

Aramee Diethelm

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EDUCATION

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| University of Nevada, Reno | Reno, NV |
| PhD, Ecology, Evolution, and Conservation Biology | 2023 |
| Supervisor: Dr. Elizabeth G. Pringle | |
| <i>Thesis:</i> From plants to predators: investigating the phytochemical landscape from the herbivore's perspective | |
| Portland State University | Portland, OR |
| BS, Biology. <i>Summa cum laude</i> . Phi Kappa Phi Honors Society | 2016 |

RESEARCH EXPERIENCE

Postdoctoral Researcher 2023 – current

University of California, Davis

Supervisors: Dr. Elizabeth E. Crone / Dr. Neal M. Williams

- Leading a multi-year, multi-agency study of western monarch (*Danaus plexippus*) breeding phenology and habitat use across Department of Defense lands and nearby wildlife refuges, examining how seasonal and spatial variation in breeding activity, milkweed availability, and vegetation structure shape patterns of habitat use and guide the timing and prioritization of conservation actions in relation to other land-use needs.

Graduate Research Assistant 2017 – 2023

National Science Foundation Graduate Research Fellowship

University of Nevada, Reno

Research Advisor: Dr. Elizabeth G. Pringle

Dissertation: Community dynamics across a mosaic of chemistry: a study of monarch butterflies (*D. plexippus*), their larval food-plant (*Asclepias* spp.; milkweeds), and their predators through an environmental gradient in the Great Basin.

- Investigated the "phytochemical landscape" of milkweeds by surveying 45 populations across the Great Basin. Phenotype data was then compared to plant secondary metabolites using a non-target approach, from which I identified compound classes that respond differently to biotic and abiotic pressures.
- Established six common gardens across a 400 km environmental gradient to determine differing climate-mediated abiotic and biotic pressures on a specialist herbivore (*D. plexippus*, N = 1,290).
- Examined the intraspecific variation of induced plant trait responses to co-occurring herbivory and water-limitation using a common garden, with plants from low water-availability areas responding with greater magnitude to single stressors, and all populations showing a decline in response to two stressors.

Field Assistant Researcher 2017

Washington State University

Supervisor: Dr. Cheryl B. Schultz

- Conducted surveys for endangered Fender's blue butterfly (*Icaricia ilariids fenderi*)

eggs on threatened host-plants (Kincaid's lupine; *Lupinus sulphureus kincaidii*) in long-term monitoring plots.

Undergraduate Researcher 2016 – 2017
 Washington State University
 National Science Foundation Research Experience for Undergraduate Program
 Research Advisor: Dr. Cheryl B. Schultz

- Designed and implemented independent project investigating the sublethal effects of neonicotinoid seed treatments from co-planted crop species with host-plants (milkweeds) on monarch larval development and survival.

Undergraduate Researcher 2015 – 2018
 Portland State University
 Ronald E. McNair Scholars Program
 Research Advisor: Dr. Susan E. Masta

- Identified parasitoid Hymenoptera from pitfall traps to family level and analyzed those data to determine differences in parasitoid community assemblages from different types of urban green roof vegetative plantings.

Undergraduate Assistant Researcher 2015 – 2017
 Portland State University
 Research Advisor: Dr. Daniel J. Ballhorn

- Examined the effects of nitrogen-fixing rhizobia on parasitoid Hymenoptera recruitment in *Phaseolus lunatus* (lima bean) by assisting with background literature searches, data analysis, and manuscript preparation.

PUBLICATIONS

Diethelm, A.C., Reichelt, M., & Pringle, E.G. (2024). Herbivores disrupt clinal variation in plant responses to water limitation. *Journal of Ecology*, 112(2).
<https://doi.org/10.1111/1365-2745.14237>

Diethelm, A.C., Kost, K.E., & Pringle, E.G. (2023). Plant water limitation and its impact on the oviposition preferences of the monarch butterfly (Lepidoptera: Nymphalidae). *Journal of Insect Science*, 23(4). <https://doi.org/10.1093/jisesa/iead075>

Godschalx, A.L., **Diethelm, A.C.**, Kautz, S., et al. (2023). Nitrogen-fixing rhizobia affect multitrophic interactions in the field. *Journal of Insect Behavior*, 36.
<https://doi.org/10.1007/s10905-023-09833-8>

Diethelm, A.C., & Masta, S.E. (2022). Urban green roofs can support a diversity of parasitoid wasps. *Frontiers in Ecology and Evolution*, 10.
<https://doi.org/10.3389/fevo.2022.983401>

