SYBIL G. GOTSCH, Ph.D.

Department of Forestry and Natural Resources
College of Agriculture, Food and Environment
University of Kentucky
Lexington, KY 40546

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SUMMARY

Passionate research scientist and educator with expertise in forest ecophysiology, ecohydrology, plant physiology, canopy biology, tropical ecology, urban ecology and climate change. Strong publishing record and well-funded research program which has provided extensive opportunities for both undergraduate and graduate students. Dedication to department, college and local community exhibited with meaningful committee appointments, community-based research and outreach.

EDUCATION

2006	Ph.D., Ecology and Evolution, Stony Brook University, Stony Brook, NY
1997	B.A. *with honors*, Biological Sciences, Mount Holyoke College, South Hadley, MA
1996	School for Field Studies, Rainforest Ecology, Queensland Australia

LANGUAGES

Spanish- Fluency in the spoken language with 20+ years of experience in formal oral communication for research and training in the U.S. and in Latin America. Proficiency in formal reading and writing.

Portuguese- Proficient in conversational language and reading. Basic writing skills.

ACADEMIC APPOINTMENTS

2023-present	Associate Professor, Dept. of Forestry and Natural Resources, University of Kentucky
2018-2022	Associate Professor, Dept. of Biology, Franklin and Marshall College
2025	Affiliate Graduate Faculty, Dept. of Environmental Studies, University of Victoria, Victoria, British Colombia, Canada
2021-present	Affiliate Graduate Faculty, Dept. of Natural Resources and the Environment, University of New Hampshire
2012-2018	Assistant Professor, Dept. of Biology, Franklin and Marshall College
2009-2012	Postdoctoral Research Associate, Dept. of Natural Resources and the Environment, University of New Hampshire
2007-2009	Postdoctoral Research Associate, Dept. of Plant and Microbial Biology, North Carolina State University

OTHER TEACHING AND RELATED APPOINTMENTS

2020	Organization for Tropical Studies, Graduate Resource Faculty in Tropical Ecology
2011-2018	Faculty, Brown University Environmental Leadership Lab

PUBLICATIONS

** indicates student and post-baccalaureate research technician authors*

Gotsch SG, Dawson T., Williams CB. (2025). Trait plasticity enables trees & shrubs to live as epiphytes throughout the coast redwood canopy. *(accepted). Ecosphere.*

Vaughan DR, Dawson TE., Lowman L., Nadkarni NM, Gutierrez P.*, Cubero E.*, Van Stan J.T., **Gotsch S.G.** (2025). Will epiphyte loss exacerbate climate change effects in tropical montane cloud forests. (*In review*). *Agricultural and Forest Meteorology*.

Carchipulla-Morales P, Corbett H; **Gotsch SG**, Vaughan D, Dawson TE, Nadkarni N, Lowman LEL. (2025). A novel model quantifies epiphyte-mediated temperature and water dynamics in a tropical montane cloud forest. Agricultural and Forest Meteorology 34 (2025) 110770.

Tucker D., **Gotsch SG**; Vaughan D.; Grastein, SR; Moreno L.; Shackelford N.; Starzomski B. (2025). Community-level trait variation of epiphytic bryophytes supports trade-off aligned with leaf-economic spectrum in vertically stratified tropical montane cloud forest canopies. https://doi.org/10.1111/1365-2435.70117. *Functional Ecology.*

Anders EM*., **Gotsch SG**, Vadeboncoeur MA, Metcalfe DB, Bartholomew DC, Horwath AB, Espinoza B., Galiano D., Asbjornsen H. (2025). Trait plasticity and adaptive strategies of vascular epiphytes to a large-scale experimental reduction of fog immersion in a tropical montane cloud forest. https://doi.org/10.1002/ajb2.70042. *American Journal of Botany.*

Vaughan D., Williams CB., Nadkarni N., Dawson TE., Dragulic D., Naesborg RR., **Gotsch SG**. (2024). Drought response strategies of vascular epiphytes in isolated pasture trees in a Costa Rican tropical montane landscape. American Journal of Botany 11(10).

Raffai A*, **Gotsch S.G**, Moore AFP, Buck CS, Van Stan JT. (2024). Evaporation and condensation dynamics within saturated epiphyte communities in a Quercus virginiana forest (Coastal Georgia, USA). Agricultural and Forest Meteorology: 361.

Dudrick R*, Antoine J*, Austin K, Bedoya L*, Clark S, Dean H*, Hoffman M, Medina A*, **Gotsch SG**. (2024). Do Plants Matter?: Determining what drives variation in urban rain garden performance. *Ecological Engineering*: 201.

Moore, AFP, Antoine J*, Bedoya LI*, Medina A*, Buck CS, Van Stan JT, **Gotsch SG** (2023). Drought decreases water storage capacity of two arboreal epiphytes with differing ecohydrological traits. *Science of the Total Environment* 894:164791.

