

# Harpo Faust

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## Herbarium Collections Manager & Botanist

UNM Herbarium, Museum of Southwestern Biology  
Department of Biology  
University of New Mexico  
Albuquerque, NM, USA

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## INTERESTS

Floristics, Herbarium Curation, Systematics & Taxonomy, Ferns and Fern Allies, Collection Data Research & Applications, Field Work, Queer Botanical History, Natural History, Humanitarian Aid

## EDUCATION

### M.S. Biology: Botany

2021

Thesis: *A Vascular Flora of the Selkirk Mountains of Idaho*, Advisor: Dr. David Tank

Thesis Committee: Dr. Jack Sullivan, Dr. Eva Strand, Dr. Barbara Ertter & Ben Legler M.S.  
*University of Idaho*, Moscow, ID

### B.A. Environmental Studies, with Education

2013

Departmental Honors

*University of California, Santa Cruz*, Santa Cruz, CA

## CURRENT POSITION

### Senior Collections Manager

2022- *Current*

*University of New Mexico Herbarium, Museum of Southwestern Biology*, Albuquerque, NM

\*Oversee the largest herbaria in the state of New Mexico, including day to day curation, data management, and facilities management

\*Maintain working knowledge of the flora of New Mexico

\*Train & supervise students & volunteers in field and museum based botanical sampling & archival curation

\*Coordinate all fieldwork based out of the UNM Herbarium, including permits & permissions

\*Facilitate specimen-based research with students & research associates

\*Perform individual research drawing on divisions collections

\*Perform a myriad of outreach activities to schools, universities, agencies, and community

\*Perform herbarium division facilities management and maintenance

\*Upkeep all technology, imaging equipment, microscopes, and databases for division

\*Create and implement up to date protocols for division

## MUSEUM ACTIVITIES

\*Actively working with undergraduate students, graduate students, volunteers, collaborators and personally towards expanding collection breadth and coverage with regular collecting activities

\*Expanding herbariums connections to other collections in the state and working towards integrating multiple under curated collections in the state into the UNM Herbarium

\*Maintaining active relationships with botanists, biologists, and supervisors across all state agencies in New Mexico and Colorado (Natural Heritage Program, State Forestry Division, Forest Service, National Park Service, Navajo Nation, Bureau of Land Management, Fish and Game)

\*Active training of over 25 students and volunteers in collection methods, voucher specimen preparation, curation, databasing methods, and taxonomic concepts

- \*Active public outreach with identification nights and collection trainings
- \*Active outreach with an average of 12 tours a year
- \*Active loan and exchange program with herbaria across the world, averaging 12 loans a year
- \*Participation in UNM courses and activities with active specimen check out
- \*Host regular activity with an average of 200 visitors a year
- \*Regular use of specimens in research, both physical specimens, genetic tissue, and database use resulting in the most publications based on specimens out of any division at the MSB
- \*Increased digitization of herbaria records, such as field notes to loan history, to division history
- \*Regularly update divisions website, brochure, sticker, design, and outreach materials

## ACADEMIC APPOINTMENTS

### Adjunct Biology Faculty

Spring 2023

*BIO 419: Botanical Diversity & Preservation, University of New Mexico, Albuquerque, NM*

- \*Designed an upper division course with lab component, rooted in exposure and development of botanical collection skills and research as well as botanical diversity in the southwest
- \*Managed and trained undergraduate senior biology students in herbaria skills
- \*Organized and facilitated guest lecture series to increase exposure to different botanical careers
- \*Lead students through collections-based research projects, including formal presentations at UNM Research Day

### Research Associate

2021

*University of Arizona, Tumamoc Laboratory, Tucson, AZ*

- \*Collaborated with ARIZ & Tumamoc Scientists to lay the groundwork for a floristic inventory of the Volcan Tres Virgenes region in Baja Sur, Mexico
- \*Reviewed & confirmed all prior collections from region in ARIZ herbaria
- \*Coordinated with regional stakeholders in Baja, MX

