KELBI DELAUNE, PH.D.

Assistant Professor of Environmental Science
Sul Ross State University Alpine, Texas
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PROFESSIONAL SUMMARY

As a lifelong learner and ecologist, I am dedicated to mentorship, student-centered education, and increasing participation in STEM. My background spans the arts, natural resource management, teaching, ecological research, and higher education administration. With strong teaching evaluations and over a decade in aquatic ecology, I focus on supporting postgraduate mentees and fostering collaborative research initiatives. Committed to innovative teaching, I promote experiential learning for diverse student populations.

ACADEMIC PREPARATION and PROFESSIONAL EXPERIENCE

Assistant Professor Environmental Science: Natural Sciences, 09/2024
Sul Ross State University -Alpine, TX

Coordinator of Research and Student Engagement, **Director of Center for Enhancing Undergraduate Research Experience and Creative Activities** 07/2021 – Current
Office of Research and Sponsored Programs, Sam Houston State University, Huntsville, TX

Postdoctoral Research Associate: Jefferson Project, 05/2021
Rensselaer Polytechnic Institute -Troy, NY

Ph.D.: Wildlife, Aquatic, & Wildlands Science Management, 05/2020
Texas Tech University - Lubbock, TX

Master of Science: Biological Sciences, 12/2015
Sam Houston State University - Huntsville, TX

Bachelor of Fine Arts: Theatre, Biology, 05/2011
Sam Houston State University - Huntsville, TX

TEACHING

Lecturer, 07/2021 – 02/2024
Department of Biological Sciences, Sam Houston State University, Huntsville, TX
Courses: General Ecology
Received excellent teaching evaluations across all assessments, including effectiveness, teaching essentials, reflective and integrative learning, collaborative learning, and active learning
Doctoral Associate, 08/2015 - 08/2020

Department of Natural Resources Management, Lubbock, TX

Experiences: Teaching Practicum in Freshwater Biology and freshwater Bioassessment, and Selected for Groundwork Program

Graduate Teaching Assistant, 08/2011 - 05/2015

Department of Biological Sciences, Sam Houston State University, Huntsville, TX

Courses: General Ecology Labs, Anatomy and Physiology Labs, and Environmental Science Labs

Undergraduate Teaching Assistant, 08/2009 - 05/2011

Department of Biological Sciences, Sam Houston State University, Huntsville, TX

Courses: General Ecology Labs

RESEARCH

Postdoctoral Research Associate, 03/2020- 03/2021

Department of Biological Sciences, Rensselaer Polytechnic Institute, Troy, NY

Research for The Jefferson Project at Lake George: Collaboration between Rensselaer Polytechnic Institute, IBM Research, and the Lake George Association

Doctoral Research Assistant, 08/2015 - 05/2020

Department of Natural Resources Management, Texas Tech University, Lubbock, TX

Research and teaching though the Barnes and Pease aquatic ecology labs

Graduate Research Assistant, 08/2011 - 12/2015

Department of Biological Sciences, Sam Houston State University, Huntsville, TX

Research through the Hargrave Aquatic Lab

Undergraduate Research Assistant, 08/2009 - 05/2011

Department of Biological Sciences, Sam Houston State University, Huntsville, TX

Research through the Hargrave Aquatic Lab

HONORS, AWARDS, GRANTS

- ACUE Cohort, 2023
- Ecological Society of America's Faculty Mentoring Network, Ecology 4DEE Curriculum Development
- Council on Undergraduate Research's STR Program, Mentor, 2023
- Sammy Award for Best Academic Organization, EURECA, 2023
- Carl and Laura Hubbs Best Student Paper Award (Desert Fishes Council) 2019
- Student Travel Grant Recipient (Desert Fishes Council) 2013, 2018, and 2019
- Conservation Grant (Desert Fishes Council) 2017
- Student Field and Natural History Award (Southwestern Association of Naturalists)2015
- Second Place Student Presenter (Texas Invasive Plant and Pest Council) 2014
- Student Travel Grant (Texas Invasive Plant and Pest Council) 2014

