

Joseph A. Kleinkopf

Ph.D. Candidate | Marx Lab | The University of New Mexico
Museum of Southwestern Biology | jkleinkopf@unm.edu

Education

2021-	Ph.D., Biology , The University of New Mexico, Albuquerque, NM <i>Committee:</i> Dr. Hannah Marx, Dr. Mike Andersen, Dr. Ken Whitney
2018-2019	M.Ed., Secondary Science Education , University of Massachusetts, Boston, MA
2016-2018	M.S., Plant Biology , Washington State University, Pullman, WA <i>Committee:</i> Dr. Eric Roalson, Dr. Larry Hufford, Dr. Joanna Kelley, Dr. Warren Wagner
2011-2015	B.A., MCDB and Japanese , University of Colorado, Boulder, CO

Research Projects

2023-	Systematics of Erigeron (Asteraceae; Astereae) , Marx Lab, The University of New Mexico <i>Reconstructing phylogenetic relationships in Erigeron to test hypotheses of alpine plant origins</i>
2022-	Silica-Dried Plant Tissue Infrastructure , UNM Herbarium, The University of New Mexico <i>Developing a standardized protocol for storing and digitizing silica-dried plant tissues.</i>
2021-	Drivers of Alpine Plant Community Turnover , Marx Lab, The University of New Mexico <i>Testing hypotheses of alpine plant community turnover across western North America.</i>
2021-2023	Adaptability of Piñon Pine , Marx Lab, The University of New Mexico <i>Transcriptome assembly and DNA probe design. Project led by Dr. Diana Macias.</i>
2016-2018	Systematics of Hawaiian Cyrtandra , Roalson Lab, Washington State University <i>Phylogenetic analysis and tests for hybridization in Hawaiian Cyrtandra using Genome-Wide Data.</i>
2014-2015	Aberrant Plant Diversity , Tripp Lab & COLO Herbarium, University of Colorado <i>Tested for genetic differentiation in morphologically aberrant forms of Purgatory plant species.</i>

Peer-Reviewed Publications

-
4. Ertsgaard, E.W., N.L. Gjording, J.D. Bakker, **J.A. Kleinkopf**, D.E. Giblin. *In review*. Geology and climate drive alpine plant compositional variation among peaks in the Cascade Mountain Range. PLoS One.
 3. Lombardi, E.M., B.D. Inouye, **J.A. Kleinkopf**, J.S. Reithel, E.H. Shapiro, J.A. Smith, N. Underwood. *In review*. Climate change data in the biology classroom: three assignment sequences leverage long-term field experiments to teach about change in mountain ecosystems. CourseSource.
 2. **Kleinkopf, J.A.**, W.R. Roberts, W.H. Wagner, E.H. Roalson. 2019. *Diversification of Hawaiian Cyrtandra (Gesneriaceae) under the influence of incomplete lineage sorting and hybridization*. Journal of Systematics and Evolution. 57(6). DOI: [10.1111/jse.12519](https://doi.org/10.1111/jse.12519)
 1. **Kleinkopf, J.A.**, D.A. Clark, and E.A. Tripp. 2017. *Aberrant Plant Diversity in the Purgatory Watershed of Southeastern Colorado and Northeastern New Mexico*. Western North American Naturalist. 77(3). DOI: [10.3398/064.077.0307](https://doi.org/10.3398/064.077.0307)

Presentations

-
- **Kleinkopf, J.A.** July 2024. *The alpine flora of the southern Rocky Mountains: Past, present, and future*. Presentation. New Mexico Native Plant Society Conference, Taos, NM.
 - **Kleinkopf, J.A.**, H.E. Marx. June 2024. *Drivers of alpine plant community turnover across Western North America*. Presentation. Botany Conference, Grand Rapids, MI.
 - Westerman, J., **J.A. Kleinkopf**, H.E. Marx. June 2024. *Effects of pollination syndromes on alpine plant communities in the Southern Rocky Mountains*. Poster. Botany Conference, Grand Rapids, MI.
 - **Kleinkopf, J.A.** February 2024. *The alpine flora of New Mexico*. Presentation, New Mexico Native Plant Society, Albuquerque, NM.
 - **Kleinkopf, J.A.** November 2023. *The alpine flora: Where do we go from here?* Seminar. Museum Research Traineeship Seminar Series, Albuquerque, NM.
 - **Kleinkopf, J.A.**, H. E. Marx, and D.E. Giblin. July 2022. *Alpine Plant Community Phylogenetics of the Greater Pacific Northwest*. Poster. Botany Conference, Anchorage, AK.

- **Kleinkopf, J.A.**, E.H. Roalson, W.R. Roberts, and W.L. Wagner. March 2018. *Detecting Hybridization in Hawaiian Cyrtandra using Genome-Wide Data*. Poster. Washington State University Biology Graduate Student Symposium, Moscow, ID.

