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EDUCATION & PROFESSIONAL PREPARATION

- 2024–present** **Peter Buck Postdoctoral Fellow**
National Museum of Natural History, Washington, DC
Adviser: Dr. Eric Schuettpehlz
- 2017–2024** **Ph.D. in Biology** (degree to be formally conferred May 2024)
Department of Biology, Duke University, Durham, NC, USA
Adviser: Dr. François Lutzoni
- 2012–2016** **B.A. in Human Ecology**
College of the Atlantic, Bar Harbor, ME, USA
Adviser: Dr. Nishanta Rajakaruna

PEER-REVIEWED PUBLICATIONS

^{1st} = Co-first authors; ^{sr} = Co-senior authors.

13. Miadlikowska, J., Magain, N., **Medeiros, I. D.**, Pardo-De la Hoz, C. J., Carbone, I., LaGreca, S., Barlow, T., Myllis, L., Schmull, M., and Lutzoni, F. (2023). Towards a nomenclatural clarification of the *Peltigera ponojensis/monticola* clade including metagenomic sequencing of type material and the introduction of *P. globulata* Miadl. & Magain sp. nov. *The Lichenologist* 55: 315–324.
12. **Medeiros, I. D.** and Lutzoni, F. (2022). Contribution to a modern treatment of Graphidaceae biodiversity in South Africa: Genera of tribe Graphideae with hyaline ascospores. *The Lichenologist* 54: 253–270.
11. Pardo-De la Hoz, C. J., **Medeiros, I. D.**, Gibert, J., Chagnon, P.-L., Magain, N., Miadlikowska, J., and Lutzoni, F. (2022). Phylogenetic structure of specialization (PSS): A new approach that integrates partner availability and phylogenetic diversity to quantify biotic specialization in ecological networks. *Ecology and Evolution* 12: e8649.
An earlier version of this paper was posted as a bioRxiv preprint. doi: 10.1101/2021.08.04.454912.
10. **Medeiros, I. D.**^{1st}, Mazur, E.^{1st}, Miadlikowska, J., Flakus, A., Rodriguez-Flakus, P., Pardo-De la Hoz, C. J., Cieślak, E., Śliwa, L.^{sr}, and Lutzoni, F.^{sr} (2021). Turnover of lecanoroid mycobionts and their *Trebouxia* photobionts along an elevation gradient in Bolivia highlights the role of environment in structuring the lichen symbiosis. *Frontiers in Microbiology* 12: 774839.
9. Fryday, A. M., **Medeiros, I. D.**, Siebert, S. J., Pope, N., and Rajakaruna, N. (2020). *Burrowsia*, a new genus of lichenized fungi (Caliciaceae), plus the new species *B. cataractae* and *Scoliciosporum fabisporum*, from Mpumalanga, South Africa. *South African Journal of Botany* 132: 471–481.

8. Magain, N., Goffinet, B., Simon, A., Sathiya Seelan, J. S., **Medeiros, I. D.**, Lutzoni, F., and Miadlikowska, J. (2020). *Peltigera serusiauxii* (Lecanoromycetes, Ascomycota), a new species from Papua New Guinea and Malaysia. *Plant and Fungal Systematics* 65: 139–146.
7. **Medeiros, I. D.** (2019). Determining the type locality and collector of Nylander’s South African lichens. *Bothalia: African Biodiversity and Conservation* 49: a2384.
6. **Medeiros, I. D.** (2018). A new species of *Clandestinotrema* (Ascomycota: Ostropales: Graphidaceae) from montane cloud forest in the Venezuelan Andes. *Plant and Fungal Systematics* 63: 7–10.
5. **Medeiros, I. D.**, Mathieson, A. C., and Rajakaruna, N. (2017). Heavy metals in seaweeds from a polluted estuary in coastal Maine. *Rhodora* 119: 201–211.
4. **Medeiros, I. D.**, Kraichak, E., Mangold, A., Lücking, R., and Lumbsch, H. T. (2017). Assembling a taxonomic monograph of tribe Wirthiotremateae (lichenized Ascomycota: Ostropales: Graphidaceae). *Fieldiana Life and Earth Sciences* 9: 1–31.
3. Stern, M., **Medeiros, I. D.**, Negoita, L., and Rajakaruna, N. (2016). Limestone flora of the Simonton Quarry Preserve, Rockport, ME, USA. *Rhodora* 118: 206–226.
2. **Medeiros, I. D.**, Rajakaruna, N., and Alexander, E. B. (2015). Gabbro soil–plant relations in the California Floristic Province. *Madroño* 62: 75–87.
1. **Medeiros, I. D.**, Fryday, A. M., and Rajakaruna, N. (2014). Additional lichen records and mineralogical data from metal-contaminated sites in Maine. *Rhodora* 116: 323–347.