Van Stan JT, Allen ST, Aubrey DP, Berry ZC, Biddick M, Coenders-Gerrits AMJ, Giordani P, **Gotsch SG**, Gutmann ED, Kuzyakov Y, Magyar D, Mella VSA, Mueller KE, Ponette-González AG, Porada P, Rosenfeld CE, Simmons J, Sridhar KR, Stubbins A, Swanson T. (2023) Shower Thoughts: Why Scientists Should Spend More Time in the Rain, *Bioscience* 73(6) 441-452.

Mabrouk AI, Gordon A, **Gotsch SG**, Van Stan JT. (2022). What signals might plant canopies send via stemflow? Frontiers in Water (4): *https://doi.org/10.3389/frwa.2022.1075732*

Gotsch S.G., Williams C.B., Bicaba R.*, Cruz-de Hoyos R., Darby A.*, Davidson K*. Dix M.*, Duarte V*, Glunk A*., Green L*., Ferguson B*., Muñoz-Elizondo K. Murray J.G.*, Picado-Fallas I.*, Reese Næsborg R, Dawson T.E, Nadkarni N. (2022). Trade-offs between succulent and non-succulent epiphytes underlie variation in drought tolerance and avoidance. *Oecologia.*198(3):645-661 §

Ferguson, B.N.*, **Gotsch S.G.**, Williams C.B., Wilson H.*, Barnes, C.N.*, Dawson T.E., Nadkarni N.M. (2022) Variation in cloud immersion, not precipitation, drives vascular epiphyte leaf trait plasticity and water relations during an extreme drought in a tropical montane region. *American Journal of Botany.* 109(4):550-563 §

R. Ostertag, C. Restrepo, J.W. Dalling, P.H. Martin, I. Abiem, S. Aiba, E. Alvarez-Dávila, R.

Aragón, M. Ataroff, H. Chapman, A. Cueva-Agila, B. Fadrique, R. Fernandez, G. González, **S. G. Gotsch**, A. Häger, J. Homeier, C. A. Armijos, L.D. Llambí, G. W. Moore, R. R. Naesborg, L. N. P. López, P. V. Pompeu, J. R. Powell, J. A. R. Correa, K. Scharnagl, C. Tobón, C. B. Williams. (2022). Litter decomposition rates across tropical montane and lowland forests are controlled foremost by climate. *Biotropica*. 54(2): 309-326

Williams C., Murray J.G*., Glunk A*., Dawson T., Nadkarni N., **Gotsch S.G.** (2020). Vascular epiphyte responses to experimental drought: Implications for community turnover in a Costa Rican cloud forest. *Functional Ecology.* 34(8): 1537-1550.

Amici A.A., Nadkarni N., Williams C., **Gotsch S.G.** (2019). Differences in epiphyte biomass and community composition along landscape and within-crown gradients. *Biotropica*.52(1): 46-58.

Hargis H*., **Gotsch S.G**., Porada P., Moore G., Ferguson B*., Van Stan J. (2019). Arboreal epiphytes: How often are the biggest "buckets" in the canopy empty? *Geosciences*, 9 (8) 342; doi:10.3390/geosciences9080342.

Berry, Z.C., Emery, N.E., **Gotsch S.G.**, Goldsmith G.R. (2018). Foliar water uptake: Processes, pathways, an integration into plant water budgets. *Plant, Cell & Environment* 42(2):410-423.

Gotsch, S.G., Dawson, T. and Draguljić, D. (2018). Variation in the resilience of cloud forest epiphytes to severe drought. *New Phytologist*, 219(3):900-913.

Gotsch S.G., Draguljić, D., Williams, C. (2018). Evaluating the effectiveness of urban trees to mitigate storm water runoff via transpiration and stemflow. *Urban Ecosystems* (1):183- 195.

Gotsch, S.G., Davidson, K*., Murray, J.G.*, Duarte, V.J.*, Draguljić, D. † (2017). Vapor pressure deficit predicts epiphyte abundance across an elevational gradient in a tropical montane region. *American Journal of Botany*, 104(12):1790-1801. **§**

Gotsch, S.G., Nadkarni, N., Amici, A. (2016). The functional significance of epiphytes and arboreal soils in tropical montane cloud forests. *Journal of Tropical Ecology*. 32(5):455-468.

Gotsch, S.G., Asbjornsen, H., Goldsmith, G. (2016). Plant carbon and water relations of tropical montane cloud forests. *Journal of Tropical Ecology*. 32(5):402-420.

Darby, A.*, Draguljić, D., Glunk, A.*, **Gotsch, S.G.** (2016). Habitat Moisture Drives Transpiration and Foliar Water Uptake in a Tropical Montane Cloud Forest Canopy. *Oecologia* 182(2), 357-371.

