

NITIN RAVIKANTHACHARI
Curriculum Vitae, updated September 6, 2024
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University of Montana
Department of Biological Sciences
Missoula, Montana - 59810

CURRENT APPOINTMENT:

2023-present Post-doctoral research associate, University of Montana, Missoula, USA.

EDUCATION:

2018-2023 Ph.D. candidate in Biological Sciences, University of South Carolina, Columbia, USA.
Dissertation: Genetic Mechanisms Underlying Maladaptation in Specialized Species Interactions
Advisor: Prof. Carol L. Boggs

2014-2016 M.Sc. in Molecular Biology, Bangalore University, Bengaluru, India.
Advisors: Dr. Krushnamegh Kunte and Dr. M.N. Shivakameshwari

2011-2014 B.Sc. in Chemistry, Botany and Zoology, St. Joseph's College (Autonomous), Bengaluru, India.

PROFESSIONAL APPOINTMENTS:

2023-2024 Visiting scientist, University of Pennsylvania, Philadelphia, USA.

2018-2023 Principal Investigator, Rocky Mountain Biological Laboratory (RMBL).

2018-2023 Teaching Assistant, Dept. of Biological Sciences, University of South Carolina. Biol. 102 lab (Fall 2018-Fall 2019), Biol. 301 lab (Spring 2020-Spring 2023)

2017-2018 Project Assistant, Biodiversity Lab, NCBS, Bengaluru, India.

2015-2015 Indian Academy of Sciences Summer Research Fellow. Indian Institute of Sciences, Bengaluru, India.

2012-2017 Research Assistant, Biodiversity Lab, NCBS, Bengaluru, India.

FELLOWSHIPS, GRANTS AND HONORS:

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.

PUBLICATIONS:

Preprints/in review:

1. **Ravikanthachari, Nitin**, and Carol L. Boggs. "Genetic Mechanisms underlying Preference-Performance Mismatches: Insights from a Specialized Native Herbivore on an Invasive Toxic Plant." *bioRxiv* (2024): 2024-02. *In review, Heredity.*
2. **Ravikanthachari, Nitin**, and Carol L. Boggs. "Gene family evolution in brassicaceous-feeding insects: Implications for adaptation and host plant range." *bioRxiv* (2023): 2023-06.

Published articles: (citations: 192, h-index: 5)

1. **Ravikanthachari, Nitin**, Burch, L.L.,, and 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.*
2. **Ravikanthachari, Nitin**, Rachel A. Steward, and Carol L. Boggs. "Patterns of genetic variation and local adaptation of a native herbivore to a lethal invasive plant." *Molecular Ecology* (2024): e17326.
3. Olson, M. M*, **Ravikanthachari, N.**, Blackwell, M., & Boggs, C. L. (2023). The dispersal of microbes among and within flowers by butterflies. *Ecological Entomology*, 48(4).
4. Attiwilli, Suman, **Nitin Ravikanthachari**, and Krushnamegh Kunte. "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, no. 1 (2024): 88-101.
5. Lu Yang, **Nitin Ravikanthachari**,, Peter Andolfatto. Predictability in the evolution of Orthopteran cardenolide insensitivity. *Phil Trans R Soc B*. 374.1777 (2019): 20180246.
6. PC Sujitha, G Prasad, **R Nitin**,, Kalesh Sadasivan. 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 (2019): 23-31.
7. Tarun Karmakar[†], **R Nitin[†]**,, Krushnamegh Kunte. Early stages and larval host plants of some northeastern Indian butterflies. *Journal of Threatened Taxa* 10.6 (2018): 11780-11799.

8. **Ravikanthachari Nitin**,, Krushnamegh Kunte. Larval host plants of the butterflies of the Western Ghats, India. *Journal of Threatened Taxa* 10.4 (2018): 11495-11550.
9. KS Sheshadri, (4 authors), **R Nitin**,, TP Kumar. Ruining the ecology of Hesaraghatta Lake – the role of bird photographers. *Conservation India* (2013).