MANUSCRIPT IN REVIEW

Medeiros, I. D., Ibáñez, A., Arnold, A. E., Hedderson, T. A., Miadlikowska, J., Flakus, A., Carbone, I., LaGreca, S., Magain, N., Mazur, E., Vargas Castillo, R., Geml, J., Kaup, M., Maggs-Kölling, G., Oita, S., Sathiya Seelan, J. S., Terlova, E., Hom, E. F. Y., Lewis, L. A., and Lutzoni, F. Eco-phylogenetic study of *Trebouxia* in southern Africa reveals inter-biome connectivity and potential endemism in a green algal lichen photobiont. In revision for *American Journal of Botany*.

SELECTED MANUSCRIPT IN PREPARATION

Medeiros, I. D. et al. Phylogenetic and comparative genomic analyses shed light on fungus–photoautotroph symbioses in the evolutionarily dynamic Eurotiomycetes.

AWARDS and SCHOLARSHIPS

Margalith Galun Award—best student poster at IAL9 meeting (**2021**; see poster #7 below)
 Society of Systematic Biologists Graduate Student Research Award (**2021**)
 Mycological Society of America Mentor Student Travel Award (**2018**; see poster #6 below)
 National Science Foundation Graduate Research Fellowship (**2017**; three-year fellowship)
 W. H. Drury, Jr. Prize in Natural History (**2016**; award to graduating COA senior)
 Botanical Society of America Young Botanist Award (**2016**)
 National Garden Club Barbara D. May Scholarship (**2014**)
 Barry Goldwater Scholarship (**2014**; two-year scholarship)
 College of the Atlantic Craig W. Greene Memorial Scholarship in Botany (**2013, 2014**)

FIELD EXPERIENCE

2019 (May–June)—KwaZulu-Natal, Mpumalanga, Northern Cape, and Western Cape, South Africa; Namibia. Dissertation research on lichens and endophytic fungi.

2016 (Sept.–Oct.)—eastern Colorado, USA. Grassland surveys to evaluate impact of different grazing regimes. Employed by Colorado Natural Heritage Program.

2016 (Aug.–Sept.)—Gulf Islands National Seashore, Florida and Mississippi, USA. Vegetation community mapping. Employed by Colorado Natural Heritage Program.

2016 (June–July)—Big Thicket National Preserve, Texas, USA. Vegetation community mapping. Employed by Colorado Natural Heritage Program.

2016 (Feb.)—Mpumalanga and Northern Cape, South Africa. Ecology of saxicolous lichens. Project funded by National Geographic Society.

2015 (June–Aug.)—western Massachusetts, USA. Ecology of serpentinite outcrops. Undergraduate senior thesis research funded by Garden Club of America, New England Botanical Club, and Maine Space Grant Consortium.

2013 (June–Aug.)—central Sierra Nevada foothills, California, USA. Post-fire vegetation monitoring with common stand exams. Employed by University of California, Davis.

2012–2017—coastal Maine, USA. Various research projects at abandoned mines and quarries, and extensive personal botanizing while a student at College of the Atlantic.

TEACHING EXPERIENCE

Duke University—graduate teaching assistant (TA)

2023 (Spring)—TA for lecture portion of **General Microbiology (BIOLOGY 212)**.

2018 (Fall)–2019 (Spring)—TA for lab section of **General Microbiology (BIOLOGY 212)**. One section of ca. 16 students per semester.

College of the Atlantic—undergraduate teaching assistant

2013–2016—Writing Tutor at the College of the Atlantic **Writing Center**

2013–2016—Undergraduate Teaching Assistant for **Communicating Science (×2)**, **Calculus III**, **Trees and Shrubs of Mount Desert Island**, **Lichen Biology**, and **Edible Botany**

Guest Lectures

Cal Poly San Luis Obispo, February 2024—Lecture on biogeography of the lichen symbiosis.