Diethelm, A.C., Reichelt, M., Dilts, T.E., Farlin, J.P., Marlar, A., & Pringle, E.G. (2022). Climatic history, constraints, and the plasticity of phytochemical traits under water stress. *Ecosphere*, 13(8). <https://doi.org/10.1002/ecs2.4167>

GRANTS AND AWARDS

Brussard Scholarship, \$1,000 2022
 University of Nevada, Reno

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| Diana Hadley-Lynch Scholarship, \$1,100 University of Nevada, Reno | 2022 |
| Graduate Student Association Outstanding Graduate Student, \$1,000 University of Nevada, Reno | 2022 |
| Graduate Student Association Travel Award, \$500 University of Nevada, Reno | 2022 |
| National Science Foundation Graduate Research Fellowship, \$138,000 University of Nevada, Reno | 2019 |
| Garden Club of America Centennial Pollinator Fellowship, \$4,000 University of Nevada, Reno | 2019 |
| Graduate Student Access Grant, \$1,500 University of Nevada, Reno | 2019 |
| Graduate Student Access Grant, \$1,500 University of Nevada, Reno | 2018 |
| Hitchcock Center for Chemical Ecology Fellowship, \$4,000 University of Nevada, Reno | 2018 |
| Graduate Dean's Merit Scholarship, \$5,000 University of Nevada, Reno | 2017 |
| NSF Research Experience for Undergraduates Program, \$3,000 Landscape Ecology and Ecosystem Dynamics Washington State University | 2016 |
| Oregon Opportunity Grant, \$3,000 Portland State University | 2016 |

TEACHING EXPERIENCE

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| University of Nevada, Reno <i>Graduate Coordinator</i> | Biology Help Center | 2023 |
| <ul style="list-style-type: none"> • Overseeing and assisting in the mentoring of >600 students per semester. • Supporting student academic performance by coordinating tutor availability. | | |
| University of Nevada, Reno <i>Graduate Teaching Assistant</i> | Ecology and Population Biology | 2023 |
| <ul style="list-style-type: none"> • Created grading rubrics for course worksheets and long-answer exam questions. • Consulted instructor on students' progress to provide target areas for improvement. | | |
| University of Nevada, Reno <i>Graduate Teaching Assistant</i> | Introduction Organismal Biology | 2018 |
| <ul style="list-style-type: none"> • Implemented biweekly flip-classroom workshops to increase student engagement and introduced remote attendance options that increased student participation. • Developed original worksheets from lecture material to improve student learning. | | |
| University of Nevada, Reno <i>Graduate Teaching Assistant</i> | Principles of Biology Laboratory | 2017 – 2018 |

- Prepared dynamic lectures to engage students and increase active learning.
- Instructed students in a variety of biology-related laboratory skills and taught essential techniques to composing a quality scientific research paper.

Portland State University
Classroom Facilitator

Principles of Biology II

2014

- Engaged students to be active participants by encouraging communication within groups while providing key insights into the concepts from class worksheets.

CONFERENCE PRESENTATIONS

Uncovering breeding phenology complexity: Spatiotemporal dynamics using western monarch butterflies (*Danaus plexippus*) as a model. AC Diethelm, CB Schultz, and EE Crone. Western Monarch Breeding Science Meeting. July 2025. Invited talk.

Evaluating competing hypotheses for breeding season phenology of western monarch butterflies (*Danaus plexippus*). AC Diethelm and EE Crone. 109th Annual Meeting of the Ecological Society of America. 2024. Contributed talk.

Understanding western monarch butterfly breeding phenology for optimized DoD habitat management. AC Diethelm, CB Schultz, and EE Crone. 41st Annual National Military Fish and Wildlife Association Meeting. Grand Rapids, MI. March 2024. Contributed talk.

Monarch butterfly survival in the Anthropocene: How variation in abiotic conditions impacts monarch performance from a tritrophic perspective. AC Diethelm and EG Pringle. 107th Ecology Society of America Annual Meeting. Montreal, Quebec. August 2022. Contributed talk.

Monarch butterfly success in the Great Basin, USA: a tritrophic perspective. AC Diethelm and EG Pringle. 69th Annual Meeting of the Entomological Society of America. Denver, CO. October 2021. Contributed talk.

Co-occurring Drought and Herbivory Modulate Plant Stress Responses in Narrowleaf Milkweed (*Asclepias fascicularis*) in a Population-dependent Manner. AC Diethelm and EG Pringle. 105th Ecology Society of America Annual Meeting. Virtual. August 2020. Contributed talk.

