# CURRICULUM VITAE
# Joel A. Mercado-Díaz, Ph. D. candidate
# University of Chicago
# he/him/his


Contact information:

Office
Committee on Evolutionary Biology
The University of Chicago
1025 E. 57th Street, Chicago IL 60637
tel: 773-702-9474, fax: 773-702-4699
email: jamercadodíaz@uchicago.edu
website: https://jamercadodiaz.github.io/

Laboratory
Negaunee Integrative Research Center
The Field Museum
1400 S. Lake Shore Drive, Chicago, IL 60605, USA
tel: 1-312-665-7881
email: jmercado@fieldmuseum.org


---

## Education

| | |
|---|---|
| Sept 2015- | **Ph.D. Evolutionary Biology (in progress)**<br>Committee on Evolutionary Biology, The University of Chicago<br>Expected graduation date: June 2021 |
| 2011 | **MSc. Biology**<br>University of Puerto Rico, Río Piedras Campus |
| 2002 | **B. A. Environmental Sciences**<br>University of Puerto Rico, Río Piedras Campus |

---

## Research and work experience

2015 to present — **Ph.D. Graduate Student**
Committee on Evolutionary Biology, University of Chicago

2008 to present — **Research Associate**
Herbarium, University of Puerto Rico, Río Piedras
- In charge of curatorial tasks and management of the lichen collection.

2012 –2013 — **Lecturing Faculty**
Universidad del Este (UNE), Recinto de Carolina
- Lecturer and laboratory instructor for General Biology I, General Biology II, and Plant Biology
- Designed curricula, rubrics and served as laboratory coordinator for Plant Biology

2011–2013 — **Research Associate**
International Institute of Tropical Forestry (USFS), Río Piedras
- In charge of lichen monitoring, data analysis, and the preparation of articles and reports related to a project describing lichen communities in a series of long-term vegetation plots along an elevational gradient in northeastern Puerto Rico

2007–2011 **Research Assistant**
International Institute of Tropical Forestry (USFS), Río Piedras
- In charge of data analysis and fieldwork for a long-term research study of plant community responses to climate change in the Alaskan Arctic.

2003–2007 **GIS Specialist**
The Conservation Trust of Puerto Rico (*Para La Naturaleza*), San Juan
- In charge of geographical analysis and preparation of maps necessary for the management of natural protected areas.

---

**Professional organizations**

Society for the Study of Evolution (SSE)
Ecological Society of America (ESA)
American Bryological and Lichenological Society (ABLS)
International Association of Lichenologists (IAL**)**
Mycological Society of America (MSA)

---

**Grants and fellowships**

| | |
|---|---|
| 2020 | Grainger Bioinformatics Center Award, Field Museum ($3,500) |
| 2019 | SSB MiniARTS Award ($2,087.00) |
| 2018 | Culberson & Hale 2018 Field Lichenology Research Award ($750) |
| 2018 | CEB Henry Hinds Fund ($2,500) |
| 2018 | Mycological Society of America Mentor Student Travel Award ($1,000) |
| 2018 | Biological Sciences Division (The University of Chicago) Travel Award ($500) |
| 2017 | Ford Predoctoral Fellowship ($24,000 per year. Three year period) |
| 2017 | CEB - Field Museum Pritzker Lab funds ($2,000) |
| 2016 | Committee on Evolutionary Biology Travel Grant ($2,000) |
| 2016 | International Association of Lichenology Travel Grant ($414.00) |
| 2014 | Ford Motor Company's Conservation & Environmental Grant ($2,000) |
| 2011 | International Institute of Tropical Forestry Independent Study Research Grant ($50,000) |

---

**Conference presentations**

1. **Mercado-Díaz JA.** *A RADseq approach to understand species delimitation and biogeography of* Cladonia sandstedei *(Abbayes) Ahti in the Caribbean* (2020) Grainger Bioinformatics Center Virtual Symposium, Field Museum, Chicago, IL, USA.

