

JAMES DALLING

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### Educational Background

1988 BA First class honours in Botany, Department of Plant Sciences, Oxford University, U.K.

1992 PhD in Tropical Forest Ecology, Department of Plant Sciences, Cambridge University, U.K.

### Academic Positions since Final Degree

Postdoctoral Fellow, Smithsonian Tropical Research Institute (1992-1995)  
 Research Associate, Smithsonian Tropical Research Institute (1996-current)  
 Honorary Lecturer, University of Aberdeen, Scotland (1999-2002)  
 Assistant Professor, Department of Plant Biology, University of Illinois (2000-2006)  
 Associate Professor, Department of Plant Biology, University of Illinois (2006-2013)  
 Professor, Department of Plant Biology, University of Illinois (2013-current)  
 Director, Integrative Biology Honors Program (2012-2015; 2019-current)  
 Head, Department of Plant Biology, University of Illinois (2014-2019)  
 Acting Director, School of Integrative Biology, University of Illinois (2017)  
 Interim Director, Integrative Biology Honors Program (2018-9)  
 Delcomyn Professorial Scholar (2018-2021)  
 Visiting Fellow, Magdalen College, Oxford (2019)  
 Beaufort Scholar, St John's College, Cambridge (2022)

### Invited Lectures and Invited Conference Presentations

#### Invited Lectures (since 2000):

University of Sao Paulo, Brazil, August 2000  
 University of Missouri – Columbia, September 2000  
 Michigan State University, March 2002  
 Hope College, Michigan, March 2002  
 Smithsonian Tropical Research Institute, Panama, March 2002  
 Smithsonian Institution – Center for Tropical Forest Science, July 2002

University of Illinois, Program in Ecology and Evolutionary Biology, October 2002  
 University of Missouri – Saint Louis, November 2003  
 University of Arkansas, March 2004  
 Pontificia Universidad Católica del Ecuador, May 2005  
 Autoridad Nacional del Ambiente, Panama, October 2006  
 Universidad Autonoma de Chiriquí, Panama, February 2007  
 Universidad Cayetano Heredia, Perú, March 2007  
 University of Arizona, December 2007  
 Louisiana State University, April 2008  
 Macquarie University, Sydney, Australia, January 2009  
 Iowa State University, April 2009  
 Tunghai University, Taiwan, November 2010  
 National Taiwan University, Taiwan, November 2010  
 Tyson Research Center, Missouri, May 2011  
 Smithsonian Tropical Research Institute, Panama, July 2012  
 Universidad Los Andes, Colombia, May 2013  
 Western Illinois University, April 2014  
 Smithsonian Tropical Research Institute, Panama, July 2014  
 University of Illinois Chicago, November 2015  
 Smithsonian Tropical Research Institute, Panama, October 2016  
 University of Chiriqui, Panama, January 2018  
 Department of Plant Sciences, University of Oxford, UK, May 2018  
 Fujian Agriculture and Forestry University, China, July 2019  
 Xiamen University, China, July 2019  
 Zhejiang University, China, July 2019  
 School of Geography, University of Oxford, October 2019  
 Center for Ecology and Hydrology, Wallingford, UK, December 2019  
 Kew Botanic Gardens, UK, December 2019  
 Nanyang Technological University, Singapore April 2020 (postponed due to covid-19)  
 Smithsonian Tropical Research Institute, Microbial Ecology Symposium, March 2021  
 Ministry of the Environment, Panama, April 2021  
 Universidad Autónoma del Estado de Morelos, Mexico, May 2021  
 Smithsonian Tropical Research Institute, Deep Dive Public Lecture, May 2021  
 Rotary Club of Panama Public Lecture September 2021  
 Panama Bird Festival October 2021  
 Smithsonian Tropical Research Institute, Tupper Seminar, April 2022  
 Smithsonian ForestGeo, May 2022  
 University of Cambridge Conservation Research Institute, May 2022  
 Kew Botanic Gardens, UK, June 2022  
 Department of Biological Sciences, University of South Florida, November 2022  
 ENEL Green Power, Public Lecture, February 2023  
 New York (and affiliated) Mycological Societies, Public Lecture, April 2023  
 Marquette University, October 2023  
 Yale University, Workshop on Soil fertility-productivity relationships, Feb 2024  
 Lake Forest College, March 2024  
 University of Minnesota, March 2025

Grants Received (since 2000)

