

## **Jonas Mendez-Reneau Ph.D.** Curriculum Vitae, Updated January 2025

BOTANY, EVOLUTION, AND BIOINFORMATICS RESEARCHER  
OWNER, LEAD RESEARCHER AT ENDEMIC BIOINFORMATICS LLC.  
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I am a consultant in botany, evolutionary biology, and bioinformatics specializing in non-model and hybrid plant systems at the intersection of macroevolution and population biology. My work integrates field and herbarium-based collections with advanced genomic analyses—spanning systematics, phylogeography, phylogenomics, and population genomics—to help clients understand and manage biodiversity, conservation challenges, and invasive species. I share my research through peer-reviewed research, conference presentations, and accessible online educational content via social media and my website/blog.

### *LINKS*

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Website: [www.endemicbio.info](http://www.endemicbio.info)  
Blog: [www.endemicbio.info/blog](http://www.endemicbio.info/blog)  
Research Gate: [www.researchgate.net/profile/Jonas-Mendez-Reneau/](http://www.researchgate.net/profile/Jonas-Mendez-Reneau/)  
Linkedin: [www.linkedin.com/in/jonas-mendez-reneau-079129133/](http://www.linkedin.com/in/jonas-mendez-reneau-079129133/)  
GitHub: [www.github.com/JonasMendez](http://www.github.com/JonasMendez)  
Google Scholar: [www.scholar.google.com/citations?user=eX11yk0AAAAJ](http://www.scholar.google.com/citations?user=eX11yk0AAAAJ)  
ORC-ID: [www.orcid.org/0000-0003-3282-2175](http://www.orcid.org/0000-0003-3282-2175)

### *EDUCATION*

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Ph.D.	Environmental, Evolutionary, and Population Biology. 2024 <b>University of Louisiana, Lafayette</b> , Biology Department. <i>Co-Advisors: Nicholas Kooyers and Erin M. Sigel</i>
B.Sc.	Botany. 2017 <b>Humboldt State University</b> , Botany Department. <i>Advisor: Mihai Tomescu</i>
A.S.	Math and Science, Social and Behavioural Science. 2014 <b>City College of San Francisco</b>
A.A.	Humanities. 2014 <b>City College of San Francisco</b>

### *PEER REVIEWED PUBLICATIONS*

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- **Mendez-Reneau, J.**, Gordon Burleigh, J. and Sigel, E.M., 2023. Target capture methods offer insight into the evolution of rapidly diverged taxa and resolve allopolyploid homeologs in the fern genus *Polypodium* ss. *Systematic Botany*, 48(1), pp.96-109.
- **Mendez-Reneau, J. I.**, J. L. Richards, J. Hobbie, E. Bollich, N. J. Kooyers, and E. M. Sigel. 2024. Lineage diversification and rampant hybridization among subspecies explain taxonomic confusion in the endemic Hawaiian fern *Polypodium pellucidum*. *American Journal of Botany* e16379. <https://doi.org/10.1002/ajb2.16379>
- **Mendez-Reneau, J.I.**, et al. (Pending, See Chapter 3 of Dissertation). Widespread Eurasian fern reveals cryptic species based on homeolog variation between Asia and Europe.
- **Mendez-Reneau, J.I.**, et al. (Pending, See Chapter 4 of Dissertation). Population genomics of a highly variable and widespread Hawaiian endemic fern
- Paul Battlay, Brandon T. Hendrickson, **Jonas I. Mendez-Reneau**, et al. (In-Review). Structural variants underlie parallel adaptation following global invasion (Pre-print: <https://www.biorxiv.org/content/10.1101/2024.07.09.602765v1>)
- Erin M. Sigel, **Jonas Mendez-Reneau**, Brittany L. Sutherland, Pedro Bond Schwartsburd, Stacy D. Holt Jr, James B. Beck. (In-Review). Being ghosted: Determining the progenitor species and biogeographic origin of the invasive fern giant salvinia

