

Rose M. H. Driscoll

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Education

- (exp 2025) Ph.D. candidate in Biology, University of Rochester, Rochester, NY
Program in Ecology, Evolution, Genetics and Genomics
Advisor: Dr. Jennifer A. Brisson
- May 2021 M.S. Biology, University of Rochester, Rochester, NY
Program in Ecology, Evolution, Genetics and Genomics
- May 2017 B.A. Biology, Reed College, Portland, OR
Alternate program with humanities/literature concentration
Undergraduate thesis: *Epigenetic regulation of aromatase underlies environmental sex determination in the cichlid fish Pelvicachromis pulcher*
Advisor: Dr. Susan C. P. Renn
Graduated Phi Beta Kappa

Publications

- Rose MH Driscoll**, Xiaomi Liu, Julia McDonough, James Schmidt, and Jennifer A Brisson. 2025. "Pea aphid wing plasticity variation has a multigenic basis." *Journal of Heredity*.
<https://doi.org/10.1093/jhered/esaf006>
- Lauren E Gregory, **Rose MH Driscoll**, Benjamin J Parker, and Jennifer A Brisson. 2025. "Impacts of body colour, symbionts and genomic regions on the pea aphid wing plasticity variation." *Molecular Ecology*, 34:5. <https://doi.org/10.1111/mec.17660>
- Rose MH Driscoll**,* Felix EG Beaudry,* Elissa J Cosgrove, Reed Bowman, John W Fitzpatrick, Stephan J Schoech, and Nancy Chen. 2024. "Allele frequency dynamics under sex-biased demography and sex-specific inheritance in a pedigreed jay population." *Genetics*, 227:3. <https://doi.org/10.1093/genetics/iyae075>
- Benjamin J Parker, **Rose MH Driscoll**, Mary E Grantham, Jan Hrccek, and Jennifer A Brisson. 2021. "Wing plasticity and associated gene expression varies across the pea aphid biotype complex." *Evolution*, 75:1143-1149. <https://doi.org/10.1111/evo.14174>
- Rose MH Driscoll**, Josh J Faber-Hammond, Cynthia F O'Rourke, Peter L Hurd, and Suzy CP Renn. 2020. "Epigenetic regulation of gonadal and brain aromatase expression in a cichlid fish with environmental sex determination." *General and Comparative Endocrinology* 296. <https://doi.org/10.1016/j.ygcen.2020.113538>

* indicates shared first authorship.

Presentations

- June 2022 **Rose MH Driscoll**, Julia McDonough, John H Werren, and Jennifer A Brisson. "Horizontal gene transfers from diverse taxa in the pea aphid genome and their association with plasticity." *Evolution*, Cleveland, OH (poster)

August 2021	Rose MH Driscoll , John H Werren, Jennifer A Brisson. “Detecting horizontal gene transfers from diverse taxa in the pea aphid genome.” Great Lakes Annual Meeting of Evolutionary Genetics, virtual (presentation)
June 2021	Benjamin J Parker, Rose MH Driscoll , Mary E Grantham, J. Hreck, J. A. Brisson. “Wing plasticity and associated gene expression varies across the pea aphid biotype complex.” Evolution, virtual (presentation)
May 2021	Rose MH Driscoll , Benjamin J Parker, Mary E Grantham, Jan Hreck, Jennifer A Brisson. “Variation in wing plasticity among the pea aphid host races.” University of Rochester Genetics Day, virtual (selected talk)
Jul 2020	Rose MH Driscoll , Benjamin J Parker, Mary E Grantham, Jan Hreck, Jennifer A Brisson. “Variation in wing plasticity among the pea aphid host races.” Great Lakes Annual Meeting of Evolutionary Genetics, virtual (presentation)
Jan 2018	Rose MH Driscoll , Peter L Hurd, Suzy CP Renn. “Evidence for differential aromatase gene promoter methylation in a cichlid with pH-influenced sex determination.” Society for Integrative and Comparative Biology, San Francisco, CA (poster)
Jun 2017	Rose MH Driscoll , Peter L Hurd, Suzy CP Renn. “Evidence for aromatase gene promoter methylation in a cichlid with pH-influenced sex determination.” Animal Behavior Society, Toronto, ON (poster)
Jan 2017	Rose MH Driscoll , Peter L Hurd, Suzy CP Renn. “Evidence for aromatase gene and enhancer methylation in <i>P. pulcher</i> , a cichlid species with environmental sex determination.” Society for Integrative and Comparative Biology, New Orleans, LA (poster)
Jan 2016	Rose MH Driscoll , Peter L Hurd, Suzy CP Renn. “Aromatase genes and their enhancers in <i>P. pulcher</i> , a cichlid species with environmental sex determination.” Society for Integrative and Comparative Biology, Portland, OR (poster)