In prep:

1. **Nitin Ravikanthachari**, Andrea Chau*, Hannah Walton*, and Carol L Boggs. *in prep*. 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. *In prep*. Timescale of transfer and evolution of *Wolbachia* in Lepidoptera.
3. **Nitin Ravikanthachari**, Jack Beltz, Paul R Schmidt, and Brandon S Cooper. *In prep*. Pervasive frequency variation of *Wolbachia* among natural populations at short timescales in an insect host.
4. **Nitin Ravikanthachari**, William Connor, Michael Turelli, and Brandon S Cooper. *In prep*. Modes of *Wolbachia* acquisition in diverse Lepidoptera.
5. **Nitin Ravikanthachari**, William Connor, Michael Turelli, and Brandon S Cooper. *In prep*. Rapid turnover and transfer of *Wolbachia* across the insect phylogeny.

*Indicates undergraduate mentees.

†Equal authors.

Book:

Krushnamegh Kunte, and **Nitin Ravikanthachari**. 2020. Butterflies of Bengaluru. Karnataka Forest Department (Research Wing), NCBS, and IFB, Bengaluru, India. 196 pp.

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, University of South Carolina
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).
Judge	63rd (2019) and 65th (2021) USC Science and Engineering Fair.

ORAL AND POSTER PRESENTATIONS: (V= virtual)

2024	Oral (V). Evolution meeting – Symposium: Intraspecific variation and its role in eco-evolutionary dynamics
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- 2024 Oral (V). Evolution meeting – **Hamilton Award finalist for outstanding graduate student talk.**
- 2023 Oral. University of Montana – **Invited talk.**
- 2022 Oral. University of Texas A & M – **Invited talk.**
- 2022 Oral. University of Montana – **Invited talk.**
- 2022 Oral (V). Invasion Genomics 2022 conference. Louisiana - **Invited talk.**
- 2022 Poster. The 11th international workshop on molecular biology and genetics of the Lepidoptera. Crete, Greece.
- 2022 Oral. Evolution meeting, Cleveland.
- 2022 Oral. Southeastern Population Ecology & Evolutionary Genetics Conference.
- 2022 Oral (V). Graduate lunch seminar. University of South Carolina.
- 2021 Poster (V). Lepidopterists' Society - **Best student poster award.**
- 2021 Oral (V). American Naturalists' conference.
- 2020 Oral (V). Southeastern Population Ecology & Evolutionary Genetics Conference.
- 2020 Oral (V). Graduate lunch seminar. University of South Carolina.
- 2019 Poster. Southeastern Population Ecology and Evolutionary Genetics Conference.
- 2019 Oral. Graduate seminar series, Rocky Mountain Biological Laboratory.
- 2019 Oral. Graduate lunch seminar. University of South Carolina.
- 2018 Poster. Biology of Butterflies conference - **runner-up award for student poster.**

UNDERGRADUATE MENTORING:

- 2023- Anna Imes (UM honors college), Teagun Holycross and Sariah Jenson (UM honors college) (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 REU independent project).
- 2020 Karla Alvarado and Daniel Novoa (RMBL).

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

Society for the Study of Evolution: 2018 - Present; American Society of Naturalists: 2019 - Present; Lepidopterists Society: 2020 - Present; Entomological Society of America: 2022 - Present.

OUTREACH:

- 2012 Co-founder; Bangalore Butterfly Club, a citizen science initiative to monitor butterfly populations in urban landscapes.
- 2015- Reviewer, Butterflies of India (<https://www.ifoundbutterflies.org/>)
- 2015-2022 Editor, Butterflies of India (<https://www.ifoundbutterflies.org/>)
- 2016 Karnataka Forest Department, India. Workshop on biology of butterflies.
- 2018 Karnataka Forest Department, India. Workshop on biology of butterflies for high school students.
- 2019 Bangalore Butterfly Club. Citizen science talk on disseminating advances in scientific research on Lepidoptera to the public.
- 2020 RMBL. Founded undergraduate-graduate mentorship program to assist undergraduate students navigate graduate school applications.

- 2020 RMBL. Organized early career research symposiums (virtual) to highlight work by underrepresented groups.
- 2021 RMBL. Organized undergraduate-graduate mentorship program to help undergraduate students navigate field work and graduate school applications.
- 2024 University of Montana, Missoula. One day workshop on Lepidoptera-Wolbachia Biology for indigenous high school students through the Montana AIMS project.

REFERENCES:

1. Prof. Brandon S Cooper (Post-doc advisor)
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University of Montana
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2. Prof. Carol L Boggs (PhD advisor)
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3. Prof. Joseph M Quattro (Dissertation Committee Chair)
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