

Georgia G. Hernández, PhD

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ORCID 0000-0002-1076-7200

Languages: **Spanish** (native language), **English** (fluent: speaking, reading, writing), **Italian** (high: listening; intermediate: reading; basic: writing, speaking), **Portuguese** (high: reading, listening, basic: writing, speaking)

APPOINTMENTS

Post-doctoral Scholar (2024 – 2026)

University of California Davis, USA

EDUCATION

Ph.D. Ecology and Evolutionary Biology (2024)

Dissertation: “Understanding Variation in Heat Tolerance Among Tropical Plant Communities: Implications for a Warming World”

University of Connecticut, USA

B.Sc. Biology (2017)

Thesis: “Evaluation of the Net Primary Productivity in high altitude pastures for livestock purposes”

Universidad Nacional de Costa Rica, Costa Rica

RESEARCH INTEREST

I am interested in understanding the effects of climate change on plants, from the leaf level to communities. Combining physiological and demographic techniques I aim to identify potential species’ capacity to tolerate climate stresses and how communities will eventually fluctuate on time and space.

PUBLICATIONS (*mentees)

7. **Hernández G G**, Rew M M*, Nelson K C*, Valliere J M. No difference in heat tolerance between native and non-native riparian species in California. *Biological Invasions* (In review)

6. **Hernández G G**, Seemann J S, Godoy L d C, García-Robledo C. Heat tolerance of tropical herbaceous plants increases with elevation. *Annals of Botany* (In review)

5. **Hernández G G**, Perez T, Vargas O M, Kress W J, Molina R, Cordero R, Seemann J R, García-Robledo C. (2022). Evolutionary history constrains heat tolerance of native and exotic tropical Zingiberales. *Functional Ecology*. DOI: 10.1111/1365-2435.14191
4. Slot M, Nardwattanawong T, **Hernández G G**, Bueno A, Riederer M, Winter K. (2021). Large differences in leaf cuticle conductance and its temperature response among 24 tropical tree species from across a rainfall gradient. *New Phytologist*, 232(4), 1618-1631. DOI: 10.1111/nph.17626
3. García-Robledo C, Kuprewicz E K, Baer C, Clifton E, **Hernández G G**, Wagner D L. (2020). The Erwin Equation of Biodiversity: From little steps to quantum leaps in the discovery of tropical diversity. *Biotropica*, 52(4), 590-597. DOI: 10.1111/btp.12811
2. **Hernández G G**, Slot M and Winter K. (2020). Similar temperature dependence of photosynthetic parameters in sun and shade leaves of three tropical tree species. *Tree Physiology*, 40(5), 637-651. DOI: 10.1093/treephys/tpaa015
1. Slot M, Krause G H, Krause B, **Hernández G G**, Winter K. (2019). Photosynthetic heat tolerance of shade and sun leaves of three tropical tree species. *Photosynthesis Research*, 141:119-130. DOI: 10.1007/s11120-018-0563-3

WORKS IN PROGRESS (*mentees)

4. **Hernández G G**, Godoy L d C, Castro R*, Perez-Enriquez*, Seemann J S, García-Robledo C, Slot M. Keeping up with the heat: Evaluating plants' ability to acclimate to local temperatures using a long-term survey of heat tolerance in a tropical plant community.
3. **Hernández G G**, Rew M M*, Nelson K C*, Funk J, Bucciarelli G, Valliere J M. A widescale assessment of heat tolerance in the California flora: Identifying predictors and vulnerabilities for plant conservation in a warming world.
2. **Hernández G G**, Kay K, García-Robledo C, Muñoz P, Funk J. Thermal acclimation of *Costus* sister species from contrasting temperature habitats.
1. **Hernández G G**, Cordero R, Fetcher N. Long-term photosynthetic acclimation of tropical tree seedlings to gradual increase of atmospheric CO₂.

CONTRIBUTED ORAL PRESENTATIONS & POSTERS (*mentees)

2022. Hernández G G, Castro R*, Pérez-Enriquez A*, García-Robledo C. "Heat tolerance on two extreme life stages of the Zingiberales community of a tropical lowland wet forest" ATBC Meeting 2022, Invited speaker at the Symposium Plant ecophysiology in a changing world: from theory to application.

2022. García-Robledo C, **Hernández G G**, Kuprewicz E. “Thermal mismatches between host plants and insect herbivores along elevational gradients: Implications for global warming” ATBC Meeting 2022

2021. Hernández G G, Seemann J R, García-Robledo. C. “Heat tolerance and thermal safety margins of tropical plants increase with elevation: Are lowland plant communities at higher risk to global warming?”
ATBC Virtual Meeting 2021, Invited speaker at the Symposium: Emerging Frontiers in Tropical Ecology: voices from the Next Generation.

