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EDUCATION

2005 – 2010	Ph.D. Biology. Major in Conservation Ecology. University of Puerto Rico.
2001 – 2004	M.Sc. Biology. Major in Molecular Biology. Universidad de Costa Rica.
1997 – 2001	B.S. Biology. Universidad de Costa Rica.

PROFESSIONAL EXPERIENCE

2017 – present	Research Associate. Department of Botany, National Museum of Natural History, Smithsonian Institution. Washington, D.C.
2012 – 2017	Postdoctoral Research Fellow. Department of Botany, National Museum of Natural History, Smithsonian Institution. Washington, D.C.
2010 – 2012	Postdoctoral Research Fellow. Center for Applied Tropical Ecology and Conservation, University of Puerto Rico, San Juan, Puerto Rico.

FELLOWSHIPS AND AWARDS

2012 – 2017	Postdoctoral Fellowship. Department of Botany, National Museum of Natural History, Smithsonian Institution. $249,000.
2010 – 2012	Postdoctoral Fellowship. Center for Applied Tropical Ecology and Conservation, University of Puerto Rico. $76,000.
2012	Costa Rican National Academy of Sciences. Award Outstanding Young Investigator.
2009 – 2010	Dissertation Fellowship Award. Dean for Graduate Studies and Research. University of Puerto Rico, Rio Piedras Campus. $11,000.
2008 – 2009	Award for Exceptional Academics and Merit Executories for Graduate Students. Dean for Graduate Studies and Research. University of Puerto Rico, Rio Piedras Campus. $13,000.

2002	Graduate Research Fellowship, Organization for Tropical Studies. Course: Ecology of Amazonian Ecosystems. OTS-02-13.
2001	Graduate Fellowship Award. Dean of Graduate Studies (Vicerrectoría de Investigación). Universidad de Costa Rica. $1000.
2000	Research Undergraduate Fellowship. Research Experiences for Undergraduate Students. Universidad de Costa Rica. Summer School Research and Field Biology. Golfito, Costa Rica.

RESEARCH EXPERIENCE

2012 – present	Postdoctoral Research Fellow and Research Associate at the Department of Botany, National Museum of Natural History, Smithsonian Institution. Projects: (1) Factors explaining the naturalization and invasion of alien plants in the West Indies. (2) Invasive plants in the West Indies: Compilation of datasheets for CABI-Invasive Species Compendium. Collaborators: Pedro Acevedo (SI-NMNH), Hilda Diaz-Soltero (USDA), Lucinda Charles and Gareth Richards (CABI), James Ackerman and Raymond Tremblay (University of Puerto Rico).
2010 – 2012	Postdoctoral Research Fellow, Center for Applied Tropical Ecology and Conservation, University of Puerto Rico. Projects: (1) Vegetation community dynamics of a tropical semiarid system following experimental removals of exotic grasses. (2) The impact of feral ungulates on Mona Island vegetation.
2005 – 2010	Graduate Student Researcher, Department of Biology, University of Puerto Rico, Rio Piedras Campus. Advisor: Elvia Meléndez-Ackerman. Dissertation title: Identification and evaluation of vulnerability factors affecting the Caribbean cactus species *Harrisia portoricensis*.
2005 – 2007	Graduate Research Assistant, Tropical Plant Ecology and Evolution Laboratory, University of Puerto Rico, Río Piedras Campus. Project: Micro-morphological characterization of the vegetation of Mona Island, Puerto Rico.
2001 – 2004	Graduate Research Assistant, Escuela de Biología, Universidad de Costa Rica. Advisors: Jorge Lobo and Mauricio Quesada. Master's Thesis Project: Reproductive biology and phenology of *Ceiba pentandra* (Bombacaceae) in two life zones of Costa Rica.
2001 – 2002	Graduate Research Assistant, Escuela de Biología, Universidad de Costa Rica and Universidad Nacional Autónoma de Mexico.

