

**SUBMITTED, IN REVIEW, OR IN REVISION PUBLICATIONS (\* INDICATES STUDENT AUTHOR, <sup>1</sup> INDICATES POSTDOCTORAL AUTHOR), SEE GOOGLE SCHOLAR FOR UP-TO-DATE LIST**

1. Johnson, KR, Griffiths, ML, **Bhattacharya, T.**, Borsato, A, Frisia, S, Henderson GM, Legrande A, Lewis, M, Mason, A, Saniya, S, Tierney, J, Wang, JK, Yang, H. in revision. Orbital and millennial variability of Southeast Asian hydroclimate over the past 38,000 years. *Nature Geoscience*.

**PEER-REVIEWED PUBLICATIONS (\* INDICATES STUDENT AUTHOR, <sup>1</sup> INDICATES POSTDOCTORAL AUTHOR)**

43. **Bhattacharya, T.**, Fastovich, D<sup>1</sup>., Maupin, C., Thompson, AE\*, Feng, R., Zhu J., Hayoung, B., LeGrande, A., Dee, S., Fiorella, RP., in press. Leaf wax hydrogen isotopes reflect storm track position over western North America. *Paleoceanography and Paleoclimatology*.
42. Ford, H.L. , Wrye N., Wofford, A., Burls, N., **Bhattacharya, T.**, Chandan, D., Federov, A., Lakhani, K., Lyle, M., Lynch-Stieglitz, J., Ravelo, A.C. 2025. Equatorial Upper Ocean Thermal Structure during the Warm Pliocene: a Data-Model Comparison. *Geophysical Research Letters* 52(16) e2025GL114749.
41. Kim, H\*, Fastovich, D.<sup>1</sup>, Bhattacharya, T., Tuttle, S. 2025. Improving Predictions of Snow Resources Using Midlatitude SSTs with Convergent Cross Mapping. *Environmental Research: Climate* 4(2)L 021001
40. Rubbelke, C.R\*, **Bhattacharya, T.**, Farnsworth, A., Valdes, P., McClymont, E., Ford, H.L. 2025. Southern Hemisphere Subtropical Front impacts on Southern African Hydroclimate across the Mid-Pleistocene Transition. *Nature Communications* 16:3501
39. **Bhattacharya, T.**, Ibarra, D.E, Feng, R., Burls, N.J. 2025. Geochemical Approaches to Reconstructing Earth's Hydroclimates. *Treatise in Geochemistry*, 3rd Edition, Elsevier.
38. Prow, A., Lu, Z., Blattler C., He, T., Yang, Z, Singh, P, Kemeny, P., Todes,J., Pohl, A., **Bhattacharya, T.**, van de Schootbrugge, B., Wignall, P.B., Payne, J. 2025. Temporal and spatial dynamics of paleo-redox conditions across the Triassic-Jurassic boundary. *Chemical Geology* 673
37. Johnson, A.L.A, Schone, B.R., Leng, M.J., **Bhattacharya, T.**, Moss, D.K., Ivany, L.C.I, Duff, R.P. 2024. Sclerochronological evidence of Quaternary change in life history and environment from the marine bivalve *Glycymeris americana* of the US eastern seaboard. *Palaios*. 39(6): 175-193.

36. Lowenstein, Tim K., Olson, K.J., Stewart B.W., McGee, D., Stroup, J.S., Hudson, A.M., Wendt, K.A., Peuple, M.D., Feakins, S.J, **Bhattacharya, T.**, Lund, S. 2024. Unified 200 kyr paleohydrologic history of the southern Great Basin: Death Valley, Searles Lake, Owens Lake and the Devils Hole Cave. *Quaternary Science Reviews* 336(1): 108751
  
35. Fastovich, D<sup>1</sup> , **Bhattacharya, T.**, Pérez-Ángel, L., Burls, N.J., Feng, R., Knapp, S. 2024. Large-scale sea surface temperature gradients govern westerly moisture transport in western Ecuador during the Plio-Pleistocene. *Earth and Planetary Science Letters* 640: 118781
  
