

Ariane Legaspi Peralta

Associate Professor
Department of Biology
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APPOINTMENTS

- Aug. 2020– Present **Associate Professor**, Department of Biology, East Carolina University
Director, Interdisciplinary Doctoral Program in Biology, Biomedicine, and Chemistry (IDPBBC), Thomas Harriot College of Arts and Sciences, East Carolina University
- Jan. 2014– Aug. 2020 **Assistant Professor**
Department of Biology, East Carolina University
- Dec. 2014– Dec. 2018 **Visiting Research Assistant Professor**
Kellogg Biological Station, Michigan State University
- Jan. 2013– Nov. 2014 **Visiting Research Associate**
Kellogg Biological Station, Michigan State University
- Dec. 2012– Dec. 2013 **National Institute of Food and Agriculture Postdoctoral Fellow**
Department of Biology, Indiana University, Mentor: Jay T. Lennon, PhD
- Dec. 2011– Nov. 2012 **Postdoctoral Research Associate**
Kellogg Biol. Station, Michigan State Univ., Advisors: Sieglinde S. Snapp, PhD & Jay T. Lennon, PhD

EDUCATION

- Nov. 2011 **Ph.D. in Ecology, Evolution, and Conservation Biology**
University of Illinois at Urbana-Champaign, Advisor: Angela D. Kent, PhD
- July 2006 **M.S. in Ecology and Evolutionary Biology**
University of Illinois at Urbana-Champaign, Advisor: Michelle M. Wander, PhD
- May 2003 **B.S. in Honors Biology and Chemistry, Distinction and Honors in Biology**
University of Illinois at Urbana-Champaign, Advisor: Martha U. Gillette, PhD

PEER-REVIEWED PUBLICATIONS (*undergraduate co-author, §graduate student co-author)

- 2023 [34] Weinfurter, K.D.[§], A.M.M. Stuckert, M.E. Muscarella, A.L. Peralta, K. Summers (2023) Evidence for a parabasal gut symbiote in egg-feeding poison frog tadpoles in Peru. *Evolutionary Biology*. <https://doi.org/10.1007/s11692-023-09602-7>
- [33] Lennon, J.T., S.D.W. Frost, N.K. Nguyen, A.L. Peralta, A.R. Place, and K.K. Treseder (In press) Microbiology and climate change: a transdisciplinary imperative. *mBio* e03335-22. <https://doi.org/10.1128/mbio.03335-22>
- [32] Abashidze, N., R. Bawa, J.R. Etheridge, Y. Li, A.L. Peralta, C. Sims, and T. Vogel[§] (2023) Air temperature spikes increase bacteria presence in drinking water wells downstream of hog lagoons. *Science of the Total Environment*. 161426 <https://doi.org/10.1016/j.scitotenv.2023.161426>
- 2022 [31] Swails, E.E., M. Ardón, K.W. Krauss, A.L. Peralta, R.E. Emanuel, A.M. Helton, J.L. Morse, L. Gutenberg, N. Cormier, D. Shoch, S. Settlemeyer, E. Soderholm, B. Boutin, C. Peoples, and S. Ward (2022) Response of soil respiration to changes in soil temperature and water table level in drained and restored peatlands of the Southeastern United States. *Carbon Balance and Management* 17:18. <https://doi.org/10.1186/s13021-022-00219-5>
- [30] Armstrong, L.[§], A.L. Peralta, K.W. Krauss, N. Cormier, R.F. Moss, E. Soderholm, A. McCall, C. Pickens, and M. Ardón (2022) Hydrologic restoration decreases greenhouse gas emissions from shrub bog peatlands in Southeastern U.S. *Wetlands* 42:81. <https://doi.org/10.1007/s13157-022-01605-y>
- [29] Kinsman-Costello, L., E. Bean, A. Goeckner[§], J.W. Matthews, M. O'Driscoll, M. Palta, A.L. Peralta, A. Reisinger, G. Reyes[§], A. Smyth, and M. Stofan[§] (2022) Mud in the city: Effects of freshwater salinization on inland urban wetland nitrogen and phosphorus availability and export. *Limnology and Oceanography Letters*. 8(1) 112-130. <https://doi.org/10.1002/lo2.10273>

