
EMILY J. BEVERLY

University of Houston | Department of Earth and Atmospheric Sciences
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EDUCATION

- 2015 Ph.D. | Baylor University | Department of Geology
Thesis Title: *Reconstruction of Late Pleistocene Paleoenvironments of the Lake Victoria Region Using Paleosols and Freshwater Tufa* | Advisors: Steven Driese and Daniel Peppe
- 2012 M.S. | Rutgers University | Department of Earth and Planetary Sciences
Thesis Title: *Paleoenvironmental and Paleoclimatic Reconstruction of a Pleistocene Catena Using Paleopedology and Geochemistry of Lake Margin Paleo-Vertisols, Olduvai Gorge, Tanzania* | Advisor: Gail Ashley
- 2008 B.A. | Trinity University | Department of Geosciences
Thesis Title: *Provenance Analysis of the Cretaceous Hornbrook Formation of northern California and southern Oregon* | Advisor: Kathleen Surpluss

RESEARCH & PROFESSIONAL EXPERIENCE

- 2018–present **Assistant Professor**, Dept. of Earth and Atmospheric Sciences, University of Houston, Houston, TX
- 2017–2018 **NSF-EAR Postdoctoral Fellow**, Dept. of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI. Mentor: Naomi Levin
- 2017 **Postdoctoral Research Fellow**, Dept. of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI. Mentor: Naomi Levin
- 2016–2017 **Postdoctoral Researcher**, Dept. of Geosciences, Georgia State University, Atlanta, GA. Mentor: Daniel Deocampo
- 2014 **Geology Intern**, Pioneer Natural Resources, Irving, TX
- 2008–2009 **Research Technologist**, Earth, Material and Planetary Sciences, Southwest Research Institute, San Antonio, TX

PUBLICATIONS

Citation metrics – updated August 2022

Scopus: h-index 17, 522 citations

Google Scholar: h-index 19, i10-index 24, 821 citations

Peer-Reviewed (underline indicates student advisee)

- [34] Lehmann, S.B., Levin, N.E., Passey, B.H., Hu, H., Cerling, T.E., Arpee, L., **Beverly, E.J.**, Hoppe, K.A., Luyt, J., Miller, J.H., and Sealy, J., 2022, Triple oxygen isotope distribution in modern mammal teeth and potential geologic applications: *Geochimica et Cosmochimica Acta*, v. 331 p. 105-122. <https://doi.org/10.1016/j.gca.2022.04.033>
- [33] Peaple, M.D., **Beverly, E.J.**, Garza, B., Baker, S., Levin, N.E., Tierney, J.E., Häggia, C., and Feakins, S.J., 2022, Identifying the drivers of GDGT distributions in alkaline soil profiles within the Serengeti Ecosystem: *Organic Geochemistry*, v. 169, p. 104433. <https://doi.org/10.1016/j.orggeochem.2022.104433>

- [32] Sherriff, J., Wilkinson, K.N., Harding, P., Hawkins, H., Timms, R.G., Adler, D.S., **Beverly, E.J.**, Blockley, S., Gasparyan, B., Manning, C., and Mark, D, 2021, Middle Pleistocene environments, landscapes and tephrostratigraphy of the Armenian Highlands: evidence from Bird Farm 1, Hrazdan Valley: *Journal of Quaternary Science*, v. 37, p. 6-27.
<https://doi.org/10.1002/jqs.3370>
- [31] Zhang, D., **Beverly, E.J.**, Levin, N.E., Vidal, E., Matia, Y., and Feakins, S.J., 2021, Plant wax carbon isotopic composition in soils from a transect across the Serengeti, Tanzania, Africa: *Geochimica et Cosmochimica Acta*, v. 311, p. 316-331.
<https://doi.org/10.1016/j.gca.2021.07.005>
- [30] Muiruri, V., Owen, R.B., Potts, R., Deino, A.L., Behrensmeier, A.K., Riedl, S., Rabideaux, N., **Beverly, E.J.**, Dommain, R., Renaut, R., Moerman, J.W., Deocampo, D., Faith, J.T., Noren, A., Cohen, A.S., Shannon, K.B., and Dommain, R., 2021, Quaternary diatoms and paleoenvironments of the Koorra Plain, southern Kenya Rift: *Quaternary Science Reviews*, v. 267, p. 1-21. <https://doi.org/10.1016/j.quascirev.2021.107106>
- [29] Lupien, R.L., Russell, J.M., Subramanian, A., Kinyanjui, R., **Beverly, E.J.**, Uno, K.T., de Menocal, P., Dommain, R., and Potts, R., 2021, The history of eastern African environmental variation and its role in the evolution and technological advancement of *Homo* since 1 Ma: *Journal of Human Evolution*, v. 157, p. 1-14.
<https://doi.org/10.1016/j.jhevol.2021.103028>
- [28] **Beverly, E.J.**, Levin, N.E., Passey, B.H., Aron, P., Yarian, D.A., Page, M. and Pelletier, E.M., 2021, Triple oxygen and clumped isotopes in modern soil carbonate along an aridity gradient in the Serengeti, Tanzania: *Earth and Planetary Science Letters*, v. 567, p. 1-13.
- [27] Bernasconi, S.M., Daëron, M., Bergmann, K.D., Bonifacie, M., Meckler, A.N., Affek, H.P., Anderson, N., Bajnai, D., Barkan, E., **Beverly, E.J.**, Blamart, D., Burgener, L., Calmels, D., Chaduteau, C., Clog, M., Davidheiser-Kroll, B., Davies, A., Dux, F., Eiler, J., Elliot, B., Fetrow, A.C., Fiebig, J., Goldberg, S., Hermoso, M., Huntington, K.W., Hyland, E., Ingalls, M., Jaggi, M., John, C.M., Jost, A.B., Katz, S., Kelson, J., Kluge, T., Kocken, I.J., Laskar, A., Leutert, T.J., Liang, D., Lucarelli, J., Mackey, T.J., Manganot, X., Meinicke, N., Modestou, S.E., Müller, I.A., Murray, S., Neary, A. Packard, N., Passey, B.H., Pelletier, E., Petersen, S., Piasecki, A., Schauer, A., Snell, K.E., Swart, P.K., Tripathi, A., Upadhyay, D., Vennemann, T., Winkelstern, I., Yarian, D., Yoshida, N., Zhang, and N., Ziegler, 2021, InterCarb: A community effort to improve inter-laboratory standardization of the carbonate clumped isotope thermometer using carbonate standards: *Geochemistry, Geophysics, Geosystems*, v. 22, p. 1-25.
- [26] Aron, P.G., Levin, N.E., **Beverly, E.J.**, Huth, T.E., Passey, B.H., Pelletier, E.M., Poulsen, C.J., Winkelstern, I.Z., and Yarian, D.A., 2021, Global variations of triple oxygen isotopes in meteoric waters: *Chemical Geology* v. 565, p. 1-23.
- [25] Potts, R., Dommain, R., Moerman, J., Behrensmeier, A.K., Deino, A., Owen, R.B., **Beverly, E.J.**, Brown, E.T., Deocampo, D., Kinyanjui, R., Lupien, R., Owen, R.B., Rabideaux, N., Russell, J.M., Stockhecke, M., deMenocal, P., Faith, J.T., Garcin, Y., Noren, A., Scott, J.J., Western, D., Bright, J., Clark, J.B., Cohen, A.S., Keller, C.B., King, J., Levin, N.E., Shannon, K.B., Muiruri, V., Renaut, R., Rucina, S.M., and Uno, K., 2020, Increased ecological resource variability during a critical transition in hominin evolution: *Science Advances*, v.6, p. 1-14.
- [24] Gegregiogis, D., Deocampo, D., Longstaffe, F., Ashley, G., **Beverly, E.J.**, Delany, J., Cuadros, J., 2020, Quantitative lacustrine paleosalinity from clay mineral oxygen isotopes: Pleistocene orbital controls at Olduvai Gorge, Tanzania: *Geophysical Research Letters*, v. 47, p. 3-8.
- [23] **Beverly, E.J.**, White, J.D., Peppe, D.J., Faith, J.T., and Tryon, C.A., 2020, Late Pleistocene desiccation and the future of Africa's Lake Victoria: *Earth and Planetary Science Letters*, v.

