

# EMILIO MIGUEL BRUNA

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Center for Latin American Studies  
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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 **Professor & Distinguished Teaching Scholar**, 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 **Director**, 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 **Adjunct Professor**, Universidade Federal de Uberlândia, Brazil  
Graduate Program in Ecology and Natural Resource Conservation
- 2007-2013 **Associate Professor**, University of Florida  
Department of Wildlife Ecology & Conservation & Center for Latin American Studies
- 2002-2007 **Assistant Professor**, University of Florida  
Department of Wildlife Ecology & Conservation & Center for Latin American Studies
- 2001-2002 **NSF Minority Postdoctoral Fellow**, Biological Dynamics of Forest Fragments Project  
Instituto Nacional de Pesquisas da Amazônia-Smithsonian Institution

## AWARDS

- 2023 Fellow, American Association for the Advancement of Science 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 *Biotropica* 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

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

1. Maxwell-Hanrahan Foundation. "Support for the ATBC Field Grant Program" (\$10,000; PIs Emilio M. Bruna, Patricia Sampaio, Lucia Lohmann, 2022-2023)
2. Sloan Foundation. "Reinventing Field Courses" (\$74,060; PI: E. M. Bruna, Co-PIs: R. McCleery, P. Antonenko, N. Attias, D. Barton, 2020-2021)
3. 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).
4. 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).
5. 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)

## RELEVANT 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>
2. 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. 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.
4. 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].
5. 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].
6. 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"**.
7. Whitlock, MC, JL Bronstein, EM Bruna, AM Ellison, CW Fox, MA McPeck, 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].
8. Bruna, EM, TJ Izzo, BD Inouye, and HL Vasconcelos. 2014. Effect of mutualist partner identity on plant demography. *Ecology* 95:3237-3243. **Cover Article.**
9. 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].
10. 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].
11. 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.

12. 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.**
13. 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.
14. Fiske, IJ, and EM Bruna. 2010. Alternative spatial sampling in studies of plant demography: Consequences for estimates of population growth rate. **Plant Ecology** 207:213-225. [Ph. D. Thesis Chapter].
15. Iacona, GD, LK Kirkman, and EM Bruna. 2010. Effects of resource availability on seedling recruitment in a fire-maintained savanna. **Oecologia** 163:171-180. [Ph. D. Thesis Chapter].
16. Quitete Portela, RDC, EM Bruna, and FA Maes dos Santos. 2010. Demography of palm species in Brazil's Atlantic Forest: A comparison of harvested and unharvested species using matrix models. **Biodiversity and Conservation** 19:2389-2403. [Ph. D. Thesis Chapter].
17. Ribeiro, MBN, EM Bruna, and W Mantovani. 2010. Influence of post-clearing treatment on the recovery of herbaceous plant communities in Amazonian secondary forests. **Restoration Ecology** 18:50-58. [Ph. D. Thesis Chapter].
18. Uriarte, M, EM Bruna, P Rubim, M Anciaes, and I Jonckheere. 2010. Effects of forest fragmentation on the seedling recruitment of a tropical herb: assessing seed vs. safe-site limitation. **Ecology** 91:1317-1328.
19. Bruna, EM, IJ Fiske, and MD Trager. 2009. Habitat fragmentation and plant populations: Is what we know demographically irrelevant? **Journal of Vegetation Science** 20:569-576.
20. Côrtes, M, V Gowda, WJ Kress, EM Bruna, and M Uriarte. 2009. Characterization of 10 microsatellite markers for the understory Amazonian herb *Heliconia acuminata*. **Molecular Ecology Resources** 9 1261-1264. [Ph. D. Thesis Chapter].
21. Fiske, IJ, EM Bruna, and BM Bolker. 2008. Effects of sample size on estimates of population growth rates calculated with matrix models. **PLoS ONE** 3:e3080. [Ph. D. Thesis Chapter].
22. De Athayde, SF, GM Da Silva, J Kaiabi, M Kaiabi, HR De Souza, K Ono, and EM Bruna. 2006. Participatory research and management of Arumã (*Ischnosiphon gracilis* Rudge Koern., Marantaceae) by the Kaiabi people in the Brazilian Amazon. **Journal of Ethnobiology** 26:36-59. **Cover article.**
23. Bruna, EM, and MBN Ribeiro. 2005. Regeneration and population structure of *Heliconia acuminata* in Amazonian secondary forests with contrasting land-use histories. **Journal of Tropical Ecology** 21:127-131.
24. Bruna, EM, and MK Oli. 2005. Demographic effects of habitat fragmentation on a tropical herb: Life-table response experiments. **Ecology** 86:1816-1824.
25. Bruna, EM, and MBN Ribeiro. 2005. The compensatory responses of an understory herb to experimental damage are habitat-dependent. **American Journal of Botany** 92:2101-2210.
26. Bruna, EM, WJ Kress, F Marques, and OF da Silva. 2004. *Heliconia acuminata* reproductive success is independent of local floral density. **Acta Amazonica** 34:467-471. **Cover Article.**
27. Nakazono, EM, EM Bruna, and RCG Mesquita. 2004. Experimental harvesting of the non-timber forest product *Ischnosiphon polyphyllus* in central Amazonia. **Forest Ecology and Management** 190:219-225.
28. Bruna, EM. 2003. Are plant populations in fragmented habitats recruitment limited? Tests with an Amazonian herb. **Ecology** 84:932-947.
29. Bruna, EM. 2002. Effects of forest fragmentation on *Heliconia acuminata* seedling recruitment in central Amazonia. **Oecologia** 132:235-243.
30. Bruna, EM, and WJ Kress. 2002. Habitat fragmentation and the demographic structure of an Amazonian understory herb (*Heliconia acuminata*). **Conservation Biology** 16:1256-1266.
31. Bruna, EM, O Nardy, SY Strauss, and SP Harrison. 2002. Experimental assessment of *Heliconia acuminata* growth in a fragmented Amazonian landscape. **Journal of Ecology** 90:639-649. **Recipient of the John L. Harper Prize from the British Ecological Society.**