### Assistant Curator

2018–2021

*Stillinger Herbarium, University of Idaho, Moscow, ID*

- \*Day to day curatorial maintenance of largest herbaria in Idaho
- \*Annotated misidentified collections & updated taxonomy of collections
- \*Oversaw undergraduate staff & volunteers working with the collections: mounting specimens, accessioning specimens, filing specimens, imaging specimens and database management
- \*Performed a myriad of outreach activities to schools, universities, agencies, and community, including Plant ID nights, Open Houses, Tours & Forays

### Teaching Assistant

2019

*BIO 460/560 Field Course: Advanced Field Botany Summer Course, University of Idaho, McCall, ID*

- \*Assisted with classroom and field work for a two-week graduate level botany intensive
- \*Taught collection methods, taxonomy, a Poaceae intensive, and database use to the class
- \*Helped locate field sites & identified, processed, and accessioned collections made during the course

### Teaching Assistant Lab

2020

*BIO 213 Lab: Principle of Biological Structure and Function, University of Idaho, Moscow, ID*

- \*Taught lab portion of large undergraduate biology course required for majors
- \*Facilitated weekly lab experiments
- \*Graded weekly lab reports
- \*Guided students semester research project

## PROFESSIONAL EXPERIENCE

### Contract Botanist

2022

Arizona ESA Species Recovery for Acuna Cactus (*Echinomastus erectocentrus* var. *acunensis*), AZ

- \*Designed field study to asses status of endangered species, including mapping potential species habitat and establishing updated demography plots
- \*Designed data collection protocols and methods specific to project needs
- \*Worked with land managers and agenices to facilitate ongoing research & required permissions

**Lead Botanist**

2021

*PG Environmental, Arizona & Southwest States*

- \*Worked as lead Botanist for southwest crew monitoring wetland health through private consulting company on BLM Lands
- \*Coordinated with regional agencies regarding taxa of concern and access
- \*Traveled to all southwest states to perform botanical surveys of targeted wetlands in rugged conditions
- \*Accurately identified wetland plants across all southwest wetlands
- \*Maintained required botanical collections for NWCA protocol

**Contract Botanist**

2021

*ESA Surveys for Whitebark Pine (*Pinus albicaulis*), in Sawtooth National Forest, ID*

- \*Worked in rugged sub-alpine mountains, including backpacking approaches
- \*Monitored historical plots of Whitebark Pine across the Sawtooth Mountains
- \*Assessed health of endangered plant populations
- \*Identified and surveyed associate plant taxa of Whitebark Pine

**Contract Botanist**

2021

*Fountaingrass (*Pennisetum setaceum*) Surveys for Coronado National Forest, Catalina Mountains, AZ*

- \*Worked in rugged desert mountains, utilizing satelite imagery to navigate to and access large areas of potential habitat for an invasive species
- \*Monitored and surveyed new Fountaingrass populations in Catalina Mountains
- \*Identified, surveyed and collected other targeted invasive species taxa

**Research Project Manager**

2018-2020

*University of Idaho, Biological Sciences & Stillinger Herbarium, Sandpoint, ID*

- \*Designed study & project objectives, protocols, data management & organization
- \*Maintained active communication with land managers in region & project collaborators
- \*Hired, trained and facilitated field technicians
- \*Facilitated field work in rugged sub-alpine mountainous regions

**Staff**

2019

*Idaho Fish & Wildlife Program, Moscow, ID*

- \*Served as botanical expert for large wildlife research project
- \*Reviewed all vegetation samples for wildlife study
- \*Synthesized and created taxonomic resources for study, including master species list

**Biological Research Technician (Plants)**

2018

*Oregon State University, Institute of Natural Resources, Corvallis, OR*

- \*Performed AIM botanical surveys of eastern Oregon sagebrush steppe
- \*Navigated to remote field plots, maintained field gear and vehicles
- \*Managed data for field plots, tracked species throughout season
- \*Worked as head botanist in smaller crew & taught species identification to other members

**Biological Science Technician (Plants)**

2017

*Chicago Botanic Garden, Bureau of Land Management, Twin Falls, ID*

- \*Performed ecosystem and vegetation inventory and assessment surveys using ArcCollector
- \*Post-fire rehabilitation monitoring using cover, density, line point intercepts & belt transects of 1-3 year old fires
- \*Gathered and managed data for local fuel moisture and fuel loading numbers
- \*Monitored and collected qualitative data for a five year emergency stabilization and rehabilitation project; compiled and wrote reports assessing the rehabilitation of three 20,000+ acre fires for state and federal offices, including original surveys, assessments and maps

