

Education

Ph.D in Ecology and Evolutionary Biology

2025 – present

University of Connecticut, Storrs, CT

- Advisor: Dr. Karolina Heyduk

Bachelor of Science in Biology

2019 – 2023

summa cum laude, GPA: 3.92, Departmental Honors

Minor in Environmental Studies

University of Richmond, Richmond, VA

- Honors thesis title: Seed bank dynamics and germination under differential light regimes of the emerging invasive species wavyleaf basketgrass (*Oplismenus undulatifolius*). Advisor: Dr. Carrie A. Wu

Research

Doctoral Student

Aug 2025 – Present

Department of Ecology and Evolutionary Biology, University of Connecticut, CT

Post Baccalaureate Research Assistant

May 2025 – July 2025

Department of Biology, University of Richmond, VA

- Analyzed complex datasets using statistical software and contributed to manuscript preparation.

Laboratory Technician

Aug 2023 – April 2025

Donald Danforth Plant Science Center, St. Louis, MO

Abiotic stress response in photosynthetic organisms. PI: Dr. Ru Zhang

Main projects:

- Quantification of reactive oxygen species (ROS) in C₄ land plant *Setaria viridis* using high resolution microscopy.
- Photosynthetic acclimation to high-light stress in *Setaria viridis*.
- Physiology of heat stress memory in *Sorghum bicolor* and *Setaria viridis*.
- Testing hydroponic growth systems with lettuce (*Lactuca sativa*).
- Comparing lettuce (*Lactuca sativa*) and tomato (*Solanum lycopersicum*) growth, photosynthesis, and yield under traditional shade screens and a photovoltaic solar and shade screen developed by Mirai Solar.
- Comparing physiology and growth between soybean (*Glycine max*) varieties.

Undergraduate Research Assistant

Dec 2020 – July 2023

Department of Biology, University of Richmond, VA

Invasion dynamics of *Oplismenus undulatifolius*, a newly invasive grass in the U.S. mid-Atlantic. PI: Dr. Carrie A. Wu

- Conducted independent research projects examining responses of an invasive grass to changes in light intensity by performing a germination assay and early growth study.
- Conducted surveys of light conditions in eastern deciduous forests.
- Designed and constructed shade structures to simulate three light conditions in forest understories.
- Collected seeds from plants in the field and grown in the lab, and managed the lab seed inventory.
- Executed a pilot study comparing early growth morphology of wavyleaf basketgrass from the invaded and native range.

Main projects:

- Seed bank dynamics and germination of the emerging invasive species wavyleaf basketgrass (*Oplismenus undulatifolius*).
- Morphological plasticity and vegetational growth of wavyleaf basketgrass (*Oplismenus undulatifolius*) under differential light regimes.

Undergraduate Researcher

Summer 2022

Field Ecology Research Education Program, Rocky Mountain Biological Laboratory, Gothic, CO

Demographics of *Valeriana edulis*, a long-lived, dioecious, and alpine perennial. PI: Dr. Will K. Petry

- Conducted an independent research study investigating inconstancy in the sex-expression of male flowers across populations of Edible Valerian (*Valeriana edulis*) as well as potential drivers of its variation.
- Conducted fieldwork over an elevational gradient, involving measurements of floral and morphological traits

Publications

- Pham, DH.**, & Wu, CA. (2023). Seed longevity and germination of the emerging invasive species wavyleaf basketgrass (*Oplismenus undulatifolius*) under varied light regimes. *Invasive Plant Science and Management*, 16(4):225-232. doi:10.1017/inp.2023.27
- Milburn, G., Morris, CM., Kosola, E., Patel-Tupper, D., Liu, J., **Pham, DH.**, Acosta-Gamboa, L., Stone, WD., Pardi, S., Hillman, K., McHargue, WE., Becker, E., Kang, X., Sumner, J., Bailey, C., Thielen, PM., Jander, G., Kane, CN., McAdam, SAM., Lawton, TJ., Nusinow, DA., Zhang, F., Gore, MA., Cheng, J., Niyogi, KK., Zhang, R. (2025). Modification of Non-photochemical Quenching Pathways in the C₄ Model Plant *Setaria viridis* Revealed Shared and Unique Photoprotection Mechanisms as Compared to C₃ Plants. *bioRxiv*, <https://doi.org/10.1101/2025.01.12.632622>

Professional Presentations

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| 2024 | Pham, D.H. , Quantification of reactive oxygen species to understand high light acclimation in C ₄ <i>Setaria viridis</i> , Botany 2024 Conference, Grand Rapids, MI. <i>Contributed talk</i> . |
| 2024 | Pham, D.H. , Quantifying reactive oxygen species in C ₄ <i>Setaria viridis</i> under high light stress, 18 th Annual Scientific Retreat, Donald Danforth Plant Science Center, St. Louis, MO. <i>Contributed talk</i> . |
| 2023 | Pham, D.H. , Seed viability and germination of the emerging invasive species wavyleaf basketgrass (<i>Oplismenus undulatifolius</i>) under shade, Botany 2023 Conference, Boise, ID. <i>Contributed poster</i> . |
| 2022 | Pham, D.H. , Wu, C.A., Germination traits of the emerging invasive species wavyleaf basketgrass (<i>Oplismenus undulatifolius</i>), 47 th Southeastern Population Ecology and Evolutionary Genetics Annual Meeting, Eatonton, GA. <i>Contributed poster</i> . |
| 2022 | Pham, D.H. , Dynamics of male inconstancy in <i>Valeriana edulis</i> in the abiotic and mating environment, Summer Research Symposium, Rocky Mountain Biological Laboratory, Gothic, CO. <i>Contributed talk</i> . |
| 2022 | Pham, D.H. , Wu, C.A., Seed bank dynamics of the emerging invasive species wavyleaf basketgrass (<i>Oplismenus undulatifolius</i>), 37 th Annual A&S Student Symposium, University of Richmond, Richmond, VA. <i>Contributed poster</i> . |