32. Bruna, EM. 1999. Seed germination in rainforest fragments. *Nature* 402:139.

## SOFTWARE

1. Fournier, A., F. Stevens, M. Boone, and E. M. Bruna. 2020. refsplitr. author name disambiguation, author georeferencing, and mapping of coauthorship networks with Web of Science data. R package version 1.0.0. <https://github.com/ropensci/refsplitr>

## COURSE DEVELOPMENT & TEACHING EXPERIENCE - 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)

## ### GRADUATE STUDENTS ADVISED

Priyanka Hari Haran	UF	Wildlife Ecology & Conservation	Ph.D.	In progress
Thomas Smith	UF	Wildlife Ecology & Conservation	Ph.D.	2023
Simon Parsons	UF	Latin American Studies	M.A.	2018
Ernane H. M. Vieira Neto	UF	Wildlife Ecology & Conservation	Ph.D.	2016
Fabiane Moreira Mundim	UF	Wildlife Ecology & Conservation	Ph.D.	2016
Ana Ceclia Silva	UF	Latin American Studies	M.A.	2014
Paulo Rubim	UFSCar (Brazil)	Ecology	Ph.D.	2014
Pedro B. de Vasconcelos	UFU (Brazil)	Biology	M.S.	2012
Christine Lucas	UF	Wildlife Ecology & Conservation	Ph.D.	2011
Cris Follman Jurinitz	USP (Brazil)	Ecology	Ph.D.	2010
Stella Copeland	UF	Wildlife Ecology & Conservation	M.S.	2009
Gwen Iacona	UF	Wildlife Ecology & Conservation	M.S.	2008
Alana Vaz Ferreira	UFU (Brazil)	Ecology & Nat. Res. Cons.	M.S.	2008
Ian Fiske	UF	Wildlife Ecology & Conservation	M.S.	2006
Matthew Trager	UF	Interdisciplinary Ecology	M.S.	2005
Maria B. Nogueira-Ribeiro	USP (Brazil)	Ecology	M.S.	2005

## POSTDOCTORAL, SABBATICAL, & POSTGRADUATE SCHOLARS

Eric Scott	UF	Postdoctoral Scholar	2020-2022
Nina Attias	UF	Postdoctoral Scholar	2021-2022
Maria Rosa Darrigo	UF	Postdoctoral Scholar	2012
Paul Gagnon	UF	Postdoctoral Scholar	2008-2011
Heather Passmore	UF	Postdoctoral Scholar	2010-2011
Marina Anciães	Columbia Univ. & BDFFP (Brazil)	Postdoctoral Scholar	2007-2010
Thiago Izzo	UF & BDFFP (Brazil)	Postdoctoral Scholar	2005-2009
Laury Cullen	Inst. De Pesquisas Ecológicas, Brazil	Sabbatical Scholar	2016
Ariadna V. F. Lopes	UFPE (Brazil)	Sabbatical Scholar	2013-2014
Karine Carvalho	Univ. Estadual Sul da Bahia (Brazil)	Sabbatical Scholar	2013-2014
Ariadna V. F. Lopes	UFPE (Brazil)	Sabbatical Scholar	2006-2007