- 530, p.1-11.
- [22] Sherriff, J.E., Wilkinson, K.N., Adler, D.S., Arakelyan, D., **Beverly, E.J.**, Blockley, S.P.E., Gasparyan, D.F., Mark, D.F., Meliksetya, K., Nahapetyan, S., Preece, K.J., and Timms, R.G.O., 2019, Pleistocene volcanism and the geomorphological record of the Hrazdan valley, central Armenia: linking landscape dynamics and the Palaeolithic record : Quaternary Science Reviews, v. 226, p. 1-26.
- [21] Deino, A.L., Dommain, R., Keller, B., Potts, R., Behrensmeier, A.K., **Beverly, E.J.**, King, J., Heil, C.W., Stockhecke, M., Brown, E.T., Moerman, J., DeMenocal, P., ODP Scientific Team, 2019, Chronostratigraphic model of a high-resolution drill core record of the past million years from the Koora Basin, south Kenya Rift: Overcoming the difficulties of variable sedimentation rates and hiatuses: Quaternary Science Reviews, v. 215, p. 213-231.
- [20] Stinchcomb, G.E. and **Beverly, E.J.**, 2019, Editorial: The Role of the Paleo-Critical Zone in Shaping Quaternary Hominin Evolution: Frontiers in Earth Sciences, v. 7, p. 1-2.
- [19] Beck, C.C., Allen, M.M., Feibel, C.S., **Beverly, E.J.**, Stone, J.R., and Wilson, C.L., 2019, Living in a swampy paradise: Paleoenvironmental reconstruction of an African Humid Period lacustrine margin, West Turkana, Kenya: Journal of African Earth Sciences, v. 154, p. 20-34.
- [18] **Beverly, E.J.**, Lukens, W.E., Stinchcomb, G.E., 2018, Paleopedology as a Tool for Reconstructing Paleoenvironments and Paleoecology, in D.A. Croft, S.W. Simpson, and D.F. Su (eds.), Methods in Paleoecology: Reconstructing Cenozoic Terrestrial Environments and Ecological Communities. Springer (Vertebrate Paleobiology and Paleoanthropology Series), Cham, Switzerland.
- [17] **Beverly, E.J.**, White, J.D., Peppe, D.J., Faith, J.T., Blegen, N. and Tryon, C.A., 2017, Reconstruction of Late Pleistocene Paleoenvironments using bulk geochemistry of paleosols from the Lake Victoria Region: Frontiers in Earth Science, v. 5, article 93, p. 1-12.
- [16] Deocampo, D.M., Berry, P.A., **Beverly, E.J.**, Ashley, G.M., and Jarrett, R.E., 2017, Whole-rock geochemistry tracks precessional control of Pleistocene lake salinity at Olduvai Gorge, Tanzania: a record of authigenic clays: Geology, v. 45, 683-686.
- [15] Frahm, E., Sherriff, J., Wilkinson, K.N., **Beverly, E.J.**, Adler, D.S., and Gasparyan, B., 2017, Ptghni: A new obsidian source in the Hrazdan Basin, Armenia: Journal of Archaeological Science: Reports, v. 17, 55-64.
- [14] Tryon, C.A., Faith, J.T., Peppe, D.J., **Beverly, E.J.**, Blegen, N., Blumenthal, S., Chritz, K., Driese, S.G., Patterson, D., 2016, The Pleistocene prehistory of the Lake Victoria basin: Quaternary International, v. 404 Part B, 100-114.
- [13] Driese, S.G., Peppe, D.J., **Beverly, E.J.**, DiPietro, L., Arellano, L.N., and Lehmann, T., 2016, Paleosols and paleoenvironments of the early Miocene deposits near Karungu, Lake Victoria, Kenya: Palaeogeography, Palaeoclimatology, Palaeoecology, v. 443, 167-182.
- [12] **Beverly, E.J.**, Driese, S.G., Peppe, D., Arellano, L.N., Blegen, N., Faith, J.T., and Tryon, C.A., 2015, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: Quaternary Research, v. 84, 368-381.
- [11] **Beverly, E.J.**, Driese, S.G., Peppe, D., Johnson, C.R., Michel, L.A., Faith, J.T., and Tryon, C.A., 2015, Recurrent spring-fed rivers in a Mid to Late Pleistocene semi-arid grassland: Implications for environments of early modern humans in the Lake Victoria Basin, Kenya: Sedimentology, v. 62, 1611-1635.
- [10] Blegen, N., Tryon, C.A., Faith, J.T., Peppe, D.J., **Beverly, E.J.**, Jacobs, Z., and Bo, L., 2015, Distal tephtras of the eastern Lake Victoria Basin, Equatorial East Africa: Correlations, chronology, and a context for early modern humans: Quaternary Science Reviews, v. 122, p. 89-111.
- [9] Faith, J. T., Tryon, C. A., Peppe, D.J., **Beverly, E. J.**, Blegen, N., Blumenthal, S., Chritz, K. L.,

