

GEORGIA G. HERNÁNDEZ

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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 Plant heat tolerance is shaped by trait coordination, acclimation, and evolutionary history.
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)

7. **Hernández G G**, Valliere J M. (2025). "A widescale assessment of heat tolerance in the California flora: Identifying predictors and vulnerabilities for plant conservation in a warming world"
California's Fifth Climate Change Assessment. Governor's Office of Land Use and Climate Innovation, California, USA

6. **Hernández G G**, Castro R*, Pérez-Enriquez A*, García-Robledo C. (2022). “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.
5. García-Robledo C, **Hernández G G**, Kuprewicz E. (2022). “Thermal mismatches between host plants and insect herbivores along elevational gradients: Implications for global warming”
ATBC Meeting 2022
4. **Hernández G G**, Seemann J R, García-Robledo. C. (2021). “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.
3. **Hernández G G**, Perez T, Vargas O, Kress W J, Molina R, Cordero R, Seemann J R & García-Robledo C. (2019). 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
2. **Hernández G G**, Slot M & Winter K. (2018). Poster: “Temperature dependence of photosynthetic parameters in tropical trees; comparing mechanisms in sun and shade leaves”
Ecological Society of America Annual Meeting 2018 (ESA)
1. Hernández R & **Hernández G G**. (2016). “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- **University of Connecticut**

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. Instructor

Seminar: Scientific Writing

University of California Davis

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 for Science** majors and non-majors 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: American Journal of Botany, 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**

2023-2024. Volunteer at the George Safford Torrey **Herbarium CONN**

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

2023. Talk at the **Willimantic Public Library Program**, Connecticut, USA. “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. Agile Project Management. Coursera – Coursera & Google

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”

REFERENCES

Martijn Slot, Smithsonian Tropical Research Institute, Panamá, slotm@si.edu

Justin Valliere, University of California Davis, jmvalliere@ucdavis.edu