Shraddha Lall

Ph.D., Organismic & Evolutionary Biology
AAAS Mass Media Fellow 2025

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Evolutionary biologist and science communicator with vast experience in experimental research, statistics and computation, as well as pedagogy, mentorship, writing and editing

Research Interests

- Behavioral Ecology
- Evolutionary Genetics
- Conservation Behavior

Publications

1. **S. Lall**, C. Milton, and B.L. de Bivort. Family-based selection: An efficient method for increasing phenotypic variability. *G3 Genes|Genomes|Genetics*, 15(10):jkaf165, 07 2025.
2. J. Akhund-Zade, **S. Lall**, E. Gajda, D. Yoon, J.F. Ayroles, and B.L. de Bivort. Genetic basis of offspring number–body weight tradeoff in *Drosophila melanogaster*. *G3*, 11(7):jkab129, 2021.
3. S. Potdar, D.K. Daniel, F.A. Thomas, **S. Lall**, and V. Sheeba. Sleep deprivation negatively impacts reproductive output in *Drosophila melanogaster*. *Journal of experimental Biology*, 221(6):jeb174771, 2018.
4. **S. Lall**, A. Mudunuri, S. Santhosh, A. Malwade, A. Thadi, G. Kondakath, and S. Dey. Adult crowding induces sexual dimorphism in chronic stress-response in *Drosophila melanogaster*. *BioRxiv*, page 702357, 2019.

Work Experience

Aug 2019 – Sep 2025 **Doctoral Researcher**, *de Bivort Lab, Harvard University*
June – Aug 2025 **AAAS Mass Media Fellow**, *The Conversation U.S.*
Aug 2020 – Jan 2025 **Teaching Fellow**, *Harvard University*

Education

2019 – 2025 **PhD**, *Organismic & Evolutionary Biology, Harvard University*
Doctoral Thesis: Genetic and evolutionary basis of behavioral variability in *Drosophila melanogaster*
Advisor: Prof. Benjamin de Bivort

2014 – 2019 **BS-MS**, *Indian Institute of Science Education and Research (IISER), Pune*
Master's Thesis: Behavioural correlates of chronic stressors in outbred and dispersal-selected *Drosophila melanogaster*
GPA: 9.8 [10]

Conference Presentations

2024 **Lall, S.**, Rodman, N., Milton, C. & de Bivort, B. L. *Evolution of increased variability in turning bias and correlated changes in* Drosophila melanogaster
At *Evolution, Entomology*

2023 **Lall, S.**, Rodman, N., Milton, C. & de Bivort, B. L. *Artificial Selection Increases Variability in Left-right Turn Bias in* Drosophila melanogaster
At *Boston Area Drosophila Meeting, Evolution, Animal Behavior Society*

2022 **Lall, S.**, & de Bivort, B. L. *Family-Based Paradigms Improve Response of Selection on Variability*
At *Evolution*

Previous Research Experience

Sept 2019 – Feb 2020 Validation of candidate genes for offspring number-body weight trade off in *D. melanogaster* (Published)
Harvard University

May 2018 – May 2019 Behavioural correlates of chronic stressors in outbred and dispersal-selected *D. melanogaster* (Master's thesis)
IISER Pune

Aug 2017 – Apr 2018 Effect of varying dietary regimens on dispersal and related behaviors in *D. melanogaster*
IISER Pune

May – July 2017 Phenotype and Genotype Characterisation of Migratory Blackcaps
Max Plank Institute for Evolutionary Biology, Plön

Aug 2016 – Apr 2017 Darwinism: Reception in India
IISER Pune

May – July 2016 Effect of sleep deprivation due to mechanical perturbation on reproductive output in *D. melanogaster* (Published)
Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore

Reviewing Experience

2023 Reviewed manuscript for *American Naturalist*

2022 Reviewed manuscript for *PeerJ*

Teaching Experience (as a Teaching Fellow)

(At Harvard University)