- Driese, S.G., and Patterson, D., 2015, Paleoenvironmental context of the Middle Stone Age record from Karungu, Lake Victoria Basin, Kenya, and its implications for human dispersals in East Africa: *Journal of Human Evolution*, v. 83, 28-45.
- [8] Tryon, C. A., Faith, J. T., Peppe, D. J., Keegan, W. F., Keegan, K. N., Jenkins, K. H., Nightingale, S., Patterson, D., Van Plantiga, A., Driese, S., Johnson, C. R., and **Beverly E. J.**, 2014, Sites on the landscape: Paleoenvironmental context of late Pleistocene archaeological sites from the Lake Victoria Basin, equatorial East Africa: *Quaternary International*, v. 331, p. 20-30.
- [7] Faith, J. T., Tryon, C. A., Peppe, D. J., **Beverly, E. J.**, and Blegen, N., 2014, Biogeographic and evolutionary implications of an extinct late Pleistocene impala from the Lake Victoria Basin, Kenya: *Journal of Mammalian Evolution*, v. 21, p. 213-222.
- [6] **Beverly, E. J.**, Ashley, G.M, and Driese, S. G., 2014, Reconstruction of a Pleistocene Paleocatena using Geochemistry of Lake Margin Paleo-Vertisols, Olduvai Gorge, Tanzania: *Quaternary International*, v. 322-323, p. 78-94.
- [5] Ashley, G.M., **Beverly, E.J.**, Sikes, N.E., and Driese, S.G., 2014, Paleosol diversity in the Olduvai Basin, Tanzania: effects of geomorphology, parent material, depositional environment, and groundwater on soil development: *Quaternary International*, v. 322-323, p. 66-77.
- [4] Ashley, G.M., Bunn, H.T., Delaney, J.S., Barboni, D., Domínguez-Rodrigo, M., Mabulla, A.Z.P., Gurtov, A.N., Baluyot, R., **Beverly, E.J.**, and Baquedano, E., 2014, Paleoclimatic and paleoenvironmental framework of FLK North archaeological site, Olduvai Gorge, Tanzania: *Quaternary International*, v. 322-323, p. 54-65.
- [3] Surpless, K.D. and **Beverly, E.J.**, 2013, Understanding a critical link in Cretaceous Cordilleran paleogeography: Detailed provenance of the Hornbrook Formation, Oregon and California: *GSA Bulletin*, v. 125, no. 5-6, p. 709-727.
- [2] Danley, P.D., Husemann, M., Ding, B., DiPietro, L., **Beverly, E.J.**, and Peppe, D.J., 2012, The impact of the geologic history and paleoclimate on the diversification of East African cichlids; v. 2012, p. 1-20.
- [1] Sims, D.W., Morris, A.P., Wyrick, D.Y., Ferrill, D.A., Waiting, D.J., Franklin, N.M., Colton, S.L., Umezawa, Y.T., Takanashi, M., and **Beverly, E.J.**, 2012, Analog modeling of normal faulting above Middle East domes during regional extension: *AAPG Bulletin*, v. 97, no. 6, p. 877–898.

In Preparation (underline indicates student advisee)

- Beverly, E.J.**, Billingsley, A., Berke, M., Blegen, N., Castañeda, I.S., Faith, J.T., Johnson, T., Kinyanjui, R., Nyingi, W., Olago, D., Peppe, D., Tryon, C.A., in prep, Invited Review: Lake Victoria's history of desiccation and implications for the future: *Quaternary Science Reviews*.
- Beverly, E.J.**, Lukens, W.E., Levin, N.E., and Quade, J., in prep, Global carbon and oxygen isotope variation in pedogenic carbonates: *Chemical Geology*.
- Beverly, E.J.**, Levin, N.E., Baker, S., Garza, B., Arellano, L.N., Takashita-Bynum, K., and Flynn, A., in prep, Geochemical trends across Serengeti soils: Implications for paleosol proxies for paleoclimate: *American Journal of Science*.
- Lukens, W.E., **Beverly, E.J.**, Peppe, D.J., and Fox, D.L., in prep, Isotopic Evidence for C₄ Vegetation and Hot Summers in the Early Mid-Miocene (~16 Ma) in the Turkana Basin of Northern Kenya: *Geology*.

