# **EMILIO MIGUEL BRUNA**

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**RESEARCH & TEACHING INTERESTS:** Tropical ecology and conservation, plant population ecology, plant-animal interactions, scientometrics and bibliometrics, science & science policy in Latin America

LANGUAGES: Fluent in Spanish, English, and Portuguese

# **EDUCATION**

2001	Ph.D. in Population Biology, University of California, Davis
1995	M.S. in Biology, University of California, San Diego
1994	B.S. in Ecology, Behavior, & Evolution with a minor in Literature, University of California, San Diego

# **PROFESSIONAL APPOINTMENTS**

2013-Present	<b>Professor &amp; Distinguished Teaching Scholar</b> , University of Florida Department of Wildlife Ecology & Conservation & Center for Latin American Studies
2022-2025	Secretary, Ecological Society of America
2020-2021	President, Association for Tropical Biology and Conservation
2012-2021	<b>Director</b> , Florida-Brazil Linkage Institute, University of Florida Center for Latin American Studies, University of Florida
2013-2019	Editor-in-Chief, Biotropica
2014-2020	Board of Directors, Dryad Digital Data Repository
2005-Present	<b>Adjunct Professor</b> , Universidade Federal de Uberlândia, Brazil Graduate Program in Ecology and Natural Resource Conservation
2007-2013	<b>Associate Professor</b> , University of Florida Department of Wildlife Ecology & Conservation & Center for Latin American Studies
2002-2007	<b>Assistant Professor</b> , University of Florida Department of Wildlife Ecology & Conservation & Center for Latin American Studies
2001-2002	<b>NSF Minority Postdoctoral Fellow</b> , Biological Dynamics of Forest Fragments Project Instituto Nacional de Pesquisas da Amazônia-Smithsonian Institution

### **AWARDS**

2020	Selected for Induction into Alpha Zeta (Faculty Affiliate, UF Chapter)
2020	Roche Teaching Scholar, UF College of Agricultural and Life Sciences
2016	Sigma Xi (Full Member, University of Florida Chapter)
2014	Academy of Distinguished Teaching Scholars, University of Florida
2012	Outstanding Paper Award, US Chapter of the International Association for Landscape Ecology
2011	Graduate Advisor & Teacher of the Year, UF College of Agricultural and Life Sciences
2009	University of Florida Research Foundation Professor
2007	Julie S. Denslow Outstanding Article in <i>Biotropica</i> Prize, Association for Tropical Biology & Conservation
2005	UF International Educator of the Year (untenured faculty category)
2003	Diversity Scholar, American Institute for Biological Sciences
2002	John L. Harper Early Career Researcher Award, British Ecological Society
1994	Ernest C. Mort Leadership Excellence Award, Revelle College, UC San Diego

#### **FELLOWSHIPS**

- 2012 Ciência Sem Fronteiras Special Visiting Researcher Fellowship, CNPq Brazil
- 2009 Fulbright Scholar, Brazil
- 2009 Visiting Researcher Fellowship, CNPq Brazil
- 2001 NSF Minority Postdoctoral Research Fellowship
- 2001 NSF International Research Fellowship (declined)
- 2000 Ford Foundation Dissertation Year Fellowship
- 1999 UC Davis Graduate Studies Fellowship
- 1998 UC Davis John F. Steindler Graduate Fellowship
- 1995 NSF Minority Predoctoral Research Fellowship
- 1993 Howard Hughes Senior Honors Thesis Fellowship
- 1993 UCSD Howard Hughes Summer Research Fellowship

