

VANESSA E. RUBIO

rubiov@caryinstitute.org

EDUCATION

University of Notre Dame Notre Dame, IN, USA
Ph.D., Biological Sciences May 2023
Advisor: Dr. Nathan Swenson

Universidad de los Andes Bogotá, Colombia
B.S., Biology May 2016

Universidad de los Andes Bogotá, Colombia
B.S., Environmental Engineering May 2013

RESEARCH EXPERIENCE

University of Notre Dame Environmental Research Center Wisconsin, USA
Graduate Fellow Summer Program June - July 2021

University of Maryland Maryland, USA
Research Assistant: Priority effects, functional differentiation, and
negative density dependence as drivers of post-hurricane seedling dynamics
January - May 2018

Smithsonian Tropical Research Institute Panamá, Panamá
Research Assistant: Plant functional traits July 2016

Smithsonian Tropical Research Institute Panamá, Panamá
Research Assistant: The evolutionary origin of social insect queen pheromones July 2016

Smithsonian Tropical Research Institute BCI, Panamá
Intern: Spatial and temporal variability of carbon pools in a tropical forest
February 2015 - February 2016

Smithsonian Tropical Research Institute Panamá, Panamá
Research Experience for undergraduates in Integrative Tropical Biology:
Reciprocal drought transplant and interspecific variation in Panamanian
tropical trees June - August 2014

Universidad de los Andes Meta, Colombia
Field research assistant: re-census of long-term vegetation plots June - July 2012

TEACHING EXPERIENCE

University of Notre Dame

Teaching Assistant: Research Experience - Global Environmental Change Indiana, MD
January – May 2023

University of Maryland

Teaching Assistant: Principles of Ecology and Evolution Maryland, USA
January – May 2021
August - December 2019

University of Maryland

Teaching Assistant: Plant Biology Laboratory Maryland, USA
January – December 2020

University of Maryland

Teaching Assistant: Principles of Evolution Maryland, USA
August – December 2018

RECEIVED THE BIOLOGY DEPARTMENT TEACHING AWARD

University of Maryland

Teaching Assistant: Principles of Ecology Maryland, USA
August – December 2017

Universidad de los Andes

Teaching Assistant: Biostatistics Bogotá, Colombia
January 2013 – May 2014

Universidad de los Andes

Teaching Assistant: Hydrology Bogotá, Colombia
August 2013 – May 2014

PUBLICATIONS

Rubio, V. E. & Swenson, N. G. In Press. On functional groups and forest dynamics. *Trends in Ecology and Evolution*

Rubio, V. E., & Swenson, N. G. (2022). Functional groups, determinism and the dynamics of a tropical forest. *Journal of Ecology* 110, 185–196. **** Shortlisted for the 2022 Harper Prize: Early Career Research Award from the British Ecological Society.**

Worthy, S.J., **Rubio, V. E.**, Staiger, K., Ngouajio, B., Yang, J., & Swenson, N. G. (2021). Site-specific impacts of a major hurricane on alpha and beta diversity in tropical forest seedling communities. *Ecosphere* 12(7): e03651

Rubio, V. E., Zambrano, J., Iida, Y., Umaña, M. N., & Swenson, N. G. (2020). Improving predictions of tropical tree survival and growth by incorporating measurements of whole leaf allocation. *Journal of Ecology* 109:1331-1343.

Swenson, N.G., Worthy, S. J., Eubanks, D., Iida, Y., Monks, L., Petprakob, K., **Rubio, V. E.**, Staiger, K., & Zambrano, J. (2019). A reframing of trait-demographic rate analyses for ecology and evolutionary biology. *International Journal of Plant Sciences* 181(1):33–43

Rubio, V. E. & Detto, M. (2017). Spatiotemporal variability of soil respiration in a seasonal tropical forest. *Ecology and Evolution* 7: 7104-7116.