PIs: Mauricio Quesada and Jorge Lobo.
Project: Effects of fragmentation and spatial isolation on the reproductive success of trees in the Bombacaceae family.

1998 – 2000 Undergraduate Research Assistant, National Museum of Costa Rica
Department of Natural History, San José, Costa Rica.
Department Director: Bernal Rodríguez.
Activities performed: Museum curator (mammals and birds).

TEACHING EXPERIENCE

2007 – 2008 Teaching Assistant, Department of Biology, University of Puerto Rico.
Courses: Biology I and II and General Ecology.

2004 – 2005 Coordinator and Environmental Educator. Environmental Education Program. Fundación Neotrópica. Osa Peninsula, Costa Rica.

2004 Teaching Assistant, Organization for Tropical Studies (OTS). Tropical Ecology and Conservation Course. OTS-ETC 04-2. Costa Rica.

2003 – 2004 Biology and Science Teacher. Middle- and high-school levels. Puerto Jiménez, Península de Osa, Costa Rica.

1999 – 2001 Teaching Assistant, Escuela de Biología, Universidad de Costa Rica.
Courses: General Biology and Ecology.

PROFESSIONAL DEVELOPMENT ACTIVITIES
-WORKSHOPS AND TRAININGS ATTENDED-

Sept 2012 Workshop title: Invasive Species Compendium: its use to support decision making in invasive species management in the Caribbean. CABI -International. St. Georges, Grenada.

Mar 2012 Workshop title: International Environmental Law and Legal Instruments for the Environmental Protection. Workshop headed by Dr. María Giménez, Universidad de Murcia, Spain. San Juan, Puerto Rico.

Jun 2011 Workshop title: Introduction to Multilevel Linear Models. Curran-Bauer Analytics, University of North Carolina, Chapel Hill, USA.

Apr 2011 Workshop title: Conservation Ethics. Training workshop headed by Dr. Michael P. Nelson and Dr. John A. Vucetich. San Juan, Puerto Rico.

Oct 2009	Course title: Presentation and Discussion Skills. Center for English as a Second Language. University of Arizona, Tucson, USA.
Sep 2009	Workshop title: MATLAB Basics for Graduate Students. The University of Arizona, Tucson, USA.
Apr 2009	Landscape Ecology: Theoretical and Practical Course. Museo de Historia Natural Noel Kempff, Santa Cruz de la Sierra, Bolivia.
Feb 2009	Workshop title: Reproductive Biology and Population Genetics of Angiosperms in Neotropical Arid Ecosystems. San Juan, Puerto Rico.
Jul 2005	Summer Teaching and Mentoring Training. Alliance for Graduate Education and the Professoriate (AGEP), University of Puerto Rico, San Juan, Puerto Rico.
Mar 2001	Workshop title: Topics in Biostatistics. Universidad de Costa Rica.

CONTRIBUTED TALKS AND PRESENTATIONS

Jul 2017	Invasive Plants of the Caribbean: Application of Herbarium Collections to Protected a Regional Biodiversity Hotspot. Island Invasives Conference 2017. University of Dundee, Scotland.
Oct 2016	Invasive Plant Species in the West Indies. USDA/APHIS Project on Invasive Species. Seminar. Washington DC.
Jun 2014	Ecology and Conservation of Semiarid Ecosystems in the West Indies. Invited Talk. CICESE, Ensenada, Baja California, Mexico.
May 2014	Potential vulnerabilities of the threatened cactus, *Harrisia portorriscensis* on Mona Island. Invited Talk. US Fish and Wildlife Service, Cabo Rojo, Puerto Rico.
Jun 2013	Assessing the influence of hurricane disturbance on Caribbean forest structure: a study case in the dry forest of Mona Island. ATBC Annual Meeting. San Jose, Costa Rica.
Mar 2013	The African grass, *Megathyrsus maximus* and its negative effects on, *Harrisia portoriscensis*, a threatened cactus on Mona Island. Invasive Species Awareness Week. University of Puerto Rico, San Juan, Puerto Rico.
Aug 2011	Vegetation community dynamics of a tropical semi-arid system following experimental removals of an exotic grass. ESA 96th Annual Meeting, Austin, Texas.