PRESENTATIONS AND ABSTRACTS

First Author Presentations: (* indicates invited talk, underline indicates student author)

- Beverly, E.J.**, Levin, N.E., Baker, S., Garza, B., Flynn, A., Takashita-Bynum, K., and Arellano, L.N., 2022, Modern soil chemistry distributions within the Serengeti Ecosystem and their implications for paleosol-based proxies, GSA Abstracts with Programs (accepted).
- Beverly***, **E.J.**, Levin, N.E., Passey, B.H., Aron, P., Page, M., Yarian, D., Pelletier, E., 2020, A new proxy for regional paleoaridity using clumped and triple oxygen isotopes of modern soil carbonates from the Serengeti Ecosystem, Tanzania, GSA Abstracts with Programs, v. 52, no. 6.
- Beverly***, **E.J.**, Levin, N.E., Passey, B.H., Aron, P., and Page, M., 2019, Using triple oxygen and clumped isotopes in soils to understand the hydrosphere in Critical Zones, GSA Abstracts with Programs, v. 51, no. 5.
- Beverly, E.J.**, Levin, N.E., Passey, B.H., Winkelstern, I.Z., 2018, Reconstructing aridity and evaporation in east Africa using triple oxygen isotopes in soil carbonates, GSA Abstracts with Programs, Vol. 50, No. 6.
- Beverly***, **E.J.**, Levin, N.E., Passey, B.H., Quade, J., 2018, Oxygen isotope variation in pedogenic carbonates and the potential to constrain paleoaridity, Goldschmidt Abstracts.
- Beverly, E.J.**, Sherriff, J., Wilkinson, K., Adler, D., and Gasparyan, B., 2017, Using Pleistocene paleosols to reconstruct paleoenvironments in the Hrazdan Valley of the Southern Caucasus of Armenia: GSA Abstracts with Programs. Vol. 49, No. 6.
- Beverly, E.J.**, Berke, M., Castaneda, I., Johnson, T.C., and Tryon, C.A., 2017, Unveiling Lake Victoria's Secrets: GSA Abstracts with Programs. Vol. 49, No. 6.
- Beverly, E.J.**, Potts, R., Behrensmeier, A.K., Deocampo, D.M., Stockhecke, M., Rabideaux, N.M., and Dommain, R., 2016, Identifying and Utilizing Those Pesky Paleosols in a Lacustrine Sequence: Examples from the Koorra Graben Pleistocene Paleolake, Kenya: GSA Abstracts with Programs. Vol. 48, No. 7.
- Beverly, E.J.**, Snell, K., Peppe, D.J., Driese, S.G., and Faith, J.T., and Tryon, C.A., 2016, Reconstruction of Late Pleistocene Paleoenvironments using Stable and Clumped Isotopes from the Lake Victoria Region: American Association of Physical Anthropology Annual Meeting.
- Beverly, E.J.**, Driese, S.G., Peppe, D., Arellano, L. N., Blegen, N., Faith, J.T., and Tryon, C.A., 2015, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: Cleveland Museum of Natural History Paleoecology Symposium.
- Beverly, E.J.**, White, J.D., Peppe, D.J., Faith, J.T., Blegen, N. and Tryon, C.A., 2015, Late Pleistocene megadrought and the equatorial grassland expansion of Lake Victoria: GSA Abstracts with Programs. Vol. 47, No. 7, p.285.
- Beverly, E.J.**, Driese, S.G., Peppe, D.J., Faith J.T., Tryon, C.A., Roure-Johnson, C., Michel, L.A., and Sharp, W.D., 2014, Pleistocene hominin paleoenvironmental reconstructions: sedimentology, micromorphology, and stable isotopes of riverine tufas from the Rusinga and Karungu regions of western Kenya: GSA Abstracts with Programs. Vol. 46, No. 6, p. 712.
- Beverly, E.J.**, Driese, S.G., Peppe, D.J., Arellano, N., Faith J.T., and Tryon, C.A., 2014, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: Soil Forming Processes and their Rates workshop in the Mojave Desert, Oct. 2014.
- Beverly, E.J.**, Driese, S.G., Peppe, D.J., and Arellano*, L., 2014, Late Pleistocene paleocatena with linear gilgai from the Lake Victoria Region, Kenya: Texas A&M Soil Survey and Land

Resource Workshop.

- Beverly, E.J.**, Peppe, D.J., Faith, J.T., Tryon, C., Blegen, N., Driese, S.G., and Arellano*, L.N., 2013, Paleosol-based evidence for late Pleistocene paleoenvironments of the Lake Victoria region: GSA Abstracts with Programs Vol. 45, No. 7, p. 752.
- Beverly, E.J.**, Faith, J.T., Peppe, D.J., Tryon, C., Driese, S.G., Blegen, N., Patterson, D., and Horner, W.H., 2012, Paleoenvironmental context of Pleistocene archaeological and paleontological sites in Kenya's Lake Victoria Basin: GSA Abstracts with Programs Vol. 44, No. 7, p. 415.
- Beverly, E.J.**, Ashley, G.M., and Driese, S.G., 2011, High-resolution paleoenvironmental and paleoclimatic reconstruction of a Pleistocene catena using paleopedology and geochemistry of lake margin paleo-Vertisols, Olduvai Gorge, Tanzania: GSA Abstracts with Programs Vol. 43, No. 5.
- Beverly, E.J.**, Ashley, G.M., Driese, S.G., and Sikes, N.E., 2010, New insights into spatial variability of rift basin paleosols using sedimentology, paleopedology, and soil geomorphology, Olduvai Gorge, Tanzania: GSA Abstracts with Programs Vol. 42, No. 5.
- Beverly, E.J.**, Surpluss, K.D., Augsburger, G.A., 2008, Provenance Analysis of the Cretaceous Hornbrook Formation of Northern California and Southern Oregon: Evidence for a Non-Klamath Cretaceous Arc Source: GSA Abstracts with Programs Vol. 40, No. 1.

