Ashlynn M. Hord

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I am an evolutionary ecologist investigating the biogeographic patterns and fitness consequences of interspecific gene flow across spatial and temporal scales. I take a genes-to-ecosystems approach utilizing population genetics, comparative genomics, common garden, field biology, and modeling methods to interrogate genomic, trait, and environmental data.

Interests

Hybridization, introgression, gene flow, adaptation, global change, species interactions, eco-evolutionary dynamics, plant biology, ecosystem resilience

Education

2019 B.S. Biology, Saint Mary's College of California, *magna cum laude*

Research Experience

2021-Present **PhD Candidate**, University of Tennessee, Knoxville.
Anticipated graduation: Summer 2027
PIs: Drs. Jen Schweitzer and Joe Bailey

2020-2021 **DNA Analyst**, BioPet Laboratories

2018 **NSF REU Research Intern**, Missouri Botanical Garden
Advisors: Drs. Rosa del-C. Ortiz and Cynthia Hong-Wa
Project Title – Studies in Malagasy Menispermaceae, a multivariate analysis of Burasaia madagascariensis

Publications

1. **Hord, A. M.**, Fischer, D. G., Schweitzer, J. A., LeRoy, C. J., Whitham, T. G., & Bailey, J. K. (2025). Hybrid introgression as a mechanism of rapid evolution and resilience to climate change in a riparian tree species. *Communications Biology*, *8*(1), 1173.

2. Nytko, A. G., **Hord, A. M.,** Senior, J. K., O'Reilly-Wapstra, J., Schweitzer, J. A., & Bailey, J.K. (2024). Evolution of rarity and phylogeny determine above- and belowground biomass in plant-plant interactions. *PLoS ONE*, *19*(5), e0294839.

3. Love, S.J., Edwards, J.D., Barnes, C.N., d'Entremont, T.W., **Hord, A.M.,** Nytko, A.G., Sero, N.B., Kivlin, S.N., & Bailey, J.K. (2023). Identifying research targets and risks in climate change studies to break barriers to broad inference. *PLoS Climate*, *2*(12), e0000320.

Manuscripts in review

1. **Hord, A.M.**, Nytko, A.G., Politano, L.E., Schweitzer, J.A., & Bailey, J.K. (*in review*). Using a biogeographic 'genes to ecosystems' framework to understand the assembly and disassembly of terrestrial forest ecosystems. *American Journal of Botany*.

Manuscripts in preparation

1. **Hord, A.M.,** Vegso, Z., Shaw, A., Schweitzer, J.A., Bailey, J.K., & Fitzpatrick, B.M. *(in prep)*. Syngameon dynamics: operationalizing the syngameon concept to investigate the eco-evolutionary consequences of interspecific gene flow.

2. **Hord, A.M.,** Papes, M., Bailey, J.K., & Schweitzer, J.A. *(in prep)*. Stacked species distribution models predict shifts in the geographic distribution and magnitude of potential contact zones for hybridizing *Populus* species in the North American cottonwood syngameon.

3. Love, S.L., Schweitzer, J.A., Kivlin, S.N., Edwards, J.D., **Hord, A.M.**, & Bailey, J.K. (*in prep)*. Landscape-scale convergence in soil microbiomes across relict ecosystems.

Grants and Awards

2026	**UTORII GATE Fellowship** ($37,000) – Mentor: Dr. John Lovell
2025	**JGI Community Science Program** – Sequencing services including *de novo* genome assembly and annotation (12 genomes) and whole genome resequencing (600 genotypes) PI: Ashlynn Hord, Project Number: 510777 Co-PIs: Jen Schweitzer, Joe Bailey, Ben Fitzpatrick, Wellington Muchero
2024	**FY25 Graduate Research Award** ($3,192) **Dennis Breedlove Award** ($1,500)
2023	**NSF Graduate Research Fellowship** ($147,000) **FY24 Graduate Research Award** ($2,750) **Dennis Breedlove Award** ($1,500) **Hochman Award** ($1,500)
2019	**Carlos Freitas Award** – *for an outstanding graduating student in Biology*, Saint Mary's College of California
2018	**Spectrum Award** – *for undergraduate writing across disciplines,* Saint Mary's College of California

Presentations

1. **Hord, A.M.**, Vegso, Z., Shaw, A., Bailey, J.K., Fitzpatrick, B.M. Syngameon dynamics: operationalizing the syngameon concept to investigate the eco-evolutionary importance of interspecific gene flow. *Ecological Society of America Annual Meeting*. July 30, 2026. (Poster presentation).

2. **Hord, A.M.** Hybrid introgression as a source of adaptive variation in natural systems. ECO691 – Ecological Impacts of Climate Change, University of Massachusetts, Amherst. Course Instructors: Drs. Toni Lyn Morelli & Sarah J. Love. (Invited speaker).

3. **Hord, A.M.**, Woolbright, S., Schweitzer, J.A., Bailey, J.K. Contemporary occurrence patterns of *Populus* hybrids on isolated sky islands suggest hybridization mediates survival during climatic oscillations. *Ecological Society of America Annual Meeting*. August 14, 2025. (Oral presentation).

4. **Hord. A.M.**, Schweitzer, J.A., Bailey, J.K. Biogeographic patterns and eco-evolutionary impacts of hybridization and introgression in *Populus* species of the Intermountain West. April 23, 2024. *University of Alabama, SupER Bio Seminar*. (Invited speaker).

5. **Hord, A. M.**, Fischer, D. G., Schweitzer, J. A., LeRoy, C. J., Whitham, T. G., & Bailey, J. K. Hybrid introgression as a mechanism of rapid evolution and resilience to climate change in a riparian tree species. *Ecological Society of America Annual Meeting*. August 6, 2024. (Poster presentation).

Teaching Experience

2021 – 2023 **Graduate Teaching Assistant**, University of Tennessee, Knoxville
Introduction to Plant Biology I: Fall 2021
Plant Biology Lab: Spring 2022, Fall 2022, Spring 2023

2010 – 2011 **Undergraduate Teaching Assistant**, St. John's College, Santa Fe, NM
Freshman Laboratory: Fall 2010 – Spring 2011

Mentoring Experience

2022 – present **Undergraduate Mentoring**
Mentees: Tamara Smith, Caden Fleugge, Brylee Nash

2022 – 2023 **Graduate Student Peer Mentor Program**
Mentee: Parker Maynard

Service & Outreach

2025 Faculty Evolutionary Genomics Search Committee, Student Representative
Graduate Affairs Committee Student Representative
2025 TN & AL State Wildlife Action Plans (SWAP): Contributed to literature reviews and data collection & participated in TN SWAP steering committee meeting