34. **Bhattacharya, T.**, Brennan, PR\*, Ibarra, DE, Gagnon, CA, Butler, KL, Terrazas, A, Munk, LA, Boutt, DF, Feng, R, Bullinger, SN, Weisbeck, L.\* 2024. Pleistocene shifts in Great Basin hydroclimate seasonality govern the formation of lithium-rich paleolake deposits. *Quaternary Science Reviews* 335(1): 108747
  
33. Peuple, M **Bhattacharya, T.**, Tierney, J.E., Knott, J.R, Lowenstein, T.K., Feakins, S. 2024. Biomarker evidence for an M2 glacial-pluvial in the Mojave Desert before warming and drying in the late Pliocene. *Paleoclimatology and Paleoceanography*
  
32. **Bhattacharya, T.**, Feng, R., Coats, S., Maupin C.R., Brennan, P\*, Carter, E.. 2023. California Margin SSTs modulate regional circulation and extreme summer precipitation in the desert southwest. *Environmental Research Letters* 18 04048
  
31. Rubbelke, C\*, **Bhattacharya, T.**, Feng, R., Burls, N.J., Knapp, S., McClymont, E. 2023. Plio-Pleistocene Southwest African Hydroclimate modulated by Benguela and Indian Ocean temperatures. *Geophysical Research Letters* 50(19): doi: 10.1029/2023GL103003
  
30. Wright, K, Johnson, KR, Serrato Marks, G, McGee, D, **Bhattacharya, T.**, Goldsmith, G, Tabor, CR, Lacaille-Muzquiz, J-L, Lum, G, Beramendi-Orosco, L. 2023. Thermodynamics control precipitation in NE Mexico on orbital to millennial timescale. *Nature Communications* 14:2279.
  
29. Gagnon, C., Butler, K., Gaviria, E., Terrazas, A., Gao, A., **Bhattacharya, T.**, Boutt D., Munk, L., Ibarra, D. 2023. Paleoclimate controls on lithium enrichment in Great Basin Pliocene-Pleistocene lacustrine clays. *GSA Bulletin*, doi: 10.1130/B36572.1
  
28. **Bhattacharya, T.**, Krause, S., Penny, D., Wahl, D. 2023. Progress Report: Drought and Water Management in Ancient Maya Society. *Progress in Physical Geography*. doi:10.1177/03091333221129784