2019. Hernández G G, Perez T, Vargas O, Kress W J, Molina R, Cordero R, Seemann J R & García-Robledo C. Poster: “Phylogenetic constraints or convergent adaptation? Leaf thermal tolerance of native and exotic Zingiberales in a tropical lowland forest”
43rd New Phytologist Symposium Interaction networks and trait evolution

2018. Hernández G G, Slot M & Winter K. Poster: “Temperature dependence of photosynthetic parameters in tropical trees; comparing mechanisms in sun and shade leaves”
Ecological Society of America Annual Meeting 2018 (ESA)

2016. Hernández R & **Hernández G G**. “Leaf crown position determines heat and light stress in *Dipterix panamensis*”
IV Cuban Tropical Biodiversity and Ecology Conference

AWARDS

2023. Honorable mention, Tree Physiology Best Graduate Student Paper Award. For the paper "Similar temperature dependence of photosynthetic parameters in sun and shade leaves of three tropical tree species (2020)".

2019. Environmental Leadership Award. Office of Environmental Policy and the Environmental Policy Advisory Council, University of Connecticut – for my contribution to education, commitment to environmental literacy of Costa Rican students (BRENESII).

FELLOWSHIPS (Total: \$46 360)

2023. American Philosophical Society – Lewis and Clark Fund for Exploration and Field Research (\$5000)

2023. Organization for Tropical Studies Fellowship. Glaxo Centro America Fellowship – Organization for Tropical Studies (\$4500)

2019 – 2023. Ecology and Evolutionary Biology Department – Botany Award. University of Connecticut (total of \$7500)

2022. Conference Participation Award – Graduate School. University of Connecticut (\$750)

2022. Organization for Tropical Studies Fellowship. Glaxo Centro America Fellowship – Organization for Tropical Studies (\$5600)

2020. Organization for Tropical Studies Fellowship. David and Deborah Clark & Rudy Ruggles Research Fellowship – Organization for Tropical Studies (\$5440)

2020. ATBC Seed Research Grant. Association for Tropical Biology and Conservation Award (\$1000)

2019. UCONN@COP25 Fellowship. Fellowship to attend the *United Nations Climate Change Conference* (formally known as the Conference of Parties, COP25-Chile) in Madrid, Spain

2019. Heliconia Society International Award for Botanical and Horticultural Research Projects on the Zingiberales (\$1000)

2019. New Phytologist Trust Student Award (\$1400)

2019. The Explorers Club – Mamont Scholar Grant (\$3000)

2019. Organization for Tropical Studies Fellowship. Glaxo Centro America Fellowship – Organization for Tropical Studies (\$5200)

2018. Tropical Ecology and Conservation (\$1000): Organization for Tropical Studies & Universidad de Costa Rica

2018. Smithsonian Tropical Research Institution: Travel Award Program (\$1000)

2018. El Instituto – Institute of Latina/o, Caribbean, and Latin American Studies. University of Connecticut (\$500): Whetten Fund Grant- UCONN

2017. Organization for Tropical Studies Fellowship (\$2370): Rudy Ruggles Research Fellowship – Organization for Tropical Studies

2016. Universidad Nacional de Costa Rica: Travel Award (\$500)

2016. Dry Forest Ecology Course (\$600): Universidad de Costa Rica

TEACHING EXPERIENCE

2025. R & Statistical Analysis Workshop Instructor
 Developed and delivered a comprehensive workshop on R programming and statistical analysis for undergraduate students.
 Course: Tropical Biology, Semester Course
 Organization for Tropical Studies

2025. Invited Faculty
 Led a student research project providing mentorship and guidance in experimental design, data collection, and analysis within my expertise at La Selva Biological Station, Costa Rica.

Course: Tropical Biology, Undergraduate Semester Course
Organization for Tropical Studies

2024. Administrative Teaching Assistant

Course: General Biology for Science majors 1108
University of Connecticut

2024. Invited Faculty

Led a student research project providing mentorship and guidance in experimental design, data collection, and analysis within my expertise at Las Cruces Biological Station, Costa Rica.