- 2021 [28] Rocca, J.D., M.E. Muscarella, A.L. Peralta, D. Izabel-Shen, and M. Simonin (2021). Guided by microbes: applying community coalescence principles for predictive microbiome engineering. *mSystems* 6(4). <https://doi.org/10.1128/mSystems.00538-21>
- [27] Koceja, M.E.*, R.B. Bledsoe[§], C. Goodwillie, and A.L. Peralta (2021). Distinct microbial communities alter litter decomposition rates in a fertilized coastal plain wetland. *Ecosphere* 12(6) e03619. <https://doi.org/10.1002/ecs2.3619>
- [26] Graham, E.B., C. Averill, B. Bond-Lamberty, J.E. Knelman, S. Krause, A.L. Peralta, A. Shade. A.P. Smith, et al. (2021) Towards a unifying framework of disturbance ecology through crowd sourced science. *Frontiers in Ecology and Evolution* 9. <https://doi.org/10.3389/fevo.2021.588940>
- 2020 [25] Peralta, A. L., R. B. Bledsoe[§], M. E. Muscarella, M. Huntemann, A. Clum, B. Foster, B. Foster, S. Roux, K. Palaniappan, N. Varghese, S. Mukherjee, T. B. K. Reddy, C. Daum, A. Copeland, I.-M. A. Chen, N. N. Ivanova, N. C. Kyrpides, T. G. delRio, and E.A. Elie-Fadrosh (2020). Metagenomes from experimental hydrologic manipulation of restored coastal plain wetland soils (Tyrell County, NC). *Microbiology Resource Announcements* 9. <https://doi.org/10.1128/MRA.00882-20>
- [24] Bledsoe, R.B.[§], E.Z. Bean, S. Austin*, and A.L. Peralta (2020). A microbial perspective on balancing trade-offs in ecosystem functions in a constructed stormwater wetland. *Ecological Engineering*. 158. <https://doi.org/10.1016/j.ecoleng.2020.106000>
- [23] Goodwillie, C., M.W. McCoy, and A.L. Peralta (2020) Long-term fertilization, mowing, and ditch drainage interact in the dynamics of a wetland plant community. *Ecosphere* 11(10): e03252. <https://doi.org/10.1002/ecs2.3252>
- [22] Bledsoe, R.B.[§], C. Goodwillie, and A.L. Peralta (2020). Long-term nutrient enrichment of an oligotroph-dominated wetland increases bacterial diversity in bulk soils and plant rhizospheres. *mSphere*. 5(3). <https://doi.org/10.1128/mSphere.00035-20>
- [21] Werba, J.[§], A. Stucy[§], A.L. Peralta, and M.W. McCoy (2020) Effects of diversity and coalescence of species assemblages on ecosystem function at the margins of an environmental shift. *PeerJ*. 8:e8608. <https://doi.org/10.7717/peerj.8608>
- [20] Wisnoski, N.I.[§], M.E. Muscarella, M. Larsen, A.L. Peralta, and J.T. Lennon (2020) Metabolic insight into bacterial community assembly across ecosystem boundaries. *Ecology*. 101(4):e02968. <https://doi.org/10.1002/ecy.2968>
- [19] Mueller, E.A.[§], N.I. Wisnoski[§], A.L. Peralta, and J.T. Lennon (2020) Microbial rescue effects: how microbiomes can save hosts from extinction. *Functional Ecology*. 34:2055–2064. <https://doi.org/10.1111/1365-2435.13493>
- [18] Curtis, W.S., J.R. Etheridge, F. Filho, P. Malali, and A.L. Peralta (2020) Planning for future solar farm development in North Carolina: A geographic food-energy-water approach. *Southeastern Geographer*. 60(1):48-64. <https://doi.org/10.1353/sgo.2020.0004>
- 2019 [17] Hinckley, B.R.[§], J.R. Etheridge, and A.L. Peralta (2019) Storm event nitrogen dynamics in waterfowl impoundments. *Water, Air, and Soil Pollution*. 230:294. <https://doi.org/10.1007/s11270-019-4332-5>
- [16] Hinckley, B.R.[§], J.R. Etheridge, and A.L. Peralta (2019) Wetland conditions differentially influence nitrogen processing within waterfowl impoundments. *Wetlands* 40:1117–1131. <https://doi.org/10.1007/s13157-019-01246-8>
- [15] Sprunger, C., S.W. Culman, A.L. Peralta, S.T. DuPont, J.T. Lennon, and S.S. Snapp (2019) Perennial grain crop roots and nitrogen management shape soil food webs and soil carbon dynamics. *Soil Biology & Biochemistry* 137. <https://doi.org/10.1016/j.soilbio.2019.107573>
- [14] Matthews, J.W., S. McIntyre, A.L. Peralta, and C. Rodgers (2019) Long-term assessment of alternative strategies for the restoration of floodplain forest in the presence of an invasive grass, *Phalaris arundinacea*. *Wetlands* 40:655–665. <https://doi.org/10.1007/s13157-019-01204-4>
- 2018 [13] Peralta, A.L., Y. Sun, M.D. McDaniel and J.T. Lennon (2018) Crop rotational diversity increases disease suppressive capacity of soil microbiomes. *Ecosphere* 9(5). <https://doi.org/10.1002/ecs2.2235>

[12] McCoy, K.A. and A.L. Peralta (2018) Pesticides could alter amphibian skin microbiomes and the effects of *Batrachochytrium dendrobatidis*. Special Issue: Ecology of Amphibian-Microbial Symbioses. *Frontiers in Microbiology* 9:748. <https://doi.org/10.3389/fmicb.2018.00748>

2017 [11] Peralta, A.L., M.E. Muscarella, and J.W. Matthews (2017) Wetland management strategies lead to tradeoffs in ecological structure and function. *Elementa: Science of the Anthropocene* 5:74. <https://doi.org/10.1525/elementa.253>

2016 [10] Peralta, A.L., E.R. Johnston*, J.W. Matthews, and A.D. Kent (2016) Abiotic correlates of microbial community structure and nitrogen cycling functions vary within wetlands. *Freshwater Science*. 35(2):573–588. <https://doi.org/10.1086/685688>

2014 [9] Peralta, A.L., D. Stuart, A.D. Kent, and J.T. Lennon (2014) A social-ecological framework for ‘micromanaging’ microbial services. *Frontiers in Ecology and the Environment*. 12(9):524–531. *featured on cover. <https://doi.org/10.1890/130308>

[8] Peralta, A.L., S. Ludmer*, J.W. Matthews, and A.D. Kent (2014) Bacterial community response to changes in soil redox potential along a moisture gradient in restored wetlands. *Ecological Engineering* 73:246-253. <https://doi.org/10.1016/j.ecoleng.2014.09.047>

[7] Peralta, A.L., J.W. Matthews, and A.D. Kent (2014) Habitat specialization along a wetland moisture gradient differs between ammonia oxidizing and denitrifying microorganisms. *Microbial Ecology* 68:339-350. <https://doi.org/10.1007/s00248-014-0407-4>