Student Presentations (underline indicates student author)

- Arellano, L.N., **Beverly, E.J.**, Steig, E.J., and Schauer, A.J., 2022, Spatial and Temporal Variability of Triple Oxygen Isotopes in Panamanian Meteoric Waters, AGU Fall Meeting Abstracts (submitted).
- Flynn, A.G., **Beverly, E.J.**, Zellman, K., Fricke, H., and Williamson, T.E., 2022, Stable and chaotic eras, an early Eocene terrestrial record from the San Juan Basin, New Mexico, USA: GSA Abstracts with Programs (accepted).
- Kovach, T.Z., Raczynski-Henk, Y., Frahm, E., Gill, J.P., Wilkinson, K.N., Petrosyan, A., **Beverly, E.J.**, Gasparian, B., and Adler, D.S., 2022, Preliminary lithic technological analysis of Solak-1, an open-air upper Paleolithic site in the Armenian Highlands: Paleoanthropology Society Meeting in Denver.
- Shedroff, S., Beck, C.C., **Beverly, E.J.**, Manning, M., Bruce, W., and Feibel, C., 2021, Paleoenvironmental reconstruction of the Turkana Basin through Pedogenic Carbonate Analyses (1.9 to 1.2 Ma) AGU Fall Meeting Abstracts.
- Flynn, A.G., **Beverly, E.J.**, Zellman, K., Fricke, H., and Williamson, T.E., 2021, Preliminary Early Eocene Age Model and Terrestrial Paleoenvironment Record from the San Juan Basin, New Mexico, USA: GSA Abstracts with Programs, v. 53, no. 6.
- Manning, M., Beck C., and Beverly E.J., 2021, Analysis of paleosol-based proxies from the Turkana Basin through paleo-landscape and paleoclimate reconstruction: EGU General Assembly 2021.
- Allen, M.M., Beck, C.C., Langworthy, M.F., Feibel, C.S., and **Beverly, E.J.**, 2016, Paleoenvironmental Reconstruction of the Holocene Galana Boi Formation at Kabua Gorge, Turkana Basin, Kenya: GSA Abstracts with Programs. Vol. 48, No. 7.
- Langworthy, M.F., Beck, C.C., Feibel, C.S., **Beverly, E.J.**, and Allen, M.M., 2016, Refined stratigraphy and paleoenvironmental interpretation for the fossil-bearing Lower Miocene Loncherangan Section, West Turkana, Kenya: GSA Abstracts with Programs. Vol. 48, No. 7.
- Arellano, L., **Beverly, E.J.**, Peppe, D.J., Driese, S.G., Faith, J.T., and Tryon, C.A., 2014, Using paleosols to reconstruct the paleoclimate of Late Pleistocene archaeological sites in the Lake Victoria Basin, Kenya: GSA Abstracts with Programs.

Invited Seminars

Dept. of Geosciences, Baylor University, November 11, 2022
Dept. of Earth and Environmental Sciences, September 16, 2022
Dept. of Biology and Biochemistry, University of Houston, March 9, 2022
Assistant Professor Excellence Speaker Series, University of Houston, September 22, 2021
Dept. of Earth and Atmospheric Sciences, Indiana University Bloomington, November 16, 2020
Dept. of Geoscience, Trinity University, October 19, 2020
Dept. of Earth Sciences, Southern Methodist University, February 21, 2020
Geo-Bio Mass Spectrometry Seminar, Texas A&M University, April 24th, 2019
Department of Geosciences, Georgia State University, Fall 2016

GRANTS

Funded

		<u>Beverly portion</u>	<u> Total</u>
2022	NSF-EAR-IF “Acquisition of an isotope ratio mass spectrometer for research and education in geological and paleoclimate studies at the University of Houston,” Role: Co-PI	-	\$500,000
2021	ACS-PRF Doctoral New Investigator “Climatic and Autogenic Controls on Fluvial Fan Architecture using Paleocene-Eocene Deposits from the San Juan Basin, New Mexico,” Role: PI	\$110,000	-
	NSF-EAR-P2C2 “Collaborative Research: Quantitative Paleoclimatology of the East African Monsoon” Role: Co-PI	\$137,503	\$256,796
	Turkunan Basin Institute Fund “Lothagam: Hominin Origins and Faunal Turnover in the Late Miocene” Role: Key Personnel	\$11,500	\$158,235
	International Continental Scientific Drilling Program (ICDP) Workshop Proposal “The Lake Victoria Drilling Project (LVDP): Unraveling the pattern and processes of desiccation of the world’s most populated lake” Role: Co-PI	-	\$66,500
2017	NSF-EAR-PF “Mapping the effects of drought on human evolution and East African ecosystems during the late Pleistocene using triple oxygen isotopes and bulk geochemistry in paleosols” Role: PI	\$174,000	-
2015	Baylor University Graduate Research Grant	\$3,000	
	GSA South Central Section Student Travel Grant	\$150	
	Baylor University Travel Grant	\$600	
	Grant to attend Paleoecology Symposium at Cleveland Museum of Natural History	\$200	
2014	Baylor University Travel Grant	\$300	
	GSA South Central Section Student Travel Grant	\$150	
	Grant to attend INQUA Soil-Forming Processes and their Rates: Workshop and Field Trip	\$700	
	Baylor University Graduate Research Grant	\$3,000	
2013	Baylor University Travel Grant	\$300	
	GSA South Central Section Student Travel Grant	\$100	

