AUSTIN KOONTZ

Center for Tree Science, Morton Arboretum

(775) · 233 · 1266

austinkoontz11@gmail.com ⋄ **https://akoontz11.github.io/**

EDUCATION

Master's of Science, Biology   December 2020
Utah State University (USU)   *Logan, UT*
Overall GPA: 4.0

Bachelor of Science, Neuroscience   May 2014
University of Nevada (UNR)   *Reno, NV*
Honor's College
Magna Cum Laude
Overall GPA: 3.715

RESEARCH EXPERIENCE

Wolf Plant Genetics & Systematics Lab, USU   September 2018 - December 2020
Master's Student   *Logan, UT*

· Used RADseq data to analyze the genetic separation between members of the *Primula cusickiana* species complex and determine correct species assignment

Pearse Evolutionary Ecology Lab, USU   September 2018 - December 2020
Master's Student   *Logan, UT*

· Developed a pipeline within R environment using phylogenetic transformations and simulated communities and phylogenies to determine effects of species boundaries on community diversity
· Wrote and published SymbiotaR2 R package
· Served as the system administrator of the Pearse Lab server (Ubuntu OS)

Van der Linden Neurogenetics Lab, UNR   September 2013 - May 2014
Lab Assistant & Honor's Undergraduate Student   *Reno, NV*

· Performed various molecular procedures as part of an undergraduate thesis project: DNA extraction (MiniPrep), PCR, gel electrophoresis, NGS library prep

PROFESSIONAL EXPERIENCE

Hoban Conservation Lab, Morton Arboretum   July, 2021 - Present
Research Assistant II   *Lisle, IL*

· Run bioinformatic analyses on sequencing data in contribution to population and conservation genetics research
· Collaborate with researchers within and beyond the Morton Arboretum to further advances in tree science

Hamilton Robotics   January 2015 - May 2018
Applications Specialist II   *Reno, NV*

· Wrote scripts automating lab procedures with Hamilton pipetting robots–primarily Illumina NGS library prep, but also blood typing and single cell gene expression assays
· Worked on a team with engineers and project managers serving as the primary technical support contact for automation customers

PROGRAMMING LANGUAGES AND SOFTWARE

Proficient	R, BASH, LaTeX, VENUS (Hamilton proprietary software), ArcGIS
Familiar	Python, Ruby, Java
Population Genetics Software	Stacks2, *ipyrad*, STRUCTURE, *adegenet*, VCFtools

PUBLICATIONS

Koontz, Austin and Pearse, William D. 2020. SymbiotaR2: Downloading Data from Symbiota2 Portals into R. R package, Version 0.0-1. Journal of Open Source Software, GitHub repository: `https://github.com/pearselab/SymbiotaR2`

Koontz, Austin, Pearse, William D., and Wolf, Paul G. 2020 (*In Prep*). Pronounced genetic separation among varieties of the Primula cusickiana species complex, a Great Basin endemic. Preprint: `https://www.biorxiv.org/content/10.1101/2021.03.19.436082v1.abstract`

Koontz, Austin, and Pearse, William D. (*In Prep*). A Phylogenetically-based Solution to Ambiguous Species Delimitation in Studies of Assemblage Structure. GitHub repository: `https://github.com/akoontz11/OTU_Phylogeny`

(*Co-authored*) Lembrechts, JJ, Aalto, J, Ashcroft, MB, et al. SoilTemp: A global database of near-surface temperature. Glob Change Biol. 2020; 00: 1– 14. `https://doi.org/10.1111/gcb.15123`

(*Co-authored*) Stachewicz, Jacob D., et al. 2020 (*In Prep*) Strong trait correlation and phylogenetic signal in North American ground beetle (Carabidae) morphology. Preprint: `https://www.biorxiv.org/content/10.1101/2021.02.12.431029v1.abstract`

PRESENTATIONS

Koontz, Austin, Pearse, William D., and Wolf, Paul G. Resolving the systematics of an endangered primrose species complex (*Primula cusickiana*) to inform management in the Great Basin region of the United States. Ecological Society of America, Oral presentation. Salt Lake City, UT, U.S. August 6 2020.

Koontz, Austin, Waring, Bonnie, and Pearse, William D. Using phylogenetic transformations to account for effects of sequencing error and intra-specific variation on operational taxonomic unit (OTU) assignment in microbial ecology. Oral presentation, Ecological Society of America. Louisville, Kentucky, U.S. August 15 2019.

HONORS & AWARDS

Honor's Undergraduate Research Award (UNR)	November 2013
Ecology Center Graduate Research Award (USU; $1,895)	March 2019
Ivan J. Palmblad Graduate Research Award (USU; $2,000)	March 2019
Margaret Williams Research Grant (Nevada Native Plant Society ; $1,000)	March 2019
Dr. Lawrence H. Piette Graduate Scholarship (USU; $600)	April 2019