#### GRANTS IN SUPPORT OF RESEARCH, TRAINING, & PROGRAM DEVELOPMENT (>\$5.5 million)

- 1. Maxwell-Hanrahan Foundaiton. "Support for the ATBC Field Grant Program" (\$10,000; PIs Emilio M. Bruna, Patricia Sampaio, Lucia Lohmann, 2022-2023)
- 2. Maxwell-Hanrahan Foundaiton. "Support for the UF TCD Seed Grant Program" (\$10,000; PIs Emilio M. Bruna, Bette Losiselle, 2022-2023)
- 3. Sloan Foundation. "Reinventing Field Courses" (\$74,060; PI: E. M. Bruna, Co-PIs: R. McCleery, P. Antonenko, N. Attias, D. Barton, 2020-2021)
- 4. National Science Foundation. SG: Synergistic effects of forest fragmentation and droughts on tropical plant population dynamics (\$199,904; PI: E. M. Bruna, Co-PIs: M. Uriarte, 2020-2022).
- 5. National Science Foundation. REU Supplement for "SG: Synergistic effects of forest fragmentation and droughts on tropical plant population dynamics (\$14,400; PI: E. M. Bruna, Co-PIs: M. Uriarte, 2021).
- 6. National Science Foundation. "The role of the matrix in fragmented landscapes: experimental tests and novel theory (\$548,058; PI: R. Fletcher, Co-PIs: E. M. Bruna, R. D. Holt, and B. Reichert, 2018-2023)
- 7. UF Informatics Institute SEED Funds: "Cross-National Patterns of Productivity & Collaboration by Latin American Scientists" (\$20,000, PI: E. M. Bruna, Co-PIs: Stephen Perz, Chris McCarty).
- 8. Mindlin Foundation. "Who are the Gatekeepers of Discovery? A crowdsourced project to ID & map the editors of academic journals" (\$3633, 2017-2018).
- 9. National Geographic Global Exploration Fund. "Experimental climate change in the Amazon: How will rising CO2 influence plants, insects, and their interactions?" (\$19,970, PI: E. M. Bruna, Co-PIs H. Vasconcelos, F. Mundim, D. Lapola).
- 10. John Wiley and Sons. "Funds to support the Biotropica Editorial Office" (\$199,945; 2014-2019).
- 11. UF Center for Latin American Studies Faculty Travel Award (\$1500, 2014)
- 12. UF Center for Latin American Studies Speakers Program. "Herton Escobar: Science Correspondent, Estado de São Paulo Newspaper (\$2000, including matching funds provided by the College of Journalism and Communications, the Tropical Conservation and Development Program, and Office of the VP for Research, 2014).
- 13. UF IFAS Dean For Research, UF VP for Research, and FAPESP-Brazil. "Support for 4 UF-FAPESP Collaborative Research Grants" (\$160,000, 2013-2015).
- 14. UF Center for Latin American Studies Faculty Research Award: "Cross-national patterns of productivity and collaboration by Latin American ecologists" (\$5450, 2012-2013).
- 15. National Science Foundation: "Doctoral Dissertation Enhancement Proposal: International: Carbon sequestration and tree biodiversity in Amazonian floodplain forests". (\$11,000; OISE-0929183 to E. Bruna prepared by and for doctoral student Christine Lucas, 2010-2012).