Berry, Z.C., **Gotsch, S.G**., Holwerda, F., Muñoz-Villers, L., Dawson, T., Asbjornsen, H.A.(2016). Slope position influences vegetation-atmosphere interactions in a tropical montane cloud forest. *Agricultural and Forest Meteorology*. 21: 207-218.

Gotsch, S.G., Nadkarni, N., Darby, A.*, Glunk, A.*, Dix, M.*, Davidson, K*., Dawson, T.(2015). Life in the Treetops: Ecophysiological Strategies of Canopy Epiphytes in a Tropical Montane Cloud Forest. *Ecological Monographs.* 85(3): 393-412. **§**

Barrientos, M.S., Holwerda, F., Geissert, D.R., Muñoz-Villers, L.E., **Gotsch S.G**., Asbjornsen,H., Dawson, T.E. (2015). Preceding fog enhances nighttime transpiration in a seasonal tropical montane cloud forest environment. *Trees-Structure and Function.* 29(1): 259- 274.

Gotsch, S.G., Crausbay, S.D., Giambelluca, T.W., Weintraub, A.E.*, Longman, R., Asbjornsen,A., Hotchkiss, S.C., Dawson, T.E. (2014). Water relations and micro-climate around the upper limit of cloud forest in Maui, Hawai'i. *Tree Physiology*. 34(7): 766-777. **§**

Gotsch, S.G., Asbjornsen, H., Weintraub, A.E.*, Holwerda, F., Goldsmith, G.R., Dawson, T.E. (2014). Foggy days and dry nights determine crown-level water balance in a seasonal tropical montane cloud forest. *Plant, Cell and Environment* 37(1): 261-272. **§**

Hoffmann, W.A., Geiger, E. L., **Gotsch, S. G**., Rossatto, D.R., Silva, L.C.R, Lau, O.L., Haridasan,

M., Franco, A.C. (2012). Ecological thresholds at the savanna-forest boundary: How plant traits, resources and fire govern the distribution of tropical biomes.*Ecological Letters*. 15(7): 759-768.

Hoffmann, W.A., Jaconis,S.Y*, Geiger, E.L., **Gotsch, S.G**., Franco, A.C. (2012) Fuels or microclimate? Understanding the drivers of fire feedbacks at savanna-forest boundaries. *Austral Ecology*, 37:634-643.

Geiger, E. L., **Gotsch, S. G**., Vale, G.D., Haridasan, M., and Franco, A.C., Hoffmann, W.A. (2011). Distinct roles of savanna and forest tree species in regeneration following fire suppression in a Brazilian savanna. *Journal of Vegetation Science* 22: 312–321.

Asbjornsen, H, Goldsmith, G.R., Alvarado-Barrientos, M.S., Rebel, K. , Van Osch, F.P., Rietkerk, M.G., Chen, J., **Gotsch**, **S.G.** Tobón-Marin, C., Geissert, D.R., Gómez-Tagle, A., Vache, K, Dawson, T.E. (2011). Ecohydrological Advances and Applications in Plant Water Relations Research: A Review. *Journal of Plant Ecology*. 4(3): 192-192.

Gotsch, S.G., E.L. Geiger, G. Goldstein, F.E. Meinzer, A.C. Franco, W.A. Hoffmann. (2010). Allocation to leaf area and sapwood area affect water relations of co-occurring savannaand forest trees. *Oecologia* 163:291–301.

Gotsch, S.G., J.S. Powers and M.T. Lerdau. (2010). Variation in leaf traits of 12 evergreen species that grow in Costa Rican wet and dry forests: shifting leaf-trait networks andnovel leaf-trait relationships. *Plant Ecology* 211(1):133-146.

Hoffmann, W.A., Adasme, R., Haridasan, M., Pereira, M.A.B.,* Geiger, E.L., Carvalho, M.T.*, **Gotsch, S.G.**, Franco, A.F. (2009). Tree topkill, not mortality, governs the dynamics of alternate stable states at Brazilian savanna-forest boundaries under frequent fire. *Ecology*. 90:1326-1337.

Gotsch, S.G., and A.M. Ellison. (1998). Seed germination of the northern pitcherplant, *Sarracenia purpurea*. *Northeastern Naturalist*, 5(2):175-182.

§ *indicates a publication where Gotsch also published a photograph as the cover for the journal*

FUNDING

National Science Foundation. *Collaborative Research: RUI: Will climate change lead to system shifts on tropical mountains?: the interplay of epiphyte losses on host tree function, microclimate, and hydrology.* PI (co-PIs: Todd Dawson, University of California-Berkeley; Nalini Nadkarni, University of Utah; Lauren Lowman, Wake Forest University). **Total Award: $1,885,584** (845k to Gotsch lab). Active 2021-2025.

