

NITIN RAVIKANTHACHARI

website: <https://nitinravi.com/>

email: ravikanth.nitin@gmail.com

EDUCATION:

- 2023 Ph.D., Biological Sciences, University of South Carolina, Columbia, USA.
Dissertation: Genetic Mechanisms Underlying Maladaptation in Specialized Species Interactions.
Advisor: Prof. Carol L. Boggs
- 2016 M.Sc., Molecular Biology, Bangalore University, Bengaluru, India.
Advisors: Dr. Krushnamegh Kunte and Dr. M.N. Shivakameshwari
- 2014 B.Sc., Chemistry, Botany and Zoology, St. Joseph's College (Autonomous), Bengaluru, India.

CURRENT APPOINTMENT:

- 2023- Postdoctoral research associate, University of Montana, Missoula, USA.

PROFESSIONAL APPOINTMENTS:

- 2025 Instructor, University of Montana. Special topics in Biology: Data Science.
- 2023-2024 Visiting scientist, University of Pennsylvania, Philadelphia, USA.
- 2018-2023 Principal Investigator, Rocky Mountain Biological Laboratory (RMBL).
- 2018-2023 Teaching Assistant, University of South Carolina.
- 2017-2018 Project Assistant, Biodiversity Lab, NCBS, Bengaluru, India.
- 2015 Indian Academy of Sciences Summer Research Fellow. Indian Institute of Sciences, Bengaluru, India.
- 2012-2017 Research Assistant, Biodiversity Lab, NCBS, Bengaluru, India.

PUBLICATIONS: 9 published, 2 preprints/in review

Peer reviewed (citations: >250, h-index: 5):

1. **Ravikanthachari, N.**, & Boggs, C. L. (2025). Differences in gene expression and genetic variation underlying preference-performance mismatches: insights from a specialized native herbivore on an invasive toxic plant. *Heredity*, 1-12. **(Editor's Choice 2025 Collection; Cover Article; Featured Podcast).**
2. **Ravikanthachari, N.**, Burch, L. L., Powell, R. E., Scott, D. M., Wayne, C. R., Niitepöld, K., ... & Boggs, C. L. (2024). Impacts of assisted migration: An introduced herbivore has short-term and long-term effects on its native host plant population. *Entomologia Experimentalis et Applicata*, 172(11), 982-991.
3. **Ravikanthachari, N.**, Steward, R. A., & Boggs, C. L. (2024). Patterns of genetic variation and local adaptation of a native herbivore to a lethal invasive plant. *Molecular Ecology*, 33(20), e17326.
4. Attiwilli, S., **Ravikanthachari, N.**, & Kunte, K. (2024). A comparison between time-constrained counts and line transects as methods to estimate butterfly diversity and monitor populations in tropical habitats. *Insect Conservation and Diversity*, 17(1), 88-101.
5. Olson, M. M*, **Ravikanthachari, N.**, Blackwell, M., & Boggs, C. L. (2023). The dispersal of microbes among and within flowers by butterflies. *Ecological Entomology*, (4).

6. Yang, L., **Ravikanthachari, N.**, Mariño-Pérez, R., Deshmukh, R., Wu, M., Rosenstein, A., ... & Andolfatto, P. (2019). Predictability in the evolution of Orthopteran cardenolide insensitivity. *Philosophical Transactions of the Royal Society B*, 374(1777), 20180246.
7. Sujitha, P. C., Prasad, G., **Nitin, R.**, Basu, D. N., Kunte, K., & Sadasivan, K. (2019). Current distribution of Nilgiri grass yellow *Eurema nilgiriensis* Yata (Lepidoptera: Pieridae), with an updated taxonomic key to *Eurema* of Western Ghats, India. *Entomon*, 44(1), 23-32.
8. Karmakar, T. [†], **Nitin, R.** [†], Sarkar, V., Baidya, S., Mazumder, S., Chandrasekharan, V. K., ... & Kunte, K. (2018). Early stages and larval host plants of some northeastern Indian butterflies. *Journal of Threatened Taxa*, 10(6), 11780-11799.
9. **Nitin, R.**, Balakrishnan, V. C., Churi, P. V., Kalesh, S., Prakash, S., & Kunte, K. (2018). Larval host plants of the butterflies of the Western Ghats, India. *Journal of Threatened Taxa*, 10(4), 11495-11550.