Publications prior to ECU

2013 [6] Peralta, A.L., S. Ludmer*, and A.D. Kent (2013) Hydrologic history constrains microbial community composition and nitrogen cycling under experimental drying/wetting treatments. *Soil Biology & Biochemistry* 66:29-37. <https://doi.org/10.1016/j.soilbio.2013.06.019>

2012 [5] Peralta, A.L., J.W. Matthews, D.N. Flanagan, and A.D. Kent (2012) Environmental factors at dissimilar spatial scales influence plant and microbial communities in restored wetlands. *Wetlands* 32:1125-1134. <https://doi.org/10.1007/s13157-012-0343-3>

2010 [4] Peralta, A.L., J.W. Matthews, and A.D. Kent (2010) Microbial community structure and denitrification in a wetland mitigation bank. *Applied and Environmental Microbiology* 76:4207-4215. <https://doi.org/10.1128/AEM.02977-09>

2009 [3] Matthews, J. W., A.L. Peralta, P. Baldwin*, A. Soni*, A.D. Kent, and A.G. Endress (2009) Local and landscape correlates of non-native species invasion in restored wetlands. *Ecography* 32:1031-1039. <https://doi.org/10.1111/j.1600-0587.2009.05863.x>

[2] Matthews, J. W., A.L. Peralta, D.N. Flanagan, P. Baldwin*, A. Soni*, A.D. Kent, and A.G. Endress (2009) Relative influence of landscape versus local factors on plant community assembly in restored wetlands. *Ecological Applications* 19:2108-2123. <https://doi.org/10.1890/08-1836.1>

2008 [1] Peralta, A.L. and M.M. Wander (2008) Soil organic matter dynamics under soybean exposed to elevated CO₂. *Plant and Soil* 303:69-81. <https://doi.org/10.1007/s11104-007-9474-3>

Manuscripts in review or in revision

In review Etheridge, J.R., J. Hochard, A.L. Peralta, and T.J. Vogel[§] (In revision) Predicting nitrate exposure from groundwater wells using machine learning and meteorological conditions.

Peralta, A.L. M.E. Muscarella, A. Stucy[§], J.A. Werba[§], and M.W. McCoy (In review) Bacterial composition reflects fine-scale salinity changes while phylogenetic diversity exhibits a strong salt divide. *bioRxiv pre-print* <https://doi.org/10.1101/2021.09.14.460410>

Scott, E.[§], M.S. Brewer, A.L. Peralta, F.A. Issa (In review) The effects of social experience on host gut microbiome in male zebrafish (*Danio rerio*). *bioRxiv pre-print* <https://doi.org/10.1101/2023.01.23.525298>

Bledsoe, R.B.[§], C.G. Finlay[§], A.L. Peralta (In review) Plant-microbe-mediated decrease of greenhouse gases under dynamic wetland hydrology. *bioRxiv pre-print* <https://doi.org/10.1101/2020.06.29.178533>

Publications not peer-reviewed

- 2019 Moysey, S., M.A. O'Driscoll, S. Mitra, J.R. Etheridge, A.L. Peralta, A.K. Manda, R. Wu (2019) Mixing zones as critical components of coastal watershed function. White paper solicited by the Department of Energy. https://doesbr.org/openwatersheds/Open_Watersheds_Low_Res.pdf
- 2012 Burton, J.L., M. Drigo, Y. Li, A. Peralta, J. Salzer, K. Varala, B. Hannon, and J.D. Westervelt (2012) A model of evaluating hunting and contraception as feral hog population control methods. In Ecologist-Developed Spatially Explicit Dynamic Landscape Models. Editors J.D. Westervelt and G.L. Cohen. Springer, New York.

GRANTS AND FELLOWSHIPS

- 2023-2026 NSF Excellence in Research: Evaluating Environmental Stressor Effects on Soil Bacterial Traits. Co-PI (\$285,645 ECU subcontract from PI Danielle Graham, Fayetteville State University)
- 2022-2027 US Department of Education. "Project edPIRATE (Educator Pipeline In Rural Action for Teaching" Senior Person (\$4,493,136)
- 2022-2026 GlaxoSmithKline Foundation. "Growing a Diverse Public Health Workforce for Rural North Carolina through Graduate School Pathways" Key Person (\$1,315,000)
- 2021-2026 NSF Research Traineeship Program. "NRT-HDR: Finding Signal in the Noise to Enable Science-Based Community Response to Change in Coastal Regions" Co-PI (\$1,999,736)
- 2021-2026 NSF Coastlines and People. "Focused CoPe: Supporting Environmental Justice in Connected Coastal Communities through a Regional Approach to Collaborative Community Science" Senior Person (\$4,999,056)
- 2021-2025 NSF Dynamics of Coupled Natural and Human Systems. "RUI: CNH2-L: An integrative analysis of perceptions, policy, and land use impact on coastal agricultural watershed resilience." PI (\$1,499,904)
- 2020-2024 US EPA, Science to Achieve Results Program, "Predicting drinking water contamination from extreme weather to reduce early life contaminant exposures." Co-PI (\$799,384)
- 2020-2024 NSF DUE. "Team Experiences and Mentoring Strategies for Undergraduate Research." Senior Person (\$1,632,581)
- 2019-2024 NSF DEB, Ecosystem Science Program. "CAREER: Microbial controls on carbon stabilization and storage." PI (\$593,852 + \$46,950 REPS supplement + \$28,263 ROA supplement) \$638,832 to ECU
- 2019-2020 North Carolina Ocean Energy Program. "Biofouling of surfaces in the coastal water of North Carolina: a preliminary investigation." Co-PI (\$31,000)
- 2018-2020 NSF SBE Decision, Risk and Management Sciences Program. "2018 Hurricane Season: RAPID: Rural residents' self-protections to perceived and actual contamination risk in private drinking wells after Hurricane Florence." Co-PI (\$179,223)
- 2018-2020 DOE Joint Genome Institute Community Sequencing Program Award. "Biogeochemical tradeoffs of wetland soil microbiomes exposed to plant inputs and dynamic hydrology." PI (sequencing costs)
- 2018-2021 North Carolina DENR Department of Environmental Quality. "Reducing non-point sources of pollution and improving water quality in the Lick Creek Watershed." Co-PI (\$143,050)
- 2017-2018 North Carolina Ocean Energy Program. "An integrative environmental and ecological assessment of the Gulf Stream current environment of the coast of Cape Hatteras, NC. Co-PI (\$181,108)
- 2017-2020 US EPA, Science to Achieve Results Program-Integrating Human Health and Well-Being with Ecosystem Services. "Community-level management of human health risks from concentrated animal feeding operations with defensive natural capital investments," Co-PI (\$399,226)
- 2016-2018 Water Resources Research Initiative – North Carolina Sea Grant. "Managing nitrogen removal capacity in a stormwater wetland." Sponsor for Graduate Student Fellowship R. Bledsoe (\$9,966)
- 2016-2019 North Carolina DENR, Department of Marine Fisheries Coastal Recreational Fishing Licenses. "Linking water quality, food quality, and larval fish condition to determine strategic habitat area quality." PI (\$161,877) (transferred from D. Kimmel)