2. **Mercado-Díaz JA,** Lücking R, Moncada B, Widhelm T, Lumbsch HT. *An integrative taxonomic approach to elucidate the diversity of the lichen genus Sticta (Ascomycota: Lobariaceae) in Puerto Rico* (2018) International Mycological Congress, San Juan, PR.

3. **Mercado-Díaz JA** *Lichenized fungi in tropical islands and the case for putative endemic distributions*. (2018) 2018 Committee on Evolutionary Biology (The University of Chicago) Symposium. Lincoln Park Zoo, Chicago, IL, USA.

4. **Mercado-Díaz JA** *Integrative taxonomic approaches to understand species diversity of lichenized fungi in a Caribbean island* (2017) 2017 Committee on Evolutionary Biology (The University of Chicago) Symposium. Chicago Botanic Garden, Chicago, IL, USA.

*5.* **Mercado-Díaz JA,** Lumbsch HT. *Lichen biodiversity in tropical islands: the case of the genus* Sticta *in Puerto Rico* (2016) International Association of Lichenology Symposium, Helsinki, Finland.

6. **Mercado-Díaz JA**, Zahn G, Walker L, Muñoz A y Lücking R. *Evaluación del estatus de conservación de un bosque pre-montano en Costa Rica utilizando líquenes telotremoides* (2013) XI Encuentro del Grupo Latinoamericano de Liquenólogos, Jardín Botánico de Caracas, Universidad Central de Venezuela, Caracas, Venezuela.

7. **Mercado-Díaz, JA**. *Los Líquenes: Elementos olvidados de la biodiversidad puertorriqueña*. 10mo Simposio Ambiental (2011) Universidad de Puerto Rico, Cayey, PR.

8. **Mercado-Díaz JA**, Gould WA and G González. *Liquenología en Puerto Rico: Pasado, Presente y Futuro* (2011) 10mo Encuentro del Grupo Latinoamericano de Liquenólogos, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia.

9. Gould WA, Welker JM, **Mercado-Díaz, JA**, Anderson A, and M Menken. *Using long-term experimental warming to distinguish vegetation responses to warming from other environmental drivers related to climate change* (2010) American Geophysical Union Meeting, San Francisco, CA, USA.

10. **Mercado-Díaz JA** and WA Gould. *Landscape- and decadal-scale changes in the composition and structure of plant communities in the northern foothills of the Brooks Range of Arctic Alaska* (2010) American Geophysical Union Meeting, San Francisco, CA, USA.

11. **Mercado-Díaz JA** and WA Gould. *Vegetation change in the Alaskan Arctic (1989-2008)* (2010) American Association for the Advancement of Science Caribbean Division Annual Conference, University of Puerto Rico, Río Piedras, PR.

12. **Mercado-Díaz JA** and Gould W. *Plant community responses of Alaskan arctic tundra after 14 years of experimental warming and snow manipulation*. (2009) ESA Annual Meeting, Albuquerque, NM, USA

13. **Mercado-Díaz JA** *Respuestas de la vegetación a experimentos de cambio climático a largo plazo en la tundra ártica* (2009) IITF Scientific Seminars Series, International Institute of Tropical Forestry, San Juan, PR.

14. **Mercado-Díaz JA** and WA Gould. *Plant Community Responses of Alaskan Arctic Tundra After 14 Years of Experimental Warming and Snow Manipulation* (2008) American Geophysical Union Meeting, San Francisco, CA, USA.

15. Gould, WA, and **Mercado-Díaz JA** *Twenty-year record of vegetation change from long-term plots in Alaskan tundra* (2008) American Geophysical Union Meeting, San Francisco, CA, USA.

16. **Mercado-Díaz JA**, Gould WA and AB Carroll. *The Imnavait Creek Grid's plant community dynamics: Changes in vegetation structure and composition after an 18-year interval* (2008) Third Symposium of Graduate Research in Biology, University of Puerto Rico, Río Piedras, PR.

