

# Joseph A. Kleinkopf

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## Education

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- 2027 **Ph.D., Plant Biology**, Cornell University, Ithaca, NY  
*Committee:* Dr. Hannah Marx (PI)
- 2019 **M.Ed., Secondary Science Education**, University of Massachusetts, Boston, MA
- 2018 **M.S., Plant Biology**, Washington State University, Pullman, WA  
*Committee:* Dr. Eric Roalson, Dr. Larry Hufford, Dr. Joanna Kelley, Dr. Warren Wagner
- 2015 **B.A., MCDB and Japanese**, University of Colorado, Boulder, CO

## Research Projects

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- 2023- **Systematics of Erigeron (Asteraceae; Astereae)**, Marx Lab, Cornell University  
*Reconstructing phylogenetic relationships in Erigeron to test hypotheses of alpine plant origins.*
- 2021- **Drivers of Alpine Plant Community Turnover**, Marx Lab, Cornell University  
*Testing hypotheses of alpine plant community turnover across western North America.*
- 2022-2025 **Silica-Dried Tissue Collection Infrastructure**, UNM Herbarium, University of New Mexico  
*Developing a standardized protocol for storing and digitizing silica-dried plant tissues.*
- 2021-2023 **Adaptability of Piñon Pine**, Marx Lab, University of New Mexico  
*Transcriptome assembly and DNA probe design. Project led by Dr. Diana Macias.*
- 2016-2018 **Systematics of Hawaiian Cyrtandra**, Roalson Lab, Washington State University  
*Phylogenetic analysis and tests for hybridization in Hawaiian Cyrtandra using Genome-Wide Data.*
- 2014-2015 **Aberrant Plant Diversity**, Tripp Lab & COLO Herbarium, University of Colorado  
*Genetic differentiation in morphologically aberrant forms of Purgatory plant species.*

## Peer-Reviewed Publications

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6. Faust, H., **J.A. Kleinkopf**, B. Olmeda, and G.L. McCartha. In review. *Updates to the flora of New Mexico (U.S.A.): Notable botanical findings from the next generation of southwestern botanists*. Journal of the Botanical Research Institute of Texas.
5. **Kleinkopf, J.A.**, H. Faust, D.E. Giblin, M.R. Gostel, C.M. Williams, K.E. Hasenstab-Lehman, J.M. Heberling, S.J. Jacobs, B. Legler, R. Levy, A.G. Linan, L.C. Majure, K.D. Pearson, T.F. Rehman, C.J. Rothfels, D.C. Tank, W. Testo, C.M. Tribble, and H.E. Marx. In review. *Building infrastructure for silica-preserved leaf tissue collections in herbaria*. Systematic Botany.
4. Lombardi, E.M., B.D. Inouye, **J.A. Kleinkopf**, J.S. Reithel, E.H. Shapiro, J.A. Smith, and N. Underwood. Accepted. *Climate change data in the biology classroom: three assignment sequences leverage long-term field experiments to teach about change in mountain ecosystems*. CourseSource.
3. Ertsgaard, E.W., N.L. Gjording, J.D. Bakker, **J.A. Kleinkopf**, and D.E. Giblin. 2025. *Geology and climate drive alpine plant compositional variation among peaks in the Cascade Mountain Range*. PLoS One. e0317140. [\[Link\]](#)
2. **Kleinkopf, J.A.**, W.R. Roberts, W.H. Wagner, and 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). [\[Link\]](#)
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). [\[Link\]](#)

## Presentations

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- **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

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2025 Spring	<b>Teaching Assistant</b> , Department of Biology, University of New Mexico, Albuquerque, NM <i>General Botany (BIOL-464L). Designed lab activities/assignments and assessed student learning.</i>
2023 Fall	<b>Instructor of Record</b> , Department of Biology, University of New Mexico, Albuquerque, NM <i>General Botany Lecture and Lab (BIOL-360L, 4 credit course). Redesigned course materials to be student centered, culturally responsive, and better incorporate our LMS, Canvas.</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 Science 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>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 Summer	<b>Undergraduate Teaching Assistant</b> , Science Discovery, University of Colorado, Boulder, CO <i>K-12 Science Summer Camp Teaching Assistant</i>

## Professional Experience

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2025	<b>Graduate Research Assistant</b> , Marx Lab, Cornell University
2024	<b>Research Assistant</b> , Marx Lab, University of New Mexico <i>DNA extractions and phylogenetic analysis of alpine plants/Erigeron herbarium specimens.</i>
2022–2023	<b>Graduate Assistant</b> , Museum of Southwestern Biology Herbarium, University of New Mexico <i>Inventoried and reorganized Type specimens 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 Summer	<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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2025 \$3500	<b>Moore Graduate Research Award</b> , L.H. Bailey Hortorium, Cornell University <i>Field work to collect alpine plants across the Southern Rocky Mountains, summer 2025.</i>
2024 \$500	<b>NYBG Visiting Scientist Research Award</b> , New York Botanical Garden <i>Visit to NYBG to sample Erigeron specimens housed at the Steere Herbarium.</i>
2024 \$400	<b>GRAC Research Award</b> , BGSA, University of New Mexico <i>Lab consumables for DNA extraction of Erigeron herbarium specimens.</i>
2024 \$1500	<b>Rogers Research Award</b> , GPSA, University of New Mexico <i>Lab consumables for DNA extraction of Erigeron herbarium specimens.</i>
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>MRT Travel and Research Grants</b> , NSF Museum Research Traineeship, University of New Mexico <i>Travel to Botany Conference 2024 and herbaria for destructive Erigeron sampling.</i>