- 2016-2019 NC Dept. of Justice Environmental Enhancement Fund. “The effects of stormwater control measures on Town Creek: Quantifying water quality improvements and stormwater reduction in an impaired urban watershed.” Co-PI (\$110,209)
- 2015-2017 The Nature Conservancy. “Greenhouse gas monitoring in restored pocosin wetlands.” Co-PI (\$88,363) (transferred from M. Ardón)
- 2015 ECU Center for Sustainability Interdisciplinary Summer Research Award. “Getting the ‘N’ out of Stormwater: Harnessing microbes for sustaining water quality and development,” Co-PI (\$11,451)
- 2012-2015 National Institute of Food and Agriculture Postdoctoral Fellowship. “Land use legacies in soils: Effects of crop diversity on plant-soil-microbial interactions,” PI (\$125,991; \$66,575 to ECU)
- 2008, 2011 Ecology, Evolution, and Conservation Biology Graduate Summer Travel Grant, Univ. of Illinois
- 2004, 08-11 University of Illinois Graduate College Travel Grant
- 2008-2010 Ecology, Evolution, and Conservation Biology Summer Research Grant, Univ. of Illinois
- 2009-2011 Illinois Water Resources Center Research Assistantship
- 2007-2008 Ecology, Evolution, and Conservation Biology Research Assistantship, Univ. of Illinois
- 2002 Pfizer Summer Undergraduate Research Fellowship
- 2001-2002 Colgate-Palmolive Undergraduate Research Fellowship

AWARDS (as faculty)

- 2022 East Carolina University, Centennial Award for Excellence in Leadership
- 2021 East Carolina University, 5-Year Achievement Research and Creative Activity Award
- 2019 National Science Foundation Faculty Early Career Development (CAREER) Award
- 2018 East Carolina University 2017-2018 Scholar-Teacher Award
- 2017 East Carolina University Coastal Maritime Council Coastal Scholar Award

AWARDS (as student)

- 2010 John G. and Evelyn Hartman Heiligenstein Outstanding Teaching Assistant Award
- 2008 Student Presentation Award: 12th International Symposium on Microbial Ecology, Cairns, Australia
Student Presentation Award, Illinois State Academy of Science Annual Meeting, Champaign, IL
- 2002-05,-08 List of Teachers Ranked as Excellent by Their Students

TEACHING EXPERIENCE

- 2021-present Seminar in Interdisciplinary Biological Sciences, Instructor, Dept. of Biology, ECU
- 2021-present Microbial Ecology, Multi-disciplinary Team Science CURE, Instructor, Dept. of Biology, ECU (odd yrs)
- 2020-present Microbiome Analysis & Science Communication CURE, Instructor, Dept. of Biology, ECU
- 2020 Current Topics in Microbiome Science, Instructor, Dept. of Biology, East Carolina Univ.
- 2019 Microbiome Sequencing and Analysis CURE, Co-Instructor with R.B. Bledsoe, Dept. of Biology, ECU
- 2017 Wetlands Ecology and Management, Instructor, Dept. of Biology, ECU
ECU Bioinformatics Workshop, Guest Instructor, Dept. of Biology, ECU
- 2015-2019 Microbial Ecology, Instructor, Dept. of Biology, ECU (spring, odd years)
- 2014-present Microbiology, Instructor, Dept. of Biology, East Carolina University (fall)
- 2009 Honors Ecology and Evolution, Teaching Assistant, School of Integrative Biology, Univ. of Illinois
- 2008 Ecology, Teaching Assistant, School of Integrative Biology, Univ. of Illinois
- 2004-2005 Introductory Soils Laboratory, Teaching Assistant, Dept. of Natural Res. and Envi. Sci., Univ. of Illinois
- 2002-2003 Accelerated Chemistry Laboratory I & II, Teaching Assistant, Dept. of Chemistry, Univ. of Illinois

MENTORING (graduate students and postdocs)

