, biometric, and stable isotope values of freshwater mollusks. Northeastern Section, Geological Society of America Abstracts with Programs 35(3):71.
93. **Conroy, J.**, Wilson, M.A., and C.M. Tang. 2002. Bored and encrusted carbonate cobbles and hardgrounds at the base of a regressive sequence (Lower Sundance Formation, Middle Jurassic, eastern Wyoming). North-Central and Southeastern Sections, Geological Society of America Abstracts with Programs 34(2): A95.

## **INVITED TALKS AND SEMINARS**

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- 2023** AGU Fall Meeting, San Francisco, CA
- 2023** Climate | Change Workshop, UIUC
- 2023** Department of Earth Sciences, University of Southern California
- 2022** AGU Fall Meeting, Chicago, IL
- 2022** Coral Reef Research Foundation, Koror, Palau
- 2022** Department of Earth and Atmospheric Sciences, Iowa State University
- 2021** AGU Fall Meeting, New Orleans, LA
- 2021** Charles Darwin Foundation, Puerto Ayora, Galápagos, Ecuador
- 2021** Department of Plant Biology, UIUC
- 2021** Kaler Lecture, Staerkel Planetarium, Parkland College
- 2020** Department of Earth and Planetary Sciences, Washington University in St. Louis
- 2018** GSA Fall Meeting
- 2018** V.M. Goldschmidt Meeting
- 2018** Department of Geology, Southern Illinois University
- 2018** Department of Geology, University of Cincinnati
- 2018** Department of Geology and Geography, Illinois State University
- 2018** Hydrosystems Seminar, UIUC
- 2017** Department of Earth and Atmospheric Sciences, Indiana University-Bloomington
- 2017** Intensively Managed Landscapes Critical Zone Observatory Annual Meeting, UIUC
- 2017** Indonesian-American Kavli Frontiers of Science Symposium, Ambon, Indonesia
- 2017** Department of Earth, Environmental, and Planetary Sciences, Brown University

2017 Program in Ecology, Evolution, and Conservation Biology, UIUC  
2016 AGU Fall Meeting  
2016 AMQUA Biennial Meeting  
2016 Department of Plant Biology, UIUC  
2016 Department of Earth Sciences, University of Iowa  
2016 Department of Earth Sciences, Indiana University-Purdue University Indianapolis  
2016 Department of Earth and Planetary Sciences, Northwestern University  
2015 INQUA Congress  
2015 Illinois State Geological Survey  
2014 Department of Natural Resources and Environmental Studies, UIUC  
2014 Department of Earth and Environmental Sciences, University of Illinois at Chicago  
2014 International Pacific Research Center, University of Hawai'i at Manoa  
2014 Illinois State Museum  
2014 Department of Geology, Northern Illinois University  
2014 33<sup>rd</sup> Annual Osgood Memorial Lecture, The College of Wooster  
2013 Department of Plant Biology, UIUC  
2013 International Association for Tibetan Studies Meeting  
2013 Department of Geography, University of Georgia  
2012 AMQUA Biennial Meeting  
2012 Department of Geography, University of Minnesota  
2011 AGU Fall Meeting  
2010 School of Earth and Atmospheric Sciences, Georgia Tech  
2006 College of Science, The University of Arizona

## **TEACHING AND ADVISING**

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### **Courses Taught:**

Geology 100: Planet Earth (Spring 2014, 2016, 2017, 2019, 2021)

Geology 484/IB 484: Paleoclimatology

(Fall 2014, 2016, 2018, 2020, Spring 2022, Fall 2023)

Geology 493: Water Cycle Course-Based Research Experience for Undergraduates  
(Fall 2021)

Geology 593: Stable Isotopes in the Hydrologic Cycle (Spring 2020)

Geology 593: Paleolimnology (Spring 2015, Fall 2017)

Geology 593: Paleoclimate Data-Model Comparison (Spring 2018)

Geology 593: Structure of Scientific Revolution in the Earth Sciences (Spring 2024)

### **Students Advised:**

Shane Lusk (PhD, ESEC, 2023-

Allison Wallin (PhD, ESEC, 2022-)

Nicole Murray (MS, Geology, 2018, PhD, Geology 2018-2024)