- Outstanding Graduate Presentation (Graduate Research Exchange) 2013
- First Place Student Presenter (Texas Aquatic and Plant Management Society) 2012
- Outstanding Graduate Presentation (Graduate Research Exchange) 2012
- Special Graduate Scholarship Recipient (Sam Houston State University) 2012 and 2013

Selected Publications

Delaune, K. D., Prevost, L., Cid, C. R. (Invited Submission). Graduating career-ready ecologists with a multidimensional, human-centered, and hands-on curricular approach (4DEE). Fall 2024 Issue for Scholarship and Practice of Undergraduate Research: Undergraduate Research, Scholarship, and Creative Inquiry as a Driver of Career Readiness.

Thompson, D., **Delaune, K. D.**, Yildiz, F., Trad, Tarek, Martin, T. (Preparation for Submission to Journal of Learning Sciences). Mitigating the constraints on undergraduate research experiences by building thoughtful ramps into research. (2023).

Delaune, K.D., Brown, C. L.*, Pease, A. (In Prep for Submission to Arid Landscapes). Spatial and Temporal Variation in Benthic Macroinvertebrate Assemblages at Tributary Confluences of the Pecos River. (2023).

Delaune, K. D., Pease, A., Patino, R., Brown, C. L.*, Barnes, M. A. 2023. Gulf Killifish (*Fundulus grandis*) in the Pecos River: Unique life history traits in a nonnative, inland population. (In Press). Southwestern Naturalist.

Brown C*, **Delaune K**, Pease, A. 2022. Benthic Macroinvertebrate Assemblage Structure in Salinized Reaches of the Lower Pecos River, TX. (In Press). Southwestern Naturalist.

Delaune, K. D., Nesich, D., Goos, J. M., & Relyea, R. A. (2021). Impacts of salinization on aquatic communities: Abrupt vs. gradual exposures. Environmental Pollution, 285, 117636. Available from: https://doi.org/10.1016/j.envpol.2021.117636

Pease, A., & **Delaune, K**. (2021). Dried and salted: Cumulative impacts of diminished flows and salinization on Lower Pecos River food webs. In TNHC-Publications. Desert Fishes Council. Available from: http://dx.doi.org/10.26153/tsw/12405

Delaune, K., Barnes, M. A., & Pease, A. (2018). eDNA detection of species of greatest conservation need in the Lower Pecos River System. Final report to New Mexico Department of Game and Fish, Share with Wildlife Program, Santa Fe

*Denotes Undergraduates Students

WORKSHOPS

Research Experiences for Undergraduates Working Groups, 2022 & 2023. Office of Research and Sponsored Programs, Sam Houston State University.

Student to Scholar, 2023. Sam Houston State University.

Down the Rabbit Hole: Storytelling as a Tool in Research and Presentation, 2022. Office of Research and Sponsored Program's Annual Scholarly Innovation Summit, Sam Houston State University.

Scholarships & Fellowships & Grants! Oh My! 2022. Office of Research and Sponsored Program's Annual Scholarly Innovation Summit, Sam Houston State University.

PRESENTATIONS

Invited

Delaune, K.D., 2023. TEDxSHSU Speaker: The Super Predator You Know Nothing About. Sam Houston State University, Huntsville, TX.

Delaune, K.D., 2023. Keynote Address: Transformation Through Inclusive Education & Innovation. 6th KIBU International Conference. Kibabii University, Kenya, Africa.

Delaune, K.D. 2022. Honors 1101: A Journey in Science & Research. Sam Houston State University, Huntsville, TX.

Academic

Delaune, K.D., Pease, A. 2019.Spatial and temporal variation in benthic macroinvertebrate assemblages at tributary confluences of the Pecos River. Desert Fishes Council, Alpine, Texas.