- 2023-present (16) Kelsey Coates, NSF Graduate Research Fellow, PhD Student

- 2023-present (15) Colin Finlay, NSF Research Trainee, PhD Student
- 2023-present (14) Michael Sioson, MS Student
- 2023-present (13) Daphka Joseph, MS Student
- 2023-present (12) Scott Siebor, MS Student, “Microbial-climate change feedbacks in wetland ecosystems”
- 2022-present (11) Dejah Smith, MS Student, “Microbiome exchange between human and non-human primates”
- 2021-present (10) Colin Finlay, MS Student, “Redox effects on wetland microbial metabolic composition”
- 2020-2022 (9) Daniya Stephens, MS Biology, “Long-term fertilization and hydrology interact to influence wetland plant and bacterial communities in a low-nutrient wetland”
- 2019-2022 (8) Aied Garcia, MS Biology, “Examining chronic nutrient enrichment effects on wetland plant-microbe interactions using a trait-based approach”
- 2017-present (7) Thomas Vogel, PhD Candidate (co-advised by R. Etheridge, J. Hochard) “Wells, Water Quality, and Welfare: Examining Groundwater Quality and Economic Impacts in a Rural North Carolina Watershed
- 2015-2020 (6) Regina B. Bledsoe, PhD in Interdisciplinary Biological Sciences, “Manipulation of flooding and nutrients influences plant-microbe interactions and wetland function”
- 2014-2018 (5) Deborah Lichti, PhD in Interdisciplinary Biological Sciences (major advisor D. Kimmel), “Are all fish nurseries equal? Determining how food web dynamics affect fish nursery habitat”
- 2016-2018 (4) Brian Hinckley, MS Biology (co-advised by R. Etheridge), “Describing nitrogen dynamics in eastern North Carolina waterfowl impoundments by combining field- and laboratory-based approaches”
- 2015-2017 (3) Luise Armstrong, MS Biology (co-advised by M. Ardón), “Rewetting pocosin wetlands lowers greenhouse gas emissions”
- 2016-2017 (2) Alexandra Stucy, MS Biology, “Salinization impacts on historically freshwater bacterial communities”
- 2015-2016 Yanmei Sun, PhD, Postdoctoral Research Associate, “Crop diversity effects on soil microbial communities and disease suppressive function”
- 2014-2015 (1) Joshua Thigpen, MS Biology (co-advised by C. Goodwillie), “Effects of nutrient availability and disturbance on the composition and diversity of soil microorganisms”

MENTORING (post-baccalaureates, undergraduates and high school students)

- 2023-present (36) Celina McCoy, Undergraduate Research Intern (Winston Salem State University Undergraduate)
- 2023-present (36) Toby Gallegos, Undergraduate Research Assistant
- 2022-present (35) Glory Kidimbu, Undergraduate Research Assistant, Honors College
- 2022-present (34) Kai Davis, Undergraduate Research Assistant, Honors College
- 2022 (33) Scott Siebor, Undergraduate Research Assistant
- 2022 (32) Ana Ramirez, Undergraduate Research Assistant
- 2021-present (31) Allison Walker, National Summer Undergraduate Research Project Intern, North Carolina State Univ. Honors Capstone Awardee 2022
- 2021-2022 (30) Ivan Martinez-Santoyo
- 2021-2023 (29) Surinder Gill, Undergraduate Research Assistant, Honors College
- 2021-2022 (28) Dejah Smith, NSF Research Experience for Post-Baccalaureate Students Scholar
- 2021-2022 (27) Shajany Davis, Undergraduate Research Assistant
- 2020-2022 (26) Virginia Rosas Acosta, Undergraduate Research Assistant
- 2022 (25) Charlotte Mesmer, Undergraduate Research Volunteer
- 2021 (24) Valari Vander-Heyden, Undergraduate Research Volunteer
- 2020-2021 (23) De'Monnie Williams, Undergraduate Research Assistant
- 2019-2020 (22) Daniya Stephens, Undergraduate Research Assistant
- 2017-2020 (21) Alexia Griffin, Undergraduate Research Assistant

- 2020 (20) Guadalupe Bernal, Cal Poly, National Summer Undergraduate Research Project Intern
- 2020 (19) Fechi Inyama, Harvard Univ., National Summer Undergraduate Research Project Intern
- 2020 (18) Ivanelis Rodriguez Torres, Univ. of Puerto Rico, National Summer Undergraduate Research Project Intern
- 2020 (17) Joseph Whittington, Undergraduate Research Assistant
- 2016-2019 (16) Megan Koceja, Undergraduate Research Assistant, Honors Thesis *Consequences of long-term fertilization on wetland microbial function*
- 2019 (15) Emma Richards, Undergraduate Research Assistant
- 2018-2019 (14) Allison Fisk, Undergraduate Research Assistant
- 2016-2018 (13) Samuel Austin, Undergraduate Research Assistant
- 2018 (12) Aied Garcia, Undergraduate Research Assistant
- 2018 (11) Diego Carreño, Undergraduate Research Assistant
- 2017 (10) David Morlock, Undergraduate Research Assistant
- 2016-2017 (9) Corey Forbes, Undergraduate Research Assistant
- 2015-2016 (8) Jonathan LeCrone, Undergraduate Research Assistant
- 2015-2016 (7) Morgan Beamon, Undergraduate Research Assistant
- 2016 (6) Julianna Haag, Undergraduate Research Assistant
- 2014-2016 (5) J. Spencer Wilkinson III, Undergraduate Research Assistant
- 2014-2015 (4) Casey Eakins, Undergraduate Research Assistant
- 2014-2015 (3) Katherine Dorransoro, Undergraduate Research Assistant
- 2014 (2) Rene Vanek, Undergraduate Research Assistant
- 2014 (1) Sheridan Iroegbu, Undergraduate Research Assistant

MENTORING (prior to ECU)