- Dalling, J.W. British Ecological Society Young Investigator Award. "Variation in growth and allocation of pioneer species as an indicator of nutrient limitation in tropical forests." 2000. \$21,000.
- Dalling, J.W., and Gallery, R. Mellon Foundation. Exploratory grant for comparative work between Barro Colorado Island, Panama, and La Selva, Costa Rica. "Comparative ecology of pioneers: evidence for local variation in life-history characteristics." 2001. \$6,000.
- Dalling, J.W., and Gallery, R. Mellon Foundation. Grant for comparative work between Barro Colorado Island, Panama, and La Selva, Costa Rica. "Activity, diversity and specificity of fungal seed pathogens in two tropical forests." 2001. \$10,578.
- Dalling, J.W. Lawrence Livermore National Laboratory Grant. "Evidence for a dispersal–dormancy trade-off among neotropical pioneers." 2001. \$25,000 in-kind funding.
- Dalling, J.W., Harms, K.E., Stallard, R., and Yavitt, J. National Science Foundation Grant DEB 0212828. "Collaborative research: effects of soil-borne resources on the structure and dynamics of lowland tropical forests." 2002-2005. Dalling budget: \$149,000; total budget: \$650,000.
- Dalling, J.W. Smithsonian Tropical Research Institute. Smithsonian Soils Initiative Fund. Support for a workshop in soils analyses techniques held on Barro Colorado Island, Panama. 2003. \$4,500.
- Dalling, J.W., and Gallery, R. Smithsonian Tropical Research Institute. Smithsonian Soils Initiative Fund. "Biotic and abiotic effects on seed mortality in the soil seed bank." 2003. \$4,000.
- Dalling, J.W. and Arnold, A.E. (co-PI). National Science Foundation Grant DEB 343953. "Collaborative research: diversity, distribution, and demographic effects of seed-associated fungi in neotropical *Cecropia*." 2004-2007. Dalling budget: \$159,000; total budget: \$299,575.
- Dalling, J.W. Fortuna Hydro-electric Power Company (Fortuna S.A.). "A web-based guide to the trees of the Fortuna Forest Reserve, Chiriqui, Panama." 2005. \$6,000.
- Dalling, J.W., and Gallery, R.E. National Science Foundation Dissertation Improvement Grant DEB 0513812. "Fungal community effects on the recruitment of a neotropical tree." 2005-2006. \$11,430.
- Dalling, J.W., and Lasso, E. National Science Foundation Dissertation Improvement Grant DEB 0508471. "Can vegetative reproduction explain the abundance of understory shrubs in tropical forests?" 2005-2006. \$11,750.
- Dalling, J.W. National Science Foundation DEB 0548910 "Collaborative Research: Effects of soil-borne resources on the structure and dynamics of lowland tropical forests?" request for supplementary funding. 2006. \$29,750.
- Dalling, J. W. Smithsonian Tropical Research Institute. "Collaborative Research: Effects of soil-borne resources on the structure and dynamics of lowland tropical forests?" 2006. \$15,000.
- Dalling, J.W., Andersen, K. National Science Foundation DEB 0608198 "Dissertation Research: An experimental assessment of soil resource availability and herbivory in determining habitat specificity in understory palms" 2006-7 \$11,641.
- Dalling, J.W., Caballero, P., Rincon, R., Turner, B.L. Secretariat Nacional de Ciencia y Tecnologia Government of Panama. Climate change effects on tropical montane forests. (2008) \$99,900.
- Engelbrecht, B., Dalling, J.W., Comita, L., Turner, B.L. Center for Tropical Forest Science. "Quantifying seedling responses to key resources as a basis for understanding tropical tree distribution patterns and species selection for reforestation". \$15,000