- 16. David and Lucile Packard Foundation. "Nitrogen dynamics in Brazil's Cerrado" (\$142,198, Grant 2008-32691 to E. Bruna and co-PIs M. Mack and H. Vasconcelos, 2009-2011).
- 17. National Science Foundation. "IGERT in Spatial Ecology & Evolution: Quantitative Training in Biology, Statistics, & Mathematics". (\$2,958,113; PI: B. Bolker; Co-PI's: E. Bruna, C. Osenberg, M. Martcheva, & M. Christman, 2008-2013).
- 18. UF International Center. "International Speakers Program: Dr. Claudio Padua, 2008 UF Distinguished Alumnus" (\$1500, with \$3500 in matching funds from Wildlife Ecology and Conservation, Latin American Studies, the Tropical Conservation and Development Program, and Institute for Agricultural and Life Sciences).
- 19. US Department of Education Fund for the Improvement of Postsecondary Education (FIPSE). "Energy, environment, and sustainable development: the central role of the United States and Brazil" (\$202,329; PI: J. Kahn, Washington & Lee University; E. Bruna is UF Project Director; 2006-2010)
- 20. National Science Foundation Collaborative Grant. "Mechanisms influencing seedling recruitment and establishment in a fragmented Amazonian landscape" DEB-0614149 to E. Bruna (\$230,888) and DEB-0614339 to M. Uriarte, Columbia Univ. (\$251,831; 2006-10).
- 21. National Science Foundation Minority Career Advancement Award. "Linking population and ecosystem ecology: how does nitrogen deposition influence plant demography in tropical savannas?" DEB-0542287 (\$174,499; 2006-08).
- 22. Joseph Jones Ecological Research Center. "Productivity and Biodiversity Patterns: Control in a SE Coastal Plain Landscape (Support for the graduate studies of Gwen Iacona)". (\$19,860; 2005-2007).
- 23. National Science Foundation Collaborative Grant. "Elucidating mechanisms of coexistence in a community of ant-plant mutualists". DEB-0453631 to E. Bruna (\$245,096) & DEB-0452720 to B. Inouye, FSU (\$260,000; 2005-09).
- 24. National Science Foundation Grant OISE-0437369. "U.S.-Brazil Collaborative Research: Seed predation and herbivory in Neotropical savannas: are there demographic consequences for plants?" (\$25,012; 2005-2008).
- 25. Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil. "Top-down effects on the structure of Cerrado plant communities" (R\$ 22,875.74, Co-PI, 2005-2007)
- 26. Fundação de Amparo a Pesquisa do Estado de Minas Gerais, Brazil. "Diversity and conservation of invertebrates in the 'Triângulo Mineiro': a case study using ants as bioindicators" (R\$12,924.13; Senior Collaborator, 2005-2007)
- 27. Fundação de Amparo a Pesquisa do Estado de Minas Gerais, Brazil (Fapemig). "Effect of herbivory by leaf-cutter ants on Cerrado vegetation" (R\$25,229.74, Co-PI, 2004-2006)
- 28. School for Natural Resources and the Environment New Faculty Support Program. "Seed predation and herbivory in Neotropical savannas: are there demographic consequences for plants?" (\$5,000; 2004)
- 29. Alfred P. Sloan Foundation. "Increasing the number of minority Ph.D.'s studying Ecology at UF." (\$32,440 and four-year Teaching Assistantships from the College of Agricultural and Life Sciences; 2004).
- 30. National Science Foundation Research Starter Grant DEB-0309819. "The effect of forest fragmentation on ant-plant mutualisms." \$50,585; 2003-2005).
- 31. USAID Subcontract from IIEB. "Sustainable Communities and Landscapes: A proposed program to sustain natural ecosystems and enhance local livelihoods in Brazil's Amazon and Atlantic Forest regions" (\$199,145; 10/01/03-9/30/07; PI: Marianne Schmink; EB and 5 other Co-PIs).
- 32. Instituto Internacional de Educação do Brasil-SUNY International Development Group. "Training of young scientists in Amazonia: A new internship program at the Biological Dynamics of Forest Fragments Project." (R\$21,000; co-PI Patricia Delamônica, 2001).
- 33. National Science Foundation Minority Postdoctoral Research Fellowship DBI-0109226. "The effect of forest fragmentation on ant-plant mutualisms" (\$190,200; 2001).

- 34. NSF Dissertation Improvement Grant INT 98-06351. "Effect of habitat fragmentation on the growth, reproduction, and population dynamics of an Amazonian understory herb" (\$17,600; 1998-2000).
- 35. Grants for Graduate Research: Smithsonian Institution, Manomet Observatory Kathleen S. Anderson Award, Wilson Ornithological Society Paul A. Stewart Award, and UC Davis (M.E. Mathias Award, Graduate Studies Research Grant, Jastro-Shields Research Award, and Center for Population Biology Summer Research Grant (Total: \$11860; 1996-1997).
- 36. Grants for Undergraduate Research: Explorer's Club Grant, UCSD Undergraduate Scholastic Research Grant (Total: \$1955; 1994-1995).

# MANUSCRIPTS & OTHER PRODUCTS IN REVIEW or REVISION (N=3)

- 1. Bruna, E. M., M. Uriarte, M. Rosa Darrigo, P. Rubim, C. F. Jurinitz, E. R. Scott, O. Ferreira da Silva, & W. John Kress. *In review* Demography of the understory herb Heliconia acuminata (Heliconiaceae) in an experimentally fragmented tropical landscape. *Ecology*
- 2. Robinsion, M. L., and the members of the HerbVar Network. *Under review* Latitude, traits, and phylogeny determine herbivore attack variability. *Nature*
- 3. Fletcher, R. J., T. A. H. Smith, N. Kortessis, E. M. Bruna, and R. D. Holt. *In review* Landscape experiments unlock the multi-scale relationships among habitat loss, fragmentation, and patch-size effects. *Ecology*
- 4. Hyde, J. L., Bohlman, S. A., Athayde, S., Bruna, E. M., Valle, D.R. *In review* A lack of open data standards for large infrastructure project hampers social-ecological research in the Brazilian Amazon. *Perspectives in Ecology & Conservation*.

# PEER-REVIEWED PUBLICATIONS, BOOK CHAPTERS, & CORRESPONDENCE (N = 110)

**Note regarding coauthorship on publications by lab members:** I am not a coauthor on papers by lab members, including publications that result from side projects or thesis chapters, as I consider mentorship regarding study development and design, analyses, and manuscript preparation fundamental to my role as their advisor. A list of the publications by lab members on which I am not a coauthor can be found below.