Teaching Experience

2023 Fall	Instructor of Record , Department of Biology, The University of New Mexico, Albuquerque, NM <i>Co-instructor of General Botany Lecture and Lab (BIOL-360L, 4 credit course)</i>
2019-2021	Science Teacher , Salish Middle School, North Thurston Public Schools, Olympia, WA <i>6th Grade Earth and Space Science, 6-8th Grade Advisory</i>
2018-2019	Resident Science Teacher , Boston Teacher Residency, Boston Plan for Excellence, Boston, MA <i>10th Grade Biology, 11th/12th Grade Anatomy and Physiology</i>
2016-2018	Teaching Assistant , Washington State University, Pullman, WA <i>General Biology and Lab (General Biology BIOL 102 and Lab BIOL 105; four semesters)</i>
2013 Summer	Undergraduate Teaching Assistant , Science Discovery, University of Colorado, Boulder, CO <i>K-12 Science Summer Camp Teaching Assistant</i>

Research Experience

2024 Fall	Research Assistant , Marx Lab, University of New Mexico
2024 Spring	Research Assistant , Marx Lab, University of New Mexico <i>DNA extractions and phylogenetic analysis of alpine plants collected in 2022-2023</i>
2022-2023	Graduate Assistant , Museum of Southwestern Biology Herbarium, University of New Mexico <i>Inventoried Type specimens, reorganized types by APG IV order. Began process of reorganizing the general collections from alphabetical to APG IV. Started to develop infrastructure to store and database silica-dried tissue samples.</i>
2021-2022	Museum Research Training Program Fellow , University of New Mexico <i>Interdisciplinary program focusing on the best practices and issues in collections-based museums.</i>
2017 Summer	Graduate Assistant , Hudson Biological Reserve, Washington State University <i>Surveyed floral diversity at the Hudson Biological Reserve at Smoot Hill.</i>

Fellowships and Grants

2024 \$1500	Rogers Research Award , GPSA, The University of New Mexico <i>Lab consumables for DNA extraction of Erigeron herbarium specimens.</i>
2024 \$1200	Graduate Student Research Grant , American Society of Plant Taxonomists <i>Origins of the Alpine Flora: Range and Biome Evolution in Conyzinae (Asteraceae: Astereae)</i>
2024 \$2000	Travel and Research Grants , NSF Museum Research Traineeship, The University of New Mexico <i>Travel to Botany Conference 2024 and museums for Conyzinae sampling</i>
2024 \$1500	Grove Summer Research Scholarship , Biology Department, The University of New Mexico <i>Materials for DNA extraction and sequencing for Erigeron phylogenetics</i>
2024 \$500	Student Research Grant , GPSA, The University of New Mexico <i>Materials for alpine plant DNA extraction.</i>
2023 \$2500	Lewis and Clark Fund for Exploration and Field Research , American Philosophical Society <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2023 \$2000	Grove Summer Research Scholarship , Biology Department, The University of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2023 \$350	Professional Development Grant , GPSA, The University of New Mexico <i>Registration to attend the Evolution Conference in Albuquerque, NM, June 2023.</i>
2023 \$1500	Jack & Martha Carter Conservation Fund Grant , The Native Plant Society of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2022 \$500	Student Research Grant , GPSA, The University of New Mexico <i>Travel to attend the Botany Conference in Anchorage, AK, July 2022.</i>
2022 \$1800	Grove Summer Research Scholarship , Biology Department, The University of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2022.</i>
2021 \$45750	NSF Museum Research Training Fellowship , The University of New Mexico <i>Tuition, fees, and stipend. Interdisciplinary program to learn about museum work.</i>

2018 \$2200 **Higinbotham Travel Grant**, Biology Department, Washington State University
Field work to collect Cyrtandra species on the Hawaiian Islands.

Service and Outreach

Service

2024-2025 **Herbarium Faculty-Curator Hiring Committee** (BGSA Rep), The University of New Mexico
2023-2024 **Graduate Research Allocation Committee (GRAC) Chair**, BGSA, The University of New Mexico
2022-2023 **Undergraduate Policy Committee Chair**, BGSA, The University of New Mexico
2023 Spring **Graduate Research Grant Proposal Reviewer**, BGSA, The University of New Mexico
2022 Fall **Graduate Research Grant Proposal Reviewer**, BGSA, The University of New Mexico
2021 Fall **Graduate Research Grant Proposal Reviewer**, BGSA, The University of New Mexico
2020-2021 **Equity Committee Co-Lead**, Salish Middle School, North Thurston Public Schools
2019-2020 **Equity Committee**, Salish Middle School, North Thurston Public Schools