Sarah Dendy (PhD, Geology, 2023)

Mingfei Chen (PhD, Geology, 2022)

Davina Allie Wyman (PhD, Geology, 2021)



Melinda Higley (PhD, Geology, 2018)  
Thomas Andrew Nash (MS, Geology, 2016)  
Nicholas Martin (MS, Geology, 2016)  
Susan Schmitt (MS, Plant Biology, 2016)  
Alison Bruegger (MS, Geology, 2016)

**Member, Graduate Student Committee:**

Cassandra Wesseln (MS, Plant Biology)  
Jacklyn Rodriquez (MS, Plant Biology)  
Ingrid Romero (PhD, Plant Biology)  
Charles Monson, (PhD, Geology)  
Nathan Webb (PhD, Geology)  
Rose Aubrey, (MS, Plant Biology)  
Hannah Beddow, (MS, Plant Biology)  
Scott Lakeram, (PhD, Plant Biology)  
Nooreen Meghani, (PhD, Geology)  
Jennifer Feng (MS, Plant Biology)  
Jon Golla (PhD, Geology)  
Celia Aranda Reina (PhD, ESEC)  
Mikell Warmes, (PhD, Department of Atmospheric and Oceanic Sciences, University of Colorado-Boulder)

**Undergraduates advised/mentored**

Nicole Choquette, Integrative Biology  
Tiffany Vlahopoulous, Geology  
Vino Sivapalan, Geology  
Helena Igbo, Microbiology  
Don McKendry, Earth, Society & Environment  
Catherine Nield, Geology  
Tyler Blackwell, Integrative Biology and Geography-GIS  
Ryan Oeste, Geology  
Gillian Patterson, Physics  
Kate O'Brien, Integrative Biology  
Sofie Rank, ESEC

**FIELD EXPERIENCE**

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Member, Proyecto Pakbeh Regional Economy Project, Chunchucmil, Mexico (2000)

Member, lake coring expeditions to western Ireland (1998), Galápagos (2004, 2012), western Tibetan Plateau (2007), Peruvian Amazon (2009)

Leader, water isotope campaigns in Kiritimati (2012), Galápagos (2012, 2015, 2021), Papua New Guinea (2013), Palau (2022)

Leader, lake coring expeditions to Kiritimati (2014, 2017)

## **PUBLIC ENGAGEMENT AND PROFESSIONAL SERVICE**

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### **Department**

2023-2024: **Chair**, ESEC faculty search committee

2023-2024, **Ombudsperson**, Department of Earth Science & Environmental Change

**2021-present**: Chair, Graduate Admissions

**2021**: Department Advisory Board

**2018-2021**: UIUC Academic senate (Department of Geology senator)

**2017**: Member, Paleobiology lecturer search committee

**2016-2020**: Member, Graduate Admissions committee

**2014-2019**: Research poster judge, School of Earth, Society, and Environment Annual Research Review

**2013-2016**: Chair, colloquium committee

**2013-2018**: Member, graduate studies committee

**2014-2022**: coordinator, UIUC Department of Plant Biology and Geology Phillips Lecture in paleoscience

**2013**: Member, hydrogeology search committee

### **School/University**

2023-2024: **Member**, College of Liberal Arts and Sciences Faculty Appeals Committee

