

Shannon LJ Bayliss, Ph.D. she/her(s)

PROFESSIONAL APPOINTMENTS

Post-Doctoral Researcher , <i>current</i>	Florida State University (FSU)
Pilina 'Āina Coordinator (<i>formerly Teaching Change</i>), <i>current</i>	Hilo, Hawai'i
Head Teaching Associate , 2018-2019	University of Tennessee, Knoxville (UTK)

EDUCATION

2021	Ph.D. Ecology & Evolutionary Biology <i>Advised by</i> Dr. Joseph K. Bailey	University of Tennessee, Knoxville (UTK)
2021	M.S. Journalism & Electronic Media <i>Advised by</i> Dr. Mark Littmann & Dr. Julie Andsager	UTK
2016	M.S. Biology <i>Advised by:</i> Dr. Casey P. terHorst	California State Univ. Northridge (CSUN)
2012	B.S. Environmental Sciences	The University of Virginia (UVA)

RESEARCH ACTIVITY

Publications

(Accepted)

1. **Bayliss, SLJ**, IM Ware, LO Mueller, JA Schweitzer, JK Bailey. Stacked species distribution models predict a climate-driven loss of genetic variation in bud break across landscapes in the western U.S. *Communications Biology*.

(Online)

2. **Bayliss, SLJ**, M Papeş, JA Schweitzer, JK Bailey. (2022). Aggregate population-level models informed by genetics predict more suitable habitat than traditional species-level model across the range of a widespread riparian tree. *PLoS ONE* 17(9): e0274892. doi. 10.1371/journal.pone.0274892
3. **Bayliss, SLJ**. *Unearthing Tree Symbolism in Song: A Sentiment Analysis*.
4. **Bayliss, SLJ**, LO Mueller, IM Ware, JA Schweitzer, JK Bailey. (2020). Plant genetic variation drives geographic differences in atmosphere-plant-ecosystem feedbacks. *Plant Envi Interactions* 00:1-15. DOI: 10.1002/pei3.10031
5. Beals, KK, JA Moore, SN Kivlin, **SLJ Bayliss**, CY Lumibao, LC Moorhead, M Patel, JL Summers, IM Ware, JK Bailey, JA Schweitzer. (2020). Predicting plant-soil feedback in the field: meta-analysis reveals that competition and environmental stress differentially influence PSF. *Front Ecol Evol* 8:191. doi: 10.3389/fevo.2020.00191
6. Van Nuland, ME, J Vincent, IM Ware, LO Mueller, **SLJ Bayliss**, KK Beals, JA Schweitzer, JK Bailey. (2020). Interspecific trait variation across elevation predicts a widespread tree species' climate niche and range limits. *Ecol Evol* 00:1-12. DOI: 10.1002/ece3.5969

7. **Bayliss, SLJ**, ZR Scott, MA Coffroth, CP terHorst. (2019). Genetic variation in *Breviolum antilloorgium*, a coral reef symbiont, in response to temperature and nutrients. *Ecol Evol* 9(5): 2803-13. DOI: 10.1002/ece3.4959
8. Ware IM, C Fitzpatrick, A Senthilnathan, **SLJ Bayliss**, KK Beals, LO Mueller, JL Summers, RC Wooliver, ME Van Nuland, et al. (2019). Feedbacks link ecosystem ecology and evolution across spatial and temporal scales: Empirical evidence and future directions. *Funct Ecol* 33:31-42. DOI: 10.1111/1365-2435.13267
9. **Bayliss, SLJ**, CP terHorst, JA Lau. (2017). Testing genotypic variation of an invasive plant species in response to soil disturbance and herbivory. *Oecologia* 183:1135. DOI 10.1007/s00442-017-3820-9