National Science Foundation. *Collaborative Research: RUI: Hydrology of the vegetation on vegetation: Comparison and scaling of rainfall interception and solute alteration by common arboreal epiphytes*. Co-PI (PI: John Van Stan, Cleveland State University; Co-PI Clifton Buck, University of Georgia). **Total Award: $854,957** (158k to Gotsch lab).
Active 2020-2023.

Center for Sustained Engagement with Lancaster. Seed Grant: *Getting to the bottom of green infrastructure's dirty secrets: Determining what drives variation in rain garden performance in the City of Lancaster*. **Total Award: $9,273.22.** Active 2021-2022.

Chesapeake Bay Trust. Impacts of salt loading on nutrient and metal processing in stormwater

bioretention. Subaward recipient to support student research. PI-Lauren McPhillips, co-PIs Hong Wu, Margaret Crawley, Shirley Clark. **Total Award: $196,183** (6k to Gotsch lab). Active 2021-2023.

National Science Foundation. *Collaborative Research: IOS (RUI): Dry in the sky?: Ecophysiological Strategies and Drought Tolerance among Tropical Montane Cloud Forest Canopy Epiphytes*. PI (Co-PIs: Todd Dawson and Nalini Nadkarni). **Total Award: $564,798** (404k to Gotsch lab). Active 2016-2020.

National Science Foundation. *Supplemental Grant. Collaborative Research: IOS (RUI): Dry inthe sky?: Ecophysiological Strategies and Drought Tolerance among Tropical Montane Cloud Forest Canopy Epiphytes.* PI (Co-PIs: Todd Dawson and Nalini Nadkarni). **Total Award: $76,545** (all to Gotsch lab). Active 2019-2020.

POST-DOC FUNDING

NSF Funded Proposals: Gotsch supported while a post-doc

2008-2011, Title: Ecohydrological Controls on Watershed Response to Land Use Change in the Montane Cloud Forest Zone in Central Veracruz, Mexico. PI: Heidi Asbjornsen (Iowa State University and University of New Hampshire), co-PIs: ToddDawson (University of California-Berkeley), Jeff McDonnell (Oregon State University) University of New Hampshire and Iowa State University, Original grant number (ISU): DEB-0746179 New number (UNH): DEB- 1156143. Total award: $1,200,000.

2006-2010, Title: Evolutionary and Ecological Feedbacks as Determinants of Savanna-Forest Dynamics. PI: William Hoffmann (North Carolina State University), co-PI: Guillermo Goldstein (Universityof Miami) North Carolina State University Award, DEB-0542912. Total award: $400,000.

Independent Grant while a post-doc

2010, Title: Water relations and micro-climate around the upper limit of cloud forest in Maui, Hawai'i.Co-PIs: Shelley Crausbay, Sybil G. Gotsch
National Park Service Research Grant, 2010, $10,000.00

TEACHING

University of Kentucky

FOR 340: Forest Ecology- *required for Forestry and Natural Resources and Environmental Science majors (NRES), taught every fall)*

FOR 245: Tree Biology- *required for Forestry majors, elective for NRES and Biology majors, taught every fall*

NRES 320: Field Studies in Costa Rica- *one of two mandatory field-intensive experiences in the Natural Resources and Environmental Sciences major, taught every summer*

Franklin and Marshall College

BIO 220: Physiology and Development *(required for a number of majors including Biology, EnvironmentalScience and Public Health, lab course, taught fall of 2012-2014, 2016-2018, 2020)*

BIO374: Plants & the Environment *(upper-level lab elective course in Ecohydrology for Biologyand Environmental Science majors, taught spring of 2019, 2021)*

BIO 370: Environmental Physiology of Plants *(upper-level elective lab course in Plant Physiology for Biology and Environmental Science majors, taught spring of 2013-2014)*

BIO 371: Applied Research in Plant Ecophysiology *(upper-level elective seminar course forBiology and Environmental Science majors, taught spring 2015)*

NSP 170: Nature in the Urban Environment *(general education course, taught spring 2015, 2017)*

BIO 390/490: Guided Research (*upper-level elective research semester for Biology and Environmental Science majors, taught fall 2013, spring 2014, fall 2014, spring 2015, fall 2016, spring 2017, fall 2017, spring 2018, fall 2018, spring 2019, fall 2019*)

