

# Joseph A. Kleinkopf

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

## Education

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

## Research Projects

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

## Peer-Reviewed Publications

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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
  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

## Presentations

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- Kleinkopf, J.A.** 2024. *The alpine flora of New Mexico*. Presentation, New Mexico Native Plant Society, Albuquerque, NM.
- Kleinkopf, J.A.** 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. 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. 2018. *Detecting Hybridization in Hawaiian Cyrtandra using Genome-Wide Data*. Poster, Washington State University Biology Graduate Student Symposium, Moscow, ID.

## Teaching Experience

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

## Research Experience

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Spring 2024	<b>Research Assistant</b> , Marx Lab, University of New Mexico <i>DNA extractions and phylogenetic analysis of alpine plants collected in 2022-2023</i>
2022-2023	<b>Graduate Assistant</b> , 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	<b>Museum Research Training Program Fellow</b> , University of New Mexico <i>Interdisciplinary program focusing on the best practices and issues in collections-based museums.</i>
2017	<b>Graduate Assistant</b> , Hudson Biological Reserve, Washington State University <i>Surveyed floral diversity at the Hudson Biological Reserve at Smoot Hill.</i>

## Fellowships and Grants

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2024 \$1200	<b>Graduate Student Research Grant</b> , American Society of Plant Taxonomists <i>Origins of the Alpine Flora: Range and Biome Evolution in Conyzinae (Asteraceae: Astereae)</i>
2024 \$2000	<b>Museum Research Traineeship Travel and Research Grants</b> , University of New Mexico <i>Funding used to travel to Botany Conference 2024 and museums for Conyzinae sampling</i>
2024 \$1500	<b>Alvin R. and Caroline G. Grove Summer Research Scholarship</b> , University of New Mexico <i>Materials for DNA extraction and sequencing for Erigeron phylogenetics</i>
2024 \$500	<b>Student Research Grant</b> , GPSA, University of New Mexico <i>Materials for alpine plant DNA extraction.</i>
2023 \$2500	<b>Lewis and Clark Fund for Exploration and Field Research</b> , American Philosophical Society <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2023 \$2000	<b>Alvin R. and Caroline G. Grove Summer Research Scholarship</b> , University of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2023 \$350	<b>Professional Development Grant</b> , GPSA, University of New Mexico <i>Registration fee to attend the Evolution Conference in Albuquerque, NM, June 2023.</i>
2023 \$1500	<b>Jack &amp; Martha Carter Conservation Fund Grant</b> , Native Plant Society of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2023.</i>
2022 \$500	<b>Student Research Grant</b> , GPSA, University of New Mexico <i>Travel costs to attend the Botany Conference in Anchorage, AK, July 2022.</i>
2022 \$1800	<b>Alvin R. and Caroline G. Grove Summer Research Scholarship</b> , University of New Mexico <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2022.</i>
2021 \$45750	<b>NSF Museum Research Training Fellowship</b> , University of New Mexico <i>Tuition, fees, and stipend. Interdisciplinary program to learn about museum work.</i>
2018 \$2200	<b>Higinbotham Travel Grant</b> , Washington State University <i>Field work to collect Cyrtandra species on the Hawaiian Islands.</i>

## Service and Outreach

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### Service

2023-2024	<b>Graduate Research Allocation Committee (GRAC) Chair</b> , BGSA, University of New Mexico
2022-2023	<b>Undergraduate Policy Committee Chair</b> , BGSA, University of New Mexico
2023 Spring	<b>Graduate Research Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2022 Fall	<b>Graduate Research Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2021 Fall	<b>Graduate Research Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2020-2021	<b>Equity Committee Co-Lead</b> , Salish Middle School, North Thurston Public Schools

### Outreach

2023-2024	<b>Jefferson Middle School Partnership</b> , Museum of Southwestern Biology, ABQ, NM
2024 Spr	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Fall	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Sum	<b>Evolution Conference Night at the Museum</b> , NMMNHS, ABQ, NM
2023 Sum	<b>Evolution Conference Museum Open House</b> , Museum of Southwestern Biology, ABQ, NM
2023 Spr	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, ABQ, NM
2023 Spr	<b>Community Museum Open House</b> , Museum of Southwestern Biology, ABQ, NM
2022 Fall	<b>Herbarium Tour for the Biology Undergraduate Society</b> , Mus. of Southwest. Biol., ABQ, NM
2022 Fall	<b>Scientist: Skype-a-Scientist</b> with Mr. Wessel 12th grade class, Middletown, DE
2022 Fall	<b>Scientist: Skype-a-Scientist</b> with Ms. Kieser's 5th grade class, Osseo, MN
2022 Fall	<b>Scientist: Skype-a-Scientist</b> with Ms. Sanyo's 4th grade class, Akron, OH
2022 Fall	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, ABQ, NM
2021 Spr	<b>Teacher: Skype-a-Scientist</b> with Jackie Billotte, University of Colorado, Denver, CO
2020 Fall	<b>Teacher: Skype-a-Scientist</b> with Nick Gladstone, University of Tennessee, Knoxville, TN
2020 Fall	<b>Teacher: Skype-a-Scientist</b> with Maia Casna, Leiden University, Leiden, Netherlands
2018 Fall	<b>Outdoor Day Volunteer</b> , BGSA, Washington State University, Pullman, WA
2017 Spr	<b>Outdoor Day Volunteer</b> , BGSA, Washington State University, Pullman, WA

### Invited Lectures

2023-02	<b>Botanical Diversity and Preservation</b> , BIOL 419/519, University of New Mexico Title: <i>Bias in Natural History Collections</i>
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### Mentored Students

2023-2024	<b>Adrian Vigil</b> , Lab work, Undergraduate, University of New Mexico, ABQ, NM
2022-2024	<b>Jeremiah Westerman</b> , Field and lab work, University of New Mexico, ABQ, NM
2023	<b>Brianna Addison</b> , Field work, University of New Mexico, ABQ, NM
2022	<b>Lauren Urenda</b> , Field work, University of New Mexico, ABQ, NM
2017	<b>Mara Huang</b> , Field work, Washington State University, Pullman, WA
2017	<b>Tia Prudholm</b> , Field work, Washington State University, Pullman, WA

### 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

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

## Professional Development

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2024	<b>Workshop on Molecular Evolution</b> , Marine Biological Laboratory, Woods Hole, MA
2023	<b>Student Experience Project for Equitable Pedagogy</b> , University of New Mexico, ABQ, NM
2023	<b>RoLE Biodiversity Data Workshop</b> , Evolution Conference 2023, Albuquerque, NM

## Field Work and Collections

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2023 **Alpine Floras**, Southern Rocky Mountains (NM & CO; 601 collections @ UNM Herbarium)

2022 **Alpine Floras**, Southern Rocky Mountains (NM & CO; 553 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 Vouchered Collections:** 1196

## Professional References

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**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