Honors and Awards

Mar 2021	University of Rochester Barnard Fellowship (\$3,000)
May 2020	NSF Graduate Research Fellowship (\$102,000 over three years)
Mar 2018	Robert L. and Mary L. Sproull Fellowship (\$61,600 over two years)
2013-2017	Reed College Commendation for Excellence in Scholarship
May 2017	Phi Beta Kappa
Apr 2017	Reed College Post-Baccalaureate Research Award and award extension (Aug 2017) to expand upon undergraduate thesis (total \$10,500)
Mar 2016	Reed College President’s Summer Fellowship in support of independent summer research in Pete Hurd’s lab at the University of Alberta (\$7,000)
Apr 2015	Reed College Summer Undergraduate Research Fellowship in support of summer research in Suzy CP Renn’s lab at Reed College (\$4,000)

Teaching experience

Fall 2019	Applied Genomics Teaching Lab Assistant , University of Rochester Biology Department, Rochester, NY (29 students)
Spr 2019	Introductory Biology Teaching Lab Instructor , University of Rochester Biology Department, Rochester, NY (59 students in 4 sections)
Spr 2017; Spr 2018	Computational Biology Teaching Lab Assistant , Reed College Biology Department, Portland, OR (approximately 16 students each year)

Mentoring

Date	Name	Next position
Sept 2019-May 2020	Brandon Courteau	PhD student in Biochemistry at UCSF
Sept 2019-May 2021	Ling Liu	PhD student at Hong Kong University
Feb 2021-May 2022	Julia McDonough	MS student at UMass Lowell
Oct 2021-Apr 2022	Mayesa Khan	
Oct 2021-Sept 2022	Abigail Seaton	
May 2022-Sept 2022	Sean Lee	
July 2022-Sept 2022	Charlotte Irwin	

Outreach and Service

Mar 2024	Panelist at a webinar for prospective students on building a strong advisor/advisee relationship (136 attendees)
Oct 2018-Sept 2022	Co-founder and leader of Diversity and Inclusion in the Biological Sciences (DIBS) group at UR
July 2022	Designed and led a 1-hour aphid biology activity for disadvantaged elementary students in the Horizons program, alongside 4 labmates
May-July 2020	Designed and produced an aphid biology virtual instruction module for disadvantaged high school students in the Upward Bound program, alongside 3 labmates
Nov 2019	Conducted R (dplyr/ggplot2) workshops for the Larracuenta lab group at UR (2 sessions, 2 hours each)
July 2019	Conducted R (base R/dplyr/ggplot2) workshops for the Brisson lab group at UR (3 sessions, 2 hours each)
May-July 2019	Designed and taught a weeklong aphid biology class (4 sessions, 1.5 hours each) for disadvantaged high school students in the Upward Bound program, alongside 2 labmates
Feb-Apr 2019	Conducted R (dplyr/ggplot2) workshops for the Chen lab group at UR (4 sessions, 1-1.5 hours each)

Society membership

Fall 2024-present	American Genetics Association (student member)
Spr 2020-Fall 2024	Society for the Study of Evolution (student member)

Fall 2015-Fall 2018	Society for Integrative and Comparative Biology (student in-training member)
Spr 2017	Animal Behavior Society (student member)

Diversity statement

I strongly believe that the scientific community should be welcoming to us all. To this end, I work to educate myself and others on topics relevant to diversity, equity, and inclusion, and to use my privilege to uplift those who do not share it and amplify their voices. I strive to combat sexism, to be an antiracist, and to oppose discrimination in all its forms.