Oct 2010 Demographic parameters of the endemic cactus *Harrisia portoricensis* in areas invaded by the exotic grass *Megathyrsus maximus.* Invited Talk. Latin-American Botanical Congress. La Serena, Chile.

Nov 2009 Factors affecting seed germination and seedling establishment of *Harrisia portoricensis* (Cactaceae) on Mona Island. Annual Symposium. Center for Applied Tropical Ecology and Conservation, San Juan, Puerto Rico.

Nov 2009 Pollination biology of *Harrisia portoricensis* (Cactaceae), an endangered Caribbean species. Annual Symposium. Center for Applied Tropical Ecology and Conservation, San Juan, Puerto Rico.

Mar 2008 Identification and evaluation of vulnerability factors in the endemic island cactus *Harrisia portoricensis*. Invited Talk. Institute for Tropical Ecosystems Studies. San Juan, Puerto Rico.

Oct 2007 Reproductive biology and population dynamics of *Harrisia portoricensis* (Cactaceae). Invited Talk. Department of Natural Resources and Environment of the Commonwealth of Puerto Rico, San Juan, Puerto Rico.

Jul 2007 Integrated Conservation and Development Projects (ICDPs): A new view for the future of biodiversity projects. ATBC Annual Meeting. Michoacán, México.

Mar 2007 Vegetation structure of the dry forests of Mona Island. 27th Puerto Rico Interdisciplinary Scientific Meeting (PRISM). Universidad Interamericana de Bayamón, Puerto Rico.

Jun 2006 Phenological patterns and reproductive success of *Ceiba pentandra* in tropical dry and wet forests of Costa Rica**.** IX Latin-American Botanical Congress. Santo Domingo, Dominican Republic.

Mar 2006 Using micromorphological characterization of vegetation to determining diet composition of feral goats at Mona Island. Junior Technical Meeting/PRISM-2006. University of Puerto Rico.

May 2002 Effects of forest fragmentation in the reproductive biology of *Ceiba pentandra* trees (Bombacaceae) in two life zones of Costa Rica. Conferences in Ecology: Conservation of Amazonian Ecosystems-OTS. Universidad de la Amazonía Peruana, Iquitos, Perú.

PROFESSIONAL SKILLS

Languages: Spanish (First language), English (Fluent).
Computer applications: SAS, JMP, PC-ORD, MATLAB, R, GS++, SigmaPlot.

PROFESSIONAL AFFILIATIONS - MEMBERSHIPS

Ecological Society of America
Botanical Society of America
The Association for Tropical Biology and Conservation
The Society of Plant Reproductive Biologists
Asociación Latinoamericana de Botánica
Sociedad Latinoamericana de Cactáceas y Suculentas (regional delegate for Costa Rica)

INVITED PEER-REVIEWER

Allelopathy Journal
American Journal of Botany
Applied Ecology
Boletín de la Sociedad Latinoamericana de Cactáceas y Suculentas
Caribbean Journal of Science/Caribbean Naturalist
Guyana Botánica
Haseltonia
Journal of Pollination Ecology
Neotropical Biodiversity
Plant Ecology
Plant Ecology and Diversity
Population Ecology
Revista de Biología Tropical
The Journal of the Torrey Botanical Society
The International Journal of Plant Reproductive Biology

EXTRACURRICULAR ACTIVITIES AND COMMUNITY SERVICE

Volunteer: Forest Inventory Analysis (FIA) at Mona Island Reserve. Southern Research Station and IITF US-Forest Service. April 2008.