Award: Carl and Laura Hubbs Best Student Paper Award

Delaune, K.D., Pease, A. 2018.Ecological traits of non-native *Fundulus grandis* in the Pecos River: Implications for impacts on native species. Desert Fishes Council, Death Valley, CA. **Delaune, K.D.**, Barnes, M.A., and Pease, A. 2018. Environmental DNA as a complement to traditional sampling methods. American Fisheries Society, Atlantic City, NJ.

Delaune, K.D., Pease, A. 2018. Spatial and temporal variation in benthic macroinvertebrate assemblages at tributary confluences of a dryland river. Southwestern Association of Naturalist, San Marcos, TX. **Delaune, K.D.,** Pease, A. 2017. Diversity of benthic macroinvertebrate communities at tributary confluences of the Pecos River. Texas Chapter American Fisheries Society, Corpus Christi, TX.

Delaune, K.D., Pease, A. 2016. Diversity of benthic macroinvertebrate communities at tributary confluences of the Pecos River. Desert Fishes Council, Albuquerque, NM.

Delaune, K.D., Pease, A. 2016. Proposed research: Functional diversity of aquatic communities at tributary confluences of the Pecos River. Texas Tech Annual Biological Sciences Symposium, Lubbock, TX. **Delaune, K.D.,** Hargrave, C.W. 2015. Flow-dependent competitive interactions between the invasive *Gambusia geiseri* and endangered *G. nobilis*. Southwestern Association of Naturalist, San Diego, CA. Award: Student Field and Natural History Award

Delaune, K.D., Hargrave, C.W. 2015. Flow-dependent competitive interactions between the invasive *Gambusia geiseri* and endangered *Gambusia nobilis*. Texas Chapter of American Fisheries Society, Tyler, TX.

Smith, E., Wozniak, J., **Delaune, K.D.,** 2014.Effects of salinity on blue crab behavior and fitness: A mesocosm

study. Gulf Estuarine Research Society, Port Aransas, TX.

Delaune, K.D., Hargrave, C.W. 2014.Competition between the endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a reconstructed desert wetland habitat. Southwestern Association of Naturalist, Lake Charles, LA.

Delaune, K.D., Hargrave, C.W. 2014. Flow-dependent competitive interactions between the invasive *Gambusia geiseri* and endangered *Gambusia nobilis* in a reconstructed desert wetland habitat: Implications for endangered species management. Texas Academy of Science, Corpus Christi, TX.

Delaune, K.D., Hargrave, C.W. 2014. Flow-dependent competitive interactions between the invasive *Gambusia geiseri* and endangered *Gambusia nobilis* in a reconstructed desert wetland habitat: Implications for endangered species management. Texas Invasive Plant and Pest Council, Port Aransas, TX.

Delaune, K.D., Hargrave, C.W. 2013. Flow-dependent competition between the endangered *Gambusia nobilis* and invasive *Gambusia geiseri*. Desert Fishes Council, Port Aransas, TX.

Delaune, K.D., Hargrave, C.W. 2013. Competition between the endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a desert wetland habitat. Southwestern Association of Naturalist, Stillwater, OK.

Delaune, K.D., Hargrave, C.W. 2013.Competition between two congeners: Endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a reconstructed desert wetland, San Solomon Springs, Texas. Texas Academy of Science, Kerrville, TX.

Delaune, K.D., Hargrave, C.W. 2013. Possible competition between two congeners: Endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a reconstructed desert wetland, San Solomon Springs, Texas. Texas Chapter of American Fisheries Society, Galveston, TX.

Delaune, K.D., Hargrave, C.W. 2012. Competition between two congeners: Endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a reconstructed desert wetland, San Solomon Springs, Texas. Sam Houston State University Graduate Research Exchange, Huntsville, TX.

Delaune, K.D., Hargrave, C.W. 2012.Potential competition between two congeners: Endangered *Gambusia nobilis* and invasive *Gambusia geiseri* in a reconstructed desert wetland, San Solomon Springs, Texas. Texas Aquatic and Plant Management Society, Bandera, TX.

