Jared Croyle

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Education

B.S. in Molecular Environmental Biology - Data Science Minor, May 2025
University of California, Berkeley
Relevant Coursework:

- General Genetics: Comprehensive study of gene regulation, manipulation, and genetic variation;
- Practical Genomics: Hands-on training in computational biology and bioinformatics techniques;
- Concepts in Computing with Data: Applied statistics using R and SQL for data analysis.

Research Experience

UC Berkeley Department of Environmental Science, Policy, & Management, February 2024 - Present
EvoLab - Research Apprentice - Supervised by Dr. Rosemary Gillespie
Research project: *Adaptive Radiation of Hawaiian Tetragnatha Spiders*

- Described morphological characteristics and performed DNA extractions.
- Prepared whole genome sequencing libraries.
- Analyzed sequence data and constructed phylogenetic trees using MEGA11 and BEAST2.
- Applied demographic modeling with dadi to infer speciation modes and estimate divergence among *Tetragnatha* populations.

Essig Museum of Entomology, UC Berkeley, September 2024 - Present
Research Apprentice - Mentored by Dr. Menglin Wang
Research project: *California Insect Barcode Initiative (CIBI)*

- Cataloged Californian insect specimens for genetic and genomic analysis.
- Prepared specimens and conducted DNA extractions.

UC Riverside Department of Microbiology and Plant Pathology, June 2023 - August 2023
Stajich Lab - NSF-REU Participant - Supervised by Dr. Jason Stajich
Research project: *Putatively Novel Coniochaeta, Filobasidium, Naganishia, and Curvibasidium Species Isolated from Moss Biocrusts*

- Cultured media and isolated novel fungal species.
- Performed DNA extractions and conducted Sanger sequencing.
- Constructed phylogenetic trees using MAAFT and SnapGene.

Awards:

NSF-REU Research Fellowship, Center for Plant Cell Biology at University of California, Riverside, 2023

Publications:

Peer Reviewed Publications

1. **Croyle**, J., Kelly, K., Liu, X., and Stajich, J. E. 2024. Draft genome sequence of endophytic fungus *Coniochaeta sp.* isolated from the Mojave Desert. **(In Preparation)**
2. Kelly, K., Liu, X., **Croyle**, J., and Stajich, J.E. 2024. Culture dependent and independent survey reveals a strong influence of climate on the biocrust mycobiome. **(In Preparation)**

Presentations and Conferences:

2023, August. Taxonomically Distinct *Coniochaeta*, *Filobasidium*, *Naganishia*, and *Curvibasidium* Species Isolated from Moss Biocrusts. Poster presentation. University of California, Riverside - CEPCEB.

Technical Skills:

Programming Languages: Python, R
Scripting Languages: BASH
Data Visualization
Web Development: HTML5, CSS3
Operating Systems: MacOS, Linux (Ubuntu)
Microsoft Office (Word, Powerpoint, Excel)

Molecular Biology Skills:

NGS (Next-Generation Sequencing) Library Preparation
PCR (Polymerase Chain Reaction)
DNA Extractions
DNA Amplification and Purification
Microbial Culturing

Bioinformatics Skills:

Demographic Modeling
Comparative Genomics
Phylogenomics
Metagenomics
Metabarcoding Analysis

Employment History

West Riverside Veterinary Hospital, Riverside, CA, June 2021 - May 2023
Veterinary Assistant

- Assisted veterinarian during immunologic, medical, surgical and diagnostic procedures.
- Took scans and x-rays of animals using proper restraint and methods.
- Administered anesthetics and managed emergencies related to disease, seizures, and conflict.

The Living Desert Zoo and Gardens, Palm Desert, CA, September 2016 - March 2020
Zookeeper's Assistant Volunteer

- Gained experience in animal husbandry, rehabilitation and breeding.

The Aquarium of the Pacific, Long Beach, CA, May 2018 - August 2019
Student Eco-Ambassador Volunteer

- Assisted with field research abroad involving water quality and wildlife surveys.