Invited speaker: AKKA-SEEDS Monthly Conference. Talk title: Bat diversity and distribution in caves and the impacts of humans in bat behavior. February 2008. San Juan, Puerto Rico.

Invited speaker: AKKA-SEEDS Monthly Conference. Talk title: Mona Island: Natural Research Laboratory in the Caribbean. March 2007. San Juan, Puerto Rico.

Environmental Educator: Environmental Education Program for Public Elementary Schools. Program sponsored by the non-profit organization Fundación Neotrópica. January-December 2004. Osa Peninsula, Costa Rica.

Ecological Tourism Advisor. Osa Tropical Co. March 2003-June 2004. Puerto Jiménez, Osa Peninsula, Costa Rica.

Volunteer: Project of Environmental Education and Interpretation in Protected Zones of Costa Rica. Barra Honda National Park. Sistema de Áreas de Conservación de Costa Rica y Universidad de Costa Rica. June-July 2000.

Volunteer: Association of Volunteers for Service at Protected Areas of Costa Rica (ASVO Costa Rica). 1997-2005. San José, Costa Rica. Participation includes environmental law enforcement in natural protected areas and act as a facilitator in conservation and educational activities.

PUBLICATIONS

27. Franklin J., Andrade R., Daniels M.L., Fairbairn P., Fandino M.C., Gillespie T.W., González G., Gonzalez O., Imbert D., Kapos V., Kelly D.L., Marcano-Vega H., Meléndez-Ackerman E.J., McLaren K.P., McDonald M.A., Ripplinger J., **Rojas-Sandoval J**., Ross M.S., Ruiz J., Steadman D.W., Tanner E.V.J, Terrill I., Vennetier M. 2018. Geographical ecology of dry forest tree communities in the West Indies. Journal of Biogeography, 45(5):1168-81 doi.org/10.1111/jbi.13198

26. Seebens H., Blackburn T.M., Dyer E.E., Genovesi P., Hulme P.E., Jeschke J.M., Pagad S., Pyšek P., Winter M., Arianoutsou M., Bacher S., Brundu G., Capinha C., Celesti-Grapow L., Dawson W., Dullinger S., Fuentes N., Jäger H., Kartesz J., Kenis M., Kühn I., Liebhold A., Mosena A., Nishino M., Pearman D., Pergl J., Rabitsch W., **Rojas-Sandoval J**., Roques A., Rorke S., Rossinelli S, Roy H.E., Scalera R., Schindler S., Štajerová K., Tokarska-Guzik B., van Kleunen M., Walker K., Yamanaka T. and Essl F, 2018. Global rise in emerging alien species results from increased accessibility of new source pools. PNAS, 115(10): 201719429 DOI:10.1073/pnas.1719429115

25. **Rojas-Sandoval J**., Tremblay R.L., Acevedo-Rodriguez P., and Diaz-Soltero H. 2017. Invasive plant species in the West Indies: geographical, ecological and floristic insights. Ecology and Evolution 7: 4522–4533.

24. Seebens H., Blackburn T.M., Dyer E.E., Genovesi P., Hulme P.E., Jeschke J.M., Pagad S., Pyšek P., Winter M., Arianoutsou M., Bacher S., Brundu G., Capinha C., Celesti-Grapow L., Dawson W., Dullinger S., Fuentes N., Jäger H., Kartesz J., Kenis M., Kühn I., Liebhold A., Mosena A., Nishino M., Pearman D., Pergl J., Rabitsch W., **Rojas-Sandoval J**., Roques A., Rorke S., Rossinelli S, Roy H.E., Scalera R., Schindler S., Štajerová K., Tokarska-Guzik B., van Kleunen M., Walker K., Yamanaka T. and Essl F. 2017. No saturation in the accumulation of alien species worldwide. Nature Communications 8:14435 | DOI: 10.1038/ncomms14435

23. Ackerman JD., Tremblay RL., **Rojas-Sandoval J**., and Hernández-Figueroa H. 2017. Biotic resistance in the tropics: patterns of seed plants invasions within an island. Biological Invasions 19: 315-328.