27. Knapp, S., Burls, N.J., Dee, S.G., Feng, R., Feakins, S.J., **Bhattacharya, T.** 2022. A Pliocene Precipitation Isotope Proxy-Model Comparison Assessing the Hydrological Fingerprints of Sea Surface Temperature Gradients. *Paleoceanography and Paleoclimatology* 37(12) : e2021PA004401
26. **Bhattacharya, T.**, Feng, R., Tierney, J.E., \*Rubbelke, C., Knapp, S., Burls, N.J., Fu, M. 2022. Expansion and Intensification of North American Monsoon during the Pliocene. *AGU Advances* 3(6). doi: 10.1029/2022AV000757 *chosen as Editor's Highlight*
25. **Bhattacharya, T.**, 2022. An energetic perspective on the Holocene North American Monsoon. *Geophysical Research Letters* 49 (19). *Invited Commentary*. doi: 10.1029/2022GL100782
24. Peuple, M., **Bhattacharya, T.**, Lowenstein, T., McGee, D., Olson, K., Stroup, J., Tierney, J.E., Feakins S.J. 2022. Biomarker and pollen evidence for late Pleistocene pluvials in the Mojave Desert. *Paleoceanography and Paleoclimatology* 37 (10), e2022PA004471
23. Tierney, J.E., Torfstein, A., **Bhattacharya, T.**, Goldstein, S. 2022. Late Quaternary hydroclimate of the Levant: the leaf wax record from the Dead Sea. *Quaternary Science Reviews* 289 (107613).
22. \*Brennan, P., **Bhattacharya, T.**, Feng, R., Tierney, J.E., \*Jorgensen, E.M. 2022. Patterns and Mechanisms of Northeast Pacific Temperature Response to Pliocene Boundary Conditions. *Paleoceanography and Paleoclimatology* 37(7): e2021PA004370.
21. Wright, K, Johnson, KR, **Bhattacharya, T.**, Serrato Marks, G., McGee, D., Ellsbury, D., Peings, Y., Lacaille-Muzquiz, J., Lum, G., Beramendi-Orosco, L., Magnusdottir, G. 2022. Precipitation in northeast Mexico primarily controlled by the relative warming of Atlantic SSTs. *Geophysical Research Letters* 49(11) e2022GL098186.
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18. Inglis, G.N., **Bhattacharya, T.**, Hemingway, J.D., Tierney, J.E., Feakins, S. 2022. Novel molecular approaches for reconstructing terrestrial environmental change. *Annual Reviews of Earth and Planetary Sciences* 50 doi: 10.1146/annurev-earth-032320-095943
17. Anderson, L., Wahl, D., **Bhattacharya, T.** 2022. Understanding Rates of Change: A case study using fossil pollen records from California to assess the potential for and challenges to a regional data synthesis. *Quaternary International* 621 26-36. doi: 10.1016/j.quaint.2020.04.044
16. Kumar, Dervla M., Tierney, J.E., **Bhattacharya, T.**, Jiang, Z., McCarty, L, Murray, J. 2021. Climatic drivers of deglacial SST variability in the eastern Pacific. *Paleoceanography and Paleoclimatology* 36 (10) doi: 10.1029/2021PA004264
15. Peuple, M., Tierney, J.E. McGee, D., Lowenstein, T.K., **Bhattacharya, T.**, Feakins, S.J. 2021. Identifying plant wax inputs in lake sediments using machine learning. *Organic Geochemistry* 156, doi: 10.1016/j.orggeochem.2021.104222
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13. \*Judd, E, **Bhattacharya, T.**, Ivany, L.C. 2020. A dynamical framework for interpreting ancient sea surface temperatures. *Geophysical Research Letters* 47, e2020GL089044. doi: 10.1029/2020GL089044
12. **Bhattacharya, T.**, Coats, S. 2020. Atlantic-Pacific gradients drive Last Millennium hydroclimate variability in Mesoamerica. *Geophysical Research Letters* 47, e2020GL088061. doi: 10.1029/2020GL088061
11. Tierney, J.E., Haywood, A.M. Feng, R. **Bhattacharya, T.**, Otto-Bleisner, B. 2019. Pliocene warmth consistent with greenhouse gas forcing. *Geophysical Research Letters*. doi: 10.1029/2019GL083802
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9. **Bhattacharya, T.**, Tierney, J.E., Addison, J.A., Murray, J.W. 2018. Ice sheet modulation of deglacial North American Monsoon intensification. *Nature Geoscience*. doi: 10.1038/s41561-018-0220-7 *chosen for a News and Views feature*
  
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7. **Bhattacharya, T.**, Tierney, J.E., DiNezio, P. 2017. Glacial reduction of the North American Monsoon via surface cooling and atmospheric ventilation. *Geophysical Research Letters* doi: 10.1002/2017GL073632 *chosen as Journal Editor's Highlight*
  
6. **Bhattacharya, T.**, Byrne, R. 2016. Late Holocene anthropogenic and climatic influences on fire and regional vegetation in Mexico's Cuenca Oriental. *Global and Planetary Change* 138: 56 – 69.
  
5. **Bhattacharya, T.**, Byrne, R., Boehnel, H., Wogau, K., Kienel, U., Ingram, B.L., Zimmerman, S. 2015. Cultural implications of late Holocene climate change in the Cuenca Oriental, Mexico. *Proceedings of the National Academy of Sciences* 112(6): 1693-1698.
  
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3. **Bhattacharya, T.**, Chiang, J.C.H. 2014. Spatial variability and mechanisms underlying El Nino-induced drought in Mexico. *Climate Dynamics* doi: 10.1007/s00382-014-2106-8
  
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