- 1. Halpern, B. S., C. Boettiger, M. C. Dietze, *et al.* 2023. Priorities for synthesis research in ecology and environmental Science." *Ecosphere* 14(1): e4342. https://doi.org/10.1002/ecs2.4342
- Scott, E. R., M. Uriarte, and E. M. Bruna. 2022. Delayed effects of climate on vital rates lead to demographic divergence in Amazonian forest fragments. *Global Change Biology* 28(2):463-479. https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.15900 \_\_Recipient of the Postdoctoral Excellence Award from the Ecological Society of America's Plant Population Ecology Section\_
- 3. Audrey C. Smith, Leandra Merz, Jesse B. Borden, Chris K. Gulick, Akhil R. Kshirsagar, Emilio M. Bruna. 2022. Assessing the effect of article processing charges on the geographic diversity of authors using Elsevier's "Mirror Journal" system. *Quantitative Science Studies* 2(4):1123–1143. doi: https://doi.org/10.1162/qss\_a\_00157 *Featured in Nature, NRC News*.
- Russell, A.E., T.M. Aide, E. Braker, E. M. Bruna, C. N. Ganong, R. D. Hardin, K. D. Holl, S. C. Hotchkiss, J. Klemens, E. K. Kuprewicz, S. K. Macey, D. McClearn, G. Middendorf, R. Ostertag, J. S. Powers, S. E. Russo, J. L. Stynoski, U. Valdez, C. G. Wills. 2022. Integrating tropical research into biology education is urgently needed. *PLoS Biology* 20(6): e3001674. doi: https://doi.org/10.1371/journal.pbio.3001674
- Mundim, F. M. E. H. M. Vieira-Neto, H. Alborn, & E. M. Bruna. 2021. Disentangling the influence of resource variability and simultaneous attacks on whole-plant tolerance to herbivory. *Journal of Ecology* 109:2729– 2739. [PhD Thesis Chapter]. https://doi.org/10.1111/1365-2745.13684 *Selected as a 2021 UF-IFAS "High Impact Publication"*.
- 6. Bruna, E.M., R Chazdon, TM Errington and BA Nosek. 2021. A proposal to advance theory and promote collaboration in tropical biology by supporting replications. *Biotropica*, 53:6-10.