	Leakey Foundation Research Grant	\$13,500
	Dallas Paleontological Society Frank Crane Memorial Scholarship	\$750
	Baylor Geology Dixon Grant for Field Assistantship Support	\$3,215
2012	Baylor University Travel Grant	\$300
	GSA South Central Section Student Travel Grant	\$150
	GSA Graduate Student Research Grant	\$2,500
	SEPM Student Assistance Grant	\$1,500
2011	Baylor University Travel Grant	\$300
	GSA South Central Section Student Travel Grant	\$150
	GSA Graduate Student Research Grant	\$1,344
	Baylor Geology Dixon Grant for Field Assistantship Support	\$3,345
2010	Evolving Earth Foundation Grant	\$1,489
	Rutgers University Graduate School Special Study Award	\$500

Pending

	<u>Beverly portion</u>	<u> Total</u>
NSF-S-STEM “Mentoring, Development, and Engagement of Diverse STEM Students at a Large, Public, Urban University,” Role: Mentor for students participating in program in the Earth and Atmospheric Sciences Department	\$18,290	\$1,453,646

NSF-CAREER “CAREER: Quantifying climate induced landscape evolution during early Paleogene hyperthermals” Role: PI	\$796,024	-
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Resubmission Anticipated

NSF-EAR-FRES “Collaborative Research: The impact of climate and environment change on Pleistocene biological diversity and human dispersal at Lake Victoria, eastern Africa,” Role: Co-PI	\$134,993	\$3,000,000
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NSF-EAR-SGP “Collaborative Research: Comparing paleosols from two east African drill cores to reconstruct the paleo-landscapes of hominin evolution,” Role: Co-PI.	\$246,956	
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NSF-EAR-SGP “Collaborative Research: EAR Climate: Using Early Eocene climate change to predict the future,” Role: Co-PI	\$340,436	\$796,348
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TEACHING EXPERIENCE

University of Houston

Physical Geology GEOL 1330 | Spring 2019, Fall 2020, Spring 2022, Fall 2022 | UG
Sedimentary Petrogenesis 3374 | Spring 2020, Spring 2021 | UG
Soils GEOL 3356/Soils and Paleosols GEOL 6356 | Fall 2019, Fall 2021 | UG/G
Rift Basin Sedimentology 6397 | Fall 2022 | G

Georgia State University

Geologic Resources and the Environment | Fall 2016 | UG

STUDENT ADVISING (*University of Houston unless otherwise noted*)

Postdoc Advisor

Andrew Flynn (2020 – present)

Anne Billingsley (2019-2020), currently at TuSimple

Ph.D. Advisor

L. Nicole Arellano, degree expected 2024
Kevin Takashita-Bynum, degree expected 2025
Madison Rafter, degree expect 2027

Committee Member

Rachel Clark, Ph.D., degree expected 2022
Joanna Clark, Ph.D., 2022
Michael Comas, Ph.D., degree expected 2027
Halina Haider, M.S., 2022
Jeffrey Hensley, M.S., 2019
Nicholas Hogancamp, Ph.D., 2022
Claire Ong, Ph.D., degree expected 2023
Jacob Slawson, Ph.D., degree expected 2025 (Colorado School of Mines)
Ariel Wilkie, M.S., degree expected 2023
Bingyi Zhao, Ph.D., 2020

Undergraduate B.S. Thesis

Laura Taylor, 2020, “Stable Isotopes of Macrofossils and Bulk Carbonates from the Late Miocene to Pleistocene Santa Rosalía Basin, Baja California Sur, Mexico.” – won award for Outstanding Senior Honors Thesis at University of Houston
L. Nicole Arellano, Baylor University, 2015, “Using paleosols to reconstruct the paleoclimate of Late Pleistocene archeological sites in the Lake Victoria Basin, Kenya.” – won award for Outstanding Thesis in the Physical and Life Sciences at Baylor University.
Blake Taylor, Baylor University, 2013, “Paleoenvironmental reconstruction of Late Pleistocene deposits in the Lake Victoria region using clay mineralogy.”

Undergraduate Mentor

University of Houston | Brittany Garza, Samantha Baker, Shea Pitre
University of Michigan | Drake Yarian, Ryan Horwitz, Elise Pelletier
Georgia State University | David Davis, Amanda O’Kelley
Baylor University | William Horner, Kenadi Sutton

AWARDS & HONORS

2014 Geological Society of America Archaeological Geology Division’s Richard Hay Student Paper/Poster Award
2013 Baylor University Geology Department Outstanding Teaching Assistant Award
2008 Trinity University’s Award for Outstanding Student in Geosciences

SERVICE

University

University of Houston

2021 Member, Seminar Committee
Member, Diversity, Equity, and Inclusion Committee
Member, Online Geoscience Program Committee
Member, EAS Fundraising and Alumni Relations Committee
Member, Climate Search Committee
2020 Member, Diversity, Equity, and Inclusion Committee

Member, EAS Fundraising and Alumni Relations Committee
Member, Sedimentary Geology Search Committee
Dobrin Lecture Student Poster Judge

2019 Member, Sedimentary Geology Search Committee

University of Michigan

2017–2018 Mentor for an Association for Women in Science (AWIS) Mentoring Circle

Georgia State University

2016 Atlanta Science Festival Discovery Day Coordinator
Judge for Georgia State University Undergraduate Research Conference

