

# NYBG

## ALEX C. MCALVAY

New York Botanical Garden  
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[NYBG Profile](#)  
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### EDUCATION

- 2012-2018 **Ph.D., Botany**, University of Wisconsin-Madison.  
Dissertation: Domestication, Invasion, and Ethnobotany of *Brassica rapa*  
Supervisor: Dr. Eve Emshwiller.
- 2006-2010 **B.S., Biological Anthropology**, Western Washington University

### PROFESSIONAL POSITIONS

- 2020-present **Research Scientist I/Assistant Curator**, Institute of Economic Botany, New York Botanical Garden
- 2021-present **Adjunct Associate Research Scientist**, Ecology, Evolution, and Environmental Biology, Columbia University, New York
- 2021-present **Adjunct Professor, Doctoral Faculty**, Graduate Center of the City University of New York, New York
- 2019-2020 **Postdoctoral Research Associate**, Dr. Alison Power Lab, Cornell University

### PUBLICATIONS

#### Peer-reviewed journal articles

- 2023 S. Ramos Bierge, Carillo de la Cruz, T; **McAlvay, A.C.** Data sovereignty and community engagement at the intersection of language and ecological knowledge: Lessons from ethnobiology and linguistics. *Sociolinguistic Studies*. **In review.**
- 2023 A.C. McAlvay; Ramos Bierge, S.; Enriquez Maldonado, D.; Linares, E.; Bye, R.; Nevares, A.; Xóchitl Silvestre, P; Emshwiller, E. Consecuencias genéticas y fenotípicas en el manejo de la *Brassica rapa* feral en México. *Etnobiología*. **In review.**
- 2023 Harkess, A.E., I.A. Al-Shehbaz, E.H. Roalson, G.J. King, M.A. Koch, M.A. Lysak, K. Mummenhoff, S. Bhattacharya, L.A. Nikolov, I.J. Leitch, D.J. Murphy, W.J. Baker, F. Lens, J.C. Hall, R.L. Barrett, K.P. Hendriks, M.S. Barker, M.T.W. McKibben, **A.C. McAlvay**, J.G. Conran, Y. Hao, G.C. Conant, M.E. Mabry, M. Dassanayake, S. Barak, M.E. Shranz, A. Beric, R.S. Abrahams, M. Piasias, S.K. Thomas, Q. Yu, S.B. Carey, F. Mercati. Complementing model species with model orders. *The Plant Cell*. koad260 p. 1- 22