22. **Rojas-Sandoval J**., Meléndez-Ackerman E., Anglés-Alcázar D. 2016. Assessing the impact of grass invasion on the population dynamics of a threatened Caribbean dry forest cactus. Biological Conservation 196: 156-164.

21. **Rojas-Sandoval J**., Meléndez-Ackerman E., Fumero-Cabán J, García-Bermúdez M, Sustache J, Aragón S, Morales-Vargas M, Olivieri G, and Fernández DS. 2016. Long-term understory vegetation dynamics and responses to ungulate exclusion in the dry forest of Mona Island. Caribbean Naturalist 1:138–156.

20. Meléndez-Ackerman E., **Rojas-Sandoval J**., Fernández D.S., González G., López H., Sustache J., Morales M., García-Bermúdez M., and Aragón S. 2016. Associations between soil variables and vegetation structure and composition of Caribbean dry forests. Caribbean Naturalist 1:176–198.

19. **Rojas-Sandoval J.** and Acevedo-Rodríguez P. 2015. Naturalization and invasion of alien plants in Puerto Rico and the Virgin Islands. Biological Invasion 17: 149-163.

18. **Rojas-Sandoval J**., Meléndez-Ackerman E., Fumero-Cabán J., García-Bermúdez M.A., Sustache, J., Aragón, S., Morales, M., and Fernández, DS. 2014. Effects of hurricane disturbance and feral goat herbivory on the structure of a Caribbean dry forest. Journal of Vegetation Science 25: 1066-1077.

17. Moreno L.M., Meléndez-Ackerman E., Cheleuitte C., Lastra L., Rodriguez R., and **Rojas-Sandoval J**. 2014. Potential impacts of the invasive grass *Megathyrsus maximus* (Poaceae) on ground-dwelling arthropods in a Caribbean dry forest. Caribbean Naturalist 7: 1-15. *Lead by undergraduate students.

16. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2013. Population dynamics of a threatened cactus species: general assessment and effects of matrix dimensionality. Population Ecology 55: 479-491.

15. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2013. Spatial patterns of distribution and abundance of *Harrisia portoricensis,* an endangered Caribbean Cactus. Journal of Plant Ecology, doi: 10.1093/jpe/rtt014.

14. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2012. Effects of an invasive grass on the demography of the Caribbean cactus *Harrisia portoricensis*: implications for cacti conservation. Acta Oecologica 41: 30-38.

13. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2012. Factors affecting establishment success of the endangered Caribbean cactus *Harrisia portoricensis.* Revista de Biología Tropical 60: 867-879.

12. **Rojas-Sandoval J.**, Meléndez-Ackerman E., and Fernández D.S. 2012. Plan community dynamics of a tropical sem-iarid system following experimental removals of an exotic grass. Applied Vegetation Science 15: 513-524, doi: 10.1111/j.1654-109X.2012.01199.x.

11. Curbelo-Rodríguez J., Meléndez-Ackerman E., **Rojas-Sandoval J**., and Segarra-Carmona A. 2012. New Record of *Cybocephalus kathrynae* (Coleoptera: Cybocephalidae) on Mona Island, Puerto Rico. Revista Brasileira de Entomologia 56: 119-121.
*Lead by undergraduate student.

10. Guerrero P.C., Carvallo G.O., Nassar J.M., **Rojas-Sandoval J**., Sanz V., and Medel R. 2011. Ecology and evolution of negative and positive interactions in Cactacaea: lesson and pending tasks. Plant Ecology and Diversity, doi:10.1080/17550874.2011.630426.

9. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2011. Reproductive phenology of the Caribbean cactus *Harrisia portoricensis*: rainfall and temperature associations. Botany 89: 861-871.

8. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2011. Reproductive wind-facilitated self-pollination in *Harrisia portoricensis* (Cactaceae): A mechanism for reproductive assurance. International Journal of Plant Reproductive Biology 3: 1-5.

