

Ian Daniel Medeiros

Department of Biology
Campus Box 90338
Duke University
Durham, NC 27708, USA

ian.medeiros@duke.edu
774.218.8426

www.ianmedeiros.com
Twitter: @IanDMedeiros

EDUCATION

2017–present **Duke University, Durham, NC, USA**
Ph.D. candidate in the Department of Biology
Adviser: Dr. François Lutzoni

2012–2016 **College of the Atlantic, Bar Harbor, ME, USA**
B.A. in Human Ecology (W. H. Drury, Jr. Prize in Natural History)
Adviser: Dr. Nishanta Rajakaruna

PEER-REVIEWED PUBLICATIONS

† = Co-first authors; ‡ = Co-senior authors.

11. Pardo-De la Hoz, C. J., **I. D. Medeiros**, J. Gibert, P.-L. Chagnon, N. Magain, J. Miadlikowska, and F. Lutzoni. 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.**†, E. Mazur†, J. Miadlikowska, A. Flakus, P. Rodriguez-Flakus, C. J. Pardo-De la Hoz, E. Cieślak, L. Śliwa‡, and F. Lutzoni‡. (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., **I. D. Medeiros**, S. J. Siebert, N. Pope, and N. Rajakaruna. (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., B. Goffinet, A. Simon, J. Seelan Sathiyaseelan, **I. D. Medeiros**, F. Lutzoni, and J. Miadlikowska. (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.**, A. C. Mathieson, and N. Rajakaruna. (2017). Heavy metals in seaweeds from a polluted estuary in coastal Maine. *Rhodora* 119: 201–211.

4. **Medeiros, I. D.**, E. Kraichak, A. Mangold, R. Lücking, and H. T. Lumbsch. (2017). Assembling a taxonomic monograph of tribe Wirthiotremateae (lichenized Ascomycota: Ostropales: Graphidaceae). *Fieldiana Life and Earth Sciences* 9: 1–31.
3. Stern, M., **I. D. Medeiros**, L. Negoita, and N. Rajakaruna. (2016). Limestone flora of the Simonton Quarry Preserve, Rockport, ME, USA. *Rhodora* 118: 206–226.
2. **Medeiros, I. D.**, N. Rajakaruna, and E. B. Alexander. (2015). Gabbro soil–plant relations in the California Floristic Province. *Madroño* 62: 75–87.
1. **Medeiros, I. D.**, A. M. Fryday, and N. Rajakaruna. (2014). Additional lichen records and mineralogical data from metal-contaminated sites in Maine. *Rhodora* 116: 323–347.

MANUSCRIPT IN REVIEW

Medeiros, I. D. and F. Lutzoni. Contribution to a modern treatment of Graphidaceae biodiversity in South Africa: Genera of tribe Graphideae with hyaline ascospores. In revision at *The Lichenologist*.

SELECTED MANUSCRIPTS IN PREPARATION

Medeiros, I. D. et al. Biodiversity and ecology of lichen photobionts in southern Africa.

Medeiros, I. D. et al. Investigating the diversity and evolution of symbiotic trophic modes in Eurotiomycetes (Ascomycota) with phylogenomics and comparative genomics.

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)

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

2018–2019—Teaching Assistant for lab section of **General Microbiology** (BIOLOGY 212) during the fall and spring semesters. One section of ca. 16 students per semester.

Guest Lectures

“Lichens”—October 2021, lecture and laboratory activity (lichen dissection and keying) in NC State undergraduate/graduate course in mycology

“Lichen Biology”—October 2021, lecture and laboratory activity (lichen dissection and keying) in Duke undergraduate course in mycology

“Lichens”—January 2021, lab (via Zoom) in UC Riverside course in Field Mycology

“Lichen Biology”—September 2020, lecture (via Zoom) in Duke undergraduate course in mycology

“Lichenized Fungi”—November 2019, lecture and laboratory activity (lichen dissection and keying) in NC State undergraduate/graduate course in mycology

“Fungi”—November 2019, mini-lecture and lab for three sections in Duke undergraduate course in microbiology

“Lichen Biology”—October 2019, lecture and laboratory activity (lichen dissection and keying) in Duke undergraduate course in mycology

College of the Atlantic

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**

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., S. Goyette, and **I. D. Medeiros**. 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 Thelotremond 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 (1), *Castanea* (1), *Environmental Earth Sciences* (1), *Herzogia* (1), *IMA Fungus* (1), *Mycologia* (1), *Northeastern Naturalist* (1), *PLOS ONE* (1)

SERVICE TO PROFESSIONAL SOCIETIES

2021 (fall semester)—Participant in multi-day workshop organized by the Botanical Society of America to provide feedback to botany students writing NSF GRFP proposals

2020 (fall semester)—Participant in multi-day workshop organized by the Botanical Society of America to provide feedback to botany students writing NSF GRFP proposals

PROFESSIONAL MEMBERSHIPS

New England Botanical Club (2013–present); Botanical Society of America (2014–present); California Botanical Society (2014–present); Society of Herbarium Curators (2015); American Bryological and Lichenological Society (2016–present); Mycological Society of America (2018–present); Society for the Study of Evolution; Society of Systematic Biologists (2018–present); International Association for Lichenology