- 2023 I. Maurice-Hammond; **McAlvay, A.**; Mathews, D.; Bosman, A.; Morris, J. A ləkʷəŋən estuarine root garden: The case of Tl'ché. *Economic Botany*. 77, 410-432
- 2023 C.G. Armstrong; Lepofsky, D.; **McAlvay, A.C.**; Leonard, K.; Richie, M.; Lyons, N.; Blake, M. Reply to Oswald: Scale in Studies of Pre-Colonial Forests. *Ecosystems and People*. 19:1.
- 2023 J.R. Wall; Lukawiecki, J; Young, R.; Powell, L.; **McAlvay, A.C.**; Moola, F. Operationalizing the Biocultural Perspective Part II. A Review of Biocultural Action Principles since The Declaration of Belém. *Environmental Science and Policy*. 150
- 2023 M.E. Mabry; Bagavathiannan, M.V.; Bullock, J.M.; Wang, H.; Caicedo, A.L.; Dabney, C.J.; Drummond, E.B.M; Frawley, E.; Gressel, J.; Husband, B.C.; Lawton-Rauh, A.; Maggioni, L.; Olsen, K.M.; Pandolfo, C.; Pires, J.C.; Pias, M.T.; Razifard, H.; Soltis, D.E.; Soltis, P.S.; Tillería, S; Ureta, S.; Warschefskey, E.; **McAlvay, A.C.** Open questions in crop ferality: where are we coming from and where are we going? *Plants People Planet*. 5(2).
- 2023 C.G. Armstrong; Lyons, N.; **McAlvay, A.C.**; Richie, M.; Lepofsky, D.; Blake, M. Historical Ecology of Forest Garden Management in Ts'msyen Lakhuyuup and Beyond. *Ecosystems and People*. 19(1), 2160823.
- 2022 **A.C. McAlvay**; DiPaola, A; D'Andrea, A.C.; Ruelle, M.; Mosulishvili, M.; Halstead, P.; Power, A.G.. Cereal species mixtures: an ancient practice with potential for climate resilience. A review. *Agronomy for Sustainable Development*. 42(5), pp. 1-17.
- 2022 M.T. Pias, Bakala, S., **McAlvay, A.C.**, Mabry, M.E., Birchler, J.A., Yang, B., Pires, J.C. Prospects of Feral Crop De Novo Re-Domestication. *Plant and Cell Physiology*. pcac072. <https://doi.org/10.1093/pcp/pcac072>
- 2022 C.G. Armstrong; Earnshaw, J.; and **McAlvay, A.C.** 2022. Coupled archaeological and ecological analyses reveal ancient cultivation and land-use in Nuchatlacht (Nuu-chah-nulth) Territories, in the Pacific Northwest of North America. *Journal of Archaeological Science*. 143, 105611. <https://doi.org/10.1016/j.jas.2022.105611>
- 2022 Andualem, A.; T. Legesse; A. Nebiyu; A. Dejen; F. Hailu; Z. Asfaw; M. Ruelle; **A.C. McAlvay**; A.G. Power; A. Tesfaye. Diversity, use and production of farmers' varieties of common bean (*Phaseolus vulgaris* L., Fabaceae) in southwestern and northeastern Ethiopia. *Agroecology and Sustainable Food Systems*. 67, 339–356.
- 2021 **McAlvay, A.C.**; C.G. Armstrong; J. Baker.; L. Black Elk; S. Bosco; N. Hanazaki; L. Joseph; T. Martínez; M. Nesbitt; M. Palmer; APW.C. Priprá de Almeida; J. Anderson; Z. Asfaw; I. Borokini; E.J. Cano-Contreras; S. Hoyte; M. Hudson; A. Ladio; G. Odonne; S. Peter; J. Wall; S. Wolverton; I. Vandebroek. Decolonizing institutions, projects, and scholarship in ethnobiology. *Journal of Ethnobiology*. 41(2), pp. 170-191
- 2021 Poveda, J.; P. Velasco; A. de Haro; T.J. Johansen; **A.C. McAlvay**; C. Mollers; J. Mölmann; E. Ordiales; V.M. Rodríguez. Modification of agronomic and metabolomic parameters in *Brassica oleracea* var. *acephala* divergent selection populations for glucobrassicin content in different environments. *Metabolites*. 11(6), 384.
- 2021 Mabry, M.E.; S.D. Turner-Hissong, E.Y Gallagher, **A.C. McAlvay**, H. An, P.P. Edger, J.D. Moore, D.A.C. Pink, G.R. Teakle, C.J. Stevens, G. Barker, J. Labate, D.Q. Fuller,

- R.G. Allaby, T. Beissinger, J.E. Decker, M.A. Gore, J.C. Pires. The Evolutionary History of Wild, Domesticated, and Feral *Brassica oleracea* (Brassicaceae). *Molecular Biology and Evolution*. msab183
- 2021 **McAlvay, A.C.**; A.P. Ragsdale; X. Qi; K. Bird; P. Velasco; A. Hong; M. Mabry; J.C. Pires; E. Emshwiller. *Brassica rapa* domestication: untangling wild and feral forms and multiple origins of crop morphotypes. *Molecular Biology and Evolution*. msab108
- 2021 Armstrong, C.G.; J. Miller; **A.C. McAlvay**; M. Richie; D. Lepofsky. 2021. Functional traits and biodiversity reflect Indigenous Peoples' Land-Use Legacies in Pacific Northwest Archaeological sites. *Ecology and Society*. 26(2), Art. 6
- 2019 Reyes-García, V., D. García-del-Amo, P. Benyei, Á Fernández-Llamazares, K. Gravani, A.B. Junqueira, V. Labeyrie, X. Li., D.M. Matias, **A.C. McAlvay** and P.G. Mortyn, A collaborative approach to bring insights from local observations of climate change impacts into global climate change research. *Current Opinion in Environmental Sustainability*, 39, pp.1-8.
- 2019 Armstrong, C.G. and **A.C. McAlvay**. Introduction to Special Section on Action Ethnobiology. *Journal of Ethnobiology*, 39(1), pp.3-13.
- 2019 Golan, J. and **A.C. McAlvay**. Intellectual Property and Ethnobiology: An Update on Posey's Call to Action. *Journal of Ethnobiology*, 39(1), pp.90-109.
- 2019 Abera, B., M. Berhane, A. Nebiyu., M.L. Ruelle, **A.C. McAlvay**, Z. Asfaw, A. Tesfaye, Z. Woldu. Diversity, use and production of farmers' varieties of common bean (*Phaseolus vulgaris* L., Fabaceae) in southwestern and northeastern Ethiopia. *Genetic Resources and Crop Evolution*, 67:339-356.
- 2019 An, H., X. Qi, M.L. Gaynor, Y. Hao, S.C. Gebken, M.E. Mabry, **A.C. McAlvay**, G.R. Teakle, G.C. Conant, M.S. Barker, and T. Fu. Transcriptome and organellar sequencing highlights the complex origin and diversification of allotetraploid *Brassica napus*. *Nature communications*, 10(1), p.2878.
- 2017 **McAlvay, A.C.**; K. Bird; J.C. Pires; E. Emshwiller. Barriers and prospects for crop wild relative conservation in *Brassica rapa*. *Acta Horticulturae*. 1202 pp. 165-177.
- 2017 Armstrong, C.G.; A.C. Shoemaker; I. McKechnie; A. Ekblom; P. Szabó; P.J. Lane; **A.C. McAlvay**; O.J. Boles; S. Walshaw; N. Petek; K.S. Gibbons; E.Q. Morales; E.N. Anderson; A. Ibragimow; G. Podruczny; J.C. Vamosi; T. Marks-Block; J.K. LeCompte; S. Awâsis; C. Nabess; P. Sinclair; C.L. Crumley. Anthropological contributions to historical ecology: 50 questions, infinite prospects. *PLoS ONE* 12:2.