Professional

2022 GSA Annual Meeting Technical Session Co-Chair: “Soils and Paleosols across Space and Time II: A Celebration of Steven G. Driese”

Chair of the Soils and Soil Processes Division of the Geological Society of America

Reviewer for proposals: NSF-P2C2, Israel Science Foundation

Reviewer for journals: *Earth and Planetary Science Letters*, *Journal of Quaternary Science*, *Journal of Human Evolution* (2)

Panel Reviewer for NSF-EAR

2021 Chair of the Soils and Soil Processes Division of the Geological Society of America

On To the Future Mentor for Geological Society of America

Resume/CV mentor at Geological Society of America Meeting

Panel Reviewer for NSF-EAR

Review for journals: *Chemical Geology*, *Science Advances*, *Geosciences*, *Paleoceanography and Palaeoclimatology*, *Journal of Human Evolution*,

2020 Chair-Elect of the Soils and Soil Processes Division of the Geological Society of America

On To the Future Mentor for Geological Society of America

Resume/CV mentor at Geological Society of America Meeting

Drop-In Mentor at Geological Society of America Meeting

Panel Reviewer for NSF-EAR

Reviewer for proposals: NSF-MRI, The Leakey Foundation (4), NSF-EAR-GG

Reviewer for Journals: *Geoderma*; *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*; *Global Biogeochemical Cycles* (2); *PNAS* (2); *Geochimica et Cosmochimica Acta*; *The Geological Society Special Publications*; *Frontiers in Earth Science*

2019 External Examiner for MSc Student Charity Kgotlaebonywe at Botswana International University of Science and Technology

Reviewer for Journals: *Journal of Quaternary Science*; *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*, *Scientific Reports*

- Reviewer for proposals: NSF-EAR-SGP
AAPG Student Expo Poster Judge
- 2018 Reviewer for Journals: *Catena*; *Quaternary Science Reviews*
Reviewer for proposals: American Chemical Society Petroleum Research Fund
- 2017 Reviewer for Journals: *Sedimentary Geology*; *Springer Vertebrate Paleobiology and Paleoanthropology Series*
Reviewer for proposals: NSF-SGP
Guest Associate Editor for *Frontiers in Earth Science* Research Topic: “The Role of the Paleo-Critical Zone in Shaping Quaternary Hominin Evolution”
GSA Annual Meeting Technical Session Co-Chair: “Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols”
- 2016 GSA Annual Meeting Technical Session Co-Chair: “From Outcrop to Core: Integrating Paleoenvironmental and Paleoclimatic Records Across Time and Space”
- 2015 GSA Annual Meeting Technical Session Co-Chair: “Paleosol Case Studies: Resurrecting Ancient Critical Zones through Space and Time”

LABORATORY EXPERIENCE

Isotopologue Paleosciences Laboratory, University of Michigan

Assisted with development and application of triple oxygen and clumped isotopes in sedimentary carbonates, maintenance and measurement of a variety of materials on an isotope ratio mass spectrometer, 2017 – 2018.

Georgia State X-Ray Diffraction Laboratory

Lab manager, supervised students and visitors using the lab and responsible for lab maintenance, maintained and operated a PANalytical X'Pert Pro, 2016-2017.

Paleopedology Laboratory, Baylor University

Lab manager, supervised students and visitors using the lab and responsible for lab maintenance, maintained and operated a cathodoluminescence microscope and polarizing microscopes with a UV fluorescence attachment, 2011-2015.

FIELD EXPERIENCE

San Juan Basin, New Mexico

Paleopedology, mapping, stratigraphy, sedimentology, micromorphology, bulk geochemistry, stable isotopes, 2021 – present (1 field season)

Uinta Basin, Utah

Paleopedology, stratigraphy, sedimentology, micromorphology, bulk geochemistry, stable isotopes, 2022 – present (1 field season)

Serengeti National Park, Tanzania

Mapping, pedology, sedimentology, micromorphology, bulk geochemistry, stable isotopes, 2018 - present (1 field season)

Lake Victoria Basin, Kenya

Paleopedology, mapping, stratigraphy, sedimentology, micromorphology, bulk geochemistry, stable isotopes, 2012 – present (2 field seasons)

Hrazdan Valley, Armenia

Paleopedology, mapping, stratigraphy, micromorphology, 2015 – 2019 (3 field seasons)

Lake Turkana Basin, Kenya

Paleopedology, stratigraphy, sedimentology, bulk geochemistry, stable isotopes, 2016 (1 field season)

Olduvai Gorge, Tanzania

Paleopedology, sedimentology, micromorphology, bulk geochemistry, 2010 (1 field season)

Olorgesailie Basin, Kenya

Paleopedology, stratigraphy, sedimentology, bulk geochemistry, stable isotopes, 2022 (1 field season)

Baringo Basin, Kenya

Paleopedology, stratigraphy, sedimentology, bulk geochemistry, stable isotopes, 2022 (1 field season)

Northern California and Southern Oregon

Stratigraphy, detrital zircon analysis, 2007 (1 field season)