Preprints/in review:

10. **Ravikanthachari, Nitin**, and Carol L. Boggs. (2023) Gene family evolution in brassicaceous-feeding insects: Implications for adaptation and host plant range. *bioRxiv*, 2023-06.
11. **Ravikanthachari, Nitin**, Behrman, E. L., Beltz, J., Conner, W. R., Schmidt, P. R., & Cooper, B. S. (2026). Climate predicts *wMel Wolbachia* frequency variation in *Drosophila melanogaster*, but genomic variation reflects a recent incomplete cytoplasmic sweep. *bioRxiv*, 2026-05. Submitted to Nature Ecology and Evolution.

In prep:

1. Nitin Ravikanthachari, Andrea Chau*, Hannah Walton*, and Carol L Boggs. Molecular evolution of chemosensory genes in arthropods: Implications for adaptation and diversification.
2. Nitin Ravikanthachari, William Connor, Sariah Jensen*, Timothy B Wheeler, Eric F LoPresti, Micheal Turelli, and Brandon S Cooper. Timescale of transfer and evolution of *Wolbachia* in Lepidoptera.
3. Nitin Ravikanthachari, William Connor, Michael Turelli, and Brandon S Cooper. In prep. Modes of *Wolbachia* acquisition in diverse Lepidoptera.
4. Nitin Ravikanthachari, Timothy B Wheeler, Eric F LoPresti, and Brandon S Cooper. In prep. Advancing our understanding of variable *Wolbachia* frequencies across diverse insects.

*Indicates undergraduate mentees. [†]Equal authors.

Book/ Technical reports:

1. Krushnamegh Kunte, and **Nitin Ravikanthachari**. 2020. Butterflies of Bengaluru. Karnataka Forest Department (Research Wing), NCBS, and IFB, Bengaluru, India. 196 pp.
2. Seshadri, K. S., Krishna, M. B., Shashank Balakrishna, S. K. M., Prabhakar, B. S., **Nitin, R.**, Kishan, S. B., ... & Piyush Daga, P. K. T. (2013). Ruining the ecology of Hesaraghatta Lake—the role of bird photographers. Conservation India.

FELLOWSHIPS, GRANTS AND HONORS:

- 2026- University Grants Program, Seed Grant. University of Montana. **\$6995.**
 2024- NSF ACCESS Allocations (PI). Totaling ~4.9 million ACCESS Credits (≈ several million CPU core-hours).

2024 Finalist, W. D. Hamilton Award for Outstanding Graduate Student Presentation. **\$500.**
 2022 Elsie Taber Fellowship. Graduate student travel grant, UofSC. **\$3410.**
 2022 SSE Graduate Student and Postdoc Travel Supplement. **\$500.**
 2022 American Society of Naturalists Student Research Award. **\$2000.**
 2021 RMBL Graduate fellowship Grant. **\$1300.**
 2019 RMBL Graduate fellowship Grant. **\$737.**
 2016 CSIR National Eligibility Test in Lectureship. All India Rank 41.
 2015 Indian Academy of Sciences Summer Research Fellow. **~\$250.**
 2013 Govt. of Karnataka, Vision Group of Science and Technology SPiCE (Science Project in College Education) Grant. USD **~\$600.**

PROFESSIONAL SERVICES:

2022-2023 President, Graduate Association of Biological Sciences, UofSC
 2022-2023 Co-chair, RMBL Diversity and Inclusion Community Committee
 2020-2022 Member, Diversity, Equity, and Inclusion committee. Dept. of Biological Sciences, UofSC
 2019-2023 Member, RMBL Diversity and Inclusion Community Committee
 2021-2022 Treasurer, Graduate Association of Biological Sciences, UofSC
 2020-2021 Organizer, Graduate-undergraduate mentoring program, RMBL
 2019-2021 Graduate student coordinator and liaison between graduate students and the administration and the Board of Trustees, Rocky Mountain Biological Laboratory
 Reviewer Journal of Threatened Taxa (3x). Animal Behavior (1x), Ecology (1x), Molecular Ecology (1x), Journal of Experimental Biology (1x), Journal of Insect Physiology (1x), Wellcome Open Research (3x), and Biological Invasion (1x).