INVITED PRESENTATIONS

2025. Research Seminar, Department of Earth Sciences, Indiana University-Indianapolis.
2024. Research Seminar, Department of Biology, University of Louisville.
2024. Research Seminar, Department of Biology, Murray State University.
2023. Research Seminar, Department of Environmental Science, Mount Holyoke College, S. Hadley MA.
2023. Research Seminar, Department of Biology, Kent State University, Kent OH.
2022. Research Seminar, Stroud Water Research Institute, Avondale, PA.
2022. Workshop Presentation, Department of Geography, *University of Costa Rica,* San Jose, Costa Rica**.**
2022. Research Seminar, Department of Forestry, *University of Kentucky,* Lexington, Kentucky**.**
2022. Research Seminar, Department of Biology, *California State University-Chico,* Chico, California**.**
2022. Research Seminar, Department of Biology, *College of Charleston,* Charleston, South Carolina**.**
2022. Research Seminar, Department of Biology, *Wake Forest University,* Winston Salem, North Carolina.
2022. Research Seminar, Department of Biology, *University of Dayton,* Dayton, Ohio.
2021. Research Seminar, Department of Natural Resources and the Environment, *University of New Hampshire,* Durham, New Hampshire.
2021. Research Seminar, Department of Earth and Environmental Science, *Temple University* (Webinar).
2020. Research Seminar, *Monteverde Institute*, Monteverde Costa Rica.
2020. Guest Lecture Presentation. *Wheaton College*, Tropical Biology.
2020. Research Seminar, *Fundación Alianza Natural Colombia,* (Webinar).
2019. Invited Oral Presentation. *American Geophysical Union Annual Conference*. San Francisco, CA USA.
2018. Research Seminar, *Universidad de Costa Rica,* Escuela de Biología, San Jose, Costa Rica.
2017. Research Seminar, *Franklin & Marshall College*, Department of Biology, Lancaster, PA.
2017. Research Seminar, *Rutgers University,* Department of Ecology and Evolution. New Brunswick, NJ. USA.
2015. Research Seminar. *University of Pennsylvania*, Department of Biology, Graduate Program in Ecology and Evolution, Philadelphia, PA, USA.
2015. Invited Oral Presentation. *Ecological Society of America*. Baltimore, USA.
2014. Invited Poster Presentation. *American Geophysical Union*, Fall Meeting, San Francisco, CA, USA.
2014. Research Seminar. Department of Biology, *The College of New Jersey*, Trenton, NJ, USA.
2014. Research Seminar. Department of Earth and the Environment, *Lehigh University*,

Bethlehem, PA USA.

2013. Research Seminar. Department of Biology, *Susquehanna University*. Selinsgrove, PA USA.

2011. Research Seminar. Department of Biology, *Franklin and Marshall College*, Lancaster, PA, USA.

2008. Research Seminar. *Organization for Tropical Studies*, La Selva Biological Reserve, Costa Rica.

2008. Research Seminar. *The American School of Brasilia*, Brasilia, Brazil.

CONTRIBUTED ORAL AND POSTER PRESENTATIONS

Gotsch, S.G. Dawson T.E., Williams C. 2023. High and dry: How do plants that generally exist as terrestrial shrubs and trees live as facultative epiphytes in the Coast Redwood forest canopy? Oral Presentation. *Ecological Society of America*. Portland, Oregon.

Gotsch, S.G., Dudrick R.*, Cubero E.*, Gutierrez P.*, Connuck H.*, Edioma G.*, Pillaca L.*, Wyche W.* Dawson T.E., Nadkarni N., Lowman, L., Vaughan, D. 2022. Whole-canopy removal of epiphytes in tropical montane cloud forest and pasture trees leads to shifts in canopy microclimate. Poster Presentation. *American Geophysical Union*. Chicago, Illinois.

Gotsch S.G and Austin K. 2022. Joining forces: Collaborations between municipalities and academic institutions provide valuable information regarding the performance of vegetated BMP installations as well as important student research experiences for undergraduates. Oral Presentation. *Environment and Water Resources Institute National Conference*, Wilmington North Carolina.

Cruz-de Hoyos R.M, Dawson T.E., Williams C. and **Gotsch S.G**. 2019. Understanding the Importance of Cloud-Water Availability in Determining Plant Hydraulic Strategies and Species Distribution Along a Costa Rican Tropical Montane Elevation Gradient. Oral Presentation. *American Geophysical Union*. San Francisco, California.

Hargis H.M., **Gotsch S.G**., Porada P., Moore G.W., Ferguson B. and Van Stan II J.T. 2019. Arboreal epiphytes: How often are the biggest "buckets" in the canopy empty? Poster Presentation. *American Geophysical Union*. San Francisco, California.

Amici, A.A., Nadkarni, N., Dawson T.E., **Gotsch, S.G.** 2017.Who's up there? Epiphyte abundance and community composition along two gradients at different spatial scales in atropical montane cloud forest, Costa Rica. Oral Presentation. *Ecological Society of America*. Portland, Oregon.

Gotsch, S.G., Williams C., Dawson, T., Murray J. 2017. Living on the edge: Variation in epiphyte drought resilience across a microclimatic gradient in a Tropical Montane CloudForest region. Oral Presentation. *Ecological Society of America*. Portland, Oregon.

Gotsch, S.G. 2017. Evaluating the effectiveness of street trees to mitigate storm water runoff. Oral Presentation. *Water and Society Annual Conference*. Seville, Spain.