- Barbosa Silva, LV, HL Vasconcelos, MC Mack, AdS Ferreira, and EM Bruna. 2020. Effects of experimental nitrogen enrichment on soil properties and litter decomposition in a Neotropical savanna. *Austral Ecology* 45:1093-1102. [Ph. D. Thesis Chapter].
- 8. Fournier, Auriel. Matthew E. Boone, Forrest R. Stevens, and Emilio M. Bruna. 2020. refsplitr: Author name disambiguation, author georeferencing, and mapping of coauthorship networks with Web of Science data. *Journal of Open Source Software* 5(45):2028. https://doi.org/10.21105/joss.02028
- Beckman, NG, CE Aslan, HS Rogers, O Kogan, JL Bronstein, JM Bullock, F Hartig, J HilleRisLambers, Y Zhou, D Zurell, JF Brodie, EM Bruna, RS Cantrell, RR Decker, E Efiom, EC Fricke, K Gurski, A Hastings, JS Johnson, BA Loiselle, MN Miriti, MG Neubert, L Pejchar, JR Poulsen, G Pufal, OH Razafindratsima, ME Sandor, K Shea, S Schreiber, EW Schupp, RS Snell, C Strickland, and J Zambrano. 2020. Advancing an interdisciplinary framework to study seed dispersal ecology. *AoB Plants* 12:plz048.
- 10. Costa, AN, A Bartimachi, HL Vasconcelos, EM Bruna, and EHM Vieira-Neto. 2020. Annual litter production in a Brazilian Cerrado woodland savanna. *Southern Forests* 82:65-69.
- 11. Powers, JS, EM Bruna, A Campos-Arceiz, P Delamonica Sampaio, SJ DeWalt, LG Lohmann, and RA Zahawi. 2020. Tropical biology and conservation in the time of the covid-19 pandemic. *Biotropica* 52:399-399.
- 12. Aslan, C, NG Beckman, HS Rogers, J Bronstein, D Zurell, F Hartig, K Shea, L Pejchar, M Neubert, J Poulsen, J HilleRisLambers, M Miriti, B Loiselle, E Effiom, J Zambrano, G Schupp, G Pufal, J Johnson, JM Bullock, J Brodie, E Bruna, RS Cantrell, R Decker, E Fricke, K Gurski, A Hastings, O Kogan, O Razafindratsima, M Sandor, S Schreiber, R Snell, C Strickland, and Y Zhou. 2019. Employing plant functional groups to advance seed dispersal ecology and conservation. *AoB Plants* 11:plz006.
- 13. Brooks, ME, K Kristensen, MR Darrigo, P Rubim, M Uriarte, E Bruna, and BM Bolker. 2019. Statistical modeling of patterns in annual reproductive rates. *Ecology* 100 (7):e02706 [Ph.D. Thesis Chapter].
- 14. Costa, AN, HL Vasconcelos, EHM Vieira-Neto, and EM Bruna. 2019. Adaptive foraging of leaf-cutter ants to spatiotemporal changes in resource availability in Neotropical savannas. *Ecological Entomology* 44:227-238.
- 15. Fletcher, RJ, Jr., JA Sefair, C Wang, CL Poli, TAH Smith, EM Bruna, RD Holt, M Barfield, AJ Marx, and MA Acevedo. 2019. Towards a unified framework for connectivity that disentangles movement and mortality in space and time. *Ecology Letters* 22:1680-1689.
- 16. Bruna, EM. 2018. Editorial board members are a non-random sample of ecological experts. *Nature Ecology and Evolution* 2(2):202.
- 17. Costa, AN, EM Bruna, and HL Vasconcelos. 2018. Do an ecosystem engineer and environmental gradient act independently or in concert to shape juvenile plant communities? Tests with the leaf-cutter ant *Atta laevigata* in a Neotropical savanna. *PeerJ* 6:e5612. [Ph. D. Thesis Chapter].
- 18. K. R. Zamudio, A. Kellner, C. Serejo, M. R. de Britto, C. B. Castro, P. A. Buckup, D. O. Pires, M. Couri, A. Brilhante Kury, I. Azevedo Cardoso, M. L. Monné, J. Pombal Jr., C. Mello Patiu, V. Padula, A. Dias Pimenta, R. Ventura, E. Hajdu, J. Zanol, E. M. Bruna, J. Fitzpatrick, L. A. Rocha. 2018. Lack of support for Science and Education Fails Brazilian Society Again. *Science* 361(6409): 1322-1323.
- 19. Brito Darosci, AA, EM Bruna, JC Motta-Junior, CdS Ferreira, JG Blake, and CB Rodrigues Munhoz. 2017. Seasonality, diaspore traits and the structure of plant-frugivore networks in Neotropical savanna forest. *Acta Oecologica* 84:15-22. [Ph. D. Thesis Chapter].
- 20. Brudvig, LA, SJ Leroux, CH Albert, EM Bruna, KF Davies, RM Ewers, DJ Levey, R Pardini, and J Resasco. 2017. Evaluating conceptual models of landscape change. *Ecography* 40:74-84.
- 21. Costa, AN, HL Vasconcelos, and EM Bruna. 2017. Biotic drivers of seedling establishment in Neotropical savannas: Selective granivory and seedling herbivory by leaf-cutter ants as an ecological filter. *Journal of Ecology* 105:132-141. [Ph. D. Thesis Chapter].
- 22. Espin, J, S Palmas, F Carrasco-Rueda, K Riemer, PE Allen, N Berkebile, KA Hecht, K Kastner-Wilcox, MM Nunez-Regueiro, C Prince, C Rios, E Ross, B Sangha, T Tyler, J Ungvari-Martin, M Villegas, TT Cataldo, and EM Bruna.