7. **Rojas-Sandoval J.** and Meléndez-Ackerman E. 2011. Notes on the natural history of *Harrisia portoricensis* (Cactaceae): a general update including specific recommendations for management and conservation. Caribbean Journal of Science 47: 118-123.

6. **Rojas-Sandoval J**. 2010. Natural history of the threatened cactus species *Harrisia portoricensis*. Kaktusy i Inne. Journal of Polish Cactus and Succulent Society 7: 4-8.

5. **Rojas-Sandoval J**. and Meléndez-Ackerman E. 2009. Pollination biology of *Harrisia portoricensis* (Cactaceae), an endangered Caribbean species. American Journal of Botany 96: 2270-2278.

4. **Rojas-Sandoval J**., Budde K., Fernández M., Chacón E., Quesada M. and Lobo J.A. 2008. Phenology and pollination biology of *Ceiba pentandra* (Bombacaceae) in the wet forest of southeastern Costa Rica. *In*: Weisserhofer A., W. Huber, V. Mayer, S. Pamperl, A. Weber and G. Aubrecht (Eds). Natural and Cultural History of the Golfo Dulce Region, Costa Rica, pp 539-545. Staphia 88, Freistadt, Austria.

3. **Rojas-Sandoval J**., Lobo J.A., and Quesada M. 2008. Phenological patterns and reproductive success of *Ceiba pentandra* (Bombacaceae) in tropical dry and wet forests of Costa Rica. Revista Chilena de Historia Natural 81: 443-454.

2. Meléndez-Ackerman E., **Rojas-Sandoval J**., and Planas S. 2008. Self-compatibility of microgametophytes in *Heliconia bihaii* (Heliconiaceae) from St. Lucia. Caribbean Journal of Science 44: 145-149.

1. Lobo, J.A., Quesada M., Stoner K., Fuchs E., **Rojas-Sandoval J**., and Saborío G. 2003. Factors affecting phenological patterns of Bombacaceous trees in seasonal forest in Costa Rica and Mexico. American Journal of Botany 90: 1054-1063.

TECHNICAL REPORTS

Rojas-Sandoval J. 2012-2018. Invasive Plant Species in the West Indies: revision of the distribution, invasion status, history of introduction, habitat preferences, and management recommendations for 375 plant species behaving as invasive on Caribbean islands. Technical reports commissioned by the United States Department of Agriculture (USDA), the Smithsonian Institution, and the Centre for Agriculture and Biosciences International (CABI). Invasive species datasheets are available online at the CABI Invasive Species Compendium (http://www.cabi.org/isc/).

NON-INDEXED PUBLICATIONS

García–Rivas A., Mori G.M., González–Carcacía J., **Rojas-Sandoval J.**, Pereira de Souza A., Mavárez J., and Nassar J.M. 2012. Ensayos preliminares con microsatélites de *Kalanchoe daigremontiana* sugieren baja variabilidad genética en localidades colonizadas en la región del Caribe. Boletín de la Red Latinoamericana para el Estudio de Plantas Invasoras 2: 4-11.

Rojas-Sandoval J. 2011. Polinización facilitada por viento en Isla de Mona: Un mecanismo para asegurar la reproducción de una especie amenazada. Revista Marejada 7: 13-15.

Rojas-Sandoval J. and Meléndez-Ackerman E. 2009. Avances sobre la historia natural de Harrisia portoricensis. Boletín de la Sociedad Latinoamericana y del Caribe de Cactáceas y otras Suculentas 6: 27-29.

Rojas-Sandoval J. 2007. Biología reproductiva y dinámica poblacional de Harrisia portoricensis. Boletín de la Sociedad Latinoamericana y del Caribe de Cactáceas y otras Suculentas 4: 4-5.

PROFESSIONAL REFERENCES/COLLABORATORS

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