Gotsch, S.G., Draguljić, D., Dawson, T. 2016. Withstanding a record drought: Dry season water relations of canopy epiphytes in three sites along an elevation gradient in a tropical montane cloud forest. *Oral Presentation*. *American Geophysical Union*, Fall Meeting, San Francisco, CA, USA.

Gotsch, S.G., Nadkarni, N., Darby, A., Dix, M., Glunk, A., Dawson, T. 2014. Life in the Treetops: Drought Tolerance and Water Balance of Canopy Epiphytes in a Tropical Montane Cloud Forest. Oral Presentation. *American Geophysical Union*, Fall Meeting,San Francisco, CA, USA.

Giambelluca, T., Crausbay, S., Hotchkiss, S, **Gotsch, S.G.,** Frazier, A, Longman, R. 2014.

Drought as a determinant of Tropical Montane Forest Line Position. Oral Presentation**.** *American Geophysical Union*, Fall Meeting, San Francisco, CA, USA.

Gotsch, S.G., Crausbay, S.D., Giambelluca, T.W., Weintraub, A.E., Longman, R., Asbjornsen,A., Hotchkiss, S.C., Dawson, T.E. 2013. Water relations and micro-climate around the upper limit of cloud forest in Maui, Hawai'i. Oral Presentation. *Association for TropicalBiology and Conservation*. San Jose, Costa Rica.

Gotsch, S.G. 2013. Climate change on the leading edge: Cloud immersion dependency and drought resistance of epiphyte communities in the Tropical Montane Cloud Forests of Costa Rica. Oral Presentation. *Lacawac Ecology Conference*, Lacawac Santuary, Lake Ariel, PA.

Gotsch, S.G., Goldsmith, G.G., Holwerda, F., Dawson, T.E., and Asbjornsen, H. 2010. Dry season foliar fog uptake, reverse sap flow, and nighttime transpiration in the tropical montane cloud forests of Mexico. Poster Presentation, *American Geophysical Union annual meeting*, San Francisco, California.

Gotsch, S.G., Goldsmith, G.G., Holwerda, F., Dawson, T.E., and Asbjornsen, H. 2010. Dry season foliar fog uptake and reverse sap flow in the tropical montane cloud forests of Mexico. Oral presentation, *Ecological Society of America 95th annual meeting*, Pittsburgh, Pennsylvania.

Gotsch, S.G., Geiger, E.L. Franco, A.C., and W.A., Hoffmann. 2008. The importance of water relations in the maintenance of savanna-forest boundaries in Central Brazil. Oral Presentation, *Association of Tropical Biology and Conservation*, Paramaribo, Suriname.

Gotsch, S.G., Powers, J.S., and M.T. Lerdau. 2008. Effects of light availability and water stresson leaf phenology in seasonal forests in NW Costa Rica. Oral Presentation, *Association of Tropical Biology and Conservation*, Paramaribo, Suriname.

Gotsch, S.G. and M.T. Lerdau. 2006. Seasonal water stress and leaf traits in the seasonal forests of Northwestern Costa Rica. Oral Presentation, *Ecological Society of America 91st annual meeting*, Memphis, Tennessee.

Gotsch, S.G. 2004. The effect of seasonality on physical defense traits of leaves in two tropical seasonal forests in Costa Rica. Poster Presentation, *Ecological Society of America 89th annual meeting*, Portland, Oregon.

Gotsch, S.G. 2004. The effect of seasonality on physical defense traits of leaves in two tropical seasonal forests in Costa Rica. Poster Presentation, University of Massachusetts-*Amherst Second Annual Symposium in Plant Biology*.

MENTORSHIP

Undergraduates-Independent studies for credit

Natalie Reynolds ’24 University of Kentucky	2023-2024
Anna Ackerman ’25 University of Kentucky	2024
Hannah Connuck ’23 Franklin and Marshall College	2022-2023
Jalayna Antoine ’22 Franklin and Marshall College	2021-2022
Laura Bedoya, ’22 Franklin and Marshall College	2021-2022
Kimberly Fermano ’21 Franklin and Marshall College	2019
Emily Anders ’20 Franklin and Marshall College	2019
Karisa Liu ’20, Franklin and Marshall College	2019
Laura Green ’19, Franklin and Marshall College	2019
Renee Bicaba ’19, Franklin and Marshall College	2018
Briana Ferguson ’18, Franklin and Marshall College†	2017-2018

Julia Rosenwald, ’17, Franklin and Marshall College 2017
Andrew Glunk, ’15, Franklin and Marshall College† 2013-2015
Alexander Darby, ’15, Franklin and Marshall College† 2014-2015
Vanessa Duarte, ’16, Franklin and Marshall College 2013-2015
Kenneth Davidson, ’16, Franklin and Marshall College† 2013-2015
Mackenzie Dix, ’14, Franklin and Marshall College† 2013-2014
† indicates students who conducted more than one semester of independent research in the lab

Undergraduate Researchers (Volunteers/Technicians/Summer Scholars)