### Unrefereed publications

- 2021 **McAlvay, AC.** Book review: Plants, People, and Places: The roles of ethnobotany and ethnoecology in Indigenous Peoples' land rights in Canada and beyond. Edited by Nancy Turner. 2020. McGill-Queen's, Montreal. 480 pp. *Herbalgram*
- 2020 Lepofsky, D.; **A.C. McAlvay**; C.G. Armstrong; J. Miller; K. Lertzman. Re-evaluating "Conservation Implications of Native American Impacts." *EcoEvoArx*. **Preprint**
- 2017 **McAlvay, AC.** Book review: Plants and Health - New Perspectives on the Health-Environment- Plant Nexus. Edited by Elizabeth Anne Olson and John Richard Stepp.

2016. Springer, Switzerland. 175 pp. *Ethnobiology Letters*.
- 2013 **McAlvay, A.C.** and Y. Chen. 2013. Handbook of Sidama Traditional Medicinal Plants. University of Wisconsin Department of Surgery.

## GRANTS AND AWARDS

- 2023 **\$18,860**, Indigenous Data Sovereignty and Ethnobotany | Social Sciences and Humanities Research Council Partnership Engage Grant (Canada), Co-PI.
- 2023 **\$499,121**, Rockefeller Periodic Table of Food Initiative | Rockefeller Foundation | Investigating underutilized traditional crop mixtures for nutritional yield, climate resilience, and soil regeneration | PI.
- 2022 **\$75,000**, Earthlab Innovation Grant | University of Washington Earthlab | Cultural Ecosystems in a changing world: building a network across the Northwest to support food sovereignty, climate adaptation, and land rights | Participant and coauthor
- 2022 **\$19,972**, Level I Funding | National Geographic | Collaborative Ethnobotanical and Floristic Investigation of the Long Island Shinnecock | PI
- 2021 **\$418,415**, Dynamic Language Infrastructure/Documenting Endangered Languages | National Science Foundation (NSF)/National Endowment for the Humanities (NEH). The Language of Land and Life: Connecting Language and Ecology in Wixárika | PI
- 2020 **Sequencing of 20 reference genomes, Equivalent value ~\$1,000,000**. The Brassicales Genome Initiative, Joint Genome Initiative, Department of Energy (PI: Alex Harkess) | Participant
- 2019 **\$10,000**, Engaged Cornell Fund Supplement for Undergraduate Training, Cornell University.
- 2019 **\$162,000**, Academic Venture Fund, Cornell University Atkinson Center for a Sustainable Future | Cereal mixtures for Climate Resilience.
- 2017 **1 semester of graduate student support**, EK and ON Allen Fellowship, UW-Madison Dept. of Botany.
- 2016 **\$19,862**, Doctoral Dissertation Improvement Grant | NSF
- 2016 **\$800**, Student Travel Award, Society for Economic Botany.
- 2016 **\$2500**, CHE Graduate Student Research and Travel Grant, UW-Madison Center for Culture, History, and Environment.
- 2015 **\$4000**, Davis Research Support, UW-Madison Dept. of Botany.
- 2015 **\$2500**, Iltis Field Travel Support, UW-Madison Dept. of Botany.
- 2015 **\$1500**, Davis Field Travel Support, UW-Madison Dept. of Botany.
- 2015 **\$4000**, Newcomb Summer Fellowship | UW-Madison Dept. of Botany.
- 2013 **\$4000**, Davis Research Support, UW-Madison Dept. of Botany.
- 2013 **\$2000**, Nave Research Award, UW-Madison Latin American, Caribbean and Iberian Studies Program.
- 2012 **\$5000**, Foreign Language and Area Studies Fellowship for Kazakh, Center for Russia, East Europe, and Central Asia.
- 2012 **\$1000**, Biological Scholars Award, UW-Madison.