- 2013 Nicholas Nelson, Indiana University Jim Holland Summer Science High School Research Program
- 2012 Ebony Rodgers, Michigan State Univ. Undergraduate Research Apprentice
- 2010-2011 Sarah Ludmer (Undergraduate Research Assistant, Awarded Helen E. Hess Award for outstanding research and High Distinction in Integrative Biology, Univ. of IL)
- 2009-2010 Eric Johnston (Undergraduate Research Asst., Awarded Distinction in Integrative Biology, Univ. of IL)
- 2008-2009 Lauren Endriukaitis, Undergraduate Research Assistant, University of Illinois
- 2008-2009 Omar Sinno, Undergraduate Research Assistant, University of Illinois
- 2008-2009 Neil Gottel, Undergraduate Research Assistant, University of Illinois

PROFESSIONAL SERVICE

manuscript and grant review

Ad hoc Journal Reviewer for Agronomy Journal, Ecology Ecosphere, Environmental Microbiology, Estuaries & Coasts, FEMS Microbial Ecology, Freshwater Biology, Freshwater Sciences, Functional, Global Change Biology, Hydrological Engineering, ISME-J, Journal of Applied Ecology, Journal of Environmental Quality, Plant and Soil, PLoS ONE, Proceedings of the Royal Society B: Biological Sciences, Scientific Reports, Science of the Total Environment, Soil Biology & Biochemistry, Water Resources Research, Wetlands

- 2022 Panelist for Department of Energy BER
- 2021-present Subject Matter Editor, Ecosphere | Agroecosystems Track
- 2017-2022 Panelist for National Science Foundation
- 2020 Reviewer for Department of Energy Subsurface Biogeochemistry Science Focus Area
- 2018 Panelist for National Institute of Food and Agriculture
- 2016 Ad hoc Reviewer for European Union BiodivERsA

- 2015-2017 Co-guest Editor, *Elementa: Science of the Anthropocene* | Special Feature “Ghosts of land-use past: Do land-use legacy effects constrain the restoration of aquatic ecosystems?”
- 2014-2016 Ad hoc Reviewer for National Science Foundation
- 2014-2015 Panelist for National Science Foundation
- professional society leadership***
- 2022-2025 Member, Subcommittee for Minority Education, American Society for Microbiology
- 2023 Governance Leadership Committee, Ecological Society of America
- 2022-2023 Past Speaker of the Council, Ecological Society of America
- 2022 Speaker of the Council, Ecological Society of America
- 2021-2022 Member, Ecological Society of America Council Leadership Working Group Representative
- 2020-2021 Member, Ecological Society of America Governance Subcommittee
- 2020-2022 Member, Society of Wetland Scientists Education and Outreach Committee
- 2020-2022 Program Committee Track Leader, American Society for Microbiology, Ecology, Evolution, Biodiversity
- 2020-present Fundraising and Communications Advisor, Microbial Ecology Section, Ecological Society of America
- 2018-2022 Program Committee Member, American Society for Microbiology, Annual Microbe Meeting
- 2018-2019 Chair, Microbial Ecology Section, Ecological Society of America
- 2017-2018 Vice-Chair, Microbial Ecology Section, Ecological Society of America
- 2016-2017 Secretary, Microbial Ecology Section, Ecological Society of America
- professional society contributions***
- 2022 Science Advocate, American Society for Microbiology Climate Change and Microbes Online Hill Day
- 2021 Lead-organizer (w/ M. Muscarella) of Inspire Session “Community coalescence as a framework for managing microbes in natural, host, and engineered ecosystems” at the Ecological Society of America Annual Meeting.
- Co-organizer (w/ A. Romero-Olivares, V.B. Chaudhary, and Lily Khadampour (2021) Organized Session: Vital Connections for Women and Non-Binary BIPOC in Ecology. Ecological Society of America Annual Meeting. 2-6 August 2021.
- 2019 Co-organizer (w/ S. Prather, B. Merkel, K. Clark) of Workshop “Applying Art, Design, and Interactivity Principles to Enhance Science Communication” at the Ecological Society of America Annual Meeting
- Co-organizer (w/ L. Kinsman-Costello) of Session “The Novel Biogeochemistry of Ubiquitous Understudied Urban Wetlands” at the Ecological Society of America Annual Meeting
- 2016-2017 Participant, North Carolina Festival Invite-A-Scientist
- 2016 Panelist, North Carolina Wetlands Symposium, Restoration Panel
- 2015 Participant, Environmental North Carolina Stormwater Task Force
- Co-organizer (w/ S. Evans, J. Bowman) LTER All Scientist Mtg. Working Group: LTER based perspectives on microbial community structure, function, process
- Lead-organizer Ecological Society of America Organized Oral Session “Trait-based ecology at the micro-scale. Co-organized with J.T. Lennon, S.F. Paver
- community | training | mentoring***
- 2020- Advisor Board Member, Women of Color in Ecology and Evolutionary Biology Slack Group
- 2020-2021 Mentor for the National Summer Undergraduate Research Project (NSURP.org) - A community-driven initiative to create rewarding remote summer research opportunities for BIPOC undergraduate students in the microbial sciences.
- 2018- Co-lead of [ourNCwater](#) Initiative, community engagement with residents aimed to understand their concerns regarding contamination risk and behaviors they adopt to protect themselves
- 2015 Reviewer for INSTARS Society for Freshwater Sciences Diversity Program
- 2014 Co-organizer Joint Aquatic Sci. Meeting Special Session: “Ghosts of land-use past: Do land-use legacy effects constrain the restoration of aquatic ecosystems?”
- 2012 Co-organizer LTER All Scientist Meeting Working Group: Flooding farm fields, draining wetlands, and damming rivers: Effects of hydrologic regime change on nutrient cycling.