Work in progress/review:

Weinstein, B. G., Marconi, S., Zare, A., ..., **Rubio, V.E.**, ..., & White, E. Individual tree species maps for the National Ecological Observatory Network.

Rubio, V. E. & Swenson, N. G. Forest dynamics under a functional group deterministic model.

Worthy, S. J., **Rubio, V. E.**, Staiger, K., & Swenson, N. G. Influences of release from light limitation and soil pathogen pressure on functional trait, neighbor density, and demographic rate dynamics.

Staiger, K, Worthy, S. J., **Rubio, V. E.**, Swenson, N. G. Height-based survival advantages among understory seedlings following Hurricane Maria.

AWARDS & FELLOWSHIPS

University of Notre Dame Environmental Research Center, USA (\$7,500)	2021
ForestGeo Research Grant, Smithsonian Institution, USA (\$12,571)	2019
Biology Department Teaching Award, University of Maryland, USA	2019
Travel Award. Department of Biology, University of Maryland, USA (\$500)	2018
Summer Dean’s Fellowship. University of Maryland, USA (\$5000)	2018-2019
Dean’s Fellowship. Biological Sciences, University of Maryland, USA (\$5000)	2018
Travel Award. Smithsonian Tropical Research Institute, Panama (\$250)	2015
REU Tropical Biology, Smithsonian Tropical Research Institute, Panama (\$5000)	2014

PRESENTATIONS

- 2022. Oral presentation: Functional groups, determinism and the dynamics of a tropical forest. ForestGeo Seminar Series. Online, USA.
- 2019. Poster presentation: Functional stability in tropical forests. Womxn in STEM symposium. Brown University. Providence, RI, USA.
- 2018. Invited symposium speaker: Functional traits, guilds, and the dynamics of tropical forest. Symposium - Tropical tree life-history strategies: Causes and consequences of

demographic diversity. Association for Tropical Biology and Conservation. Kuching, Malaysia.

- 2016. Poster presentation: Spatial and temporal variation in soil and stem respiration in a seasonal tropical forest. Smithsonian Tropical Research Institute - Fellows and Interns Symposium. Panama City, Panama.
- 2015. Oral presentation: Spatial and temporal variability of ecosystem respiration in a seasonal tropical forest. Center for Tropical Forest Science, Barro Colorado Island, Panama.
- 2015. Poster presentation: Variación espacio – temporal de la respiración del suelo y tallos en un bosque tropical estacional. Congreso Colombiano de Botánica. Manizales, Colombia.
- 2015. Oral presentation: Variación espacio-temporal de la respiración del suelo y tallos en un bosque húmedo tropical estacional. IX Congreso Forestal Centroamericano y II Congreso Forestal de Panamá. Panama City, Panama.
- 2015. Poster co-author: Effects of the 100-year most severe El Niño driven drought on above and below ground CO₂ exchanges in a seasonal tropical forest. Detto, Muller-Landau, Davies, Rubio. AGU Fall Meeting. San Francisco, USA.

ACADEMIC SERVICE

Peer Reviewer For: Ecology letters, Environmental Monitoring and Assessment, Plant Ecology

University of Notre Dame Environmental Research Center, USA 2021

- Advised three undergraduate students in their research projects

Universidad de los Andes, Bogotá, Colombia 2012 - 2016

- Volunteer at the Laboratorio de Ecología de Bosques Tropicales y Primatología

LEADERSHIP & OUTREACH

Expanding Your Horizons in Science & Mathematics at Notre Dame 2023
Women in STEM: Discovering the Power of Science!

Member of Latinx Graduate Association at Notre Dame 2021-2023
Volunteer at “Citizenship Class” for La Casa de Amistad, South Bend, IN, USA

Secretary - Treasurer Behavior, Ecology, Evolution, and Systematics Students Taskforce 2019
University of Maryland, USA

Maryland Day Organizing Committee. University of Maryland, USA 2019

Volunteer Technica Hackathon for underrepresented genders, U. of Maryland, USA 2018