- 2011 **\$1500**, Henry G. Schwarz Mongolian Studies Scholarship, WWU.  
 2010 **\$250**, Undergraduate Ethnobiologist of the Year Award, Society of Ethnobiology.  
 2006 **\$2000**, Presidential Scholarship, WWU.

## PRESENTATIONS

### Invited Seminars/Presentations

- 2022 **McAlvay, A.C.** Investigating Underutilized Traditional Crop Mixtures for Climate Resilience, Nutritional Yield, and Soil Regeneration | Rockefeller Foundation Periodic Table of Food Initiative Sandbox Webinar Series | *Rockefeller Foundation* | New York, USA.
- 2022 **McAlvay, A.C.** Climate change and storytelling | *Printed Matter* | New York, USA.
- 2021 **McAlvay, A.C.** Ecological and evolutionary impacts of traditional and Indigenous plant management | E3B Research Seminar Series, *Columbia University*, New York, USA.
- 2021 **McAlvay, A.C.** Traditional farming and crop diversity for a more resilient future | Climate Week Seminar Series | *New York Botanical Garden*, New York, USA.
- 2021 **McAlvay, A.C.** Decolonizing Ethnobiology | Interactive Laboratory in Ethnobotany, at the *National Museum of the Federal University of Rio de Janeiro*, Rio de Janeiro, Brazil.
- 2021 **McAlvay, A.C.** Traditional Plant Management as Resource Sovereignty | Global Ethnobotany Research Webinar Series | *Centre for Conservation of Natural Resources*, Bangalore, India.
- 2020 **McAlvay, A.C.** Ethnoecology and traditional resource and environmental management | Department of Anthropology, *Axum University*, Axum, Ethiopia.
- 2019 **McAlvay, A.C.** Cultural keystone plant species | Department of Plant Biology and Biodiversity Management, *Addis Ababa University*, Addis Ababa, Ethiopia.
- 2014 **McAlvay, A.C.** Sidama Traditional Medicinal Plants: An ethnobotanical study from southwestern Ethiopia | Department of Surgery Seminar Series, *University of Wisconsin-Madison*, Madison, United States.

### Conference presentations

- 2023 **McAlvay, A.C.**; Pace, M.; Walker, K. Collaborative Ethnobotanical and Floristic Investigation of the Long Island Shinnecock Nation. *Samples with Consequences*. New York, USA.
- 2023 **McAlvay, A.C.** Investigating underutilized traditional crop mixtures for nutritional yield, climate resilience, and soil regeneration. *American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America International Annual Meeting*. St. Louis, MO, USA.
- 2022 **McAlvay, A.C.** Pacific Northwest Cultural Ecosystems. Lightning Talk. *Northeast Regional Meetup of the Society for Economic Botany and International Society of Ethnobiology*. New York, NY, USA.

- 2022 **McAlvay, A.C.** Data Sovereignty and Labeling Tools in Ethnobotany. Preconference Workshop. *Society for Economic Botany* and *International Society of Ethnobiology*. Virtual
- 2022 **McAlvay, A.C.** and T. Adams Food programs at The New York Botanical Garden. Agriculture, food Systems and the future of food in botanic gardens. Food and Agriculture Community Townhall. *American Public Gardens Association*. Virtual
- 2021 **McAlvay, A.C.** Reconstructing the dedomestication and invasion history of field mustard (*Brassica rapa*). *Botanical Society of America*. 2021: Virtual.
- 2021 **McAlvay, A.C.** Use, management, and potential climate resilience of traditional wheat and barley seed mixtures in Ethiopian highland agriculture. *Society of Ethnobiology*. 2021: Virtual.
- 2021 **McAlvay, A.C.** Ethics and Advocacy - Organizing Equity and Decolonizing Ethnobiology. *Royal Anthropological Institute Anthropology and Conservation Conference*. Workshop panel. 2021: Virtual.
- 2020 **McAlvay, A.C.** Wixárika ethnobotany and land rights. *Arts to Research Universities Conference*. 2020: Madison, WI, USA.
- 2019 **McAlvay, A.C.** Toward a united literature on traditional resource and environmental management: implications for resource sovereignty and understanding human subsistence. *Society of Ethnobiology* 2019: Vancouver, BC, Canada.
- 2018 **McAlvay, A.C.;** A. Ragsdale, X. Qi, K. Bird, P. Velasco, J.C. Pires, and E. Emshwiller. Out of Turnips: Reconstructing the domestication history of *Brassica rapa* crops in Eurasia. *Joint meeting of the Society of Ethnobiology and Society for Economic Botany*. 2018: Madison, WI, USA.
- 2018 **McAlvay, A.C.;** A. Ragsdale, X. Qi, K. Bird, P. Velasco, J.C. Pires, and E. Emshwiller. Domestication and ferality of *Brassica rapa* clarified through genotyping-by-sequencing. *Botanical Society of America*. 2018: Rochester, MN, USA.
- 2017 **McAlvay, A.C.** Barriers, resources, questions: Moving forward as an advocate-academic | Paper presented at the 40th *Society of Ethnobiology* Meeting, Montreal, QC, Canada.
- 2017 **McAlvay, A.C.** Trained peer-review to improve writing and feedback quality | *Center for the Integration of Research, Teaching and Learning* | All-Network Teaching As Research Conference.
- 2017 **McAlvay, A.C.** "We have always grown it" - forming relationships with an invasive weed in Mexico | Paper presented at the *Culture, History, and Environment Graduate Student Symposium*, Madison WI, United States.
- 2017 **McAlvay, A.C.;** R. Bye, E. Emshwiller. Redomestication of feral turnips in Mexico: phenotypic and genotypic evidence. *Society of Economic Botany*. 2017: Bragança, Portugal.
- 2017 **McAlvay, A.C.;** K. Bird, C. Pires, E. Emshwiller. Weedy and wild *Brassica rapa* worldwide: origins, relationships, and a surprising pool of diversity. *Brassica 2017*: Pontevedra, Spain.
- 2016 **McAlvay, A.C.** Ethnobotany and resource sovereignty in Mexico | Paper presented at Academic Forum of *Wirikuta Weekend: Celebrating Indigenous Cultural Survival*, Austin TX, United States.