#### PRESENTATIONS

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- Bertrand Black, Michael Sundue, **Jonas Mendez-Reneau**. 2024. A systematic revision of the lady fern (*Athyrium filix-femina*) species complex in the Americas. International Botanical Conference. Madrid, Spain.
- **Mendez-Reneau, J. I.** 2023. Evolution and hybridization in the endemic Hawaiian fern *Polypodium pellucidum*. Botany Conference. Boise, Idaho
- **Mendez-Reneau, J. I.** 2022. Geography and ecology structure lineage diversity in the endemic Hawaiian fern *Polypodium pellucidum*. The Consortium for Plant Invasion Genomics Conference. Lafayette, Louisiana
- **Mendez-Reneau, J. I.** 2022. Rapid Divergences and Hybridization in the endemic Hawaiian fern *Polypodium pellucidum* with focus on lineages found in Oahu. Army Natural Resources Program in Oahu Staff Meeting. Oahu, Hawai'i.
- **Mendez-Reneau, J. I.**, Kooyers N.J., Sigel E.M. 2022. Geography and ecology structure lineage diversity in the endemic Hawaiian fern *Polypodium pellucidum*. [SSB Ernst Mayr Award Symposium II]. Evolution Conference 2022. Cleveland Ohio
- **Mendez-Reneau, J. I.** 2021. A novel target-capture bioinformatic pipeline resolves allopolyploid evolution, paralogs, and allelic variation in *Polypodium* s.s. Ferns. Evolution Conference, 2021(Virtual)
- **Mendez-Reneau, J. I.** 2021. Species and gene-allele phylogenies resolve conserved lineages and hybrids in the hyper-variable Hawaiian endemic *Polypodium pellucidum* fern. Botany Conference, 2021(Virtual)
- **Mendez-Reneau, J. I.** 2019. A Target Enrichment Approach to Resolving Evolutionary Relationships within the *Polypodium vulgare* Complex. Colloquium Departmental Seminar, University of Louisiana, Lafayette.

- **Mendez-Reneau, J. I.**, C. H. Haufler, and E. M. Sigel. 2019. Cryptic Diversity in *Polypodium vulgare* Across North Temperate Eurasia. Botanical Society of America annual meeting, Tucson, Arizona.
- **Mendez-Reneau, J. I.** 2018. Parentage and Cryptic Species in the Allopolyploid Hybrid *Polypodium vulgare* L. Colloquium Departmental Seminar, University of Louisiana, Lafayette.

#### *TEACHING EXPERIENCE*

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- Spring 2024: Lab Instructor, Biological Principles and Issues Laboratory (BIOL 123)
- Fall 2023: Teaching Assistant, Introduction to R for Biologists (BIOL 416)
- Fall 2019: Teaching Assistant, Systematic Methods (BIOL 559)
- Fall 2018: Lab Instructor, Introductory Biology (BIOL 112)

#### *HERBARIA*

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- Spring 2019: Graduate Assistant Curator, University of Louisiana, Lafayette Herbarium (LAF)
- Spring 2020: Graduate Assistant Curator, University of Louisiana, Lafayette Herbarium (LAF)

#### *FIELD WORK FOR EDUCATION, RESEARCH & HERBARIA*

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- 2020: California, Oregon, Washington Coast (*Polypodium* Dissertation Research); Vouchers deposited at LAF
- 2019: Hawai'i: Big Island, Maui, Moloka'i, O'ahu, Kauai (*Polypodium* Dissertation Research); Vouchers deposited at PTBG, BISH, LAF
- 2018: Costa Rica (Organization For Tropical Studies, Ferns and Lycophytes); Vouchers deposited at USJ
- 2018: Costa Rica (Organization For Tropical Studies, Tropical Plant Systematics); Vouchers deposited at USJ
- 2012: Point Reyes, California (Ecology of Point Reyes, Undergraduate Field Course)
- 2010: San Francisco Bay, California (Ecology of San Francisco Bay, Ecology of San Francisco)
- 2010: San Francisco Bay, (Ecology of the Golden Gate National Recreation Area, Undergraduate Field Courses)
- 2010: Mendocino County, California (Ecology of Mendocino, Undergraduate Field Course)

#### *PROJECT COLLABORATIONS*

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- 2024-present: California Conservation Genomics Project: [www.ccgproject.org](http://www.ccgproject.org)

- Bioinformatics work for projects with *Opuntia basilaris* and related taxa. P.I. Susan Fawcett
- 2020-2024: Consortium for Plant Invasion Genomics: [www.invasiongenomics.com](http://www.invasiongenomics.com)
  - Bioinformatics work for projects involving *Salvinia molesta* and *Trifolium repens*. P.I.'s Erin Sigel and Nicholas Kooyers

#### *AWARDS, FELLOWSHIPS, & RESEARCH FUNDING*

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- 2022: SSB Ernst Mayr Award Symposium II, Evolution Conference
- 2021: SSB Excellence Award Symposium, Evolution Conference
- 2018 (Fall): OTS Tropical Ferns and Lycophytes Course Scholarship, \$1,500
- 2018 (Summer): OTS Tropical Plant Systematics Course Scholarship, \$1,500
- 2017-2021: University of Louisiana, Lafayette Graduate Fellowship
- 2017: Sterling Sam Scholarship, Humboldt State University, \$500
- 2017-2018: ULL Graduate Student Organization Research Funds, \$320

#### *LANGUAGES*

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- English, Fluent
- Spanish, Native Speaker
- French, Proficient

#### *LETTERS OF RECOMMENDATION*

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**Dr. Erin Sigel:** [emsigel@unh.edu](mailto:emsigel@unh.edu)

**Dr. Nicholas Kooyers:** [nicholas.kooyers@louisiana.edu](mailto:nicholas.kooyers@louisiana.edu)

**Dr. Gordon Burleigh:** [gburleigh@ufl.edu](mailto:gburleigh@ufl.edu)