**2021**: Member, SESE AGU Bridge proposal development team

**2021-present**: Steering committee member, Institute for Sustainability, Energy, and the Environment

**2020-2022**: Committee member, Academic Standards Committee, College of Liberal Arts and Sciences

**2020**: **Proposal reviewer**: UIUC-University of Birmingham BRIDGE program

**2018-2021**: member, faculty advisory board, Carver Biotechnology Center

**2018**: Member, School of Earth, Society & Environment Director search committee

**2016-2019**: Member, iSEE Earth Week Lecture committee

**2014**: Internal reviewer, NSF-MRI proposals

**2014-present**: Reviewer of proposals for the Prairie Research Institute and UIUC Campus Research Board

**2014**: Panelist, UIUC Postdoctoral Development Workshop

**2014**: Coordinator of campus-wide UIUC Paleo Research Group

**2010-2011**: Mentor for incoming freshman from low-income families, AZ Assurance Program, The University of Arizona.

**2010-2011**: Mentor for under-represented students in geosciences, SAGUARO Program, The University of Arizona.

## **Community**

- 2023:** Activity development and presentation on wind and weather, Next Generation 4<sup>th</sup> grade science, Champaign, IL
- 2023:** Panel reviewer for NSF-GEO directorate
- 2021-present:** Steering committee member, Galápagos Regional Coordinated Network, Island Systems Integration Consortium (ISIC)
- 2022:** Organizing committee member, Galápagos Island Systems Integration ISIC All Hands Meeting
- 2021:** Panel reviewer for NSF-GEO directorate
- 2021:** Mentor, Oak Park-River Forest High School
- 2021:** Speaker, Women in STEM student group, University High School, Urbana, IL
- 2020-2021:** Mentor and reviewer for STEMSEAS program
- 2020:** Panel reviewer for NSF-GEO directorate
- 2018-2020:** Core member, World Climate Research Programme CLIVAR (Climate Variability and Predictability Program) Water Isotopes Working Group
- 2018:** Outreach project on seawater stable isotope geochemistry, STEMSEAS program (Science, Technology, Engineering and Math Student Experiences Aboard Ships)
- 2018:** Session convener, "Where Does the Wind Blow? Aeolian Systems in Time and Space" GSA Annual Meeting
- 2017-2018:** Member, PAGES Iso2k data synthesis project
- 2017:** Session convener, "Water Isotope Systematics" AGU Fall Meeting
- 2016:** Outreach project on Champaign-Urbana water chemistry with ELL (English Language Learner) students, Urbana High School, Urbana, IL
- 2016:** Outreach project on IL Pleistocene landscape, "Digging Through Time" with STEAM (Science, Technology, Engineering, Arts, Math) Studio afterschool program, Champaign, IL
- 2016:** Session convener, "Limnogeology and Paleoclimatology – Investigating Past Environments and Reconstructing Past Climates," North-Central GSA Meeting
- 2014:** Session convener, "Water Isotope Systematics: Improving Paleoclimate Interpretations," AGU Fall Meeting
- 2014:** Outstanding Student Paper Award Judge, AGU Fall 2014 Meeting
- 2014:** Guest instructor and coordinator of student water isotope research, Tennessee Primary School, Kiritimati, Republic of Kiribati
- 2014:** Member, External Advisory Board, Department of Geosciences, The University of Arizona
- 2016:** Panel reviewer for NSF-GEO directorate
- 2014:** Panel reviewer for NSF-GEO directorate
- 2012:** Curriculum development and guest lecturer for oceanography class, Grady Public High School, Atlanta, GA
- 2012:** NSF Expert Witness Testimony Academy, William Mitchell College of Law
- 2012-2013:** Science Fair Mentor, North Springs High School, Sandy Springs, GA

Reviewer of manuscripts for peer reviewed journals including *Climate Dynamics, Earth and Planetary Science Letters, Earth Surface Processes and Landforms, EOS-Transactions of the American Geophysical Union, Estuarine Coastal and Shelf Science, Geochemistry Geophysics Geosystems, Geology, Geophysical Research Letters, Global Change Biology, The Holocene, Journal of Arid Environments, Journal of Climate, Journal of Geophysical Research-Atmospheres, Journal of Geophysical Research-Earth Surface, Journal of Marine Systems, Journal of Paleolimnology, Journal of Quaternary Science, Marine Chemistry, Nature, Nature Communications Earth&Environment, Nature Geoscience, Nature Communications, Nature Scientific Reports, Palaeogeography Palaeoclimatology Palaeoecology, Paleoceanography & Paleoclimatology, Quaternary Research, Quaternary Science Reviews, Science Advances, Tellus B*

Reviewer of proposals for the U.S. National Science Foundation, National Geographic Society, American Chemical Society Petroleum Research Fund, Natural Sciences and Engineering Research Council of Canada, Netherlands Organisation for Scientific Research, Earth Observatory of Singapore

*Professional affiliations:* American Geophysical Union, American Quaternary Association, Geological Society of America, Past Global Changes (PAGES)