Sam J. Ahler

PhD Candidate

Department of Ecology and Evolutionary Biology | Institute for Arctic and Alpine Research

University of Victoria Affiliate

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EDUCATION

2021 **University of Wisconsin — Madison**
B.S. Conservation Biology & B.S. Environmental Studies, *LGBT Studies Minor*
Graduated with Comprehensive Honors (GPA: 3.91)
Honors Thesis: How dispersal and persistence traits have shifted over 60 years in Wisconsin savanna understories (Advisor: Ellen Damschen)

2026 (exp.) **University of Colorado — Boulder**
PhD Ecology and Evolutionary Biology (GPA: 4.0)
Dissertation: Grassland restoration, microsites, and bud banks: drivers of emergence, reproduction, and persistence for perennial grasses (Advisor: Katharine Suding)

PROFESSIONAL EXPERIENCE

2021 – Pres. **Graduate Research Asst.** (Advisors: Katharine Suding & Nancy Shackelford), CU Boulder
- ➢ USDA funded project addressing the impact of microsites on the establishment and recruitment of native species

System: Semi-arid mixed-grass prairie - Colorado, US

2023 **Graduate Research Asst.** (Advisors: Kyra Clark-Wolf & Imtiaz Rangwala), North Central Climate Adaptation Science Center/CU Boulder
- ➢ Synthesize existing knowledge on the effects of climate change, invasive species, and fire on the Northern Great Plains
- ➢ Interview land managers and experts to pool areas of concern for this region

System: Mixed/tallgrass prairies - Great Plains, US

2022 **Graduate Teaching Asst.**, EBIO 1250: Intro to Ecology Research Lab, CU Boulder
- ➢ Taught the lab portion of a course-based undergraduate research experience (CURE) to first-year and transfer students

2022 **Research Asst.** (Advisors: Brian Enquist & Vigdis Vandvick), U of Bergen
- ➢ Collected alpine plant functional traits to assess the impact of experimental warming, precipitation, and grazing on functional traits and community composition

System: Wet alpine meadow - Western Norway

2021 **Field Technician** (Supervisors: Madelon Case & Lauren Hallett), U of Oregon
- ➢ Assessed the effect of grazing and fire on the spread of invasive annual grasses

System: Sagebrush steppe - Great Basin, US

2019 – 2021 **Lab Manager** (Advisor: Ellen Damschen), UW Madison

- ➢ Managed plant functional trait database for prairie and savanna species and trained undergraduate techs on plant ecology protocols

System: Tallgrass prairie and oak savanna - Wisconsin, US

2019 – 2021 **Research Asst.** (Advisor: Laura Ladwig, & Katherine Carton), UW Madison

- ➢ Assessed long-term change in oak savanna understories using dispersal and persistence functional traits

System: Oak Savanna - Wisconsin, US

2018 – 2020 **Research Asst.** (Advisors: Hilary Dugan & Holly Embke), UW Madison

- ➢ Explored the impact of road salt on urban soils, the effect of trophic manipulation on fish abundances in lakes, and the impact of reduced snow cover on below-ice biogeochemical processes

System: Temperate lakes - Wisconsin, US

2018 **Ecological Restoration Intern** (Supervisor: Drew Harry), Madison Audubon Society

- ➢ Helped remove invasive species and collect and process native seeds

System: Restored tallgrass prairie and oak savanna- Wisconsin, US

PUBLICATIONS

1. **Ahler, S.J.**, Ladwig, L.M., Charton, K.T., Henn, J.J. & Damschen, E.I. (2023) Dispersal and persistence traits inform long-term herbaceous plant community change in encroached savannas. Plant Ecology. https://doi.org/10.1007/s11258-023-01307-3
2. Toone, T.A., **Ahler, S.J.**, Larson, J.E., Luong, J.C., Martínez-Baena, F., Ordóñez-Parra, C.A., Silva, M.C. & van der Ouderaa, I.B. (2022) Inclusive restoration: Ten recommendations to support LGBTQ+ researchers in restoration science. Restoration Ecology. https://doi-org.colorado.idm.oclc.org/10.1111/rec.13743
3. Shannon, T., **Ahler**, **S.J.**, Mathers, A., Ziter, C., & Dugan, H. (2020) Road salt impact on soil electrical conductivity across an urban landscape. Journal of Urban Ecology. https://doi-org.colorado.idm.oclc.org/10.1093/jue/juaa006

PRESENTATIONS

1. **Ahler, S.J.**, Paladeni, K., Madsen, M., Miller, C., Lee, J., Suding, K.N., Shackelford, N. (2023) Seed and seedling traits predict grass germination and emergence response to microsite management in rangelands (poster presentation). Society for Range Management Annual Conference, Boise, ID.
2. **Ahler, S.J.**, Corwin, L., Taylor, S. (2022) Field-Based Courses as a Bottleneck to LGBTQ+ Persistence in Ecology (roundtable discussion). Society for the Advancement of Biology Education Research Annual Conference, Minneapolis, MN
3. **Ahler, S.J.**, Ladwig, L.M., Charton, K.T. & Damschen, E.I. (2021) Long-term changes in dispersal and persistence traits of the savanna understory (oral presentation). Ecological Society of America Annual Conference, Virtual