Outreach Volunteer and Field Tour Guide for Kellogg Biological Station LTER
Judge for Student Posters at the MSU Organic Food and Farming Reporting Session

EAST CAROLINA UNIVERSITY SERVICE

- 2022-2023 Member, Department Biology Ecology and Evolution of Infectious Disease or Macroecology Search Committee
- 2022 Chair, Search Committee for Teaching Assistant Professor - Microbiology, Dept. of Biology
- 2021-2024 Member, Personnel Committee, Dept. of Biology
- 2021-22 Member, Regional Resilience Task Force
- 2021-23 Member, Dean of Graduate School Search Committee
- 2021-22 Member, Department of Coastal Studies Search Committee
- 2021- Graduate Pathways Program (Fayetteville State University-ECU Summer Research Program)
- 2020-2023 Director, Interdisciplinary Doctoral Program in Biology, Biomedicine, and Chemistry
- 2020-2023 Member, University Research and Creative Activities Committee
- 2020-2021 Faculty Mentor, ECU Grad Promoting Inclusion through Research, Action, Teaching, and Education (PIRATE) Talks Committee
- 2018-2020 Admissions Committee, Coastal Resource Management/Integrated Coastal Sciences PhD Program, Integrated Coastal Programs, East Carolina University
- 2019 Applied Ecologist Search Committee, Dept. of Coastal Studies, East Carolina University
- 2017 Veterans Affairs Liaison for Dept. of Biology
- 2014-16,17 Committee Member, Biology Graduate Program Committee, Dept. of Biology
- 2016-2019 Member, East Carolina University Student Academic Appellate Committee
- 2016 Estuarine Ecology Search Committee, Dept. of Biology, East Carolina University
- 2015-Present Member, Genomics Core Committee, Dept. of Biology, East Carolina University
- 2015 Workshop co-leader, Preparing and Inspiring Readiness for Achieving Teaching Excellence in Science – North Carolina public school teacher training workshops
- 2015 Member, Department Biology Microbiology Search Committee

UNIVERSITY OF ILLINOIS SERVICE

- 2011 Graduate Student Representative, Program in Ecology, Evolution and Conservation Admissions
- 2004, 07-11 Committee Member, Annual Graduate Student Symposium Graduate Students in Ecology and Evolutionary Biology Univ. of Illinois, Urbana, IL
- 2008-2009 President, Graduate Students in Ecology and Evolutionary Biology Univ. of Illinois, Urbana, IL
- 2007-2011 Science Outreach Volunteer to Campus Middle School for Girls (Urbana, IL)
- 2007-2011 Science Outreach Volunteer, Orpheum Children's Science Museum (Urbana, IL)

PROFESSIONAL DEVELOPMENT TRAINING

- 2022 Research Mentoring Workshop, Center for the Improvement of Mentored Experiences in Research. November 8, 2022. East Carolina University, Greenville, NC
- 2022 Facilitating Entering Mentoring, Center for the Improvement of Mentored Experiences in Research. October 24-25, 2022. University of Wisconsin, Madison, WI
- 2021 Foundations in Historical and Institutional Racism Racial Equity Institute Training
- 2020 Adobe Creative Campus, Faculty Development Institute
- 2019 Department of Energy Joint Genome Institute Microbial Genomics and Metagenomics Workshop
- 2013 Software Carpentry Bootcamp, Bioinformatics Workshop, Bloomington, IN
- 2011 Mothur Workshop Participant, Bioinformatics Workshop, Romulus, MI
- 2010 Certificate in Business Administration, University of Illinois, Urbana, IL
- 2010 Stable Isotope Biogeochemistry, Michigan State University, East Lansing, MI

PROFESSIONAL MEMBERSHIPS

Current Ecological Society of America, American Society for Microbiology, Society of Wetland Scientists
Past Soil Science Society of America, International Society for Microbial Ecology, Coastal and Estuarine Research Federation, Graduate Women in Science, American Geophysical Union