- 2016 **McAlvay, A.C.;** I. Neubauer; C.G. Armstrong; J. Miller; E. Emshwiller. Beyond the foraging- farming continuum: modeling the diversity of human subsistence in multiple dimensions | Paper presented at the 39th *Society of Ethnobiology* Meeting, Tucson AZ, United States.
- 2015 **McAlvay, A.C.;** E. Emshwiller. Adopting and Adapting: Local Use and Management of Invasive *nabitos* (*Brassica rapa* L.) in Mexico and Consequences for their Evolution | Paper presented at the 2nd *New International Community for Historical Ecology meeting*, Vancouver, British Columbia, United States.
- 2015 **McAlvay, A.C.;** R. Pierotti; E. Emshwiller. The many faces of anthropogenic evolution: reconciling isolated lines of research on human-induced selection under the banner of ethnobiology | Paper presented at the 38th *Society of Ethnobiology* meeting, Santa Barbara CA, United States.
- 2015 **McAlvay, A.C.;** R. Bye; E. Emshwiller. Evolutionary consequences of traditional plant management of weedy field mustard in Mexico | Paper presented at the 38th *Society of Ethnobiology* Meeting, Santa Barbara CA, United States.

### Poster presentations

- 2016 **McAlvay, A.C.;** Y. Chen; H. Busse; G. Tefera. Healthcare access and traditional medicine among the Sidama of Ethiopia | Poster presented at the *Wisconsin Medicinal Plant Symposium*, Madison WI, United State.
- 2014 **McAlvay, A.C.;** E. Emshwiller. Traditional non-crop management of the Wixáritari (Huichol) of western Mexico | Poster presented at the 37th *Society of Ethnobiology Meeting*, Cherokee NC, United States.
- 2014 **McAlvay, A.C.;** Y. Chen; H. Busse; G. Tefera. Healthcare access and traditional medicine among the Sidama of Ethiopia | Poster presented at the *University of Wisconsin-Madison Department of Surgery Research Summit*, Madison WI, United States.

### Consulting

- 2023 **Regen10 Experts Network:** Serving as one of 15 Experts for Regen10, a multinational initiative emerging from COP26 seeking to scale up regenerative agriculture and feed the majority of the world's people sustainably by the end of the decade. The initiative will work with 500 million farmers and leverage \$60 billion per year. The Experts Network will provide technical advice and guidance as Regen10 refines and launches a Regenerative Outcomes Framework.

### Policy participation

- 2023 **Policy report:** K. Morgan; McAlvay, A.C.; de la Parra, J. 2023. Legume-Based Agroecology for African Nutrition Security. FAO Agroecological Knowledge Hub. [Link](#).
- 2023 **Input submitted:** Tata Cornell Institute for Agriculture and Nutrition policy brief on Promoting Millets in the Public Distribution System.