Awards, Honors, Grants

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| 2025 | Impact Scholar fellowship award, The Graduate School, University of Connecticut (\$45,000) |
| 2025 | Distinguished Graduate Fellow award, The Graduate School, University of Connecticut (\$5,000) |
| 2025 | Graduate Research Fellowship Program Honorable Mention, National Science Foundation |
| 2025 | CSTM Member of the Month, Committee for Scientific Training and Mentoring, Donald Danforth Plant Science Center |
| 2024 | Physiological / Ecophysiological Section Best Oral Presentation Award, Botanical Society of America (\$250) |
| 2024 | Best Talk Award, 2024 Scientific Retreat, Donald Danforth Plant Science Center (\$50) |
| 2024 | Professional Development Award, Committee for Scientific Training and Mentoring, Donald Danforth Plant Science Center (\$1000) |
| 2023 | Young Botanist Award, recognizing accomplishments in the botanical sciences, Botanical Society of America |
| 2023 | Preparing Leaders and Nurturing Tomorrow's Scientists (PLANTS) Grant (NSF; DEB #2138730), Botanical Society of America (~\$2,260) |
| 2023 | Betty Ann Dillon Award, Westhampton College, University of Richmond |
| 2023 | The Robert F. Smart Award in Biology, Department of Biology, University of Richmond (\$5,500) |
| 2023 | Senior Achievement Award, Department of Biology, University of Richmond |
| 2023 | Service Award, Department of Biology, University of Richmond |
| 2023 | Member, Beta Beta Beta National Biology Honor Society, University of Richmond Beta Theta Chapter |
| 2022 | Summer research experience full scholarship, Rocky Mountain Biological Laboratory (\$8,000) |
| 2022 | Rocky Mountain Biological Laboratory Travel Award (\$600) |
| 2022 | John Neasmith Dickinson Award, Department of Biology, University of Richmond (\$5,500; <i>Declined</i>) |
| 2022 | Cole Memorial Scholarship Award, Department of Biology, University of Richmond |
| 2022 | Biology Junior Research Award, Department of Biology, University of Richmond |

2022	SEPEEG registration award, supported by the National Science Foundation (\$255)
2022	Undergraduate Travel Grant Award, University of Richmond (\$750)
2022	Member, Omicron Delta Kappa National Leadership Honor Society, University of Richmond Epsilon Circle
2021	University of Richmond Summer Fellowship (\$2,800)
2019–2023	Bonner Scholarship Program, four-year academically grounded civic engagement scholarship, University of Richmond (\$15,000 total)

Leadership, Service, and Training

Mentoring Scientist

2024 - present

PlantingScience, Botanical Society of America.

Provided mentoring and support through asynchronous online conversations to teams of 3-5 students in 6th-12th grade classrooms as students design and carry out a plant-focused scientific investigation in the classroom.

President, National Biology Honor Society

2022–2023

Beta Beta Beta National Biology Honor Society, University of Richmond Beta Theta Chapter.

Revived the Beta Theta chapter of TriBeta National Biology Honor Society to recognize high achieving students committed to the life sciences as well promote professional development opportunities and help build a safe and productive community. Successfully recruited members, held an induction ceremony, led chapter meetings, streamlined the bylaws, and helped organize community building events.

Bonner Center for Civic Engagement Program Associate

2022–2023

Center for Civic Engagement, University of Richmond.

Collaborated with CCE staff and other program associates to strengthen community engagement and learning by leading campus-wide programs, supporting the Bonner Scholars Program, and offering personalized advising to all students to get connected to the city of Richmond. My work focused on building community, deepening student commitment to a greater community, and enhancing critical reflection on topics related to community-driven change, civic engagement, and social justice. Served on the Student Engagement Fund Committee and Assessment Initiatives Committee (Spring 2023).

First-Generation Low-Income Peer Mentor

2020–2023

Student Center for Equity and Inclusion, University of Richmond.

Mentor 1-2 first-year students to promote successful integration into college life, specifically from a FLI perspective, as well as contribute to establishing a sense of community through programming events for the greater FLI community.

Multicultural Student Organization President, Activities Chair

2021–2022

Asian American Student Union, University of Richmond.

Hosted and lead organization and campus-wide meetings to both advance knowledge on Asian, Pacific Island, Desi, and Arab (APIDA) issues/experiences and foster belonging within the community.

WELL 100 Course Peer Instructor

2021

Division of Student Development, University of Richmond.

Professional Development Cohort Intern

2020

Bonner Center for Civic Engagement, University of Richmond.

Multicultural Pre-Orientation and General Orientation Advisor

2020, 2021, 2022

Division of Student Development, University of Richmond.

Youth Mentor

2019–2020

Youth Life Foundation of Richmond, Richmond, VA.

Other Professional Experience

Event Server

2024

St. Louis Country Club

Provide excellent hospitality services for members of the private country club, including cocktailing, event setup, and dining services.

Science Gallery Intern**2019–2022**

Science Museum of Virginia, Richmond, VA.

Researched, developed, and implemented activities to creatively explore methods of scientific communication and actively engage the public in understanding different scientific concepts. Also interpreted and mediated scientific information from exhibits to the general public.

Medical Receptionist**2018–2019**

Back In Motion Physical Therapy, Lorton, VA.