---

**Talks and other presentations**

1. **Date:** Sept 17, 2020
   **Title:** Evolution, biogeography, and species diversity patterns of lichenized fungi in Puerto Rico and the Caribbean
   **Audience:** Department seminar, Biology Graduate Program, University of Puerto Rico

2. **Date:** Apr 29, 2020
   **Title:** Elucidating species richness in lichen fungi: the genus *Sticta* in Puerto Rico.
   **Audience:** Graduate Mycology course seminar, University of Puerto Rico

---

**Citations**

| | |
|---|---|
| Citations | 1987 |
| h-index | 13 |
| i10-index | 18 |

---

**Journal publications**

1. **Mercado-Díaz, J. A.**, Merced A. (2021) Effects of hurricanes on the bryological and lichenological flora of Puerto Rican forests Acta Científica 32(1-3): 55-72.

2. Moncada, B., **Mercado-Díaz, J. A.**, Magain, N., Hodkinson, B. P., Smith, C. W., Bungartz, F., Pérez- Pérez, R-E., Gumboski, E., Sérusiaux, E., Lumbsch, H. T., &

Lücking, R. (2021) Phylogenetic diversity of two geographically overlapping lichens: isolation by distance, environment or fragmentation? Journal of Biogeography 48(3): 676-689.

3. Moncada, B., **Mercado-Díaz, J. A.**, Smith, C. W., Bungartz, F., Sérusiaux, E., Lumbsch, H. T., Lücking, R. (2021) Two new common, previously unrecognized species in the *Sticta weigelii* morphodeme (Ascomycota: Peltigeraceae). Willdenowia 51(1): 35-45.

4. **Mercado-Díaz, J. A.,** Moncada, B., Widhelm, T., Lücking, R., & Lumbsch H.T. (2020) Elucidating species richness in lichen fungi: the genus *Sticta* (Ascomycota: Peltigeraceae) in Puerto Rico. Taxon 69: 851-891.

5. Simon, A., Lücking R., Moncada, B., **Mercado-Díaz, J. A.**, Bungartz, F., da Silva Caceres, M. E., Gumboski, E. L., de Azevedo Martins, S. M., Spielmann, A., Parker, D., Goffinet, B. (2020) *Emmanuelia*, a new genus of lobarioid lichen-forming fungi (lichenized Ascomycota: Peltigerales): phylogeny and synopsis of accepted species. Plant and Fungal Systematics 65(1): 76-94.

6. Lindgren H., Moncada B., Lücking R., Magain N., Simon A., Goffinet B., Sérusiaux E., Nelsen M., **Mercado-Díaz, J. A.**, Widhelm T., & Lumbsch H. T. Cophylogenetic patterns in algal symbionts correlate with repeated symbiont switches during diversification and geographic expansion of lichen-forming fungi in the genus *Sticta* (Ascomycota, Peltigeraceae) (2020) Molecular Phylogenetics and Evolution 150: 106860.

7. Widhelm, T. J., Grewe, F., Huang, J. P., **Mercado-Díaz, J. A.**, Goffinet, B., Lücking, R., Moncada, B., Mason-Gamer, R. & Lumbsch, H.T. (2019). Multiple historical processes obscure phylogenetic relationships in a taxonomically difficult group (Lobariaceae, Ascomycota). Scientific Reports, 9(1), 8968.

8. Moncada, B., **Mercado-Díaz, J. A.**, & Lücking, R. (2018). The identity of *Sticta damicornis* (Ascomycota: Lobariaceae): a presumably widespread taxon is a Caribbean endemic. The Lichenologist, 50(5), 591-597.

9. Aptroot, A., Sipman, H., **Mercado-Díaz, J. A.**, Mendonça, C., Feuerstein, S., Cunha-Dias, I. P. R., Pereira T. A., & Cáceres M. E. (2018). Eight new species of Pyrenulaceae from the Neotropics, with a key to 3-septate *Pyrgillus* species. The Lichenologist, 50(1), 77-87

10. Widhelm T., Bertoletti F. R., Asztalos M. J., **Mercado-Díaz J. A.**, Crouch N., Huang J. P., Magain N., Moncada B., Lücking R., Sérusiaux E., Goffinet B., Mason-Gamer R., & Lumbsch H. T. (2018) Oligocene origin and drivers of diversification in the genus *Sticta* (Lobariaceae, Ascomycota) Molecular Phylogenetics and Evolution 126, 58-73.