- Dalling, J.W., Hubbell S.P., DeWalt, S. National Science Foundation DEB 0939907  
 “Acquisition of high resolution LiDAR for Barro Colorado Nature Monument,  
 Panama. 2009-2010 \$62,000
- Dalling, J.W., Turner, B.L. "Analysis of soil nutrient availability and carbon storage in the  
 Nourages forest dynamics plots". CNRS-Guyane \$7,200
- Dalling, J.W., Davis, A.S., Arnold, A.E. National Science Foundation DEB 1120205  
 "Collaborative Research: Seed defense syndromes of tropical forest trees:  
 emergent properties of seed dormancy, defense and microbial interactions" 2011-  
 2015 \$370,000
- Ferrer, AH, Dalling, J.W., Heath K. National Science Foundation DEB 1241212  
 Dimensions: Community assembly and decomposer function of aquatic fungi  
 along a salinity gradient. 2012-2017 \$799,000
- Dalling, J.W., Heineman, K. National Science Foundation DEB 1311379 “Dissertation  
 Research: The influence of soil fertility on tropical tree species carbon and nutrient  
 storage: A comparison between lowland and montane forests” (2013-2014) (\$20,613)
- Dalling, J.W., Corrales, A. National Science Foundation DEB 1501483 "Dissertation  
 Research: Effects of nitrogen addition on ectomycorrhizal communities in tropical  
 montane forest" (2015-2016) (\$17,262)
- Dalling, J.W. Patricia Price Peterson Foundation "Proposal to establish ecological research at  
 Finca El Velo, Boquete, Panama". (2015-2016) (\$31,880)
- Dalling, J.W., Turner. B.L., Winter, K. Simons Foundation “Mycorrhizal mediation of soil  
 phosphorus affinities in tropical forests” (2017-2018) (\$20,000)
- Dalling, J.W., Ellis, J., Fraterrigo, J. Student Sustainability Council “Student led census of  
 the Trelease Woods forest dynamics plot (2018-2019) (\$72,866)
- Dalling, J.W., Ellis, J., Fraterrigo, J. Student Sustainability Council “Student led census of  
 the Trelease Woods forest dynamics plot – Phase II” (2019-2020) (\$64,496)
- Dalling, J.W. National Science Foundation DEB 2026742 “RAPID: Effect of mass-flowering  
 and die-back of a large cane-forming bamboo on nutrient cycling, seedling  
 recruitment and oak dominance in a tropical montane forest” (2020-2021) (\$82,655).
- Dalling, J.W., Davis A.S. Campus Research Board, Arnold O. Beckman Award “Proof of  
 concept: Analysis of fungal infection processes of seeds using X-ray computed  
 microtomography. (2021-2023) (\$18,878).
- Zalamea, P-C., Dalling, J.W., Davis, A.S., Arnold, A.E. National Science Foundation  
 “Collaborative Research: Seed-fungal interactions: the role of functional specificity  
 and primary symbionts in promoting tropical tree diversity (2022-2025) (\$176,576).
- Dalling, J.W., Fraterrigo, J.M. Student Sustainability Committee “A student-driven recensus  
 of the Trelease Woods Forest Dynamics Plot. (2023-2024) (\$72,721).
- Fortunel CE, Dalling JW, Ferrer A. The evolutionary relationship between the monocarpic  
 tree genus *Tachigali*, polypore fungus *Amauroderma*, and N fixing bacteria  
*Bradyrhizobium*. CEBA, French Guiana 13,600 Euros (2024-2025)
- O’Dwyer JS and Dalling JW Life History and Coexistence in a Dynamic World. NSF  
 \$789,668 (2024-2027).
- Ferrer A, Dalling JW Variation in root and soil fungal communities associated with the  
 tropical conifer *Podocarpus* in Panama. SPUN \$9830 (2024-2025)

Gutierrez J, Dalling JW et al. Predicting the functional resilience of tropical forests to extreme climate events through their above and below-ground functional composition. UKRI, Pushing the Frontiers of Environmental Research \$1.25 million.

#### Grants in support of teaching and outreach

Dalling, J.W., Caballero, P. Secretariat Nacional de Ciencia y Tecnologia, Government of Panama. “Ecología y Conservación de Bosque Montañosos en Fortuna, Panama. Funding received to run a field course and support undergraduate research for University of Chiriqui undergraduates 2007. \$9940

Dalling, J.W., Caballero, P. Secretariat Nacional de Ciencia y Tecnologia (SENACYT, Government of Panama). “Segundo curso en la Ecología y Conservación de Bosque Montañosos y Pre-montañosos en Fortuna, Panama”. Funding for a second annual field course for Panamanian undergraduate students 2009. \$9960

Dalling, J.W., Caballero, P. Secretariat Nacional de Ciencia y Tecnologia (SENACYT, Government of Panama). “Tercer curso en la Ecología y Conservación de Bosque Montañosos y Pre-montañosos en Fortuna, Panama”. Funding for a third field course for Panamanian undergraduate students 2011. \$9900

Dalling, J.W., National Science Foundation. Research Experience for Undergraduates. "Seed defense syndromes of tropical forest trees: emergent properties of seed dormancy, defense and microbial interactions" 2014. \$7120

Dalling, J.W., Fraterrigo, J. Provost's Initiative on Teaching Excellence. “Integrating data science learning opportunities into the ecology curriculum across campus”. 2022. \$7,500 with matching funds from SIB.

#### Publications

Google scholar  $h=58$ ;  $i10=126$ ; 13,493 citations

#### Publications: Chapters in Books

Dalling, J.W. (2002) Ecología de semillas. Pages 345-375 in Guariguata, M., and Kattan, G. (eds.). *Ecología y conservación de Bosques Neotropicales*. Libro Universitario Regional, Cartago, Costa Rica.