ORAL AND POSTER PRESENTATIONS: (V= virtual)

Invited talks:

2026 Evolution (V). Symposium – Past Student Research Award Winners.
 2024 Wright State University.
 2023 University of Montana.
 2022 University of Texas A & M.
 2022 University of Montana.

Conference talks:

2026 Evolution meeting, Ohio, USA.
 2026 Entomological Society of America, Pacific Branch Meeting.
 2025 Evolution meeting, Athens, Georgia, USA.
 2025 EVO-WIBO meeting, Blaine, Washington, USA.
 2024 Evolution meeting – Symposium: Intraspecific variation and its role in eco-evolutionary dynamics
 2024 Evolution meeting – **Hamilton Award finalist for outstanding graduate student talk.**
 2022 Invasion Genomics 2022 conference. Louisiana - **Invited talk.**
 2022 Evolution meeting, Cleveland, Ohio, USA.
 2022 Southeastern Population Ecology & Evolutionary Genetics Conference.
 2021 American Naturalists' conference.
 2020 Southeastern Population Ecology & Evolutionary Genetics Conference.

Departmental talks:

2022 Graduate lunch seminar. University of South Carolina.
 2020 Graduate lunch seminar. University of South Carolina.
 2019 Graduate seminar series, Rocky Mountain Biological Laboratory.
 2019 Graduate lunch seminar. University of South Carolina.

Posters:

2022	The 11th international workshop on molecular biology and genetics of the Lepidoptera. Crete, Greece.
2021	Lepidopterists' Society - Best student poster award .
2019	Southeastern Population Ecology and Evolutionary Genetics Conference.
2018	Biology of Butterflies conference - runner-up award for student poster .

UNDERGRADUATE MENTORING:

2026	Grace Giles (University of Montana), Declan Pham (Hellgate High School).
2023-2025	Anna Imes and Sariah Jenson (UM honors college), Teagun Holycross (University of Montana).
2023	Anna Michelle Sanders (University of South Carolina).
2022-2023	Laura Littleton (University of South Carolina).
2020-2022	Hannah Walton (UofSC honors college), Andrea Chau (University of South Carolina) and Malia Olson (Regis University).
2021	Eva Kerr, Molly Long (RMBL) and Kelley Asselin (RMBL NSF Research Experience for Undergraduates site grant independent project).
2020	Karla Alvarado and Daniel Novoa (RMBL).

OUTREACH:

2024-2026	University of Montana, Missoula. Annual one day workshop on Lepidoptera- <i>Wolbachia</i> Biology for indigenous high school students through the Montana AIMS project.
2022	Karnataka butterfly festival (organized by the Karnataka Forest department, India). Citizen science talk on butterfly biology.
2021	RMBL. Organized undergraduate-graduate mentorship program to help undergraduate students in navigating field work and graduate school applications.
2020	RMBL. Organized early career research symposiums to highlight work by underrepresented groups.
2020	RMBL. Founded undergraduate-graduate mentorship program to assist undergraduate students in navigating graduate school applications.
2019	Bangalore Butterfly Club. Citizen science talk on disseminating advances in scientific research on Lepidoptera to the public.
2016,2018	Karnataka Forest Department, India. Workshop on biology of butterflies for high school students.
2015-2022	Editor, Butterflies of India (https://www.ifoundbutterflies.org/)
2015-	Reviewer, Butterflies of India (https://www.ifoundbutterflies.org/)
2012	Co-founder; Bangalore Butterfly Club, a citizen science initiative to monitor butterfly populations in urban landscapes.

Professional society memberships:

2021-	Entomological Society of America
2019-	American Society of Naturalists
2019-	Society for the Study of Evolution
2019-	The Lepidopterists' Society