Scientific Presentations

- **Bayliss, SLJ**. Biodiversity in Science and Song. Florida St. University Post-Doctoral Appreciation Week Research Symposium. September 2022.
- **Bayliss, SLJ**. Landscape Distribution of Genetic Diversity and Ecosystem Function in a Changing Climate. UTK. Ecology & Evolutionary Biology Department Seminar Series. November 2021.
- **invited Speaker for Organized Oral Session at ESA Utah 2020** – session cancelled due to COVID-19
- **Bayliss, SLJ**, JA Schweitzer, JK Bailey. Genetically informed SDMs mismatch with species-range SDMs by up to 50%. UTK Department 4th Year Seminar. February 2020.
- **Bayliss, SL**, JA Schweitzer, JK Bailey. Better Range Predictions Using Appropriate Genetic Niche Models. Ecological Society of America, New Orleans, LA. August 2018 *=poster
- **Bayliss, SL**, JA Schweitzer, JK Bailey. Energy and Water limits drive dominant tree population differentiation. Ecological Society of America, Portland, OR. August 2017
- **Bayliss, SL**, CP terHorst. Genetic Diversity and Nutrients affect the ecology of *Symbiodinium*. Western Society of Naturalists, Sacramento, CA. November 2015
- **Bayliss, SL**, CP terHorst. Genetic Diversity and Nutrients affect the ecology of *Symbiodinium*. Ecological Society of America, Baltimore MD. August 2015
- **SL Bayliss**, CP terHorst, JA Lau. Context-dependent effects of herbivory on biotic resistance to plant invasion. Western Society of Naturalists, Tacoma, WA. November 2014.
- **SL Bayliss**, CP terHorst, JA Lau. Selection for size, phenology, and resistance drives invasion success in a non-native legume. Ecological Society of America, Sacramento, CA. August 2014.

Funding

2022	Post-Doc: NSF Geography & Spatial Sciences (now HEGS). PI: Dr. S. Pau, FSU	\$328,000
2021	Dawn and Lawrence Taylor Dissertation Award, UTK	\$5,000
2020	Yates Dissertation Fellow, UTK	\$10,000
2019	Student-Faculty Research Award awarded to Bayliss and Bailey, UTK	\$4,303
2017	EEB Department Research Funds, UTK	\$1,100
2017	Penley Graduate Fellowship, UTK	\$5,000
2016	Student-Faculty Research Award awarded to Bayliss and Bailey, UTK	\$3,684
2016	Bianchi Award for Outstanding Graduate Student, CSUN	\$400
2014	<i>The Scifund Challenge</i> with Experiment.com, crowdfunding, CSUN	\$1,463
2014	Grad. Fellowship for Outstanding Promise in Research in Science and Math, CSUN	\$5,000
2014	Thesis Support Grant, CSUN	\$1,000

TEACHING

Curriculum Development

- 2022 **Pilina 'Āina Coordinator** (formerly Teaching Change Program)
- 8-part curriculum for high school students built around NSF NEON (National Ecological Observatory Network) data from local field site Pu'u Maka'ala
 - 2/8 lessons include citizen science data generation
 - Focus on career-connected learning
- 2022 **Pilina 'Āina Teacher Training Workshop** (3 day, 2 nights) at Hakalau Forest National Wildlife Refuge, Hawai'i.
- Place-based immersive curricula using biocultural approaches to teaching science
- 2018-19 **Head Teaching Associate**, Skills of Biological Literacy.
- Curriculum re-design
 - Management of 8-12 peer teaching assistants per semester

Graduate Courses Taught

2020	Scientific Writing	EEB 603	UTK
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Undergraduate Courses Taught

2021	Global Change Ecology	EEB 419	UTK
2021	Career/Professional Development	EEB 311	UTK
2020	Ecosystems Ecology	EEB 404	UTK
2016-17	Skills of Biological Literacy	BIO 150	UTK
2015	Biology Lab Field Trip Leader	BIO 100L	CSUN
2014	Principles of Ecology	BIO 427/L	CSUN
2013-15	Introductory Biology Lab	BIO 100L	CSUN

Invited Lectures

2020	EEB Theory & Methods, " <i>A leaf by any other name</i> "	Dr. Liz Derryberry	UTK
2020	Ecosystems Ecology, "Nutrient Cycling"	Dr. Stephanie Kivlin	UTK
2018-21	Career & Prof. Dev., "Science Communication"	Dr. Jennifer Schweitzer	UTK
2017	Ecology, "Invasion Biology"	Dr. Kimberly Sheldon	UTK

