

## Curriculum Vitae – Benjamin Gerstner

Department of Biology  
University of New Mexico  
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[Pronouns: He/They](#)

### Education

- 2017- current Ph.D. anticipated Spring 2023. University of New Mexico Albuquerque, NM.  
Dissertation Committee: Kenneth Whitney (chair), Helen Wearing, Jenn Rudgers  
Robert Laport (outside member)  
Research interests: polyploidy theory & model building; novel methodologies;  
population genetics, evolutionary theory
- 2016 Semester Abroad in Evolution, Ecology and Conservation  
Universidad de San Francisco de Quito Quito and San Cristobal, Ecuador
- 2013-2017 B.S. Ecology and Evolutionary Biology. University of Rochester Rochester, NY.

### Research Experience

- 2017 - current Graduate Research Assistant – Dr. Kenneth Whitney – UNM  
2014 - 2017 Undergraduate Research Assistant – Dr. Christian Rabeling Lab – UR

### Teaching Experience

- 2021 Curriculum Development for Undergraduate Genetics Course – UNM  
2017 – 2021 Teaching Assistant – Cell and Developmental Biology & Genetics – UNM  
2016 Curriculum Development for Undergraduate Introductory Biology - UR  
2015 – 2017 Teaching Assistant (Head TA 2017) – Principles of Biology II – UR  
2014 – 2015 Instructor – EcoReps: Introduction to Leadership and Sustainability – UR

### Fellowships

- 2022 – 2023 Vice-President of Research Zancada Fellowship – Head Fellow  
2022 Ecological Society of America Graduate Student Policy Fellow  
2019 – 2024 National Science Foundation Graduate Research Fellow  
2015 Ronald E. McNair Post-Baccalaureate Achievement Program Fellow  
2013 – 2017 Renaissance and Global Scholar

### Leadership & Service Experience

- 2022 – current Faculty Senate Research Policy Committee – Graduate Student Member  
2022 – current Biology Graduate Student Association – Graduate Policy Committee Member  
2022 Ecological Society of America Graduate Student Policy Lobbyist  
2022 GPSA Strategic Support Chair  
2021 UNM Biology Graduate Student Coordinator Hiring Committee – Observer  
2021 Botanical Society of America Graduate Research Fellowship Reviewer  
2021 Museum of Southwest Biology Herbarium Senior Curator Committee Member  
2020 – current Common Bond New Mexico Foundation – Board Member and Treasurer  
2020 Sevilleta Long-term Ecological Research Summer Fellowship Reviewer  
2020 – 2022 Biology Graduate Student Association – Co-President, Undergraduate Policy  
2019 – 2021 GPSA Council Member – Biology Representative

2019 – 2020 Biology Graduate Student Association – Graduate Policy Committee Member  
2018 – 2019 GPSA Grants Reader  
2017 – 2018 Graduate and Professional Students Association (GPSA) Grants Committee  
2014 – 2015 Recruitment and Retention Officer for Greenspace Community Living  
2013 – 2014 Sustainability and Leadership Representative for Residential Community Life  
2012 – 2013 North Rose – Wolcott Board of Education Student Board Member

### Funding

2022 Zancada Fellowship, Office of the Vice-President of Research, UNM - \$2500  
2021 Rosemary Grant Advanced Award, Society for the Study of Evolution - \$3500  
2020 Graduate & Pro. Student Assoc. Professional Development Grant, UNM - \$500  
2020 Graduate & Pro. Student Assoc. Student Research Grant, UNM - \$500  
2019 – 2022 National Science Foundation Graduate Research Fellowship, NSF - \$138,000  
2019 Sevilleta LTER Graduate Summer Research Fellowship, UNM - \$4,000  
2019 Alvin R. and Caroline G. Grove Summer Research Scholarship, UNM - \$2,000  
2018, 20, 21 Graduate Research Allocations Committee, UNM - \$400  
2017 – 2019 Supplemental Recruiting Assistantship, UNM - \$10,000  
2015 Research and Innovation Grant, UR - \$1,500

### Publications

Granath, A., Portman T., **Gerstner B. P.**, Mann M., Marquez R., Cerrato J, Rudgers J. Stress responses of root-associated fungi to heat and water stress. In prep for *Fungal Ecology*.

**Gerstner B.P.**, Wearing H.J. & Whitney K.D. Why so many polyploids? Accounting for stochasticity in formation rate of unreduced gametes lowers the perceived barriers to polyploid establishment. In prep for *The American Naturalist*.