2024	\$1500	<b>Grove Summer Research Scholarship</b> , Biology Department, 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>Grove Summer Research Scholarship</b> , Biology Department, 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 to attend the Evolution Conference in Albuquerque, NM, June 2023.</i>
2023	\$1500	<b>Jack &amp; Martha Carter Conservation Fund Grant</b> , The 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 to attend the Botany Conference in Anchorage, AK, July 2022.</i>
2022	\$1800	<b>Grove Summer Research Scholarship</b> , Biology Department, 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> , Biology Department, Washington State University <i>Field work to collect Cyrtandra species on the Hawaiian Islands.</i>

## Service and Outreach

### Service

2024-2025	<b>Herbarium Faculty-Curator Hiring Committee</b> , BGSA Representative, University of New Mexico
2024 Fall	<b>GRAC Grant Proposal Reviewer</b> , BGSA, University of New Mexico
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>GRAC Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2022 Fall	<b>GRAC Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2021 Fall	<b>GRAC Grant Proposal Reviewer</b> , BGSA, University of New Mexico
2020-2021	<b>Equity Committee Co-Lead</b> , Salish Middle School, North Thurston Public Schools
2019-2020	<b>Equity Committee</b> , Salish Middle School, North Thurston Public Schools

### Outreach

2024-	<b>Alpine Botany Journal Club Organizer</b> , Virtual monthly meetings
2024 Fall	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, Albuquerque, NM
2023-2024	<b>Jefferson Middle School Partnership</b> , Museum of Southwestern Biology, Albuquerque, NM
2024 Spring	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, Albuquerque, NM
2023 Fall	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, Albuquerque, NM
2023 Summer	<b>Night at the Museum (Evolution Conference 2023)</b> , NMMNHS, Albuquerque, NM
2023 Summer	<b>Open House (Evolution Conference 2023)</b> , Museum of Southwestern Biology, Albuquerque, NM
2023 Spring	<b>Plant Identification Nights</b> , Museum of Southwestern Biology Herbarium, Albuquerque, NM
2023 Spring	<b>Open House (Community Outreach 2023)</b> , Museum of Southwestern Biology, Albuquerque, NM
2022 Fall	<b>Herbarium Tour, Biology Undergrad Society</b> , Museum of Southwestern Biology, Albuquerque, 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, Albuquerque, NM
2021 Spring	<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 Spring	<b>Outdoor Family Fun Day</b> , BGSA, Washington State University, Pullman, WA
2017 Fall	<b>Biology Family Fun Day</b> , BGSA, Washington State University, Pullman, WA
2017 Spring	<b>Outdoor Family Fun Day</b> , 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

2022-2025 **Jeremiah Westerman**; undergraduate; fieldwork, lab work, writing; University of New Mexico  
2023-2024 **Adrian Vigil**; undergraduate; lab work; University of New Mexico  
2023 Summer **Brianna Addison**; undergraduate; field work; University of New Mexico  
2022 Summer **Lauren Urenda**; undergraduate; field work; University of New Mexico  
2017 Summer **Mara Huang**; undergraduate; field work; Washington State University  
2017 Summer **Tia Prudholm**; undergraduate; 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

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2023 **1st Place, The Faces of Biology Contest**, American Institute of Biological Sciences  
Cover Image of Bioscience Vol 74, Issue 4 (April 2024) [\[Link\]](#)  
2015 **EBIO Undergraduate Scientist Feature**, University of Colorado-Boulder  
2014 **Phi Beta Kappa Honors Society**, University of Colorado-Boulder

## Professional Development

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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**, University of New Mexico, Albuquerque, NM  
2023 **RoLE Biodiversity Data Workshop**, Evolution Conference, Albuquerque, NM  
2022 **Plant Collection Workshop**, Sevilleta Wildlife Refuge, Socorro, NM

## Fieldwork and Herbarium Collections

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### Vouchered Specimens:

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 Vouchered Herbarium Collections:** 1293

### Notable Collections:

*Carex perglobosa* (Cyperaceae): New Mexico state record. Kleinkopf 1182 at UNM.  
*Phacelia hastata* var. *alpina* (Boraginaceae): New Mexico state record. Kleinkopf 976 at UNM.

[Link to Bionomia Profile](#)

## Professional References

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**Dr. Hannah Marx** | hem73 [at] cornell.edu

Assistant Professor & Director of the L.H. Bailey Hortorium, Cornell University

**Dr. David Giblin** | dgiblin [at] uw.edu

Herbarium Collections Manager, Burke Museum, University of Washington

**Dr. Eric Roalson** | eric\_roalson [at] wsu.edu

Professor & Director of the Ownbey Herbarium, Washington State University

**Dr. Warren Wagner** | wagnerw [at] si.edu

Research Botanist and Curator of Botany, Smithsonian Institute