Tritrophic interactions and monarch larval success in the Great Basin, USA. AC Diethelm, C Gosse, and EG Pringle. 2019 International Pollinator Conference. Davis, CA. July 2019. Poster presentation.

Presence of Parasitoid Wasps (Hymenoptera) on Urban Green Roofs Suggests Natural Pest Control. AC Diethelm, SE Masta, and OS Starry. 14th Annual Urban Ecology and Conservation Symposium. Portland, OR. February 2016. Poster presentation.

Indirect Affects of Seed-Treatments of Larva Performance of Monarch (*Danaus plexippus*) Butterflies Across Three Host Plant (*Asclepias*) Species. AC Diethelm and CB Schultz. 2nd Annual Summer Undergraduate Research Poster Symposium. Vancouver, WA. September 2016. Poster presentation.

SEMINAR PRESENTATIONS

Feeding in fear – Host-plant species, predators, and larval performance in the monarch butterfly (*Danaus plexippus*). AC Diethelm. Animal Behavior Seminar, University of California, Davis. Davis, CA. February 2024. Invited talk.

OUTREACH PRESENTATIONS

Paving the Way: Postdoctoral Tips for First-Gen Scholars. UC Davis Postdoctoral Scholars Association and Graduate Student Association. Nov. 2024. Invited talk.

Graduate School Insights for Non-traditional Students. Environment for the Americas (EFTA). August 2024. Invited panelist.

First Gen Graduate Student Discussion Panel. TRiO, McNair, and Upward Bound Programs (National First Gen Week), University of Nevada, Reno. Nov. 2023. Invited panelist.

Milkweeds and Monarchs: Precarious Pals. Great Basin Bird Observatory. Jan. 2022. Invited talk.

Talking Toxicity: Northern Nevada Milkweeds and the Community Around Them. Nevada Native Plant Society. March 2020. Invited talk.

SERVICE EXPERIENCE

Ecology 2022 – 2024

Ad hoc Reviewer

- Evaluated submitted manuscript using critical thinking skills and knowledge of system being investigated.

Society for Ecological Restoration 2021 – 2023

UNR Chapter Vice President

- Arranged field visits and planned relevant workshops to provide hands-on training for conservation-related activities to undergraduate and graduate students.

Graduate Student EECB Colloquium Nomination Committee 2018 – 2023

Committee Chair

- Organized regular meetings and trained new members. Implemented selection criteria that increased the diversity among invited speakers.

Annals of the Entomological Society of America 2021

Ad hoc Reviewer

- Assisted in the peer-review process by providing insightful and thorough evaluation of submitted manuscript.

VOLUNTEER EXPERIENCE

UNR Museum of Natural History 2017 – 2023

Museum Volunteer, Outreach

- Lead classroom activities that promote interest our native flora and fauna of Northern Nevada while serving under-represented communities.
- Assisted in the design and filming for an outreach video targeting 4th to 8th graders to teach the importance of biodiversity to ecosystem functioning.

Truckee Meadows Park Foundation 2019 – 2022

Volunteer Biodiversity Researcher

- Improved community awareness of biodiversity and the need for stewardship of public parks by writing natural history stories of the flora and fauna within the parks system. These stories are available on the Foundation's website.

Washoe County Regional Parks and Open Spaces

2020 – 2022

Habitat Restoration Volunteer

- Designed and implemented restoration plan that included improving food resources for pollinators as well as erosion control techniques in degraded areas of the park.
- Organized and lead restoration activities that have installed ~100 lbs. of native seed and 240 native plants while also removing over 400 invasive plants.

Portland State University Museum of Natural History

2015 – 2018

Museum Volunteer, Outreach

- Increased public engagement with Oregon's flora and fauna through managing interactive exhibits from PSU's scientific collections.

PROFESSIONAL AFFILIATIONS

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| California Native Plant Society | 2024 – current |
| Society for Ecological Restoration | 2021 – current |
| Entomology Society of America | 2021 – current |
| Ecology Society of America | 2020 – current |
| Sigma Xi, the Scientific Research Honor Society | 2019 – 2023 |
| Phi Kappa Phi Honors Society | 2015 – 2018 |

UNDERGRADUATE MENTORING

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- 14 students total with two honors thesis and six independent research projects.

REFERENCES

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| Elizabeth G. Pringle, Ph.D. Assistant Professor Department of Biology University of Nevada, Reno Email: epringle@unr.edu | Elizabeth E. Crone, Ph.D. Professor Evolution and Ecology University of California, Davis Email: ecrone@ucdavis.edu | Matt L. Forister, Ph.D. Professor Department of Biology University of Nevada, Reno Email: mforister@unr.edu |
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