INVITED PRESENTATIONS

- 2023 Peralta, A.L. (2023) Microbes matter for sustaining nature-based solutions. Ecological Society of America Annual Meeting. Inspire Session: “Linking microbial evolution to ecosystem processes for all ecologists” Aug. 9, 2023.
Peralta, A.L. (2023) Pathways to STEM Leadership for Women of Color. Networks of Success Conference. Dartmouth College, Hanover, New Hampshire. July 26, 2023.
Peralta, A.L. (2023) Microbial-climate change feedbacks at the land-water interface. Department of Plant and Microbial Biology Seminar Series, North Carolina State University, Raleigh, NC. February 28, 2023.
Peralta, A.L. (2023) Microbial-climate change feedbacks in coupled natural and human systems. Department of Biological Sciences Seminar Series, Auburn University, Auburn, AL. February 16, 2023.
- 2022 Peralta, A.L. (2022) Wetland microbiome restoration for mitigating climate change. American Society for Microbiology Microbe Conference. Washington, D.C. July 10-14, 2022. Lightning presentation.
Peralta, A.L. (2022) Microbial services (and dis-services) in human-dominated landscape. Microbes and Climate Change Mini-Conference. Washington, D.C. June 9, 2022.
- 2021 Peralta, A.L. (2021) Linking research and teaching to understand microbial-climate change feedbacks. North Carolina Branch American Society for Microbiology Meeting. October 30, 2021.
Peralta, A.L. (2021) Multiple stressor effects on microbiomes in coupled natural and human systems. Duke Microbiome Center Seminar Series, Duke University, Durham, NC. October 18, 2021.
Peralta, A.L. (2021) Land use consequences and considerations for restoring wetland microbial functions. Society of Wetland Sciences Annual Meeting. Session: Microbes: Small Players with Big Impacts on Invasive Species Management and Wetland Restoration. Invited Talk. June 10, 2021.
- 2020 Peralta, A.L. (2020) Past and present land use determine microbial community patterns and processes. University of California, Irvine, Department of Ecology and Evolutionary Biology Seminar. October 23, 2020.
Peralta, A.L. (2020) Consequences and considerations of multiple stressors on wetland soil microbiomes. Kent State University, Department of Biological Sciences Seminar. October 9, 2020.
Peralta, A.L. (2020) Microbiomes in coupled natural and human systems. University of North Carolina Charlotte, Department of Biology Seminar. January 24, 2020.
- 2019 Peralta, A.L. (2019) Ongoing nutrient enrichment shifts microbial community patterns and processes in a coastal plain wetland. ModEx Approaches to Research on Shorelines (MARSh) workshop. Oak Ridge National Laboratory. September 19, 2019.
Peralta, A.L. (2019) Microbiomes in coupled natural and human systems. University of North Carolina Pembroke, Department of Biology Seminar. March 31, 2019.
- 2018 Peralta, A.L. (2018) Microbial controls on wetland carbon stabilization and storage. East Carolina University, Department of Geological Sciences Seminar Series. October 26, 2018.
Peralta, A.L. (2018) Microbiomes in coupled natural and human systems. University of Kansas, Department of Ecology and Evolutionary Biology Seminar. February 5, 2018.
- 2017 Peralta, A.L. and M.E. Muscarella (2017) How can we manage microbial functions to restore ecosystem services in human-dominated landscapes? Ecological Society of America Annual Meeting. Organized Oral Session: “Integrating Functional and Phylogenetic Diversity to Understand the Delivery of Ecosystem Services” Aug. 9, 2017.
Peralta, A.L. (2017) It’s time to get out of our microbial silos. Ecological Society of America Annual Meeting. Ignite Session: “Integrating Microbial Silos to Enhance Ecosystem Services” Aug. 8, 2017
Peralta, A.L. (2017) Managing microbiomes to enhance water quality. East Carolina University, Coastal Water Resources Center Seminar Series. March 29, 2017.
- 2016 Peralta, A.L. (2016) Managing microbiomes to enhance and restore ecosystem services. Virginia Polytechnic Institute and State Univ., Ecology & Evolutionary Biology Seminar Series. Oct. 27, 2016.

- Peralta, A.L. (2016) Can social-ecological frameworks be used to enhance restoration of microbial ecosystem functions? Society of Wetland Scientists Meeting. Corpus Christi, TX. June 2, 2016.
- Peralta, A.L. (2016) "Micromanaging" human-dominated ecosystems for enhanced microbial functions. Illinois Natural History Survey. Champaign, IL. January 19, 2016.
- 2015 Peralta, A.L. (2015) "Micromanaging" human-dominated ecosystems for enhanced microbial functions. Duke University Program in Ecology Seminar Series. December 1, 2015.
- Peralta, A.L. (2015) If you build it, will they come? Restoring ecosystems many microbes at a time. East Carolina University, Department of Biology. Nerd Nite - Homecoming. October 16, 2015.
- Peralta, A.L. (2015) Can social-ecological frameworks be used to enhance restoration of microbial functions? UNC Institute of Marine Science Seminar Series. September 17, 2015.
- Peralta, A.L. (2015) Microbial community structure and function in human-dominated landscapes: An interdisciplinary approach. Guest lecture for Explorations in Data Analyses for Metagenomic Advances in Microbial Ecology (EDAMAME) Workshop at Michigan State University. Hickory Corners, MI. June 25, 2015.
- Peralta, A.L., C.N. Balakrishnan, and S.M. Barribeau (2015) Social media and the (young) scientist. Research In Progress Seminar. Dept. of Biology, East Carolina University.
- 2014 Peralta, A.L. (2014) Microbial community structure and function in human-dominated ecosystems. Explorations in Data Analyses for Metagenomic Advances in Microbial Ecology (EDAMAME) Workshop, Kellogg Biology Station, Michigan State Univ. August, 2014
- 2013 Placella, S.A., A.L. Peralta, and J.T. Lennon (2013) Dormancy dynamics of soil bacteria: Can moisture variability promote microbial diversity? National Cooperative Soil Science Conference & AFRI Project Directors Meeting. Annapolis, MD, USA. June 17-20, 2013.
- Peralta, A.L., J.W. Matthews, and A.D. Kent (2013) Land use legacies in restored wetlands: Implications for microbial community structure and nitrogen cycling function. Society of Wetland Scientists Annual Meeting. Duluth, MN, USA. April 2-6, 2013.
- Peralta, A.L. (March 2013) Microbial community structure and function in human-dominated ecosystems. Department of Biology, East Carolina University, Greenville, NC.
- 2012 Peralta, A.L. (July 2012) Soil ecology and soil organic matter management. Invited guest lecture presented to Michigan State University's International Agroecology, IPM, and Sustainable Agriculture Short Course, Kellogg Biological Station, Hickory Corners, MI.

OTHER PROFESSIONAL EXPERIENCE

- 2011 Harvest Assistant, Blue Moon Farm (Certified Organic Vegetable Farm), Urbana, IL
Wine Consultant, Corkscrew Wine Emporium, Urbana, IL
- 1999-2007 Musician, Bass guitar player for the band The Beauty Shop, Champaign, IL

Discography

Yr Money or Yr Life: Mud/Parasol Records, USA (2000) & Shoeshine Records, United Kingdom (2002)

Crisis Helpline: Shoeshine Records, United Kingdom (2004)

Yard Sale: Snapper Records/Shoeshine Records, United Kingdom (2006)

Just Some Demos EP: Independent release, USA (2007)

Touring for national and international album promotion

Performed at music venues in the UK to promote *Crisis Helpline* (2002, 2004, 2005)

Performed at festivals and music venues in the UK to promote *Yard Sale* (2005, 2006)

Performed at music venues in the USA to promote album sales (2006)