

Rose M. H. Driscoll

University of Rochester Department of Biology
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Education

- Aug 2018-present Ph.D. candidate in Biology, University of Rochester, Rochester, NY
Program in Ecology, Evolution, Genetics and Genomics
Advisor: Dr. Jennifer A. Brisson
- 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

- R. M. H. Driscoll**,* Felix E.G. Beaudry,* Elissa J. Cosgrove, Reed Bowman, John W. Fitzpatrick, Stephan J. Schoech, and Nancy Chen. 2021. "Allele frequency dynamics under sex-biased demography and sex-specific inheritance in a pedigreed population." bioRxiv. <https://doi.org/10.1101/2021.10.28.466320>
- B. J. Parker, **R. M. H. Driscoll**, M. E. Grantham, J. Hrcek, and J. 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>
- R. M. H. Driscoll**, J. J. Faber-Hammond, C. F. O'Rourke, P. L. Hurd, and S. C. P. 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 authorship.

Presentations

- August 2021 **R. M. H. Driscoll**, J. H. Werren, J. 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 B. J. Parker, **R. M. H. Driscoll**, M. E. Grantham, J. Hrcek, J. A. Brisson. "Wing plasticity and associated gene expression varies across the pea aphid biotype complex." *Evolution*, virtual (presentation)

May 2021	R. M. H. Driscoll , B. J. Parker, M. E. Grantham, J. Hrcek, J. A. Brisson. "Variation in wing plasticity among the pea aphid host races." University of Rochester Genetics Day, virtual (selected talk)
Jul 2020	R. M. H. Driscoll , B. J. Parker, M. E. Grantham, J. Hrcek, J. A. Brisson. "Variation in wing plasticity among the pea aphid host races." Great Lakes Annual Meeting of Evolutionary Genetics, virtual (presentation)
Jan 2018	R. M. H. Driscoll , P. L. Hurd, S. C. P. 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	R. M. H. Driscoll , P. L. Hurd, S. C. P. Renn. "Evidence for aromatase gene promoter methylation in a cichlid with pH-influenced sex determination." Animal Behavior Society, Toronto, ON (poster)
Apr 2017	R. M. H. Driscoll , P. L. Hurd, S. C. P. Renn. "Epigenetic mechanisms of environmental sex determination in the cichlid fish <i>Pelvicachromis pulcher</i> ." Reed College Biology Department Students Talking About Research Seminar (STARS) Talk, Portland, OR
Jan 2017	R. M. H. Driscoll , P. L. Hurd, S. C. P. 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	R. M. H. Driscoll , S. C. P. Renn, P. L. Hurd. "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

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
Mar 2016	President's Summer Fellowship in support of independent summer research in Pete Hurd's lab at the University of Alberta (\$7,000)
Apr 2015	Summer Undergraduate Research Fellowship in support of summer research in Susan C. P. 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)
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Spr 2019	Introductory Biology 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

Oct 2021-present	Abigail Seaton (sophomore undergraduate)
Oct 2021-present	Mayesa Khan (sophomore undergraduate)
Feb 2021-present	Julia McDonough (senior undergraduate)
Sept 2019-May 2021	Ling Liu (now a PhD student at Hong Kong University)
Sept 2019-May 2020	Brandon Courteau (now a PhD student in Biochemistry at UCSF)

Outreach and Service

Oct 2018-present	Co-founder and sole graduate student leader of Diversity and Inclusion in the Biological Sciences (DIBS) group at UR
May-July 2020	Worked with three labmates to design and record videos for an aphid biology module for high school students in the Upward Bound program
Nov 2019	Led R (dplyr/ggplot2) workshops for the Larracuenta lab at UR (2 sessions, 2 hours each)
July 2019	Led R (base R/dplyr/ggplot2) workshops for the Brisson lab at UR (3 sessions, 2 hours each)
May-July 2019	Worked with two labmates to design and teach a weeklong aphid biology class (4 sessions, 1.5 hours each) for high school students in the Upward Bound program
June 2019	Guest instructor and biology “reference” for students in the Get Real! Science teacher training program at the Warner School of Education at UR as they brainstormed ideas for an inquiry-based summer camp for middle school students in Sodus, NY (1.5 hours)
Feb-Apr 2019	Led R (dplyr/ggplot2) workshops for the Chen lab at UR (4 sessions, 1-1.5 hours each)
Sept 2015-Apr 2017	Co-founder of ScienceChat, casual science discussion group for students of different majors at Reed College

Grants and Funding

Oct 2017	Reed College Opportunity Grant – \$1,055 To cover expenses while attending Society for Integrative and Comparative Biology (SICB) 2018 meeting
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Aug 2017	Post-Baccalaureate Research Award Extension – \$4,500 To continue post-baccalaureate research, building on undergraduate thesis
Apr 2017	Post-Baccalaureate Research Award – \$4,500 stipend + \$1,500 supplies To expand upon undergraduate thesis after graduation
Apr 2017	Reed College Initiative Grant – \$1,035 In support of undergraduate thesis work
Mar 2017	Reed College Opportunity Grant – \$1,440 To cover expenses while attending Animal Behavior Society (ABS) 2017 meeting
Nov 2016	Reed College Opportunity Grant – \$1,500 To cover expenses while attending Society for Integrative and Comparative Biology (SICB) 2017 meeting
Nov 2016	Biology Undergraduate Student Travel Award – \$500 To cover travel expenses for SICB 2017
Nov 2016	SICB Charlotte Magnum Student Support Award – \$99 Registration fee equivalent for SICB 2017
Oct 2016	Biology Undergraduate Research Proposal award – \$3,138 In support of undergraduate thesis research
	Total \$19,267

Skills

- Genetic /molecular biology techniques (PCR, qPCR, Illumina library prep)
- Bioinformatics (bowtie2, samtools, BLAST)
- R statistical programming language (proficient)
- Python (basic knowledge)
- Spanish language skills (conversational)

Society membership

Spr 2020-present	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 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.