Velasquez-Runk, J., and Dalling, J.W. (2002) La artesanía de la tagua y el cocobolo en las comunidades Wounaan y Emberá de Darién. Pages 187-192 in Heckado-Moreno, S. (ed.). *Panamá: Puente Biológico*. Smithsonian Tropical Research Institute, Panama.

Muller-Landau, H., Dalling, J.W., Harms, K.E., and Wright, S.J. (2004) Seed dispersal and density-dependent seed and seedling survival in *Trichilia tuberculata* and *Miconia argentea* Pp 340-362 In: Losos EC, Condit R, LaFrankie JV and Leigh EG (eds.) *Tropical Forest Diversity and Dynamism: Findings from a network of Large-Scale Forest Dynamics Plots*. University of Chicago Press

Dalling J.W. (2005) The fate of seed banks: factors affecting seed survival for light-demanding species in tropical forests. Pp 31-44 In: Forget, PM., Lambert, JE.,

- Hulme, P.E., and Vander Wall, S. (eds.) *Seed Fate: Predation, dispersal and seedling establishment*. CABI, Wallingford, UK
- Dalling, J.W., and Burslem, D.F.R.P. (2005) Role of life-history and performance trade-offs in the equalization and differentiation of tropical tree species. Pp 65-88 In: Burslem DFRP, Pinard MA and Hartley SE (eds.) *Biotic Interactions in the Tropics*. Cambridge University Press, Cambridge, UK.
- Gallery, R.E., Dalling J.W., Wolfe, B.T., and Arnold A.E. (2007) The influence of litter, seed bank density and fungi on *Cecropia* seed survival. Pp 479-498 In *Frugivory and Seed Dispersal: Theory and Application in a Changing World* Volume 4 (Eds: Wescott D, Dennis A, and Schupp EW), CABI.
- Dalling, J.W., and John R. C. (2008) Recruitment limitation and Coexistence of Pioneer species. Pp 242-253 In *Tropical Forest Community Ecology* (Eds: Carson WP and Schnitzer SA), Wiley-Blackwell.
- Dalling, J.W., and Burslem, D.F.R.P. (2008) Anthropogenic Disturbance in Tropical Forests: Towards a functional understanding of seedling responses. Pp 332-351 In *Seedlings: Ecology and Evolution* (Ed. Leck, M), Cambridge University Press
- Dalling, J.W. (2008) Pioneer species. Pp 2779-2782 In *Encyclopedia of Ecology*. Elsevier Press
- Dalling, J. W., Barkan, P., Bellingham, P.J., Healey, J.R., Tanner, E.V.J., Toro Murillo, J. (2011) Ecology and distribution of neotropical Podocarpaceae. In *Ecology of the Podocarpaceae in Tropical Forests*. Smithsonian Contributions to Botany, 95:43-56.
- Cernusak, L., Adie, H., Bellingham, P.J., Biffin, E., Brodribb, T.J., Coomes, D.A., Dalling, J.W., Dickie, I.A., Enright, N.J., Kitayama, K., Ladd, P.G., Lambers, H., Lawes, M.J., Lusk, C.H., Morley, R.J., and Turner, B.L. (2011) Podocarpaceae in tropical forests: a synthesis. In *Ecology of the Podocarpaceae in Tropical Forests*. Smithsonian Contributions to Botany, 95:189-196
- Dalling, J.W, Heineman, K., Lopez, O.R., Wright, S.J., Turner, B.L. (2016) Nutrient availability in tropical rain forests: the paradigm of phosphorus limitation. In *Tropical tree physiology 6: adaptations and responses in a changing environment*. Pp. 261-273. Springer DOI 10.1007/978-3-319-27422-5\_12
- Maccracken Stump, S., Sarmiento, C., Zalamea, P-C., Dalling, J.W., Davis, A.S., Shaffer, J.P., Arnold, A.E. (2019) Colonization of seeds by soilborne fungi: linking seed dormancy-defense syndromes, evolutionary constraints, and fungal traits. In press in *Seed Endophytes – Biology and Biotechnology*, Ed White J.
- Dalling, J.W., Cernusak, L.A., Chen, Y., Slot, M., Zalamea, P-C. (2022) Tropical wet forests. In *Plant regeneration from seeds: A global warming perspective*. Ed C. Baskin Elsevier Press.
- Dalling, J.W., Davis, A.S. (2022) Understanding biotic stresses affecting seed germination and seedling emergence. In *Advances in seed science and technology for more sustainable crop production*, eds. J. Buitink and O. Leprince. Burleigh Dodds Science Press.