**Wildcrafter**

2015

*Juniper Ridge*, Various Locations in California

- \*Worked as a contracted plant harvester of native California plants for perfume company

**BOTANICAL SUPERVISION & MANAGEMENT**

University of New Mexico Herbarium, <b>Student Staff(12) &amp; Volunteer Staff(13)</b>	2022- <i>Current</i>
University of New Mexico Herbarium, BIO 419 Lab, <b>Students(8)</b>	<i>Current</i>
PG Environmental Consulting Company, Southwest States, <b>Field Technicians(2)</b>	2021
University of Idaho, Graduate Research, <b>Field Technicians(3) &amp; Volunteers(12)</b>	2019-2020
University of Idaho, BIO 213 Lab, <b>Students(24)</b>	2019
University of Idaho, BIO 460 Advanced Field Botany Summer Course, <b>Students(6)</b>	2019
University of Idaho, Stillinger Herbarium, <b>Student &amp; Volunteer Staff (12)</b>	2018-2021

**PEER REVIEWED PUBLICATIONS**

1. Faust, H, Legler, B & Tank, D. (2022). *A Vascular Flora of the Selkirk Mountains, Bonner and Boundary Counties, Idaho*. Also: *A Journal of Systematic and Floristic Botany: Volume 40: Issue 1, Article 2*.
2. Faust, H & Legler, B. (2021). *Noteworthy Collections: Idaho*. *Madroño*, 68(2), 71-74.

**PUBLICATIONS IN PREP**

1. Lombardi, L., Faust, H. & Marx, H. (2023) *Using historical botanical data to prioritize future collection efforts: identifying patterns and gaps in herbarium holdings from New Mexico*.
2. Killingsworth, S & Faust, H. (2023) *Technical Report: Status Reassessment of the Endangered Acuna Cactus (*Echinomastus erectocentrus* var. *acunensis*)*.
3. Kleinklopff, J., Lombardi, L., Marx, H., Faust, H., (2024) *Methods Paper: Old collections & New tools: Using modern taxonomic harmonizing tools to re-organize herbaria*.
4. Faust, H. (2025) *Revised Checklist of the Ferns & Fern Allies of New Mexico*.

**GRANTS & FELLOWSHIPS & AWARDS**

<b>University of New Mexico, OVPR Outstanding Research Staff Award</b> , Exceptional Support of Research Training \$1,000	2023
<b>New Mexico Native Plant Society</b> , Jack & Martha Carter Grant \$1,500	2023
<b>ESA Section 6 Grant</b> , Arizona \$20,000	2021
<b>Kinnikinnik Native Plant Society</b> , Loise Wythe Grant \$300	2020
<b>Idaho Native Plant Society</b> , White Pine Grant \$1000	2020
<b>Palouse Audubon Society</b> , Graduate Research Student Award \$500	2019
<b>Torrey Botanical Society</b> , Graduate Student Research Fellowship \$1,000	2019
<b>American Society of Plant Taxonomists</b> , Graduate Student Research Grant \$1,200	2019
<b>Stillinger Expedition Grant</b> , University of Idaho \$20,000	2019-2020
<b>Biology Departmental Fellowship</b> , University of Idaho \$24,000	2018-2020
<b>NSF</b> , Citizen Science Grant, CNPS Rare Plant Treasure Hunts \$500	2013

**INVITED TALKS & PUBLIC PRESENTATIONS**

- \*Guest Lecture for Flora of New Mexico Undergraduate Course, University of New Mexico, November 2023.
- \*Presentation for the New Mexico Native Plant Society, Taos Chapter Annual Conference, October 2023.
- \*Presentation in Floristics & Taxonomy, Botanical Society of America Conference, July 2021.
- \*Presentation for the Montana Native Plant Society, Kelsey Chapter, March 2021.
- \*Presentation for the Idaho Native Plant Society, White Pine Chapter, Moscow, ID, March 2021.
- \*Presentation for the Kinnikinnik Native Plant Society Annual Meeting, Sandpoint ID, November 2020.
- \*Rare Plant Assessments, Idaho Rare Plant Conference, February 2020.