Course: Tropical Biology, Graduate Semester Course
Organization for Tropical Studies

2018 – 2023. Teaching Assistant

Course: General Biology 1102 & 1108
University of Connecticut

2021. Research Mentor

Course: Research Experience for Undergraduates, Costa Rica
NSF/LSAMP – Organization for Tropical Studies
Coordinator: Dr. Carissa Ganong

2018. Co-coordinator and Teaching Assistant

Course: Research Experience for Undergraduates, Costa Rica
NSF/LSAMP – Organization for Tropical Studies
Coordinator: Dr. Carissa Ganong

2015 – 2017. Teaching Assistant

Course: Plant Anatomy & Physiology Laboratory
Universidad Nacional de Costa Rica
Professor: Dr. Roberto Cordero

STUDENT RESEARCH MENTORED

Graduate Students

Kekoa C. Nelson (PhD Student, UC Davis, 2024-2025)

Maisey M. Rew (Junior specialist, UC Davis, 2024-2025)

Undergraduate Students

Kayla Dubbs (UConn undergraduate senior project 2022)

Raquel Castro (Universidad Nacional Costa Rica, NSF-REU Project 2021, Research Assistant 2021-2023)

Alejandra Pérez (Universidad Nacional Costa Rica, NSF-REU Project 2021)

Julian Batista Lugo (Pontifical Catholic University of Puerto Rico, NSF-REU Project 2021)

Megana Varma (UCONN undergraduate honor thesis 2020)

SERVICE

Peer reviewer for: Global Change Biology, Global Ecology and Conservation, Journal of Ecology, Oecologia, Tree Physiology

2023 – 2024. DEI Committee Member. EEB, University of Connecticut

OUTREACH & VOLUNTEER ACTIVITIES

2025. Volunteer at the Arboretum & Botanic Garden, University of California Santa Cruz.

2023. [Blog](#) featured in Functional Ecologists, Behind the paper.

2023. Talk at the Willimantic Public Library Program, CT. “How do tropical plants beat the heat?”

2019 – 2020. Outreach Committee Coordinator. Graduate Student Association, EEB University of Connecticut

2015 – 2019. Co-founder of a start-up BRENESII, Costa Rica. A science communication program focused on latino young people in Costa Rica. www.brenesii.com, [video](#)

BRENESII Awards:

UNA INCUBA, Universidad Nacional de Costa Rica (2014).

Premio Yo Creo, Universidad Latina (2015)

Member of Youth Action Network (2015)

Mention of BRENESII in the **local press:** [La República \(2015\)](#), [El Financiero \(2015\)](#)

CERTIFICATES, COURSES & WORKSHOPS

2025. Project Execution: Running the Project. Coursera – Coursera & Google

2025. Project Planning: Putting it all together. Coursera – Coursera & Google

2025. Project Initiation: Starting a Successful Project. Coursera – Coursera & Google

2025. Foundations of Project Management. Coursera – Coursera & Google

2024. Mentoring Academy for Postdoctoral Scholars. Graduate studies, UC Davis

2018. Tropical Ecology and Conservation: Organization for Tropical Studies & Universidad de Costa Rica (OTS funded: \$1000).

2016. Dry Forest Ecology. Universidad de Costa Rica & UNAM (UCR funded: \$600).

Professors: Drs. Mauricio Quesada, Silvana Martén, Jorge Lobo & Ariel Fuchs
Santa Rosa National Park, Costa Rica

2016. Modeling of Fundamental Processes in Ecology. Universidad Nacional de Costa Rica
Professor: Dr. Esteban Acevedo

2015. Introductory course in Meta-analysis for Ecology. Universidad Nacional de Costa Rica & UNAM

Professor: Dr. Romeo Saldaña

2014. Curatorial procedures for Natural History Collections. Universidad Nacional de Costa Rica & Instituto de Ecología y Sistemática Cuba

INTERNSHIPS

2018. Smithsonian Internship (\$3000): Smithsonian Tropical Research Institute

Mentors: Drs. Martijn Slot and Klaus Winter

Project: "Ecophysiology of Tropical Plants"

2018. Smithsonian Internship (\$2400): Hollister-Smith Endowment Program- Smithsonian Tropical Research Institute

Mentors: Drs. Martijn Slot and Klaus Winter

Project: "Ecophysiology of Tropical Plants"

2017. Universidad de Costa Rica (UCR): Research Center for Environmental Contamination. Thesis program for undergraduates

Mentor: Dr. Christina Chinchilla

Project: "Limitations to primary production of pastures under low radiance and nutrients"

2016. Research Experience for Undergraduates NSF- Organization for Tropical Studies (\$2480):

Mentors: Drs. Roberto Cordero & Ned Fetcher

Coordinator: Dr. Carissa Ganong

Project: "Long-term photosynthetic acclimation of tropical tree seedlings to gradual increase of atmospheric CO₂"