- 2022 **Input submitted**, UN Human Rights report on Indigenous Women, Traditional and Scientific Knowledge for presentation at the UN Human Rights Council.
- 2022 **Input submitted**, Indigenous Tribal Consultation and Public Input Opportunities on Indigenous Traditional Ecological Knowledge in Federal Policy, U.S. Government.
- 2022 **Input submitted**, NIFA Listens: Session for stakeholder input to science priorities

## TEACHING AND MENTORSHIP EXPERIENCE

### Instructor of record

- 2021/2023 **Instructor, Columbia University:** Ethnobotany: The Study of People and Plants (Ecology, Evolution, and Environmental Biology G4086; Co-instructor: Michael Balick). 2 semesters
- 2019 **Instructor, Cornell University:** Scientific Writing and Statistical Analysis Graduate Level Course. One-month training for Ethiopian graduate students and three-day training for Ethiopian professors.
- 2016-2017 **Instructor, UW-Madison:** Ethnobotany (American Indian Studies / Anthropology / Botany 474). Summer term for two years.

### Professional development in teaching

- 2018 **Cultivating Effective, Culturally Responsive Mentoring** | 1 semester | Research mentor Training Seminar | WISCIENCE program.
- 2017 **Teaching in Science and Engineering: The College Classroom** | 1 semester | Center for the Integration of Research, Teaching and Learning (CIRTL).
- 2016 **Delta Internship** | 1 semester | Co-developed a writing-based curriculum for a Tropical Horticulture Class | CIRTL.
- 2016 **Delta Internship Seminar** | 1 semester | Participated in a seminar to discuss best practices for designing and implementing scholarship of teaching projects | CIRTL.
- 2016 **Advancing Learning Through Evidence-Based STEM Teaching** | 1 semester | CIRTL.
- 2013 **Teaching in Science and Engineering: The International College Classroom** | 1 semester | CIRTL.

### Teaching assistant and curriculum development

- 2022 **Curriculum Developer**, Vision Learning Biodiversity module, City University of New York. Helped develop free STEM resource for undergraduate students.
- 2014-2017 **Teaching Assistant**, UW-Madison: Plants and Humans, 3 semesters.
- 2014-2017 **Teaching Assistant**, UW-Madison: Ethnobotany (Botany 474), 3 semesters (in person) 1 semester (online).
- 2016-2017 **Teaching Assistant and Independent Project Mentor**, UW-Madison: Introductory Biology, 2 semesters.



- 2012-2016 **Teaching Assistant**, UW-Madison: General Botany, 5 semesters.
- 2013 **Curriculum developer**, Nutrition, Environment and Food Systems in Ethiopia program. Worked with Hawassa University to write culturally informed inquiry-based modules on traditional ecological knowledge and ecosystem services for Ethiopian community conservation leaders.
- 2012 **Teaching Assistant (Laboratory)**, UW-Madison Introductory Biology, 1 semester.
- 2010 **Curriculum Developer and Teacher**, Huichol Center for Cultural Survival and Traditional Arts. Worked at a summer school with Wixárika teachers to develop and teach culture-based curriculum for 5-10-year-old Wixárika children in Jalisco, Mexico. Applied for grants and developed volunteer infrastructure for school.

### Workshops and lecture series

- 2022 **Food and plant preservation** | Members gallery talk | New York Botanical Garden.
- 2022 **Crops and Climate** | Plant whisperers adult continuing education class | New York Botanical Garden.
- 2022 **Ethnobotany: the study of plants and cultures** | Mellon Foodways Fellows | New York Botanical Garden.

### Guest lectures

- 2023 **Anthropology in Practice Lecture Series** | SUNY Oswego | Oswego, NY.
- 2023 **Domesticación y Feralidad** | Consecuencias genéticas y fenotípicas en el manejo de la *Brassica rapa* feral en México, Agrobiodiversidad, Universidad Nacional del Sur, Bahía Blanca | Argentina.
- 2022 **Ethnobotany** | Scientific Inquiry | St. John's University | Queens, NY.
- 2022 **Food security** | Biodiversity, Climate Change and the Political Process | The City College of New York, NY.
- 2022 **Domestication, dedomestication, and ethnobotany of *Brassica rapa*** | Domestication, Agriculture, and Ferality | Universidad Nacional del Sur | Bahía Blanca, Argentina.
- 2022 **Ethnobotany and climate change** | Making Climate Change | Yale University | New Haven, CT.
- 2021 **Traditional ecological management and sovereignty in Mexico, Canada, and Ethiopia** | Introduction to Ethnobotany | Drake University | Des Moines, IA.
- 2021 **Traditional plant management strategies** | Ethnoecology: Nature, Knowledge, and People. | University of Maryland, College Park, MD.
- 2021 **Traditional Plant Management: Ecology, Evolution, and Sustainability** | Graduate Student Science Communications | City University of New York | New York, NY.
- 2020-2021 **Domestication and Ongoing Selection on the Farm** | Food, Agriculture, and

