

# Neha Mohanbabu

Ph.D. candidate  
Department of Biology, Syracuse University  
[nmohanba@syr.edu](mailto:nmohanba@syr.edu)  
[nehamohanbabu@gmail.com](mailto:nehamohanbabu@gmail.com)  
ORCID: 0000-0002-6557-131X

Mailing Address  
107 College Place  
110 Life Sciences Complex  
Syracuse, NY, USA 13244

## RESEARCH INTERESTS

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Plant-herbivore interaction | Theoretical ecology | Grasslands | Plant traits | Resource availability

## MANUSCRIPTS AND PUBLICATIONS

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- Large herbivore impact on plant biomass along multiple resource gradients.  
N **Mohanbabu** and ME Ritchie (in review at *Ecology*)
- Multiple resource limitation of plants and its consequences for herbivores and their impacts.  
N **Mohanbabu** and ME Ritchie (in prep for *American Naturalist*) [preprint of an earlier version is available [here](#)]
- Friend or foe? The role of biotic agents in drought induced plant mortality. RJ Griffin-Nolan, N **Mohanbabu**, S Araldi-Brondolo, AR Ebert, J LeVonne, JI Lumbsden-Pinto, H Roden, JR Stark, J Tourville, KM Becklin, JE Drake, DA Frank, LJ Lamit, and JD Fridley (under revision for *Plant Ecology*)
- Grass-associated nitrogen fixation mitigates ecosystem nutrient limitation on poor Serengeti soils. ME Ritchie, GE Soka, N **Mohanbabu**, RA Raina, A Aman and NC Johnson (in prep for *PNAS*)

## RELEVANT EXPERIENCE

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- Successfully carried out ecological research at several remote field sites including Western and Eastern Himalayas, Western Ghats (India) and East Africa.
- Managed all research related logistics for a multi-institute collaboration on the effects of fragmentation on plant phenology and plant-pollinators, as a research assistant at Barua Lab, IISER Pune.
- Experienced in multiple computer languages and/or softwares including R, Python and ArcGIS
- Knowledge of advanced statistical techniques including hierarchical Bayesian analyses
- Skilled at graphic designing for science communication
- As a member of the Graduate Education Committee and Diversity and Inclusion (Teaching Assistant support) Committee, worked with the administration and students to create inclusive guidelines and practices.

## EDUCATION

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Syracuse University  
Graduate Student

August 2016 - Present

Indian Institute of Science Education and Research (IISER), Pune

BS-MS

August 2010 - May 2015

Master of Science (Distinction), Specialization: Biology

Bachelor of Science (Distinction)

## AWARDS, GRANTS & SCHOLARSHIPS

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- Research Excellence Doctoral Funding (REDF) Fellowship from Syracuse University Graduate School
- Multiple travel grants from Dept. of Biology and Graduate Student Organization from 2018-2020.
- Ecological Society of America Registration Grant to attend ESA Annual Meeting 2020
- American Society of Naturalists Travel Grant to attend Evolution 2019
- Council of Scientific & Industrial Research (CSIR) and University Grants Commission (UGC), India, Junior Research Fellowship, 2015
- Indian Academy of Sciences Summer Fellowship, 2013
- KVPY Fellowship, (2010-2015), Department of Science and Technology, Government of India

## SELECTED POSTERS AND PRESENTATIONS

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- *Ecological Society of America (ESA) Annual Meeting 2018*. “To defend or not to defend: Variation in defense with resource and herbivory”
- *Evolution 2019*. “When to defend? Variation in defense traits along multiple resource gradients”
- *British Ecological Society (BES) Annual Meeting 2019*. “Multiple resource control of herbivore consumption”  
Poster selected as “highly commended for the Best Poster Prize” at BES
- *Young Modellers in Ecology Workshop 2020*. “Multiple resource influence on herbivore consumption”
- *ESA Annual Meeting 2020*. “To defend or not to defend: Plant herbivore defense along resource gradients”
- *BES Annual Meeting 2020*. “How does multiple resource limitation of plants impact herbivores?”

## TEACHING

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- Taught “Introductory Biology” lab to undergrads from different disciplines in Fall of 2016-2020. Also developed modules to facilitate online learning during Fall 2020.
- As a teaching assistant for “Integrative Biology Laboratory”, I had the opportunity to teach upper-level biology undergrads about experiment design, statistics, and microscopy.
- Contributed to the “Integrative Biology Laboratory” by developing and updating the syllabus to include coding and statistics in R language with great success.
- Mentored undergrads in the research lab on designing their research projects, teaching them wet-lab chemistry and statistics

## OUTREACH

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- Designed hands-on experiment to teach high-school students about plant anti-herbivore defenses in a wide variety of commonly found trees in New York
- Volunteered at the Museum of Science and Technology (MOST), Syracuse on International Womens’ Day 2020 to talk about Women in Science
- Co-organizer of a year-long “Diversity in Ecology” seminar series that invites talented ecologists from under-represented backgrounds to present their research and network at Syracuse University.

## REFERENCES

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**Prof. Mark E. Ritchie**  
Department of Biology  
Syracuse University,  
Syracuse, NY, USA  
Email: [meritchi@syr.edu](mailto:meritchi@syr.edu)

**Prof. Jason D. Fridley**  
Department of Biology  
Syracuse University,  
Syracuse, NY, USA  
Email: [fridley@syr.edu](mailto:fridley@syr.edu)