11. Aptroot, A., Ertz, D., Etayo Salazar, J.A., Gueidan, C., **Mercado Díaz, J. A**., Schumm, F. & Weekaron, G. (2016) Forty-six new species of Trypetheliaceae from the tropics. The Lichenologist, 48(6): 609–638.

12. Lücking, R., Nelsen, M. P., Aptroot, A., Barillas de Klee, R., Bawingan, P. A., Benatti, M. N., Binh, N.Q., Bungartz, F., Caceres, M.E.S., Canez, L. da S., Chaves, J.-L., Ertz, D., Esquivel, R.E., Ferraro, L.I., Grijalva, A., Gueidan, C., Hernandez M., J.E., Knight, A., Lumbsch, H.T., Marcelli, M.P., **Mercado-Díaz, J.A**., Moncada, B., Morales, E.A., Naksuwankul, K., Orozco, T., Parnmen, S., Rivas Plata, E., Alazar-Allen, N., Spielmann, A.A. & Ventura, N. (2016) A phylogenetic framework for reassessing generic concepts and species delimitation in the lichenized family Trypetheliaceae (Ascomycota: Dothideomycetes). The Lichenologist, 48(6): 739–762.

13. Lücking, R., Dal Forno, M., Moncada, B., Coca, L.F., Vargas-Mendoza, L.Y., Aptroot, A., Arias, L.J., Besal, B., Bungartz, F., Cabrera-Amaya, D.M., Cáceres, M.E.S, Chaves, J.L., Eliasaro, S., Gutiérrez, M.C., Hernández Marin, J.E., Herrera-Campos, M de los A., Holgado-Rojas, M.E., Jonitz, H., Kukwa, M., Lucheta, F., Madriñán, S., Marcelli, M.P., de Azevedo Martins, S.M., **Mercado-Díaz, J.A.**, Molina, J.A., Morales, E.A., Nelson, P.R., Nugra, F., Ortega, F., Paredes, T., Patiño, A.L., Peláez-Pulido, R.N., Pérez Pérez, R.E., Perlmutter, G.B., Rivas-Plata, E., Robayo, J., Rodríguez, C., Simijaca, D.F., Soto-Medina, E., Spielmann, A.A., Suárez-Corredor, A., Torres, J-M., Vargas, C.A., Yánez-Ayabaca, A., Weerakoon, G., Wilk, K., Celis Pacheco, M., Díazgranados, M., Brokamp, G., Borsch, T., Gillevet, P., Sikaroodi, M. and J.D. Lawrey (2016) Turbo-taxonomy to assemble a megadiverse lichen genus: seventy new species of Cora (Basidiomycota: Agaricales: Hygrophoraceae), honouring David Leslie Hawksworth's seventieth birthday. Fungal Diversity, 1-69.

14. **Mercado-Díaz JA** (2015) Lichens in Puerto Rico: an ecosystem approach. Gen. Tech. Rep. IITF-GTR-46. San Juan, PR: U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry. 76 p.

15. **Mercado-Díaz JA**, Gould WA, and G Gonzalez (2014) Soil nutrients, landscape age, and *Sphagno-Eriophoretum vaginati* plant communities in Arctic moist acidic tundra landscapes. Open Journal of Soil Science 4: 375-387.

16. Trejo-Torres JC, Caraballo-Ortiz MA, Torres-Santana CW, Cetzal-IX W, **Mercado-Díaz JA**, Carlo TA (2014) Rediscovery of *Eugenia fajardensis* (Myrtaceae), a rare tree from the Puerto Rican Bank. Phytotaxa 191(1): 154-164.

17. Nelsen MP, Lücking R, Aptroot A, Andrew CJ, Cáceres M, Rivas-Plata E, Gueidan C, da Silva Canêz L, Knight A, Ludwig LR, **Mercado-Díaz JA**, Parnmen S & HT Lumbsch (2014) Elucidating phylogenetic relationships and genus-level classification within the fungal family Trypetheliaceae (Dothideomycetes: Ascomycota) Taxon 63(5): 974–992.