- Bellingham, P.J., Kapos, V., Varty, N., Healey, J.R., Tanner, E.V.J., Kelly, D.L., Dalling, J.W., Burns, L.S., Lee, D., and Sidrak, G. (1992) Hurricanes need not cause high mortality: the effects of Hurricane Gilbert on forests in Jamaica. *Journal of Tropical Ecology* **8**:217-223.
- Dalling, J.W. (1994) The vegetation colonization on landslides in the Blue Mountains, Jamaica. *Biotropica* **26**:392-399.
- Dalling, J.W., and Iremonger, S.F. (1994) Landslide disturbance in the Blue Mountains, Jamaica. *Caribbean Journal of Science* **30**:290-292.
- Dalling, J.W., and Tanner, E.V.J. (1995) An experimental study of regeneration on landslides in montane forest in Jamaica. *Journal of Ecology* **83**:55-64.
- Dalling, J.W., Swaine, M.D., and Garwood, N.C. (1995) Effect of soil depth on seedling emergence in tropical soil seed-bank investigations. *Functional Ecology* **9**:119-121.
- Harms, K.E., and Dalling, J.W. (1995) Seasonal consistency in germination timing in the palm *Scheelia zonensis*. *Principes* **39**:104-106.
- Dalling, J.W. (1995) Effects of litter removal and soil scarification on seed germination in a Jamaican montane rain forest. *Caribbean Journal of Science* **31**:223-230.
- Dalling, J.W., Harms, K.E., Candenado, I., and Eberhard, J. (1996) Natural history and uses of vegetable ivory (*Phytelephus seemannii*) in Panama. *Principes* **40**:16-23.
- Harms, K.E., Dalling, J.W., and Aizprúa, R. (1997) Cotyledonary resprouting capacity of *Gustavia superba* (Lecythidaceae). *Biotropica* **29**:234-237.
- Harms, K.E., and Dalling, J.W. (1997) Damage and herbivory tolerance through resprouting as an advantage of large seed size in tropical trees and lianas. *Journal of Tropical Ecology* **13**:481-490.
- Dalling, J.W., Harms, K.E., and Aizprúa, R. (1997) Seed damage tolerance and seedling resprout ability of *Prioria copaifera* ('El Cativo'). *Journal of Tropical Ecology* **13**:617-621.
- Dalling, J.W., Swaine, M.D., and Garwood, N.C. (1997) Soil seed bank community dynamics in seasonally moist lowland forest, Panama. *Journal of Tropical Ecology* **13**:659-680.
- Dalling, J.W., Swaine, M.D., and Garwood, N.C. (1998) Dispersal patterns and seed bank dynamics of pioneer tree species in moist tropical forest, Panama. *Ecology* **79**:564-578.
- Tyree, M.T., Velez, V., and Dalling, J.W. (1998) Growth dynamics of root and shoot hydraulic conductance in seedlings of five neotropical tree species: scaling to show possible adaptation to differing light regimes. *Oecologia* **114**:293-298.
- Dalling, J.W., Hubbell, S.P., and Silvera, K. (1998) Seed dispersal, seedling emergence and gap partitioning in gap-dependent tropical tree species. *Journal of Ecology* **86**:674-689.
- Dalling, J.W., and Denslow, J.S. (1998) Changes in soil seed bank composition along a chronosequence of lowland secondary tropical forest, Panama. *Journal of Vegetation Science* **9**:669-678.
- Dalling, J.W., and Wirth, R. (1998) Dispersal of *Miconia argentea* seeds by the leaf-cutting ant, *Atta colombica*. *Journal of Tropical Ecology* **14**:705-710.
- Dalling, J.W., and Harms, K.E. (1999) Damage tolerance and cotyledonary resource use in the tropical tree *Gustavia superba*. *Oikos* **85**:257-264.
- Dalling, J.W., Lovelock, C.E., and Hubbell, S.P. (1999) Growth responses of two neotropical pioneer seedlings to simulated forest gap environments. *Journal of Tropical Ecology* **15**:827-839.
- Harms, K.E., and Dalling, J.W. (2000) Successful bruchid beetle and seedling emergence from a single diaspore of *Attalea butyracea*. *Journal of Tropical Ecology* **16**:319-325.