College of the Atlantic, February 2023—Lecture on lichens as a holobiont for undergraduate course on cross-kingdom interactions.

Duke University, November 2022—Lecture and laboratory activity about lichens for undergraduate course in mycology. With Scott LaGreca.

NC State University, October 2021—Lecture and laboratory activity about lichens for undergraduate/graduate course in mycology

Duke University, October 2021—Lecture and laboratory activity about lichens for undergraduate course in mycology

UC Riverside, January 2021—Taught lab about lichens (via Zoom) in field mycology course

Duke University, September 2020—Lecture on lichens (via Zoom) for undergraduate course in mycology

NC State University, November 2019—Lecture and laboratory activity about lichens for undergraduate/graduate course in mycology

Duke University, November 2019—Mini-lecture and lab on fungal biology for three sections of undergraduate course in microbiology

Duke University, October 2019—Lecture and laboratory activity about lichens for undergraduate course in mycology

BOOK REVIEWS

2. **Medeiros, I. D.** 2016. Review of *A Natural History of English Gardening: 1650–1800*. By Mark Laird. 2015. 440 pp. Yale University Press, London. *Plant Science Bulletin* 62: 46–48.

1. **Medeiros, I. D.** 2014. Review of *The Savage Garden: Cultivating Carnivorous Plants, revised*. By Peter D’Amato. 2013. 384 pp. Ten Speed Press, Emeryville, CA. *Plant Science Bulletin* 60: 107–108.

OTHER PUBLICATIONS

LaGreca, S., Goyette, S., and **Medeiros, I. D.** 2018. The lichens of Lizard Lick, North Carolina. *Evansia* 35: 53–57.

GRANTS RECEIVED

Garden Club of America Joan K. Hunt and Rachel M. Hunt Summer Scholarship in Field Botany. (2015): Documenting the serpentine biota of Massachusetts: A study of the plant and lichen diversity of serpentine outcrops in Massachusetts, USA. \$2,500.

Maine Space Grant. (2015): Documenting the serpentine biota of Massachusetts: A study of the plant and lichen diversity of serpentine outcrops in Massachusetts, USA. \$1,750.

New England Botanical Club Les Mehrhoff Botanical Research Fund Grant. (2015): Documenting the serpentine biota of Massachusetts: A study of the plant and lichen diversity of serpentine outcrops in Massachusetts, USA. \$1,500.

Maine Sea Grant. (2014): Investigation of metal uptake by macroalgae at the Callahan Mine, Brooksville, Maine, USA. \$2,050.

CONFERENCE PRESENTATIONS: TALKS

5. **I. D. Medeiros**, C. J. Pardo-De la Hoz, S. LaGreca, N. Magain, A. Flakus, R. Vargas Castillo, W. White, J. Miadlikowska, and F. Lutzoni. Survey of lichen photobionts in South Africa and Namibia. Third lichen photobiont symposium. Špindlerův Mlýn, Czech Republic. 27–29 September 2021.

4. **I. D. Medeiros** and N. Rajakaruna. Exceptions to the serpentine syndrome in eastern North America. 9th International Conference on Serpentine Ecology. Tirana, Albania. 4–9 June 2017.

3. **I. D. Medeiros** and N. Rajakaruna. Serpentinite Outcrops Do Not Support a (Particularly) Distinctive Biota in Western Massachusetts. BOTANY 2016 Conference. Savannah, Georgia, USA. 30 July–3 August 2016.

2. **I. D. Medeiros** and N. Rajakaruna. Serpentinite Outcrops in Massachusetts: A Botanical and Ecological Overview. Northeast Natural History Conference. Springfield, Massachusetts, USA. 22–24 April 2016.

1. **I. D. Medeiros**, A. M. Fryday, and N. Rajakaruna. Diversity and Conservation of Lichens at Two Metal-Enriched Sites in Coastal Hancock County, Maine, USA. Eighth International Conference on Serpentine Ecology, Kota Kinabalu, Sabah, Malaysia. 9–13 June 2014.

CONFERENCE PRESENTATIONS: POSTERS

First-author posters only. † = Co-first authors; ‡ = Co-senior authors.