Shelby White ’25, University of Kentucky (Biology) 2024
Evan Myers ’26, University of Kentucky (Computer Science) 2024
Madison Arnett ’26, University of Kentucky (NRES) 2024
Jillian Fortwengler ’25, University of Kentucky (Biosystems Engineering) 2024
Sarah Cawood ‘24, University of Kentucky (Forestry) 2023
Nick Gray ‘24, University of Kentucky (NRES) 2023-24
Anna Ackerman ‘25, University of Kentucky (Forestry) * 2023
Maya Cooper ‘25, University of Kentucky (NRES) 2023
Hannah Connuck ’23, Franklin and Marhsall College* 2022
Whitney Wyche ’23, Franklin and Marshall College* 2022
Glory Edioma ’23, Franklin and Marshall College* 2022
Hannah Deane ’22, Franklin and Marshall College* 2021
Ann Medina ’22, Franklin and Marshall College* 2021
Jalayna Antoine ’22, Franklin and Marshall College* 2021
Laura Bedoya ’22, Franklin and Marshall College* 2021
Emily Anders ’21, Franklin and Marshall College* 2019
Giuseppe Inglima ’20, Franklin and Marshall College* 2019
Kimberly Fermano ’21, Franklin and Marshall College 2019
Ethan Abercrombie ’20, Humboldt State University 2019
Renee Bicaba ’19, Franklin and Marshall College 2018
Laura Green ’19, Franklin and Marshall College* 2017-18
Briana Ferguson ’18, Franklin and Marshall College* 2017-18
Hannah Wilson ’18, Tulane University 2018
Cait Barnes ’18, Belmont University 2018
Sucel Sanchez ’17, Franklin and Marshall College* 2016
Jessica Murray ’14 University of North Georgia 2015-16
Andrew Glunk, ’15, Franklin and Marshall College ** 2013-15
Alexander Darby, ’15, Franklin and Marshall College* 2013-14
Vanessa Duarte, ’16, Franklin and Marshall College* 2015
Kenneth Davidson, ’16, Franklin and Marshall College* 2014-15
Ignacio Picado Fallas, ’17, Franklin and Marshall College* 2014-15
Mackenzie Dix, ’14, Franklin and Marshall College* 2013
Erica Hample, ’16, Hampshire College 2014
Minh Pham, ’15, Franklin and Marshall College* 2013
Susan Jaconis, ’09, North Carolina State University 2008-09
Marina Carvalho, ’07, Universidade de Brasilia 2007-08
Mireia Pereira, ’08, Universidade de Brasilia 2007-08
Kristen McKinley, ’09, North Carolina State University 2007-08
Palmyra Romero, ’09, North Carolina State University 2007-08

*indicates scholarships received for summer research
+ indicates Center for Sustained Engagement with Lancaster Fellowship recipient
** Andrew Glunk also received a Fulbright Fellowship under my guidance to conduct independent research at my field site

Undergraduates- Lab Volunteers

Ann Medina ’22, Franklin and Marshall College	2019-2021
Glory Edioma ’23 Franklin and Marshall College	2021
Laura Bedoya ’22 Franklin and Marshall College	2020-2021
Jalayna Antoina ’22 Franklin and Marshall College	2020-2021
Hannah Deane ’23 Franklin and Marshall College	2021
Hannah Connuck ’23 Franklin and Marshall College	2021
Eamon Black ’21, Franklin and Marshall College	2019
Giuseppe Inglima ’20, Franklin and Marshall College	2019
Emily Anders ’20, Franklin and Marshall College	2018-2019
Diana Peña ’20, Franklin and Marshall College	2017
Renee Bicaba ’19, Franklin and Marshall College	2017, 2019
Julia Rosenwald ’17 Franklin and Marshall College	2015, 2016
Yiting Liu ’20, Franklin and Marshall College	2017, 2018
Camden McMillan ’19, Franklin and Marshall College	2017
Laura Green ’19, Franklin and Marshall College	2016-2018
Sophia Klevan ’18, Franklin and Marshall College	2016, 2017
Ariek Norford ’18, Franklin and Marshall College	2016
Peter Lewis, ’17, Franklin and Marshall College	2015
Heather Nonnemacher, ’17, Franklin and Marshall College	2013-2014
Cinthia Liu, ’15, Franklin and Marshall College	2012-2013
Victoria Abel, ’15, Franklin and Marshall College	2012-2013