- 2017. A persistent lack of international representation on editorial boards in environmental biology. **PLoS Biology** 15:e2002760.
- 23. Mundim, FM, HT Alborn, EHM Vieira-Neto, and EM Bruna. 2017. A whole-plant perspective reveals unexpected impacts of above- and belowground herbivores on plant growth and defense. *Ecology* 98:70-78.
- 24. Resasco, J, EM Bruna, NM Haddad, C Banks-Leite, and CR Margules. 2017. The contribution of theory and experiments to conservation in fragmented landscapes. *Ecography* 40:109-118.
- 25. Rocha-Ortega, M, A Bartimachi, J Neves, EM Bruna, and HL Vasconcelos. 2017. Seed removal patterns of pioneer trees in an agricultural landscape. *Plant Ecology* 218:737-748.
- 26. Pitman, N. C. A., J. Widmer, E. M. Bruna, C. N. Jenkins, G. Stocks, L. Seales, F. Paniagua, and E. Maehr. 2017. El sorprendente liderazgo del Ecuador en la producción científica de la región andino-amazónica, pp. 27-30 in D. Romo et al. (eds.), Los Secretos del Yasuní: Avances en investigación en la Estación de Biodiversidad Tiputini, Universidad San Francisco de Quito, Quito.
- 27. Carvalho, KS, MAF Carneiro, IC Nascimento, AK Saha, and EM Bruna. 2016. Lower ant diversity on earth mounds in a semi-arid brazilian ecosystem: Natural or a sign of degradation? *Sociobiology* 63(4):1022-1030.
- 28. Mundim, FM, and EM Bruna. 2016. Is there a temperate bias in our understanding of how climate change will alter plant- herbivore interactions? A meta- analysis of experimental studies. *American Naturalist* 188:S74-S89. [Ph. D. Thesis Chapter] *Selected as WEC Department's 2016 "High Impact Publication"*.
- 29. Sobrinho, MS, M Tabarelli, IC Machado, JC Sfair, EM Bruna, and AV Lopes. 2016. Land use, fallow period and the recovery of a caatinga forest. *Biotropica* 48:586-597.
- 30. Vieira-Neto, EHM, HL Vasconcelos, and EM Bruna. 2016. Roads increase population growth rates of a native leaf-cutter ant in Neotropical savannahs. *Journal of Applied Ecology* 53:983-992. [Ph. D. Thesis Chapter].
- 31. Parker, TH, Nakagawa, S, Gurevitch, J and IIEE (Improving Inference in Evolutionary Biology and Ecology) workshop participants. 2016. Promoting transparency in evolutionary biology and ecology. *Ecology Letters*, 19: 726–728.
- 32. Whitlock, MC, JL Bronstein, EM Bruna, AM Ellison, CW Fox, MA McPeek, AJ Moore, MAF Noor, MD Rausher, LH Rieseberg, M G Ritchie, and RG Shaw. 2016. A balanced data archiving policy for long-term studies. *Trends in Ecology and Evolution* 31(2) 84-85 [Response to article].
- 33. Fine, P.V.A. and Bruna, E.M. 2016. Neotropical White-sand Forests: Origins, Ecology and Conservation of a Unique Rain Forest Environment. *Biotropica*, 48: 5-6. https://doi.org/10.1111/btp.12305
- 34. Hoeksema, JD and EM Bruna. 2015. Context-dependent outcomes of mutualistic interactions. Pages 181-202 in Mutualism, JL Bronstein (ed.). Oxford University Press.
- 35. Bruna, EM, TJ Izzo, BD Inouye, and HL Vasconcelos. 2014. Effect of mutualist partner identity on plant demography. *Ecology* 95:3237-3243. *Cover Article*.
- 36. Cho, AH, SA Johnson, CE Schuman, JM Adler, O Gonzalez, SJ Graves, JR Huebner, DB Marchant, SW Rifai, I Skinner, and EM Bruna. 2014. Women are underrepresented on the editorial boards of journals in environmental biology and natural resource management. *PeerJ* 2:e542. *Named to the 2015 PeerJ Picks Collection* (*Highlighting 20 articles of the 471 published in 2014*).
- 37. Smith, MJ, C Weinberger, EM Bruna, and S Allesina. 2014. The scientific impact of nations: Journal placement and citation performance. *PLoS ONE* 9:e109195.
- 38. Braunger Vasconcelos, P, GM Araújo, and EM Bruna. 2014. The role of roadsides in conserving cerrado plant diversity. *Biodiversity and Conservation* 23:3035-3050.
- 39. V. Christianini, P. S. Oliveira, E. M. Bruna, H. L. Vasconcelos. 2014. Fauna in decline: Meek shall inherit. *Science* 354(6201):1129.
- 40. Bruna, E. M. 2014 On identifying rising stars in biology. *Bioscience* 64(3):169.

