**Sophia Mucciolo**

(570) 336-4469 ½ sophiamucciolo@gmail.com

**EDUCATION**

**Pennsylvania State University, University Park** August 2023-Present

Ph.D., Ecology (in progress)

**Pennsylvania State University, University Park**

B.S., Biology August 2019-December 2022

Minor, Wildlife and Fisheries Science

Cumulative GPA: 4.0

**RESEARCH EXPERIENCE**

Graduate Research Assistant August 2023-Present

*Hermann Lab, Pennsylvania State University* State College, Pennsylvania

Advisor: Dr. Sara Hermann

* Project: Predation and survival of monarch caterpillars in backyard gardens

Undergraduate Researcher January 2021-Present

*Hermann Lab, Pennsylvania State University* State College, Pennsylvania

Advisor: Dr. Sara Hermann

* Project: Milkweed aphid host selection and potential consequences for monarch conservation
* Project: Impact of a milkweed aphid on monarch butterfly oviposition and larval survival

Undergraduate Research Assistant May 2021-Present

*Hermann Lab, Pennsylvania State University* State College, Pennsylvania

Advisor: Dr. Sara Hermann

* Investigate how plant and invertebrate community differences can influence butterfly survival
* Coordinate and communicate with community gardeners who provided study sites
* Develop recommendations for gardeners to add to the conservation plan for Monarch Butterflies

Undergraduate Research Assistant June-September 2021

*Shaver’s Creek Environmental Center* Petersburg, Pennsylvania

Advisor: Dr. Meredith Bashaw

* Utilized ethogram to catalog and record venomous snake behaviors
* Assisted on project studying how captive snake behaviors relate to welfare

**WORK EXPERIENCE**

Lead Animal Ambassador September 2022-July 2023

*Shaver’s Creek Environmental Center*

* Coordinate husbandry and care of 30+ ambassador animals
* Manage 30 students and community volunteers
* Educate students on animal behavior, proper care, and training techniques through readings, discussions, and hands-on experiences and feedback
* Give formal and informal educational presentations about ambassador animal conservation, natural history, and care
* Create public programming and student curriculum

Animal Ambassador September 2019-2022

*Shaver’s Creek Environmental Center* Petersburg, Pennsylvania

* Perform daily husbandry, feeding, and care of a variety invertebrates, herptiles, and raptors, including administering supplement and medication routines
* Maintain feeder invertebrate colonies
* Create enrichment for animals to mimic natural behaviors
* Keep up-to-date records of individual animal care, enrichment, and training
* Practice behavioral observations of raptors and snakes
* Carry out positive reinforcement-based training with raptors and reptiles, including training for medical procedures
* Follow venomous reptile handling and husbandry protocols
* Assist with enclosure renovations to mimic natural history

**RESEARCH GRANTS ($9,000)**

* Erickson Discovery Grant, 2022 (**$3,500**). *“Impact of a milkweed aphid on monarch butterfly oviposition and larval survival.”* Pennsylvania State University.
* Apes Valentes Undergraduate Summer Research Award, 2022. (**$5,500**). *“Impact of a milkweed aphid on monarch butterfly oviposition and larval survival.”* Pennsylvania State University.

**SCHOLARSHIPS AND AWARDS ($56,625)**

* 3rd Place, 2022 Stone Valley Forest Research Exposition (**$125**), Pennsylvania State University.
* 3rd Place, 2022 Undergraduate Research Exhibition, Pennsylvania State University.
* 2022 Evan Pugh Scholar Senior Award, Pennsylvania State University.
* 2021 President Sparks Award, Pennsylvania State University.
* 2020 President’s Freshman Award, Pennsylvania State University.
* 2022 Undergraduate Research Conference Presentation Support, Pennsylvania State University (**$1,500**).
* 2023 NSF GRFP Honorable Mention
* 2023 University Graduate Fellowship, Pennsylvania State University (**$35,000**).
* 2023 Huck Distinguished Graduate Fellowship, Pennsylvania State University (**$20,000**).

**POSTER PRESENTATIONS**

*\*\*Presenting author in bold*

* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (March 2022). “*Milkweed aphid host selection and potential consequences for monarch conservation.”* 27th Annual Gamma Sigma Delta Research Expo, The Pennsylvania State University.
* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (April 2022). “*Milkweed aphid host selection and potential consequences for monarch conservation.”* Stone Valley Forest Research Expo, The Pennsylvania State University.
	+ *3rd place — Overall*
* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (April 2022). “*Host selection: how milkweed species impacts population establishment of a specialist aphid.”* Undergraduate Research Exhibition, The Pennsylvania State University. [Virtual].
	+ *3rd place — Health and Life Sciences*
* **Bashaw, M.J.,** Davidow, S., Clark M., Li, W., Mucciolo, S., Bakaj, M., Dollen, S., & Whitehead, J. (August 2022). *“Snakes on film: Validating welfare assessment for timber rattlesnakes.”* Poster accepted for presentation at the national conference of the Association of Zoos and Aquariums, Baltimore, MD.
* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (November 2022). *“Milkweed aphid host selection and potential consequences for monarch conservation.”* 2022 Entomological Society of America Joint Annual Meeting, Vancouver, BC, Canada.
* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (January 2024). *“What’s for dinner? The impact of milkweed species on monarch predation.”* 2024 Predator-Prey Gordon Research Conference, Ventura, CA.

**ORAL PRESENTATIONS**

* **Mucciolo, S.,** Germeroth, L., & Hermann, S. (November 2022). *“Impact of a milkweed specialist aphid and its honeydew on monarch success.”* 2022 Entomological Society of America Joint Annual Meeting, Vancouver, BC, Canada.

**OUTREACH**

Juniata Valley Elementary School Family Science Night, May 2022.

* Hosted a booth featuring different invertebrates
* ~80 attended

Penn State Arboretum Milkweed Giveaway, May 2022.

* >100 milkweed plants distributed

Penn State Arboretum Pollination Celebration, June 2022.

* ~ 200 milkweed plants distributed

Maple Harvest Festival, Shaver’s Creek Environmental Center, March 2023.

* Planned and presented programming focused on adaptations of native invertebrates and reptiles to 35 attendees
* Provided interpretation of native animal behavior and conservation to ~2,000 attendees

AnthroFest, Penn State Arboretum, April 2023.

* Planned and hosted a booth focused on invertebrate biodiversity and conservation, with a focus on backyard species
* ~300 attended

Juniata Valley Elementary School Family Science Night, May 2023.

* Provided interpretation of native animal behavior and conservation, with a focus on amphibians and venomous snakes
* ~100 attended

Penn State Arboretum Children’s Garden Program, July 2023.

* Hosted a table focused on the benefits of planting native milkweeds
* Distributed 100 milkweed plants to attendees

Great Insect Fair, Penn State, September 2023.

* Hosted a booth featuring monarch butterflies and lady beetles.
* Designed materials focused on arthropod diversity and milkweed planting and distributed native milkweed seeds.
* 3,100 attended