
LISABETH NICOLE ARELLANO

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EDUCATION & TRAINING

- 2019-present Ph.D. Geology, University of Houston (Houston, TX)
Thesis: Triple oxygen isotope variability and the utility of the $\Delta^{17}\text{O}$ hydrological tracer in low latitude settings
Advisor: Emily Beverly
- 2015-2019 M.S. Water Resources Science, Peace Corps Masters International, Oregon State University (Corvallis, OR)
Thesis: Using stable isotopes to estimate the mean recharge elevation of water sources in Central America
Advisor: Stephen Good
- 2015-2019 Certificate in Water Conflict Management and Transformation, Oregon State University (Corvallis, OR)
Practicum: Evaluating the effectiveness of situation mapping and other participatory tools for community-based management of WASH projects in rural and indigenous Panama
Supervisor: Todd Jarvis
- 2011-2015 B.S. Geology, Baylor University (Waco, TX)
Honors Thesis: Using paleosols to reconstruct the paleoenvironment and paleoclimate of a Late Pleistocene archaeological site in the Lake Victoria Basin, Kenya*
Advisor: Daniel Peppe

RESEARCH AND PROFESSIONAL EXPERIENCE

- Spring 2022 Teaching Assistant, GEOL 3340: Geologic Field Methods, University of Houston (Houston, TX)
- Fall 2021 Teaching Assistant, GEOL 3357/6357: Soils and Paleosols, University of Houston (Houston, TX)
- Fall '19- Spr. '21 Research Assistant, Human-Environment Interactions Lab, University of Houston (Houston, TX)
Assisted in developing standard operating procedures for sample analysis using a Picarro L2140-*i* as well as creating internal lab standards included in sample runs for calibration purposes and writing/translating scripts to calibrate raw data, remove memory effects, and perform other processing calculations
- Spring 2019 Teaching Assistant, WRP 523: Environmental Water Transactions, Oregon State University (Corvallis, OR)
- 2016-2018 Water, Sanitation, and Hygiene Engineer, United States Peace Corps (Tulú county, Coclé province, Panama)
Worked with Ministry of Health personnel to organize and train rural water committees in management functions and in the construction, repairation, and maintenance of WASH systems including spring-fed, gravity-flow aqueducts, rainwater catchment tanks, ventilated improved pit (VIP) and composting latrines
- 2013-2015 Research Assistant, Lake Victoria Prehistory Project
Assisted with research aiming to reconstruct past natural and cultural environments of the Lake Victoria Basin to better understand the relationships between climate change, plant, animal, and human populations

Field work (Lake Victoria Basin, Kenya)

Paleopedology, sedimentology, stratigraphy, mapping

Lab work (Baylor Paleopedology Laboratory)

Bulk geochemistry and clay mineralogy

AWARDS AND HONORS

- 2021 University of Houston Earth and Atmospheric Science Student Research Funding Program Award
- 2020 Geological Society of America Graduate Student Research Grant
- 2019 Oregon State University College of Agricultural Sciences Savery Outstanding Master's Student Award
- 2015 Baylor University F. Ray Wilson II Award for Best Thesis in the Physical and Life Sciences*
- 2015 Baylor University Undergraduate Research & Scholarly Achievement First Place Poster Presentation*
- 2015 Baylor University's Award for Outstanding Undergraduate Student in Geosciences
- 2013 Baylor Geosciences Department Wendlandt Geology Scholarship and James W. Dixon Field Award
- 2012 Baylor Geosciences Department Glen Oskin Memorial Scholarship

RELEVANT SKILLS

- Spoken and computational languages: Spanish (fluent), Ngabere (basic); Python and R (basic)
- Hydrologic modeling: SWAT, HEC-RAS, MODFLOW, HYDRUS 2D/3D, PHREEQC
- Geospatial analysis software: ENVI, ArcGIS

PUBLICATIONS

- Arellano, L. N., Good, S. P., Sanchez-Murillo, R., Noone, D. C., Jarvis, W. T., and Finkenbiner, C. E., 2020, Bayesian estimates of the mean recharge elevations of water sources in the Central America region using stable water isotopes: *Journal of Hydrology: Regional Studies*, v. 32, 100739.
- 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: *Palaeography, Palaeoclimatology, Palaeoecology*, v. 443, 167-182.
- Beverly, E.J., Driese, S.G., Peppe, D.J., Arellano, L.N., Blegen, N., Faith, J.T., and Tyron, C.A., 2015, Paleoenvironmental reconstruction of a semi-arid Late Pleistocene paleocatena from the Lake Victoria Region, Kenya: *Quaternary Research*, v. 84, 368-381.

SEMINARS, PRESENTATIONS, AND WORKSHOPS

- Arellano, L.N., 2019, What I learned supporting community WASH projects in rural Panama (*invited talk*), Geography, Environmental Sciences, and Marine Resource Management winter seminar series, Oregon State University.
- Arellano, L. N., and Cronin, V.S., 2014, A physical model of near-homogeneous 1-D horizontal shortening or stretching of a ~2D layer: *GSA Abstracts with Programs* v. 46, no. 6, p. 501.
- Arellano, L. N., Beverly, E.J., Peppe, D. J., Driese, S.G., Faith, J.T., and Tyron, C.A., 2014, Using paleosols to reconstruct the paleoenvironment and paleoclimate of a Late Pleistocene archaeological site in the Lake Victoria Basin, Kenya: *GSA Abstracts with Programs* v. 46, no. 6. p. 772.
- Beverly, E.J., Driese, S.G., Peppe, D.J., Arellano, L.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*.
- Beverly, E.J., Driese, S.G., Peppe, D.J., and Arellano, L.N., 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 Lake Victoria: *GSA Abstracts with Programs* Vol. 45, No. 7, p. 752.

COMMUNITY SERVICE

- 2015-2016 Educational Outreach Coordinator, Oregon State University Hydrophiles Student Club
Facilitated interactive activities at the Corvallis Sister Cities Association Walk for Water, the Corvallis Farmers Market, and other local events to engage the public in current water issues
- 2014-2015 Volunteer Interpreter/Translator, Baylor University Law School Immigration Clinic
Supported Waco area residents in the process of applying for or renewing their DACA status by translating legal documents and forms and interpreting during meetings with attorneys and other professionals
- 2013-2015 Service Chair / Tau Beta Sigma (Iota Chapter) / Baylor University School of Music
Collaborated with Baylor's Director of Bands and fellow music students to plan and carry out service activities on campus and in the Waco community, including:
- Women in Music series in the BU School of Music spring programs, where incoming Baylor freshmen met women working in various aspects of the music profession, including education, performance, and therapy
 - The Scouting for Music program, where Baylor faculty and students participated in a two-day workshop designed for Girl Scouts in the Central Texas region with the goal of encouraging participation and integration of girls/women in music/the music profession
 - The Bear Band program, where high school band students rehearsed and performed with members of Baylor's Golden Wave marching band on Baylor game-days