Graduate Students & Post-Docs

Damon Vaughan, Post-Doc, University of Kentucky	2023-present
Daniel Tucker, Ph.D. Student (committee member, University of Victoria)	2023-present
Emily Anders, M.S. Student (co-advised with Heidi Asbjornsen at the University of New Hampshire)	2021-present
Pablo Gutierrez, Licenciatura Student (committee member, University of Costa Rica)	2023-2024
Cameron Williams, Post-Doc, Franklin and Marshall College	2017-2020
Roxy Cruz-de Hoyos, Ph.D. Candidate, University of California-Berkeley Primary Advisor: Todd Dawson	2019-2020
Autumn Amici, Ph.D. Candidate, University of Utah Primary Advisor: Nalini Nadkarni	2017-2019
Bruna Mendes, M.S. Universidade de Brasilia	2007-2009
Fred Takahashi, Ph.D. Universidade de Brasilia	2007-2009
Floortje Van Osch, M.S. University of Amsterdam	2009-2011
Susana Alvarado, Ph.D. University of New Hampshire	2009-2012

Outreach Activities:

UK Canopy Cats (tree climbing training and environmental education)	2023-present
F&M Tree Climbers (tree climbing training and empowerment for undergrads)	2014-2022
SISTERS: Women's Leadership Panel	2021
Guest Field Instructor: Texas A&M Summer Biology Research Students	2018
Guest Field Instructor: University of Costa Rica-San Ramon	2018
*o*Stem Student Group (LGBTQA, STEM group at F&M)-Faculty Mentor	2016
Plant Functional Ecology Couse for Naturalist Guides (Monteverde, Costa Rica)	2015
Farm Fresh Rhode Island (Developed bi-lingual nutrition education program)	2011-2012
Brown University Leadership Institute (Young Leader Mentor)	2011-2012

Other Appointments/Awards:

Experiment.com public funding, 2014, $5000.00
Mount Holyoke Alumnae Association Research Award, 2011, $4,000.00.
RocketHub public funding, 2012, $2,000.00
Tinker Field Research Fellow, Stony Brook University, 2004, $2000.00.
Mary Lyon Scholar, Mount Holyoke College, 1997.
Sigma Xi, Mount Holyoke College, 1997.
Merck Fellowship Recipient, Mount Holyoke College, 1996, $4000.00.

Professional Societies

American Geophysical Union, Association for Tropical Biology and Conservation, Botanical Society of America, Ecological Society of America

Professional Service

NSF Panel Review: Division of Biology, Integrative Organismal Systems: 2017, 2022

Meetings: Oral Session organizer, Ecological Society of America 2023*,* Symposium Co-Organizer, AGU-Frontiers in Hydrology 2022; Symposium Co-Organizer, Association for Tropical Biology and Conservation Annual Meeting 2013; Invited Participant, Tropical Montane Cloud Forest Working Group Meeting (National Science Foundation Research Coordination Network) 2013, 2015

University of Kentucky Departmental Committees	
Research committee	2023
Research Committee (Chair)	2024-2025
Graduate Program Committee	2025
Franklin and Marshall College Committees	
Educational Policy Committee (Elected Committee)	2021-2022
Faculty and Staff Queer Alliance Executive Board	2021-2022
International and Off-Campus Study Committee	2020-2021
Internationalization Committee	2018-2019
Provost Search Committee	Spring 2019
LGBTQ+ Taskforce	2018-2019
International Studies Program Committee	Fall 2018
Campus Tree Advisory Committee	2015-2019
Campus Sustainability Committee	2014-2017

Search Committee for Visiting Professor in Biology at F&M	2014, 2016
Fringe Benefits Committee	2013-2014
Environmental Science Major Committee	2013-2015
Environmental Studies Program Committee	2016-2017

Proposal Reviewer

CONICYT- National Foundation of Scientific Research, Chile, 2017
DFG German Research Foundation, 2017
NSF- USA National Science Foundation Full Proposal Panelist (DEB-IOS) 2017
OTS-Organization for Tropical Studies Graduate Fellowship, 2016

Manuscript Reviews

Global Change Biology, Physiologia Plantarum, American Journal of Botany, New Phytologist, Plant Cell & Environment, Oecologia, Functional Ecology, Biotropica, Agricultural and Forest Meteorology, Plant Ecology, Trees-Structure and Function, Hydrological Processes, Basic and Applied Ecology, Tree Physiology, Urban Forest and Urban Greening, Plant and Soil, Biology Letters

Service Presentations

Gotsch, S.G., 2017. Withstanding drought: Ecological strategies of canopy epiphyte communities in a tropical montane region. Oral Presentation. *Rutgers Master Gardner Continuing Education Program*. Flemington, NJ. USA.

Gotsch, S.G. 2014. Understanding the impact of climate change in the tropical montane cloud forest. Franklin and Marshall College Leadership Council and Parents Council, Lancaster, PA, USA.

Gotsch, S.G. 2013. Conducting research with faculty at Franklin and Marshall College. Franklin & Marshall Incoming Student Orientation, Lancaster, PA, USA.

Student Advising-Franklin and Marshall College

16 Biology majors	2020-2022
10 Second-year students	2018-2019
16 Second-year students	2017-2018
16 First-year students	2016-2017
18 Biology majors	2013-2015