- Schnitzer, S.A., Dalling, J.W., and Carson, W.P. (2000) The impact of lianas on tree regeneration in tropical forest canopy gaps: evidence for an alternative pathway of gap-phase regeneration. *Journal of Ecology* **88**:655-666.
- Dalling, J.W., Winter, K., Nason, J.D., Hubbell, S.P., Murawski, D.A., and Hamrick, J.L. (2001) The unusual case of *Alseis blackiana*: a shade-persistent pioneer tree? *Ecology* **82**:933-945.
- Krause, G.H., Koroleva, O.Y., Dalling, J.W., and Winter, K. (2001) . Acclimation of tropical tree seedlings to excessive light in simulated tree-fall gaps. *Plant, Cell and Environment* **24**:1345-1352.
- Daws, M.I., Mullins, C.E., Burslem, D.F.R.P., Paton, S., and Dalling J.W. (2002) Topographic position affects the water regime in a semideciduous tropical forest in Panama. *Plant and Soil* **238**:79-90.
- Daws, M.I., Burslem, D.F.R.P., Crabtree, L.M., Kirkman, P., Mullins, C.E., and Dalling, J.W. (2002) Differences in seed germination responses may promote coexistence of four sympatric *Piper* species. *Functional Ecology* **16**:258-267.
- Dalling, J.W., and Hubbell, S.P. (2002) Seed size, growth rate and gap microsite conditions as determinants of recruitment success for pioneer species. *Journal of Ecology* **90**:557-568.
- Dalling, J.W., Muller-Landau, H.C., Wright, S.J., and Hubbell, S.P. (2002) Role of dispersal in the recruitment limitation of neotropical pioneer species. *Journal of Ecology* **90**:714-727.
- Pearson, T.R.H., Burslem, D.F.R.P., Mullins, C.E., and Dalling, J.W. (2002) Germination ecology of neotropical pioneers: interacting effects of environmental conditions and seed size. *Ecology* **83**:2798-2807.
- Silvera, K., Skillman, J.B., and Dalling, J.W. (2003). Seed germination, seedling growth and habitat partitioning in two morphotypes of the tropical pioneer tree *Trema micrantha* in a seasonal forest in Panama. *Journal of Tropical Ecology* **19**:27-34.
- Pearson, T.R.H., Burslem, D.F.R.P., Mullins, C.E., and Dalling, J.W. (2003). Functional significance of photoblastic germination in neotropical pioneer trees: a seed's eye view. *Functional Ecology* **17**:394-402.
- Wehncke, E.V., Hubbell S.P., Foster R.B., and Dalling, J.W. (2003). Seed dispersal patterns produced by White-faced Monkeys: Implications for the dispersal limitation of neotropical tree species. *Journal of Ecology* **91**:677-685.
- Pearson, T.R.H., Burslem, D.F.R.P., Goeriz, R.E., and Dalling, J.W. (2003). Regeneration niche partitioning in neotropical pioneers: effects of gap size, seasonal drought and herbivory on growth and survival. *Oecologia* **137**:456-465.
- Pearson, T.R.H., Burslem, D.F.R.P., Goeriz, R.E., & Dalling, J.W. (2003). Interactions of gap size and herbivory on establishment, growth and survival of three species of neotropical pioneer trees. *Journal of Ecology* **91**:785-796.
- Yesson, C., Russell, S.J., Parrish, T., Dalling, J.W., and Garwood, N.C. (2004). A Phylogenetic framework for *Trema* (Celtidaceae). *Plant Systematics and Evolution* **248**, 85-109.
- Dalling, J.W., Winter K., and Hubbell, S.P. (2004). Variation in growth responses of neotropical pioneer species to simulated gaps. *Functional Ecology* **18**:725-736.
- Fornara, D.A., and Dalling, J.W. (2005). Post-dispersal removal of seeds of pioneer species from five Panamanian forests. *Journal of Tropical Ecology* **21**:79-84.
- Wehncke, E.V. and Dalling, J.W. (2005). Post-dispersal removal and germination of seeds dispersed by *Cebus capucinus* on Barro Colorado Island, Panamá. *Biotropica* **37**: 73-80.