- Society, 3 classes | Cornell University | Ithaca, NY.
- 2020 **Domestication and agrobiodiversity** | Current Topics in Plant Biology | City University of New York | New York, NY.
- 2020-2023 **Global cropping systems** | Introduction to Ethnoecology, 4 classes | Simon Fraser University | Vancouver, BC.
- 2019-2021 **Wild and managed edible plants** | Plants and People, 3 classes | Swarthmore University | Swarthmore, PA.
- 2020 **Medicinal Plants** | Place-Based Ecological Knowledge | Clark University | Worcester, MA.
- 2020 **Ethnobotany: the study of plants and cultures** | Senior environmental studies seminar | St. John's University | Queens, NY.
- 2018 **Traditional food systems** | Archaeology and Ethnobiology in Resource and Environmental Management | Wilp Wilxo'oskwahl Nisga'a Institute | Royal Roads University, Gitwinksihlkw, British Columbia.
- 2016-2017 **Traditional Agroecological Knowledge** | Foundations of Agroecology, 2 classes | UW-Madison.
- 2014-2016 **Ethnoecology and Traditional Ecological Knowledge** | Ethnobotany, 3 classes | UW-Madison.

## Mentorship

- Postdoctoral fellows:** Stefanie Ramos Bierge (2021-2024), Giulia Mattalia (2023-2024), Makenzie Mabry (2023-)
- Ph.D. student advisees:** Toni Johnson (City University of New York), Karam Sheban (Yale University)
- Master's student advisees:** Amani Rodriguez (Columbia University), Marco Zanghi (Columbia University)
- Graduate committee member:** Lucía Muñoz Sueiro (Columbia University)
- Undergraduate researchers** (\* = senior thesis): Maimuna Islam (2022), Chanti Max (2022), Gabriel Rosenstein (2022), Tina Le\* (2022), Calvin Heiman\* (2021). Josh Haberstroh (2017), Noah Bevers (2017), Elena Schmelzer (2017), Thi Le (2017), Ilhulpatchakatl Neubauer (2016), Megan Christensen (2015), Yingshan Deng (2015), Matthew Brodhead (2015), Tyler Keime (2015), Katie Mullan (2015), Rodrigo Indig (2014), AJ Hill (2014), Patrick O'Flaherty (2014), Sean Mcsweeney (2014), Rae Schira (2014), and Syd Midgorden (2014).
- Visiting scholars:** Jason Irving

## PRESS COVERAGE

### Press highlights

- 2023 **The Atlantic** | The Missing Piece of the Foraging Renaissance | June 6, 2023

- 2023 **Climate Wire** | Experts find modern climate resilience in ancient grains | Jan. 17
- 2022 **WIRED** | This Ancient Grain-Sowing Method Could Be Farming's Future | Oct. 29, 2022.
- 2022 **Inside Climate News** | The Botanic Matchmakers that Could Save Our Food Supply | Aug. 28, 2022.
- 2022 **Washington Post Magazine** | Ditch Your Grocery Store. Go Foraging Instead | Aug. 15, 2022.
- 2022 **CBC News** | New research shines light on how Nuchatlaht people cultivated plants in their territory | May 29, 2022.
- 2021 **National Geographic** | Answers to these botanical mysteries could help a climate-stressed world | Jun. 15, 2021.
- 2021 **Smithsonian Magazine** | Indigenous Peoples in British Columbia Tended 'Forest Gardens' | Apr. 29, 2021.
- 2021 **Popular Science** | 'Forest gardens' planted by Canada's Indigenous people before the 1800s still benefit ecosystems today | Apr. 27, 2021.
- 2021 **National Geographic** | 'Forest gardens' show how Native land stewardship can outdo nature | Apr. 23, 2021.
- 2021 **Science Magazine** | Pacific Northwest's 'forest gardens' were deliberately planted by Indigenous people | Apr. 22, 2021.
- 2021 **New York Times** | National Endowment for the Humanities Announces New Grants | Apr. 14, 2021.
- 2019 **ScienceDaily** | Mapping a vegetable family tree for better food  
<https://www.sciencedaily.com/releases/2019/07/190708154106.htm>.