- 41. Girão, LC, AV Lopes, M Tabarelli, and EM Bruna. 2014. Mudanças em atributos reprodutivos de árvores reduzem a diversidade funcional em uma paisagem fragmentada de floresta Atlântica pp. 145-174 in Serra Grande: Uma Floresta de ideas. M. Tabarelli, A. V. Neto, I. R. Leal, and A. V. Lopes (Eds.). Editora Universitároa da UFPE. Recife. [translation of Girão I 2007, *PLoS ONE*].
- 42. Araújo, GM, AF Amaral, EM Bruna, and HL Vasconcelos. 2013. Fire drives the reproductive responses of herbaceous plants in a Neotropical swamp. *Plant Ecology* 214:1479-1484.
- 43. Côrtes, MC, M Uriarte, MR Lemes, R Gribel, W John Kress, PE Smouse, and EM Bruna. 2013. Low plant density enhances gene dispersal in the Amazonian understory herb *Heliconia acuminata*. *Molecular Ecology* 22:5716-5729. [Ph. D. Thesis Chapter].
- 44. Jurinitz, CF, AA de Oliveira, and EM Bruna. 2013. Abiotic and biotic influences on early-stage survival in two shade-tolerant tree species in Brazil's Atlantic forest. *Biotropica* 45:728-736. [Ph. D. Thesis Chapter].
- 45. Lucas, CM, EM Bruna, and CMN Nascimento. 2013. Seedling co-tolerance of multiple stressors in a disturbed tropical floodplain forest. *Ecosphere* 4(1):3. [Ph. D. Thesis Chapter].
- 46. Copeland, SM, EM Bruna, LV Barbosa Silva, MC Mack, and HL Vasconcelos. 2012. Short-term effects of elevated precipitation and nitrogen on soil fertility and plant growth in a Neotropical savanna. *Ecosphere* 3. [Ph. D. Thesis Chapter].
- 47. Iacona, GD, LK Kirkman, and EM Bruna. 2012. Experimental test for facilitation of seedling recruitment by the dominant bunchgrass in a fire-maintained savanna. *PLoS ONE* 7. [Ph. D. Thesis Chapter].
- 48. Mundim, FM, EM Bruna, EHM Vieira-Neto, and HL Vasconcelos. 2012. Attack frequency and the tolerance to herbivory of Neotropical savanna trees. *Oecologia* 168:405-414. [Ph. D. Thesis Chapter].
- 49. Passmore, HA, EM Bruna, SM Heredia, and HL Vasconcelos. 2012. Resilient networks of ant-plant mutualists in Amazonian forest fragments. *PLoS ONE* 7(8):e40803.
- 50. Vasconcelos, HL, and EM Bruna. 2012. Arthropod responses to the experimental isolation of Amazonian forest fragments. *Zoologia* 29:515-530. *Invited review*.
- 51. Palumbo, MJ, SA Johnson, FM Mundim, AC Wolf, S Arunachalam, O Gonzalez, A Lau, JL Ulrich, A Washuta, EM Bruna. 2012. Harnessing smartphones for ecological education, research, and outreach. *Bulletin of the Ecological Society of America* 93(4): 390-393.
- 52. Bruna, EM, and AS de Andrade. 2011. Edge effects on growth and biomass partitioning of an Amazonian understory herb (*Heliconia acuminata*; Heliconiaceae). *American Journal of Botany* 98:1727-1734.
- 53. Bruna, EM, TJ Izzo, BD Inouye, M Uriarte, and HL Vasconcelos. 2011. Asymmetric dispersal and colonization success of Amazonian plant-ants queens. *PLoS ONE* 6:e22937.
- 54. Ferreira, AV, EM Bruna, and HL Vasconcelos. 2011. Seed predators limit plant recruitment in Neotropical savannas. *Oikos* 120:1013-1022.
- 55. Uriarte, M. Anciães, M. T.B. da Silva, P. Rubim, E. Johnson, and E. M. Bruna. 2011. Disentangling the drivers of reduced long-distance seed dispersal by birds in an experimentally fragmented landscape. *Ecology* 92(4): 924-93. 2012 Outstanding Paper in Landscape Ecology, Int. Assoc. for Landscape Ecology US Chapter.
- 56. Gagnon, PR, EM Bruna, P Rubim, MR Darrigo, RC Littell, M Uriarte, and WJ Kress. 2011. Growth of an understory herb is chronically reduced in Amazonian forest fragments. *Biological Conservation* 144:830-835.
- 57. Laurance, WF, JLC Camargo, RCC Luizao, SG Laurance, SL Pimm, EM Bruna, PC Stouffer, GB Williamson, J Benitez-Malvido, HL Vasconcelos, KS Van Houtan, CE Zartman, SA Boyle, RK Didham, A Andrade, and TE Lovejoy. 2011. The fate of Amazonian forest fragments: A 32-year investigation. *Biological Conservation* 144:56-67. *Highlighted as "Exceptional" by the Faculty of 1000*.
- 58. Pitman, NCA, J Widmer, CN Jenkins, G Stocks, L Seales, F Paniagua, and EM Bruna. 2011. Volume and geographical distribution of ecological research in the Andes and the Amazon, 1995-2008. *Tropical Conservation Science* 4:64-81.