- Fornara, D.A. and Dalling, J.W. (2005). Seed bank dynamics in five Panamanian forests. *Journal of Tropical Ecology* **21**:223-226.
- Daws, M.I., Pearson, T.R.H., Burslem, D.F.R.P., Mullins, C.E., and Dalling, J.W. (2005). Interactions of topographic position, litter, and seed size on seedling demography in a semi-deciduous tropical forest in Panamá. *Plant Ecology* **179**:93-105.
- Engelbrecht, B.M.J., Dalling, J.W., Pearson, T.R.H., Wolf, R.L., Galvez, D.A., Koehler, T., Tyree, M.T., and Kursar, T.A. (2006) Short dry spells in the wet season increase mortality of tropical pioneer seedlings. *Oecologia* **148**:258-269
- Gallery, R., Dalling, J.W., and Arnold, A.E. (2007) Diversity, host affinity and distribution of seed-infecting fungi: A case-study with neotropical *Cecropia*. *Ecology*, **88**:582-588.
- John, R.C., Dalling, J.W., Harms, K.E., Yavitt, J.B., Stallard, R.F., Mirabello, M., Hubbell, S.P., Valencia, R., Navarrete, H., Vallejo, M., and Foster, R.B. (2007) Soil nutrients influence spatial distributions of tropical tree species. *Proceedings National Academy of Science* **104**:864-869
- Kikuchi, D.W., Lasso, E., Dalling, J.W., and Nur, N. (2007) Pollinators and pollen dispersal of *Piper dilatatum* (Piperaceae) on Barro Colorado Island, Panama. *Journal of Tropical Ecology*, **23**:603-606
- Kluger, C.G., Dalling, J.W., Gallery, R.E., Sanchez, E., Weeks-Galindo, C., and Arnold A.E. (2008) Prevalent host-generalism among fungi association with the seeds of four neotropical pioneer species. *Journal of Tropical Ecology*, **24**:332-351.
- Marthews, T.R., Mullins C.E., Dalling, J.W., and Burslem, D.F.R.P (2008) Burial and secondary dispersal of small seeds in a tropical forest. *Journal of Tropical Ecology*, **24**:595-605.
- Daws, M.I., Crabtree, L.M., Dalling, J.W., Mullins, C.E., and Burslem, D.F.R.P. (2008) Germination responses to water potential in neotropical pioneers suggest larger seeded species take more risks. *Annals of Botany* **102**:945-951.
- Berberis, I., and Dalling, J.W. (2008) The effect of light, seed size and biomass removal on cotyledon reserve use and root mass allocation in *Gustavia superba* seedlings. *Journal of Tropical Ecology* **24**:595-605.
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- Jops, K., Dalling, J.W. (2024) Life History explains Patterns of Abundance Variation in a Neotropical forest. *PNAS*, in review.

#### Graduate students and postdoctoral associates trained

- Camilo Zalamea* Postdoctoral Associate 2012-2019 "Seed defense syndromes of tropical forest trees"
- Carolina Sarmiento* Post-masters Associate 2012-current "Seed defense syndromes of tropical forest trees"
- Robert John* Postdoctoral Associate 2003-5. "Soil nutrient associations in tropical forest". Currently Assistant Professor, Indian Institute of Science, Kolkata
- Rachel Gallery* PhD student 2001-2007 "Seed banks, seed mortality, and the role of fungal communities in neotropical forests". Assistant Professor, University of Arizona
- Eloisa Lasso* PhD student 2001-2007 "Role of vegetative reproduction in the maintenance of tropical understory shrub populations" Assistant Professor, Los Andes University, Colombia
- Kelly Andersen* PhD student, 2002-2008 "An experimental assessment of soil-based habitat partitioning in understory palms" Post-doctoral researcher, University of Exeter, UK
- Claire Baldeck* PhD student, 2006-2012 "Causes and consequences of soil resource niches" Post-doctoral researcher, Yale University
- Brian Steidinger* MS Student 2009-2011 "Resource partitioning of soil organic phosphorus: investigations from a tropical montane forest" Post-doctoral researcher, Stanford University
- Pimonrat Tiansawat* PhD student 2007-2013 "Seed ecology of *Macaranga*" Lecturer, University of Chang Mai, Thailand

*Elena Lobo* PhD student 2007-2013 "Temporal variance and spatial aggregation of treefall gaps in a tropical forest" Analyst DMC International Imaging

*Katie Heineman* PhD student 2010-2016 "Carbon and nutrient storage in tropical forest" Vice President of Science, Center for Plant Conservation, San Diego Zoo

*Adriana Corrales* PhD student 2010-2016 "Ectomycorrhizal networks in tropical montane forest" Assistant Professor, Universidad Rosario, Colombia

*Shawn Brown* Postdoc, 2013-15 "Fungal community assembly along a salinity gradient in the eastern Pacific". Professor, University of Memphis

*Jennifer Jones* PhD student 2013-2019 "Effects of wood nutrients on decomposition rates in terrestrial and aquatic habitats". Postdoctoral fellow, Kellogg Biological Station, Michigan State University.

*Sierra Perez* MS student 2018-2020 "Historical impacts of compositional change on carbon storage in an eastern deciduous forest" PhD student, Indiana University.

*Jessica Lira* PhD student 2016-2020 "Regeneration ecology of ferns". Postdoc, National Taiwan University.

*Cecilia Prada* PhD student 2015-2021 "Soil and elevation effects on carbon storage in tropical forest". Postdoc, Harvard University

*Zarluis Mijango* MS student 2019- 2021 "Effects of soil fertility on functional diversity in tropical montane forest". PhD student, U Texas, Austin

*Manuel Flores* MS student 2020-2022 "Sapwood nutrient fluxes along a soil fertility gradient". PhD student, Yale University.