**FIELD WORK**

New Mexico, Colorado	2023
New Mexico, Colorado, Arizona & Nevada	2022
Arizona, Utah, Colorado, Nevada, Idaho & Mexico (Baja)	2021
Idaho & Ecuador	2020
Idaho & Washington	2019
California, Oregon, Washington	2018
Idaho & Nevada	2017
Oregon	2016
California	2012-2015
<b>Number of Collections Made</b>	<b>4900</b>
<b>Herbaria Deposited (ID, WTU, SRP, ARIZ, UNM, MICH, NYBG, MONTU, UTC)</b>	<b>9</b>

**PROFESSIONAL MEMBERSHIPS**

New Mexico Native Plant Society	2022
Arizona Native Plant Society	2021
Botanical Society of America	2019
American Society of Plant Taxonomists	2019
Torrey Botanical Society	2019
Idaho Native Plant Society	2018
Oregon Native Plant Society	2016
Northern California Botanist	2013
California Native Plant Society	2013

**SERVICE**

Root & Shoot Inclusive Conference Working Group, <i>Reviewer</i>	2023
Natural History Club, University of New Mexico, <i>Faculty Advisor</i>	2022 - <i>Current</i>
Queer Femmes in Botany: Botanical Society of America Annual Conference, <i>Facilitator</i>	2022
Careers in Botany Panel: Botanical Society of America Annual Conference, <i>Panelist</i>	2022
New Mexico Rare Plant Technical Council, <i>Member</i>	2022
American Society of Plant Taxonomists, Systematics Committee, <i>Student Representative</i> .	2020-2021
Randall Women in Science: Inclusion Diversity Equality Alliance, <i>Student Board Leader</i>	2019-2021
North Idaho Rare Plant Working Group, <i>Member</i>	2019-2021

**FORMAL MENTORSHIP**

Bryana Olmeda, M.S. Student Biology, University of New Mexico	2022- <i>Current</i>
Joseph Kleinklopf, PhD. Student Biology, University of New Mexico	2022- <i>Current</i>
Erin Berkowitz, M.S. Student Museum Studies, University of New Mexico	2022- <i>Current</i>
Peri Lee Pipkin, M.S. Student Botany, Claremont Graduate University	2019- <i>Current</i>

**SCIENCE COMMUNICATION**

University of New Mexico Art & Sciences Highlight, MSB Plant Identification Nights	2023
Botanical Society of America, Careers in Botany Profile	2022
University of Idaho, Vandal Explorer Highlight Video	2020

**TEACHING EXPERIENCE**

<b>Instructor: Plant Identification Nights</b>	2022- <i>Current</i>
<i>University of New Mexico Herbarium, Albuquerque, NM.</i>	

<b>Instructor: Collections Training</b>	2022
<i>University of New Mexico, Sevilleta National Wildlife Refuge, Socorro, NM.</i>	

<b>Instructor: Botanical Field Identification &amp; Plant Collection Intensive</b>	2019
<i>University of Idaho, Grouse and Grazing Wildlife Study, Rogerson, ID</i>	

<b>Instructor &amp; Facilitator: Plant Identification Nights</b>	2018-2020
<i>University of Idaho, Stillinger Herbarium, Moscow, ID.</i>	

<b>Program Coordinator &amp; Head Educator</b>	2016
<i>Willamette Resources and Educational Network, Bureau of Land Management, Eugene, OR</i>	

<b>Instructor: Nature Journaling &amp; Grinell Field Methods</b>	2014, 2016
<i>California Naturalist Program, UC Santa Cruz Arboretum, Santa Cruz, CA.</i>	

<b>Guide</b>	2015-2016
<i>Wild Child Homeschool, Bay Area, CA</i>	

<b>Guide &amp; Curriculum Creator</b>	2015
<i>Sunol Agricultural Park, Sunol Valley, CA</i>	