WORKSHOPS AND SHORT COURSES

- 2022 International Continental Drilling Scientific Drilling Program Workshop for the Lake Victoria Drilling Project July 25-27, 2022, Dar es Salaam, Tanzania
Hominin Sites and Paleolakes Drilling Project (HSPDP) 7th Annual Meeting and Workshop July 7-10, 2022, Nairobi, Kenya
CO₂ Proxy Integration Project (CO₂PIP) Workshop June 5-7, 2022, Lake Tahoe, Nevada
- 2021 Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research Virtual Workshop June 21-23, 2021
Hominin Sites and Paleolakes Drilling Project (HSPDP) 6th Annual Meeting and Virtual Workshop June 21-22, 2021
- 2020 Triple Oxygen Isotope Geochemistry Virtual Short Course, Mineralogical Society of America, December 18, 2020
EarthRates '20-'21 Virtual All Hands Meetings
- 2019 Early Career Geoscience Faculty Workshop: Teaching, Research, and Managing Your Career, at University of Maryland, July 28 – Aug. 1, 2019
Lake Tanganyika Drilling Workshop in Dar es Salaam, Tanzania, June 16-20, 2019
Hominin Sites and Paleolakes Drilling Project (HSPDP) 5th Annual Meeting and Workshop at University of Arizona, Jan. 25-27, 2019
- 2018 Hominin Sites and Paleolakes Drilling Project (HSPDP) 4th Annual Meeting and Workshop at Rutgers University, Jan. 12-14, 2018
- 2017 Hominin Sites and Paleolakes Drilling Project (HSPDP) 3rd Annual Meeting and Workshop at Arizona State University, Phoenix, AZ, Jan. 13-15, 2017
Lake Victoria Drilling Workshop, Harvard University, Cambridge, MA, Aug. 8-9, 2017

- Olorgesailie Drilling Project Climate, Landscape, Ecological and Evolutionary Modeling Workshop, Smithsonian Natural History Museum, Washington, D.C., Oct. 13-14, 2017
- 2016 Hominin Sites and Paleolakes Drilling Project (HSPDP) 2nd Annual Meeting and Workshop at Georgia State University, Atlanta, GA, Jan. 9-11, 2016
- National Lacustrine Core Facility (LacCore)/Continental Scientific Drilling Coordination Office (CSDCO) Coring and Drilling Summer Institute at the University of Minnesota, Minneapolis, MN, Aug. 8-19, 2016
- Continental Scientific Drilling Coordination Office (CSDCO) Workshop 1: Scientific Drilling/Coring and Earth-Life System Evolution in Arlington, VA, Nov. 13-14, 2016
- 2015 Olorgesailie Drilling Project Core Sampling Workshop at LacCore, University of Minnesota, Minneapolis, MN, Nov. 8-14, 2015
- Paleoecology Symposium Research Workshop at the Cleveland Museum of Natural History, Cleveland, OH, Sept. 10-13, 2015
- Olorgesailie Drilling Project Age Modeling Workshop at the Smithsonian Natural History Museum, Washington, D.C., June 10-13, 2015
- 2014 International Union for Quaternary Science (INQUA) Rates of Soil-Forming Processes: Workshop and Field Trip in the Mojave Desert, Oct. 26-Nov. 1, 2014
- 2010 Society for Sedimentary Geology (SEPM)-NSF Research Conference and Workshop: Paleosols and Surface System Analogs, Petrified Forest National Park, Sept. 22-25, 2010

POPULAR MEDIA

- Ackerman, S.J., 2021, Drilling into the Climate of Human Origins: *American Scientist*, v. 109, no. 6, p. 326-328. DOI: 10.1511/2021.109.6.326.
<https://www.americanscientist.org/article/drilling-into-the-climate-of-human-origins>
- Catania, G. and Hayhoe K., February 24th 2021, “Texas Scientists: Power outages show why Texas must prepare for climate change.” *Dallas Morning News*. Retrieved from:
<https://www.dallasnews.com/opinion/commentary/2021/02/24/katharine-hayhoe-and-ginny-catania-power-outages-show-why-texas-must-prepare-for-climate-change/>
- Wei-Haas, M., October 21, 2020, “Surprising leap in ancient human technology tied to environmental upheaval.” *National Geographic*. Retrieved from:
<https://www.nationalgeographic.com/science/2020/10/surprising-leap-in-ancient-human-technology-tied-to-environment/> Research news article highlighting research in *Science Advances*.
- Beverly, E.J.**, January 26, 2020, “In 100 000 years Lake Victoria has dried up three times. It could happen again.” *The Conversation*. Retrieved from: <https://theconversation.com/in-100-000-years-lake-victoria-has-dried-up-three-times-it-could-happen-again-129361> Research news article highlighting my research published in *EPSL*.
- Cluzeau, Taïna, December 18, 2019, “L’assèchement du lac Victoria menace la bonne santé du Nil.” *French National Geographic*. Retrieved from:
<https://www.nationalgeographic.fr/environnement/2019/12/lassechement-du-lac-victoria-menace-la-bonne-sante-du-nil>. Research news article highlighting my research published in *EPSL*.

- Cartier, K.M.S., November 25, 2019, “Dire and drier future for Lake Victoria.” *Eos*, v. 100.
Retrieved from: <https://doi.org/10.1029/2019EO137016>. Research news article highlighting my research published in EPSL.
- NSF Public Affairs, November 21, 2019, “Environmental change in Africa: Will it lead to a drying Lake Victoria?” Retrieved from:
https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299626&org=NSF&from=news
Research news article highlighting my research published in EPSL.
- Beverly, E.J.**, June 4-6, 2018. Guest contributor for the American Geophysical Union Instagram Account (@americangeophysicalunion) where I highlighted my research to promote science outreach.
- Beverly, E.J.**, September 2, 2016, “Paleosols”. Retrieved from:
[http://www.winchester.ac.uk/blog/Pages/PAGE\(S\)-4-Paleosols.aspx](http://www.winchester.ac.uk/blog/Pages/PAGE(S)-4-Paleosols.aspx). Blog post discussing the geology and paleosols of Armenia and what it is like conducting fieldwork in the Southern Caucasus.
- Emerson, L., “How Climate Change Shaped Human Evolution.” Retrieved from:
<http://www.gsu.edu/2016/02/15/how-climate-change-shaped-human-evolution/>. Article highlighting the research from my postdoctoral work at Georgia State University.