Delaune, K.D., Hargrave, C.W. 2012. Potential hybridization between endangered *Gambusia nobilis* and invasive *G. geiseri* in a reconstructed desert wetland. Texas Academy of Science, Alpine, TX. **Delaune, K.D.,** Hargrave, C.W. 2012. A preliminary analysis of potential hybridization between endangered *Gambusia nobilis* and invasive *G. geiseri* in a reconstructed desert wetland, San Solomon Cienega Balmorhea State Park, Texas. Sam Houston State University Graduate Research Exchange, Huntsville, TX.

Delaune, K.D., Hargrave, C.W. 2011. Population dynamics and potential competition between the Endangered *Gambusia nobilis* and invasive *Gambusia geiseri*, San Solomon Cienega, Balmorhea State Park, Texas. Sam Houston State University Biology Graduate Exchange, Huntsville, TX. **Delaune, K.D.,** Hargrave, C.W. 2011.Population dynamics and potential competition between the endangered *Gambusia nobilis* and invasive *Gambusia geiseri*, San Solomon Cienega, Balmorhea State Park, Texas. Texas Invasive Plant and Pest Control Council, Austin, TX.

Award: First Place Student Presenter

Delaune, K.D., Hargrave, C.W. 2011.Population dynamics of *Gambusia nobilis* and *Cyprinidon elegans* in San Solomon Cienega, Balmorhea State Park, Texas. Sam Houston State University, Huntsville, TX. **Delaune, K.D.,** Hargrave, C.W. 2011. Population dynamics of *Gambusia nobilis* and *Cyprinidon elegans* in San Solomon Cienega, Balmorhea State Park, Texas. Texas Academy of Science, Austin, TX.

Delaune, K.D., Hargrave, C.W 2010. Population dynamics of *Gambusia nobilis* and *Cyprinidon elegans* in San Solomon Cienega, Balmorhea State Park, Texas. Desert Fishes Council, Moab, UT.

RESEARCH PROJECTS

Project: National Survey for Student Engagement at Sam Houston State University Role: 2022 NSSE Committee

- **Outcomes:** Summary Report and recommendations for increasing student engagement, manuscript in preparation for high impact practices quality

Project: Providing on Ramps for Undergraduate Students in Research Funded by: NSF, PI: T. Martin: SHSU STEM Center

- **Outcomes:** Assessment and strategy implemented, future funding submission, manuscripts in preparation

Project: Impacts of Salinization on Aquatic Communities in the New York Funded by: NSF, PI: R. Relyea: Salt Pollution Application

- **Outcomes:** Publication, results will be important in management of road salt applications

Project: Investigating Ecological Traits of Non-Native *Fundulus grandis* in the Pecos River: Implications for Impacts on Native Species. Funded by: Deserts Fishes Council Conservation Grant. PI: Kelbi D. Delaune. • **Outcomes:** Publication, Specimen in Museum Collection, 3 Conference Presentations

Project: Influence of Tributary Confluences on the Biodiversity Aquatic Communities in the Pecos River. Funded by: Texas Tech University's Strategic Research. PI: Allison Pease and Kelbi Delaune. • **Outcomes:** Best Student Research Presentation, Multiple Manuscripts in Preparation, Magazine Article

Project: Environmental DNA Detection of Species of Greatest Conservation Need in the Lower Pecos River System. Funded by: New Mexico Department of Game and Fish. PI: Matthew Barnes, Co-PI: Allison Pease. • **Outcomes:** Publication in Preparation, Published Report, Invited Talk for American Fisheries Society, New Primers Developed, Management Implications for Native Fishes

Project: Earthwatch Ignite Program: Wading Birds of the Texas Gulf Coast. Funded by: Earthwatch Institute and The Durfee Foundation, 2014. PI: Jeffrey Wozniak. Co-PI: Elizabeth Smith.

- **Outcomes:** Assisted in leading a team of Earthwatch Ignite high school volunteers from Los Angeles County, California in the field (Aransas National Wildlife Refuge) to conduct research on the wading birds of Texas, with specific interest in understanding how environmental changes will affect the endangered Whooping Crane on the Texas Coast.