18. Lumbsch, HT, Kraichak E, Parnmen S, Rivas-Plata E, Aptroot A, Cáceres MES, Ertz D, Feuerstein SC, **Mercado-Díaz JA**, Staiger B, van der Broeck D & R Lücking (2014)

New higher taxa in the lichen family Graphidaceae (lichenized Ascomycota: Ostropales) based on a three-gene skeleton phylogeny. Phytotaxa 189(1): 39-51.

19. **Mercado-Díaz JA**, Lücking R, and Parnmen S (2014) Two new genera and twelve new species of Graphidaceae from Puerto Rico: a case for higher endemism of lichenized fungi in islands of the Caribbean? Phytotaxa 189(1): 186-203.

20. **Mercado-Díaz JA** (2014). La flora del transecto social-ecológico del karso norteño. Acta Científica 28(1-3): 50-68.

21. Kraichak E, Parnmen S, Lücking R, Rivas Plata E, Aptroot A, Cáceres M E S, Ertz D, Mangold A, **Mercado-Díaz JA**, Papong K, Van Den Broeck D, Weerakoon G & HT Lumbsch (2014) Revisiting the phylogeny of Ocellularieae, the second largest tribe within Graphidaceae (lichenized Ascomycota: Ostropales). Phytotaxa 189(1): 52-81.

22. Lücking R, Johnston MK, Aptroot A, Kraichak E, Lendemer JC, Boonpragob K, Cáceres MES, Ertz D, Ferraro LI, Jia Z-F, Kalb K, Mangold A, Manoch L, **Mercado-Díaz JA**, Moncada B, Mongkolsuk P, Papong KB, Parnmen S, Peláez RN, Poengsungnoen V, Rivas Plata E, Saipunkaew W, Sipman HJM, Sutjaritturakan J, Van Den Broeck D, Von Konrat M, Weerakoon G & Lumbsch HT (2014) One hundred and seventy five new species of Graphidaceae: closing the gap or a drop in the bucket? Phytotaxa 189(1): 007-038.

23. Nelsen MP, Lücking R, Andrew CJ, Aptroot A, Caceres M, **Mercado-Díaz JA**, Rivas-Plata E, Lumbsch TH (2014) Molecular phylogeny reveals the true colors of Myeloconidaceae (Ascomycota: Ostropales). Australian Systematic Botany 27(1) 38-47.

24. **Mercado-Díaz JA**, Gould WA, G Gonzalez and R Lücking (2013) Four new species of *Coenogonium* (Ascomycota: Ostropales) from vulnerable forest ecosystems in Puerto Rico. The Bryologist 116(4): 373-381.

25. Elmendorf SC, Henry GHR, Hollister RD, Bjork RG, Boulanger-Lapointe N, Cooper E, Cornelissen JHC, Day TA, Dorrepaal E, Elumeeva TG, Gill M, Gould WA, Grétarsdóttir J, Harte J, Hik DA, Hofgaard A, Jarrad F, Johnson DR, Johnstone J, Jonsdottir IS, Jorgenson J, Klanderud K, Klein JA, Koh S, Kudo G, Lara M, Lévesque E, Magnússon B, May JL, **Mercado-Díaz JA**, Michelsen A, Molau U, Myers-Smith I, Oberbauer SF, Onipchenko VG, Rixen C, Schmidt NM, Shaver GR, Spasojevic MJ, Þórhallsdóttir óE, Tolvanen A, Troxler T, Tweedie CE, Wahren CH, Walker X, Webber PJ, Wipf S. (2012) Plot scale evidence of tundra vegetation change and links to recent summer warming. Nature Climate Change 2: 453-457.