7. **I. D. Medeiros**†, E. Mazur†, J. Miadlikowska, A. Flakus, P. Rodriguez-Flakus, C. J. Pardo-De la Hoz, E. Cieślak, L. Śliwa‡, and F. Lutzoni‡. Bolivian Lecanoroid Lichens Exhibit Photobiont Interactions Structured by Elevation, Mycobiont Phylogeny, and Substrate. International Association for Lichenology 9th Symposium. Online conference due to COVID-19 pandemic. 1–6 August 2021. **Awarded Margalith Galun Award for best student poster.**

6. **I. D. Medeiros**, D. L. Haughland, N. Magain, J. Miadlikowska, and F. Lutzoni. Factors shaping the distribution of *Peltigera* spp. and their *Nostoc* symbionts at an inter-biome scale in Alberta, Canada. 11th International Mycological Congress. San Juan, Puerto Rico, USA. 16–21 July 2018.

5. **I. D. Medeiros**, A. M. Fryday, N. Pope, A. Frisby, M. Coetzee, S. Siebert, and N. Rajakaruna. Work in progress: Lichen substrate ecology of the Barberton Greenstone Belt, South Africa. 9th International Conference on Serpentine Ecology. Tirana, Albania. 4–9 June 2017.

4. **I. D. Medeiros** and N. Rajakaruna. Documenting the Rocks, Soils, and Biota of Serpentinite Outcrops in Western Massachusetts. Geological Society of America Northeastern Section 51st Annual Meeting. Albany, NY, USA. 21–23 March 2016. & Geological Society of Maine 2016 Spring Meeting. University of Maine, Orono, ME, USA. 1 April 2016.

3. **I. D. Medeiros**, R. Lücking, and H. T. Lumbsch. New Species of Thelotreroid Graphidaceae in Hawai‘i: Insights into Lichen Endemism on a Remote Archipelago. BOTANY 2015 Conference. Edmonton, Alberta, Canada. 25–29 July 2015.

2. **I. D. Medeiros** and N. Rajakaruna. Research in Progress: Documenting the Serpentine Biota of Massachusetts. Northeast Natural History Conference. Springfield, Massachusetts, USA. 18–20 April 2015. & New England Botanical Club 120th Anniversary Research Conference. Smith College, Northampton, Massachusetts, USA. 5–7 June 2015.

1. **I. D. Medeiros** and N. Rajakaruna. A Biodiverse Polluted Site in Coastal Maine: Opportunity and Dilemma. Twentieth International Conference of the Society for Human Ecology. Bar Harbor, Maine, USA. 22–25 October 2014.

MANUSCRIPT REVIEWS

Bothalia: African Biodiversity and Conservation (2), *Castanea* (1), *Environmental Earth Sciences* (1), *Environmental Monitoring and Assessment* (1), *Herzogia* (1), *IMA Fungus* (1), *Mycologia* (2), *Northeastern Naturalist* (1), *Phytotaxa* (1), *Plant and Fungal Systematics* (1), *PLOS ONE* (1)

SERVICE TO PROFESSIONAL SOCIETIES

2020, 2021, 2022, and 2023 (fall semester)—Group co-leader for NSF GRFP writing workshop organized by the Botanical Society of America. Each year, I co-led a small group that included one other graduate student, postdoc, or faculty leader and 2–4 students writing proposals.

OUTREACH and SCIENCE COMMUNICATION

North Carolina Museum of Natural Science (Raleigh, NC), November 2022—Participated in Darwin Day event to educate public about lichens.

North Carolina Museum of Natural Science (Raleigh, NC), November 2019—Participated in Darwin Day event to educate public about lichens.

George B. Dorr Natural History Museum (Bar Harbor, ME), 2016—Editorial work for new exhibit.

Schoodic Marine Center (Winter Harbor, ME) 2016—Editorial work for new exhibit.

Acadia National Park Sieur de Monts Nature Center (Bar Harbor, ME) 2014—Editorial work for new exhibit.

PROFESSIONAL MEMBERSHIPS

Botanical Society of America; Mycological Society of America; Society of Systematic Biologists; International Association for Lichenology; Society of Herbarium Curators; New England Botanical Club; California Botanical Society; American Bryological and Lichenological Society