MENTORING

current	<i>UROP (Undergrad. Research Opp. Program) Mentoring Program</i> <ul style="list-style-type: none"> • Mentoring two undergraduate students in research projects • Designed two research projects exploiting stored samples (datasets will be >10 years) from Inst. Pacific Islands Forestry, Hilo, Hawai'i. 	FSU, Hawai'i
2017-20	<i>Undergraduate Research Coordinator</i> , Bailey-Schweitzer Lab Groups <ul style="list-style-type: none"> • Management, recruitment, training of >10 undergraduate researchers who assisted in lab, grad student, and independent research • Wrote PhD letter of rec. for outstanding mentee, K. Hollabaugh, with successful admission to program in Entomology and Plant Pathology 	UTK
2017-21	<i>EEB Undergraduate Mentor Program</i> <ul style="list-style-type: none"> • Grad student mentor to 1-2 undergrad students each year in EEB 	UTK

LEADERSHIP, SERVICE, & COMMUNITY ENGAGEMENT

ongoing	Referee: <i>Glob Chang Biol, J Plant Ecol, Mol Ecol, Oecologia, J Zool</i>	
2022	Exhibitor for Pilina 'Āina at "Walk for the Wild" Event <ul style="list-style-type: none"> • <i>invited by</i> Friends of Hakalau Forest 	Hakalau NWR
2022	Dry Forest Bio-Cultural Blitz; Pilina 'Āina	Pu'u Wa'a Wa'a
2022	Teacher Training Workshop; Pilina 'Āina <ul style="list-style-type: none"> • Logistics, curriculum development, teaching • 12 teachers attended on-site overnight field trip 	Hakalau NWR
2022	Ecology Consultant for Art Exhibit: " <i>A bearing tree is a witness</i> " <ul style="list-style-type: none"> • 16 mm film in exhibit debuting October 21, 2022 	G44 Gallery, Toronto
2021	Science Fair Judge: S. Appalachian Science & Engineering Fair (SASEF)	Tennessee
2019	Panelist: Undergrad BrownBag Workshop: <i>Do I need to go to grad school?</i>	UTK
2017-19	Graduate Student Seminar Committee <ul style="list-style-type: none"> • Soliciting nominations, inviting, hosting speakers for weekly EEB seminar series 	UTK
2014-15	Women in Science Club President <ul style="list-style-type: none"> • Organized skill workshops, faculty-student lunches, career panel • Outreach at <i>The Science Academy</i> in North Hollywood with 7-8th graders (science fair judging, classroom visits) 	CSUN, Los Angeles
2010/12	Alternative Spring Break Club Student Leader <ul style="list-style-type: none"> • Led peers on conservation projects in Drake Bay, Costa Rica • Invasive species removal & ecological education; Rio de Janeiro, BR 	UVA, Costa Rica, Brazil

2008-12	Virginia Club Tennis President (2011-12)	UVA
	<ul style="list-style-type: none"> • Match Coordinator (2010) • USTA <i>Tennis on Campus</i> Leadership Award (2011) • Women's Doubles National Finalist (2012) 	

ADDITIONAL TRAINING & AWARDS

current	<i>Basics of Teaching Certification</i>	FSU
2021	J. Paul Blakely Award for Science Writing , Soc. Technical Comm.	UTK
	<ul style="list-style-type: none"> • Entry: "Romeo, Lady Gaga, and Flamingos: Evolutionary Biology in a Hair-Obsessed World." 	
2021	<i>HubSpot Academy Social Media Certification</i>	UTK
	<ul style="list-style-type: none"> • Best practices in social media policy, content creation, social engagement and monitoring, ROI monitoring for stakeholders, etc. 	
2020	<i>Funded Workshop: Species Distribution Modeling with Bayesian Stats in R</i>	remote
2017	<i>Sponsored Attendee: National Com-Sci-Con Annual Meeting & Workshop</i>	Harvard
2017	J. Paul Blakely Award for Science Writing , Soc. Technical Comm.	UTK
	<ul style="list-style-type: none"> • Entry: "New Science Faculty Profile of Dr. Kimberly Sheldon" 	
2015	Eco-Art Award , Ecological Society of America Annual Meeting	Baltimore, MD
2015	<i>Sponsored Attendee: California STEM Symposium</i>	Anaheim, CA
2014	Eco-Art Award , Ecological Society of America Annual Meeting	Sacramento, CA