Outreach

2024- **Alpine Botany Journal Club Organizer**, Virtual monthly meetings
2023-2024 **Jefferson Middle School Partnership**, Museum of Southwestern Biology, ABQ, NM
2024 Spring **Plant Identification Nights**, Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Fall **Plant Identification Nights**, Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Summer **Night at the Museum (Evolution Conference 2023)**, NMMNHS, ABQ, NM
2023 Summer **MSB Open House (Evolution Conference 2023)**, Museum of Southwestern Biology, ABQ, NM
2023 Spring **Plant Identification Nights**, Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Spring **MSB Open House (Community Outreach 2023)**, Museum of Southwestern Biology, ABQ, NM
2022 Fall **Herbarium Tour for the Biology Undergraduate Society**, Mus. of Southwest. Biol., ABQ, NM
2022 Fall **Scientist: Skype-a-Scientist** with Mr. Wessel 12th grade class, Middletown, DE
2022 Fall **Scientist: Skype-a-Scientist** with Ms. Kieser's 5th grade class, Osseo, MN
2022 Fall **Scientist: Skype-a-Scientist** with Ms. Sanyo's 4th grade class, Akron, OH
2022 Fall **Plant Identification Nights**, Museum of Southwestern Biology Herbarium, ABQ, NM
2021 Spring **Teacher: Skype-a-Scientist** with Jackie Billotte, University of Colorado, Denver, CO
2020 Fall **Teacher: Skype-a-Scientist** with Nick Gladstone, University of Tennessee, Knoxville, TN
2020 Fall **Teacher: Skype-a-Scientist** with Maia Casna, Leiden University, Leiden, Netherlands
2018 Spring **Outdoor Family Fun Day**, BGSA, Washington State University, Pullman, WA
2017 Fall **Biology Family Fun Day**, BGSA, Washington State University, Pullman, WA
2017 Spring **Outdoor Family Fun Day**, BGSA, Washington State University, Pullman, WA
2016 Fall **Biology Family Fun Day**, BGSA, Washington State University, Pullman, WA

Guest Lectures

2023 Spring **Botanical Diversity and Preservation**, BIOL 419/519, University of New Mexico
Title: *Bias in Natural History Collections*

Mentored Students

2023- **Adrian Vigil**, Lab work, Undergraduate, The University of New Mexico
2022-2024 **Jeremiah Westerman**, Field and lab work, The University of New Mexico
2023 Summer **Brianna Addison**, Field work, The University of New Mexico
2022 Summer **Lauren Urenda**, Field work, The University of New Mexico
2017 Summer **Mara Huang**, Field work, Washington State University
2017 Summer **Tia Prudholm**, Field work, Washington State University

Professional Society Membership

Botanical Society of America (BSA), American Society of Plant Taxonomists (ASPT), Society for the Study of Evolution (SSE), Society of Systematic Biologists (SSB), New Mexico Native Plant Society (NMNPS)

Honors and Awards

- 2023 **1st Place, The Faces of Biology Contest**, American Institute of Biological Sciences
2015 **EBIO Undergraduate Scientist Feature**, University of Colorado-Boulder
2014 **Phi Beta Kappa Honors Society**, University of Colorado-Boulder

Professional Development

- 2024 **Biodiversity Data Wrangling Workshop**, Botany Conference, Grand Rapids, MI
2024 **Workshop on Molecular Evolution**, Marine Biological Laboratory, Woods Hole, MA
2023 **Student Experience Project for Equitable Pedagogy**, The University of New Mexico, Albuquerque, NM
2023 **RoLE Biodiversity Data Workshop**, Evolution Conference, Albuquerque, NM
2022 **Plant Collection Workshop**, Sevilleta Wildlife Refuge, Socorro, NM

Field Work and Herbarium Collections

- 2024 **Alpine Plants**, Pecos Wilderness Area, NM (97 collections @ UNM Herbarium)
2023 **Alpine Plants**, Southern Rocky Mountains, NM & CO (601 collections @ UNM Herbarium)
2022 **Alpine Plants**, Southern Rocky Mountains, NM & CO (551 collections @ UNM Herbarium)
2022 **Sevilleta Wildlife Refuge**, Socorro Co., NM (2 collections @ UNM Herbarium)
2017 **Hudson Biological Reserve**, Whitman Co., WA (42 collections @ WS Herbarium)
2016 **Picket Wire (Purgatoire) Canyonlands**, Las Animas Co., CO
2016 **Comanche National Grasslands BioBlitz**, Las Animas Co., CO
Total Voucher Herbarium Collections: 1293

Professional References

Dr. Hannah Marx | hmarx [at] unm.edu | Assistant Professor & Herbarium Curator, University of New Mexico
Dr. David Giblin | dgiblin [at] uw.edu | Herbarium Collections Manager, Burke Museum, University of Washington
Dr. Eric Roalson | eric_roalson [at] wsu.edu | Professor & Herbarium Director, Washington State University
Dr. Warren Wagner | wagnerw [at] si.edu | Research Botanist and Curator of Botany, Smithsonian Institute