

## 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 CO<sub>2</sub>.

#### 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”  
43<sup>rd</sup> 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](http://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 CO<sub>2</sub>”

## **REFERENCES**

Martijn Slot, Smithsonian Tropical Research Institute, Panamá, [slotm@si.edu](mailto:slotm@si.edu)

Justin Valliere, University of California Davis, [jmvalliere@ucdavis.edu](mailto:jmvalliere@ucdavis.edu)