Alexandre Oliveira	USP (Brazil)	Sabbatical Scholar	2006
Laura Vivian Barbosa	UFU (Brazil)	Postgraduate Scholar	2010-2013
Paulo Rubim	UF & BDFFP (Brazil)	Postgraduate Scholar	2007-2011
Camilla Castanho	USP (Brazil)	Postgraduate Scholar	2006
Simone Athayde	Instituto Socioambiental (Brazil)	TCD Professional Visitor	2004
Maria Rosa Darrigo	BDFFP-INPA	Postgraduate Scholar	2002-2003

#### UNDERGRADUATE THESIS STUDENTS, HIGH SCHOOL RESEARCHERS, & VISITING GRADUATE STUDENTS

Maíra Rocha	INPA-Botânica	Visiting Ph.D. Student	2017
Yves Bovolenta	Univ. Estadual Londrina (Brazil)	Visiting Ph.D. Student	2014
Diego Rodruigues	Univ. Estadual Londrina (Brazil)	Visiting Ph.D. Student	2014
Alan Nilo da Costa	UFU (Brazil)	Visiting Ph.D. Student	2012
Pedro Vasconcelos	UFU (Brazil)	Visiting M.S. Student	2011
Rodolfo de Abreu	USP-ESALQ (Brazil)	Visiting Ph.D. Student	2011
Caroline Ferreira	UFU (Brazil)	Visiting M.S. Student	2011
Fabiane Mundim Ribeiro	UFU (Brazil)	Visiting M.S. Student	2008
Rita Quitete Portela	UNICAMP (Brazil)	Visiting Ph.D. Student	2007
Ernane Vieira Neto	UFU (Brazil)	Visiting M.S. Student	2007
Ellie McDaniel	UF	WEC Independent Study	2022
Ellie McDaniel	UF	NSF REU Scholar	2021
Andrew Mercadante	UF	NSF REU Scholar	2021
Irina Skinner	UF	UF Scholars Thesis	2009
Irina Skinner	UF	WEC Independent Study	2006
David M. Lapola	UNESP (Brazil)	Senior Thesis Co-advisor	2004
Olavo Nardy	UNESP (Brazil)	Senior Thesis Co-advisor	2000
Ian Fiske	UF	WEC Undergrad Project	2003
Bridget Chapin	UF	WEC Undergrad Project	2003
William Hahn	Eastside High School	Research Associate	2011-2012
Shannon Moore	Ft. Myers High School	SSTP Scholar	2010
Tyler Webner	American Heritage High School	SSTP Scholar	2010

**Research Interns:** 2007: Wesley Dáttilo da Cruz, Univ. Estadual do Norte Fluminense (Brazil), Jefferson José Valsko da Silva, Universidade do Norte Fluminense (Brazil). 2005-2007: Renata Pacheco do Nascimento and Cauê Thomé Lopes, Univ. Federal de Uberlândia (Brazil). 2005-2006: Polyanna Custodio Duarte, Univ. Federal de Uberlândia (Brazil). 2006: Waldete Castro Lourenço, Univ. Federal do Amazonas (Brazil), Elisabete Marques da Costa, Univ. Federal de Pernambuco (Brazil). 2005: Bruno Turbiani, Universidade Estadual Paulista (Brazil). 2004: Cristina Escate, Universidade Federal do Amazonas (Brazil), Simone Benedet, Universidade do Vale do Rio do Sinos (Brazil). 2003: Cris Follman Jurinitz, Univ. Federal do Rio Grande do Sul (Brazil), Denise Cruz, Univ. Federal do Rio de Janeiro (Brazil). 2003-2004: David M. Lapola, Universidade Estadual Paulista (Brazil). 2002: Maria Beatriz Nogueira, Universidade de São Paulo (Brazil). 2001-2002: Sylvia Heredia, Universidad de los Andes (Colombia). 2001: Obed Garcia, INPA (Brazil), Olavo Nardy, UNESP (Brazil).