26. Elmendorf SC, Henry GHR, Hollister RD, Bjork RG, Bjorkman AJ, Callaghan TV, Cooper E, Cornelissen JHC, Day TA, Fosaa AM, Gould WA, Grétarsdóttir J, Harte J, Hermanutz L, Hik DA, Hofgaard A, Jarrad F, Jonsdottir IS, Keuper F, Klanderud K, Klein JA, Koh S, Kudo G, Lang S, Lowen V, May JL, **Mercado-Díaz JA**, Michelsen A, Molau U, Pieper S, Robinson CH, Siegart L, Myers-Smith I, Oberbauer SF, Post E,

Rixen C, Schmidt NM, Shaver GR, Tolvanen A, Totland O, Troxler T, Wahren CH, Webber PJ, Welker JM, Wookey PA. (2012) Global assessment of experimental climate warming on tundra vegetation: heterogeneity over space and time. Ecology Letters 15:164-175.

27. Lücking R, Seavey F, Common RS, Beeching SQ, Breuss O, Buck WR, Crane L, Hodges M, Hodkinson BP, Lay E, Lendemer JC, McMullin RT, **Mercado-Díaz JA**, Nelsen MP, Rivas-Plata E, Safranek W, Sanders WB, Schaefer Jr HP. & J Seavey (2011) The lichens of Fakahatchee Strand Preserve State Park, Florida: Proceedings from the 18th Tuckerman Workshop. Bulletin of the Florida Museum of Natural History 4:127–186.

28. **Mercado-Díaz, JA** and E., Santiago-Valentín (2010) Lichenological studies in Puerto Rico: History and Current Status. Harvard Papers in Botany 15(1): 93–101.

29. Walker DA, Bhatt US, Comiso JC, Epstein HE, Gould WA, Henry GHR, Jia GJ, Kokelj SV, Lantz TC, **Mercado-Díaz JA**, Pinzon JE, Raynolds MK, Shaver GR, Tucker CJ, Tweedie CE, Webber, PJ (2010) Arctic: Land: Vegetation [in "State of the Climate in 2009"]. Bulletin of the American Meteorological Society. 91(6): S114-S116.

30. Walker DA, Walker MD, Gould WA, **Mercado J**, Auerbach NA, Maier HA, Neufeld GP (2009) Maps for monitoring long-term changes to vegetation structure and composition, Toolik Lake, Alaska. *In* A. Bryn, W Dramstad and W Fjellstad (Eds) Mapping and Monitoring of Nordic Vegetation and Landscapes. Vol. 1. pp. 121-123, Norsk Institutt for Skog og Landskap, Ås, Norway.

---

**Book chapters**

1. Shaver GR, Laundre JA, Bret-Harte MS, Chapin FS III, **Mercado-Díaz JA**, Giblin AE, L Gough, Gould WA, Hobbie SE, Kling GW, Mack MC, Moore JC, Nadelhoffer K, Rastetter EB, Schimel JP (2014) Terrestrial ecosystems at Toolik Lake, Alaska. *In* JE Hobbie and GW Kling (Eds) Alaska's changing Arctic: ecological consequences for tundra, streams, and lakes. Oxford University Press, NY, pp 90-142.

---

**References**

Dr. Thorsten Lumbsch
Vice President, Science, and Education,
Curator of Lichenized Fungi
Field Museum
1400 S. Lake Shore Dr.
Chicago, IL 60605
Tel. 312-665-7881
Email: tlumbsch@fieldmuseum.org

Dr. Robert Lücking
Kustos, Kryptogamen
Botanischer Garten und Botanisches Museum
Freie Universität Berlin
Königin-Luise-Strasse 6-8
14195 Berlin
Tel. +49-(0)30-838-56350
Email: r.luecking@bgbm.org

Dr. Eugenio Santiago-Valentín
Full Professor
Departamento de Biología
Universidad de Puerto Rico
Recinto de Río Piedras
Apartado 23360
San Juan, Puerto Rico 00931-3360
Tel. 787-250-0000, x6105, 6106
Email: eugenio.santiago@upr.edu

Dr. Marcos Caraballo-Ortíz
Post-doctoral fellow
Smithsonian Institution
National Museum of Natural History
Department of Botany
MRC-166, Washington, DC 20013-7012, U.S.A.
Email: caraballom@si.edu,
marcoscaraballo@protonmail.com

Additional references provided by request.