4. **Ahler, S.J.**, Ladwig, L.M., Henn, J.J. & Damschen, E.I. (2020) The Effect of Winter Climate Change on Prairie Plant Bud Bank Survival and Growth (poster presentation). Ecological Society of America Annual Conference, Virtual
5. **Ahler, S.J.,** Ladwig, L.M., Henn, J.J. & Damschen, E.I. (2020) The Effect of Winter Climate Change on Prairie Plant Bud Bank Survival and Growth (oral presentation). Midwest Ecology and Evolution Annual Conference, Macomb, IL

INVITED TALKS

1. **Ahler, S.J.** (2023) Bud-banking—What is it and How can it Benefit Ecological Restoration? Society for Ecological Restoration - Rocky Mountain Chapter Outreach Series
2. **Ahler, S.J.** (2024) LGBTQ+ Experiences in Ecology. Program in Ecology and Evolution Symposium, University of Wyoming
3. **Ahler, S.J.** (2024) Bud-banking—What is it and How can it Benefit Ecological Restoration? Colorado Native Plant Society

ORGANIZED SESSIONS

1. Orr, D., **Ahler, S.J.**, Larson, L., Rao, D., Morris, L.R. (2024) Women Changing the Range: Panel and Forum. Society for Range Management Annual Conference, Sparks, NV

AWARDS AND GRANTS

2023	Thomas J. Cashman Graduate Scholarship, The Environmental Education Foundation	$3,000
2023	Summer Research Award, CU Boulder Ecology and Evolutionary Biology Department	$2,500
2023	CU Boulder Graduate Travel Grant	$450
2022	Summer Research Award, CU Boulder Ecology and Evolutionary Biology Department	$2,500
2020	Undergraduate Research Fellowship, UW Madison Department of Botany	$3,600
2020	John Thomson Award, Botanical Club of Wisconsin	$1,000
2019	Trewartha Undergraduate Research Grant, UW Madison Honors College	$1,500
2019	Summer Study Scholarship, UW Madison	$500

TEACHING EXPERIENCE

Fall 2022 **Lab Teaching Assistant**
CU Boulder, EBIO 1250: Intro to Ecology and Evolution Research
- ➢ Topics included plant and insect community ecology, dendrology, soil science, and ecosystem services in the context of urban apple orchards.
- ➢ Syllabus development
- ➢ Majors and Non-Majors
- ➢ Instructed students in both field and lab environments

2019 – 2021 **Teaching Fellow** (Supervisors: Hannah Bailey and Marina Kelly)
UW Madison, INTER-LS 250: Undergraduate Research Experience
- ➢ Topics varied, the course goal was to expose students to quantitative and qualitative research while working in labs on campus on individual projects

- ➢ Syllabus development

MENTORING

2023 - Pres. **Leah Terry (she/her)**, Undergraduate Research Assistant, Red Rocks Community College
- ➢ Mentored as a part of the Research Experience for Community College Students (RECCS) program. Developed research skills while addressing weed emergence in response to experimental setup (via top-soil removal).

2023 - Pres. **Rachel Belport (she/her)**, Undergraduate Technician, CU Boulder
- ➢ Aided in monitoring multiple grassland experiments including demographic growth measurements, community composition, and community assembly.

2023 - Pres. **Sarah Newman (they/them)**, Undergraduate Technician/Research Assistant, CU Boulder
- ➢ Assisted on Honors Senior Thesis addressing fitness impacts of commercially grown species used in restorations. (Advised by Ezra Kottler and Nancy Emery).
- ➢ Aided in monitoring multiple grassland experiments including demographic growth measurements, community composition, and community assembly.

2022 - Pres. **Catlina Johnson (she/her)**, Undergraduate Research Assistant, CU Boulder
- ➢ Developing Honors Senior Thesis addressing inter- and intraspecific competition in response to soil microbial communities sourced from various restorations.

Summer 2022 **Jordan Lee (she/her)**, Undergraduate Technician, CU Boulder
- ➢ Aided in monitoring multiple grassland experiments including demographic growth measurements and community composition.

Spring 2021 **Abigail Widdell (she/her)**, Lab Manager in-training, UW Madison
- ➢ Aided in collection of plant functional traits

SERVICE

2021 – Pres. **Colorado Native Plant Society, Steering Committee Member**

2022 – Pres. **Colloquium Committee, Co-chair**
CU Boulder, Ecology and Evolutionary Biology Department

2024 – Pres. **Diversity and Inclusion Committee, Voting member**
Society for Range Management

2022 - 2024 **Social Committee, Co-chair**
CU Boulder, Ecology and Evolutionary Biology Department

2021 – 2023 **Graduate Application Assistance Program (GAAP) Mentor**
CU Boulder, Institute for Arctic and Alpine Research

PROFESSIONAL MEMBERSHIPS

Ecological Society of America, International Society for Nonbinary Scientists, Audubon Society, The Prairie Enthusiasts, Colorado Native Plant Society, Society for Range Management

PEER REVIEWING

Restoration Ecology, Natural Areas, Rangeland Ecology and Management Dedicated Reviewer