#### Current graduate students

*Sumashini Pagaldevatti* PhD student 2021- "Fungal effects on forest regeneration in the western Ghats, India"

*Lauren Otoliski* PhD candidate 2021- "Effect of wood nutrients on decay rates in tropical forest"

*Jennifer Alvarez* MS candidate 2021- "A carbon budget for Trelease woods, Illinois" (co-advised with Prof. Jennifer Fraterrigo, NRES)

*Allanis Vera* PhD student 2023- "Immune responses of seeds to fungal infection"

*Lindsay McCulloch* Postdoc 2023-2027 "Biogeography of seed-infecting fungi and seed defense chemistry" (co-advised with Prof. Camilo Zalamea, USF, and based at STRI).

Graduate students advised off-campus (including as Research Associate, Smithsonian Tropical Research Institute, and Honorary Lecturer, University of Aberdeen).

*Matthew Daws* (PhD 2002, University of Aberdeen. "Germination and establishment requirements of small-seeded tropical pioneer trees")

*Tim Pearson* (PhD 2002, University of Aberdeen. "Habitat partitioning among tropical pioneer tree species")

*Elisabeth Wehncke* (PhD 2002, UNAM, Mexico. "Effectiveness of white-faced monkeys as seed dispersal agents")

*Camila Pizano* (MS 2004, University of Florida. "Above and below-ground interactions drive habitat segregation between two cryptic species of tropical trees")

*Rosa Villareal* (MS 2010, University of Chiriqui, Panama. "Relationship between soil fertility and fine root production in a tropical montane forest")

*Sumling Castillo* (MS 2013, University of Chiriqui, Panama. "Diversity of ectomycorrhizal fungi associated with oak species in a tropical montane forest")

*Carlos Ordóñez Parra* (PhD student, Federal University of Minas Gerais, Brazil. "Seed functional traits of cerrado plant species"; co-advisor)

*Viviana Londoño* (PhD student, University of Minnesota. "Assessing the impact of environmental abiotic filters in the regeneration fate of the tropical dry forest"; external committee member)

*Zarluis Mijango* (PhD student, University of Texas, Austin. "Metabolomics of monodominance in *Oreomunnea mexicana*"; external committee member)

#### Current contributions to teaching

IB 372 Honors Ecology and Evolution (every Fall)

IB 471 Fungal Ecology and Diversity (every other Fall)

IB 496 Tropical Ecology (every Winter Break)

#### Contributions to teaching off-campus

10-day field course in tropical field ecology for Panamanian undergraduate students (2007, 2009, 2011, 2013, 2016, 2018).

#### Journal Editorships

Associate Editor, *Functional Ecology* (2006-13)

Associate Editor, *Journal of Ecology* (2017-)

Associate Editor, *Biotropica* (2017-)

#### Ad-hoc Manuscript Reviews

*American Journal of Botany; Annals of Botany, Austral Ecology, Australian Journal of Plant Physiology; Biological Reviews; Biology Letters; Biotropica; Canadian Journal of Forest Research; Conservation Biology; Ecology; Ecological Applications; Ecological Research; Ecology Letters; Ecosystems; Forest Ecology and Management; Functional Ecology; Global Change Biology; Interciencia; Journal of Applied Ecology; Journal of Biosciences; Journal of Ecology; Journal of Tropical Ecology; Journal of Vegetation Science; Methods in Ecology and Evolution; New Phytologist; Oecologia; Perspectives in Plant Ecology and Evolution; Plant Ecology; Plant, Cell and Environment; Plant and Soil; Plant Ecology; Plant Ecology and Diversity; Philosophical Transactions Royal Society; Phytopathology; Princeton University Press; Proceedings National Academy of Sciences; Science; Tree Physiology; Trends in Ecology and Evolution; Restoration Ecology; Seed Science.*

#### Review Panels

National Science Foundation, Population and Community Ecology proposal review panel  
2005, 2011, 2013, 2017

National Science Foundation, International Program review panel 2008, 2009, 2010

Scientific Advisor, International Foundation for Science (2010-)

Ad-hoc Proposal Review

National Science Foundation; WOTRO (Dutch equivalent of National Science Foundation); NERC (British equivalent of National Science Foundation); Smithsonian Institution Fellowship Program; Smithsonian Institution Scholarly Studies Program; Center for Tropical Forest Science; MJ Murdock Charitable Trust; International Foundation For Science; Danish Council for Independent Research.

Other service

Board Member, Organization for Tropical Studies (2021-), Advancement Committee Chair (2023-).

Association for Tropical Biology and Conservation, Climatic Change Thematic Group co-chair (2021-)

LAS Honors Council (2023-)