Fall 2024 & Fall 2022 OEB 53: *Evolutionary Biology*

Spring 2023 OEB 242: *Population Genetics*

Spring 2022 OEB 207: *The Fishy Aspects of the Human Body*

Fall 2021 GENED 1004: *Understanding Darwinism*

Fall 2020 OEB 10: *Foundations of Biological Diversity*

(At IISER Pune)

Spring 2018 HSS: *Science, History and Theatre*

Selected Achievements & Awards

June - Aug 2025 Mass Media Science & Engineering Fellowship
American Association for the Advancement of Science (AAAS)

March 2025 The Derek Bok Center Teaching Certificate
The Derek Bok Center for Teaching & Learning, Harvard University

Fall 2022 Student Recognition of Teaching Certificate
GSAS Office of Academic Programs, Harvard University

2019 Best MS Thesis Award in Biology (2018-19)
IISER, Pune

2017 DAAD-WISE Scholarship

2016 Indian Academy of Sciences (IAS) Summer Research Fellowship

2014 – 2019 INSPIRE Scholarship
Department of Science & Technology, Government of India

Workshops & Training

Spring 2025 *Science Education Partner* with the Harvard Museums of Science and Culture

Spring 2025 Seminar on *How to Teach Writing Assignments—And Design Your Own* at The Derek Bok Center for Teaching & Learning

Fall 2024 Seminar on *Teaching with Generative AI* at The Derek Bok Center for Teaching & Learning

Nov 2024 *Science, Story, and Pictures: A Beginners Guide to Communicating Your Science with Comics* at the Entomology Conference, 2024

Sep – Oct 2024 *Aarhus Comprehensive Computational Entomology Summer School* or ACCESS 2024 for automated monitoring of insects at Aarhus University, Denmark
Selected through a competitive application process

Skills & Interests

Computation Coding in Python, R, MATLAB, SLiM;
Microcontroller-based applications and robotics
High-performance computing and version-control software (Github)

Methods GLM(M)s, Bayesian & frequentist statistical modeling
Software and hardware tools for high throughput behavior monitoring
Processing and analyzing genomic datasets
Microscopy and imaging
Familiarity with geolocators and geospatial data

Writing Scientific writing (research papers, reviews, grant proposals)
Non-technical science writing and editing

Graphics Adobe Photoshop, Adobe Illustrator, Procreate, Fusion 360, LaTeX

Photography Wildlife Photography, Adobe Lightroom;
Portfolio with select photographs here

Fabrication Laser cutting, 3D printing, Circuit board assembly, Hand tools

Other interests Birding, hiking

Mentorship Experience

At the de Bivort Lab, Harvard University, I have mentored -

March – Sep 2024 MEME (Erasmus Mundus Master Programme in Evolutionary Biology) student

June – Aug 2024 Undergraduate student through the Genes, Ecosystems & Organisms (GEO) Research Experience for Undergraduates (REU) program based in the Department of Organismic and Evolutionary Biology (OEB)

June – Aug 2023 Undergraduate student through the Evolution, Ecology & Environment (E3) REU program based in the OEB Department

July 2022 – Aug 2023 High-school student who worked as a research assistant on two projects led by me

July – October 2022 High-school student who worked as a research assistant on a project led by me

March – Aug 2022 Research technician (Trainer and supervisor)

At the Population Biology Lab, IISER Pune, I mentored -

May 2018 – May 2019 Undergraduate student for a year-long project

May – July 2018 3 undergraduate summer interns

Professional Society Memberships

- American Association for the Advancement of Science
- Society for the Study of Evolution
- Animal Behavior Society
- Entomological Society of America

References

1. Benjamin de Bivort
   Professor & Co-Chair, Organismic and Evolutionary Biology
   Harvard University, Cambridge, Massachusetts
   debivort@oeb.harvard.edu

2. Ian Dworkin
   Professor, Department of Biology
   McMaster University, Hamilton, Ontario
   dworkin@mcmaster.ca

3. Andrew Berry
   Lecturer, Organismic and Evolutionary Biology
   Harvard University, Cambridge, Massachusetts
   berry@oeb.harvard.edu