<b>Guide: Beginners Botany Walk</b>	2015
<i>Redwood Coast Tours, Santa Cruz, CA</i>	

<b>Instructor: Botany for Herbalists</b>	2015
<i>1849 Medicine Garden, San Francisco, CA</i>	

<b>Teacher in Residence</b>	2014
<i>Slide Ranch, Muir Beach, CA</i>	

<b>Teacher</b>	2013
<i>Life Lab Science Program, Santa Cruz, CA</i>	

<b>Instructor: Natural History Unit</b>	2013
<i>Monarch Community School, Santa Cruz, CA</i>	

<b>Guide: Trees of Upper Campus, Chapparal Botany, Reproduction in the Forest, Halloween Forest Walk</b>	2012-2014
<i>Natural History Walks, Save Upper Campus, Santa Cruz, CA</i>	

<b>Teaching Assistant</b>	2012
<i>Natural History of UC Santa Cruz Campus Course, Santa Cruz, CA</i>	

<b>Assistant Teacher</b>	2012
<i>San Lorenzo Valley Elementary, Felton, CA</i>	

**RELEVANT COURSEWORK**

<b>University of Idaho</b> , Moscow, ID	2018-2020
Advanced Field Botany, Principles of Systematics, Ethics for Biologists, Statistical Approaches, Landscape Ecology, Phylogenetics Understanding Reading Group	
<b>Lane Community College</b> , Eugene, OR	2016
Plant Systematics	
<b>Meritt Community College</b> , Oakland, CA	2015
Plant Terminology	
<b>University of California Santa Cruz</b> , Santa Cruz, CA	2012-2013
Natural History Field Quarter (California Vegetation, California Animals and California Conservation and Land Management), Environmental Interpretation, Statistical Methods for Environmental Studies, Environmental Policy, Ecology, Teaching Environmental Education, Introduction to Teaching Science	

**TRAININGS**

Tropical Botany Graduate Intensive, Missouri and New York Botanical Gardens, Ecuador	2020
Eriogonum Morphometrics Workshop, College of Idaho, Boise, ID	2019
Poaceae Workshop, Jepson Herbarium, Berkeley, CA	2019
Asteraceae and Poaceae Workshops, Botany Washington, WA	2018
Assessment, Monitoring, and Inventory (AIM) Field Methods Course, OR	2018
Women in Wildfire, Los Padres National Forest, Ventura, CA	2017

**CERTIFICATIONS**

<b>Wilderness Herbal First Responder/ First Aid Certification</b>	2021
<i>Herbal Medics University</i> , Eden, AZ	
<b>Western Herbalism, Field Botany and Wildcrafting Certification</b>	2016
<i>Columbines School of Botanical Studies</i> , Eugene, OR	
<b>California Master Naturalist</b>	2013
<i>University of California Cooperative Extension</i> , Santa Cruz, CA	
<b>Permaculture Design Certification</b>	2011
<i>Merritt Community College</i> , Oakland, CA	

**RELEVANT SKILLS**

- \*Extensive knowledge of Southwest, California, Pacific Northwest, Great Basin, & Intermountain flora
- \*Botanical identification using dichotomous keys, both in the field and in herbaria
- \*Experience working with ESA and RTE species: monitoring, reporting, surveying
- \*Experienced in multiple vegetation monitoring protocols (*Fuels, Assessment, Inventory and Monitoring (AIM), Nature Serve, National Wetland Conditional Assessment, Line Point Inventory, Demography Plots*)
- \*Experienced in compass map & orienteering, experienced with *ArcMap, Gaia, Collector, Avenza, GIS*
- \*Experienced working in inclement conditions, collaborating with others, managing a field crew
- \*Over 15 years' experience backpacking and camping in remote wilderness settings
- \*Experienced in preparation of voucher specimens and labels, mounting
- \*Experience in maintenance, organization, and curation of herbaria
- \*Experienced & trained in multiple archival restoration methods
- \*Firm grasp of Microsoft Programs, Data Management, & R
- \*Experienced in design & outreach communication
- \*Experienced in training & coordinating multiple volunteers, students & staff: in the field & in herbaria
- \*Conversational Spanish