Project: Long-term monitoring of the Endangered Pecos Gambusia and Comanche Springs Pupfish. Funded by**:** Texas Parks and Wildlife Department, 2008-2009**;** U.S. Fish and Wildlife Service & Texas Parks and Wildlife Department, 2009-2010**;** Texas Parks and Wildlife Department, 2010-2011; Unites States Bureau of Reclamation, 2010-2013. PI: Chad Hargrave, Co-PI: Raelynn Deaton.

- **Outcomes:** Spring 2009- Fall 2013 monitoring, Implications for Conservation Practitioners, Multiple Outreach, Conference, and Professional Presentations.

Project: Conservation of Fishes in Phantom Springs Lake. Funded by: United States Bureau of Reclamation, 2010-2013. PI: Chad Hargrave.

- **Outcomes:** Long-term Monitoring and Conservation Efforts, Informed Policy, and Conservation Strategy

Project: Long-term Monitoring of Harmon Creek, Huntsville, TX. Funded by: Sam Houston State Universities Department of Biological Sciences.

- **Outcomes:** Long-term Dataset and Monitoring, Outreach

Project: Local, Regional, and Temporal Drivers of Fish Communities in The Big Thicket National Preserve. Funded by: Big Thicket Association, 2008-2009. PI: Chad Hargrave. • **Outcomes:** Data Collection, Conservation Implications, Publications

RESEARCH SKILLS

- Data Analysis
- SPSS, R, NVivo
- Engaged Learning
- STEM Pedagogy
- Strategic Planning
- Communication
- Council on Undergraduate Research
- Cross-cutting Collaboration • Field and Lab Based Methods • Team building
- Leadership
- Evaluation and Assessment • Grant Writing

AFFILIATIONS

- American Association for the Advancement of Science
- STEM UP Network, Advancing Women in STEM
- Skype-A-Scientist
- National Council of Research Administrators
- Desert Fishes Council
- Texas Invasive Plant and Pest Control Council
- Southwestern Association of Naturalist

SERVICE & OUTREACH

Leadership

- Executive Member Leadership, Biomedical Research, Innovation, Training and Employment (BRITE) Consortium, Present
- Ramps Into Research Leadership, Sam Houston State University, Present

- National Survey for Student Engagement Leadership Committee, Sam Houston State University, Present

Service

- Reviewer, National Endowment for the Arts, Present
- Reviewer, National Science Foundation, Present
- Reviewer, National Council for Undergraduate Research, Present
- Mentor, First-Gen Trailblazer Program
- Miss Sam Houston Judge, Sam Houston State University, Present
- University Strategic Planning Working Group, Present
- Kenya STEM Professional Learning Community Co-Leader, 2023
- Honors Student Research Contract, Mentor, 2023

Outreach

- Skype-A-Scientist, Scientific Outreach for K-12 Students, Present
- eCybermission, Tx. Ambassador for the Army's Program for the East Texas Region, Present • South Plains Regional Science Fair Judge, Lubbock, TX, 2019
- Scales, Tails, and Trails Outreach Event, Association of Natural Resource Scientists, Texas Tech University 2016
- Volunteer, Heart of Lubbock Community Garden, 2017
- Research Volunteer, South Pecos River Sampling, Southeastern Oklahoma, and Sam Houston State University, 2013
- K-12 Outreach (El Paso ISD Elementary), Texas Parks and Wildlife Department, Balmorhea State Park, Toyahvale, TX , 2013
- Park Clean Up, Texas Parks and Wildlife, Balmorhea State Park, Toyahvale, TX. 2012-2013 • Volunteer & Community Outreach, Biological Sciences Graduate Student Organization, Sam Houston State University, 2011-2015
- Seasonal Deer Survey Volunteer, Texas Parks and Wildlife, 2011

References

Allison A. Pease, Ph.D.
Assistant Professor of Fisheries Ecology
School of Natural Resources
University of Missouri
573-882-6607
peasea@missouri.edu

Aaron Lynn, Ph.D.
Chair and Professor
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