**Gerstner B.P.**, Mann M., Laport R. & Whitney K.D. Rhizosphere fungal assemblages differentiate by host ploidy level in mixed-ploidy *Larrea tridentata* populations.  
bioRxiv: <https://doi.org/10.1101/2022.11.04.515195> Submitted to *Oikos* Special Issue: The Role of Whole Genome Duplication in Evolutionary Ecology Jan 2023

Ohlert T, Kimmel K, Avolio M, Chang C, Forrestel E, **Gerstner B**, Hobbie S, Komastu K, Reich P, Whitney K. 2022. Exploring the impact of trait number and type on functional diversity metrics in real-world ecosystems. PLoS ONE 17(8): <https://doi.org/10.1371/journal.pone.0272791>

Dahan R.A., Grove N., Bollazz M., **Gerstner, B.P.**, & Rabeling C. 2022. Decoupled evolution of mating biology and social structure in *Acromyrmex* leaf-cutting ants. Behavioral Ecology and Sociobiology **76**, 7. <https://doi.org/10.1007/s00265-021-03113-1>

Farkas T.E., **Gerstner B.P.**, and Whitney K.D. 2021. SEV-LTER Plant Traits Database ver 1. Environ. Data Initiative. <https://doi.org/10.6073/pasta/5b3a6d80a1c6d3121a2196cb40838849>

## **Presentations**

**Gerstner, B.** Rhizosphere fungal assemblages differentiate by host ploidy level in mixed-ploidy *Larrea tridentata* populations? Shared Knowledge Conference. Poster November 2022  
Albuquerque, NM.

**Gerstner, B.** Why so many polyploids? Polyploid Webinar Series – Barker Lab. Presentation  
March 2021, Albuquerque, NM.

**Gerstner, B.** Why so many polyploids? UNM Biology Brown Bag Seminar Series. Presentation  
April 2020, Albuquerque, NM.

**Gerstner, B.,** Baack, E. & Whitney, K. Adding genome size to the *Sevilleta* plants traits  
database. *Sevilleta* All-hands 2020 Meeting. Poster January 2020, Albuquerque, NM.

**Gerstner, B.,** Wearing, H. & Whitney, K. The paradox of polyploidy: is variation in unreduced  
gamete formation the key missing factor? American Society of Naturalists Stand Alone Meeting.  
Poster January 2020, Pacific Grove, CA.

**Gerstner, B.,** Interactions of soil microbes and *Larrea tridentata*. *Sevilleta* LTER Brown Bag  
Series. October 2019, Albuquerque, NM.

**Gerstner, B.,** Wearing, H. & Whitney, K. The paradox of polyploidy: is variation in unreduced  
gamete formation the key missing factor? University of New Mexico Biology Department  
Annual Research Day. Poster March 2019, Albuquerque, NM.

**Gerstner, B.,** Rabeling, C. & Dahan, R. Evolution of multiple queen breeding and social  
parasites in South American leaf-cutting ants. Annual Biomedical Research Conference for  
Minority Students. Poster November 2015, Seattle, WA.

**Gerstner, B.,** Rabeling, C. & Dahan, R. Evolution of multiple queen breeding and social  
parasites in South American leaf-cutting ants. David T. Kearns Center Research Symposium.  
Presentation July 2015, Rochester, NY.

## **Technical Expertise**

High Proficiency in R, working knowledge in Python, SQL, Git, HTML, and command line.  
High Proficiency in Adobe Illustrator, Photoshop, working knowledge in Adobe Premiere Rush  
High Proficiency in website building, design, and maintenance

## **Awards and Honors**

2021	Graduate and Professional Student Association Council Chair's Service Award
2020	Doctoral Conference Presentation Award – University of New Mexico (\$1,140)
2020	<i>Sevilleta</i> All-hands 2020 Meeting Poster Award 3rd place – <i>Sevilleta</i> LTER (\$150)
2020	Ruth Patrick Student Poster Award – American Society of Naturalists (\$400)
2019	Susan Deese-Roberts Teaching Assistant of the Year Award – UNM, nominated

**Outreach**

2022	Slice of Bio: Paths to Research Panelist	Albuquerque, NM
2022	Empowering Graduate Pedagogies Panelist	Albuquerque, NM
2022	Building Community as a Graduate Student Luncheon	Albuquerque, NM
2020 – 2021	Reading Group on Evolution	Albuquerque, NM
2019 – 2022	Skype a Scientist: 7 classrooms, 5 states	
2018 – 2020	Jefferson Middle School Science Fair Judge	Albuquerque, NM