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### MANUSCRIPTS IN PREPARATION (N=11, drafts available upon request).

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- 12. Bruna, E. M. and W. Hahn. In preparation. Is Latin American ecology really on the rise? Cross-national patterns of productivity and collaboration by Latin American scientists. In preparation for *PLoS Biology*.
- 13. Rubim, P., D. M. S. Matos, M. Uriarte, and E. M. Bruna. Local density influences the growth of seedlings of an Amazonian understory herb. In preparation for *Biotropica* [Ph.D. Thesis Chapter].
- 14. Loiselle, B. A., E. M. Bruna, R. Buschbacher, and S. Athayde. In prep. How can Brazilian Studies and partnerships with Brazilian institutions shape the perception of tropical conservation and development issues at US universities? Lessons from the University of Florida. Brazilian Studies in the United States: The road ahead. Yale University, FGV, and The Ministry of Education in Brazil.
- 15. Rubim, P. R., M. Uriarte, O. Ferreira, and E. M. Bruna. Neighborhood effects and the reproductive effort of a tropical perennial herb. In preparation for *Ecology* [Ph.D. Thesis Chapter].

#### **COURSE DEVELOPMENT & TEACHING EXPERIENCE**

# Courses Developed & Taught at the University of Florida

The Future of Rain Forests (Undergraduate, 2021, 2022)

Data Collection & Management for Latin American Studies (Graduate, 2019, 2021, 2022)

Ecology and Conservation of Tropical Wildlife (Undergraduate, 03,05,07,11,12,14,18)

Plant-Animal Interactions (Graduate, 2004, 2006, 2008, 2010)

Fundraising for Tropical Conservation & Development (Graduate, 2013, 2016, 2018, 2020)

Scientific Publishing (Graduate, 2014, 2015, 2017, 2018)

Ecological Principles for Development & Conservation Professionals (Graduate, 2010, 2011, 2012)

Tropical Forest Community Ecology (Graduate, 2000)

Design and Methods of Research in Latin American Studies (Graduate, 2008, 2010)

Research Methods in Tropical Conservation & Development (Graduate, 2003-2007)

Seminar in Wildlife Ecology and Conservation (Graduate, 2003, 2004)

Social Media Workshop (Graduate, 2016)

# **Guest Lectures in University of Florida Courses**

The Professional Scientist (WIS 6934: 2021, 2022)

Diverse Perspectives in Conservation (WIS4934: 2021, 2022)

Human Footprint on the Landscape (GEO3352: 2019)

Facets of Sustainability (IDS2154: 2011, 2013)

Environmental Planning & Design (EES 6051: 2016, 2018)

The Amazon (LAS6290: 2009, 2011)

Design & Methods of Research in Latin American Studies (Graduate, 2019, 2020)

Discovering Research & Communicating Science (IDH3931: 2015)

Wildlife Techniques (WIS4945C: 2005)

Development Theory & Practice (LAS6938: 2010)

Wildlife Population Modeling (WIS6466: 2003, 2006, 2008, 2010) Principles of Wildlife Ecology & Conservation (WIS6934: 2008)

Luso-Brazilian Civilization (POW3500: 2004)

### **Courses and Guest Lectures for Other Institutions**

Univ. Federal de Uberlândia: Mechanisms of Species Coexistence (Graduate Course, 2006) Univ. Federal de Uberlândia: Data Management & Archiving (Graduate Course, 2012, 2014)

Univ. Federal de Uberlândia: Scientific Publishing (Graduate Course, 2011)

INPA: Population Ecology (Guest Lecturer 2002, 2003)

INPA: Community Ecology (Guest Lecturer 2002) OTS 3M Field Course (2001)

OTS Amazonian Ecosystems Field Course (2001)

Antioch College Semester Abroad in Brazil (1999, 2001)

Univ. Federal do Amazonas, Fragmented Landscapes Field Course (2000, 2002)