### Additional press coverage

- 2023 **Atmos** | The Environmental Wisdom Encoded in Endangered Languages | November 22, 2023
- 2023 **Foodie Pharmacology Podcast** | Agrobiodiversity and climate resilience in Ethiopia with Dr. Alex McAlvay | November 6, 2023
- 2023 **Yale Environment Review** | Imagining the future of food with ancient answers | August 23, 2023
- 2023 **Ambrook Research** | Maslins, a Method of Planting Grains You've Probably Never Heard of | June 28, 2023
- 2023 **International Bakery Magazine** | An Enduring History | April 25, 2023
- 2023 **The Financial Express** | Mixing cereal species for stabilising crop yields | Jan. 24, 2023
- 2023 **Lifegate** | Maslin, uno studio valorizza la pratica di miscelare i semi di cereali per far fronte ai cambiamenti climatici. Feb. 15, 2023
- 2023 **European Scientist** | Agricultural innovation vital for climate-threatened food security and sustainability. Feb. 2, 2023

- 2023 **EnviroNewsBits** | Ancient farming strategy holds promise for climate resilience. Jan. 30, 2023
- 2023 **Agricultura & Mar** | Técnica agrícola com mais de 3.000 anos pode ajudar colheitas a sobreviverem às alterações climáticas. Jan. 22, 2023
- 2023 **Gizmodo** | Una técnica agrícola de hace más de 3000 años puede ayudar a las cosechas a sobrevivir al cambio climático. Jan. 16., 2023
- 2023 **Fanpage.it** | Un'antichissima tecnica agricola può salvare i raccolti dai cambiamenti climatici | Jan. 16, 2023
- 2023 **Science Alert** | Fluke Discovery of Ancient Farming Technique Could Stabilize Crop Yields, Jan. 16, 2023
- 2023 **New Atlas** | Study shows how mixed-grain crops can thrive where others falter | Jan. 16, 2023
- 2023 **Phys.org** | Ancient farming strategy holds promise for climate resilience | Jan. 12, 2023
- 2023 **Newslanes** | Fluke Discovery of Ancient Farming Technique Could Stabilize Crop | Jan. 16, 2023
- 2023 **Cornell Chronicle** | Ancient farming strategy holds promise for climate resilience, Jan. 12, 2023
- 2022 **Atlas Obscura** | Our Favorite Environment Stories of 2022 | Dec. 20, 2022.
- 2022 **CBC News** | How ancient forest gardens could impact Nuchatlaht First Nation's land claim | May 29, 2022.
- 2022 **New Scientist** | The surprising origin of sprouts, the vegetable we either love or hate | Dec. 14, 2022.
- 2022 **Undark** | Making the Case for the Revival of an Ancient Grain Tradition | Nov. 11, 2022
- 2022 **Mother Jones** | This Nearly Lost Ancient Grain Tradition Could Be the Future of Farming | Oct. 23, 2022.
- 2022 **Atlas Obscura** | This Nearly Lost Ancient Grain Tradition Could Be the Future of Farming | Oct. 13, 2022.
- 2022 **Civil Eats** | Meet the Researchers 'Decolonizing Botany' to Save Our Food Supply | Sept. 9, 2022.
- 2022 **Sierra Club BC** | Ancient Forest Gardens in Nuchatlaht ḥaḥuuliʔakʔi (Territory) Illuminate Hishuk'ish tsawalk (everything is one) nismà (land) and čaaʔak (water) Stewardship | May 24, 2022.
- 2022 **Perpetual Notion Machine** | WORT 89.9 FM Madison, WI | Crop diversity and crop wild relatives | Jan. 13, 2022.
- 2022 **UW-Madison News** | In a busy and productive 2021 for UW–Madison research, these stories stood out | Dec. 14, 2021.
- 2021 **Labroots** | A Look Back at the Evolution of Greens | Jul. 13, 2021.
- 2021 **NSF Research News** | Don't like your greens? Blame it on *Brassica* domestication | Jun. 22, 2021.

- 2021 **Phys.org** | A feral past could help chart the future for Brassica vegetables | Jun. 25, 2021.
- 2021 **The Frontier Post** | Study shows that many deep rooted vegetables come from same species | Jun. 22, 2021.
- 2021 **Atlas Obscura** | 'The Deep Roots of the Vegetable That "Took Over the World"' | Jun. 14, 2021.
- 2021 **Hakai Magazine** | Ancient gardens persist in British Columbia's forests | Jun. 9, 2021.
- 2021 **Morning AgClips** | Don't like your greens? Blame it on Brassica domestication | Jun. 7, 2021.
- 2021 **Scienmag** | Don't Like Your Greens? Blame It On Brassica Domestication | Jun. 4, 2021.
- 2021 **Quirks and Quarks (CBC News)** | How Indigenous science could help us with our sustainability and diversity crisis | June 4, 2021.
- 2021 **Bioengineer** | Don't like your greens? Blame it on Brassica domestication | Jun. 4, 2021
- 2021 Industry Update | Don't you like your greens? Blame the domestication of oilseed rape | Jun. 4 2021.
- 2021 **EurekAlert!** | Don't like your greens? Blame it on Brassica domestication | Jun. 4, 2021.
- 2021 **New York Botanical Garden Press Release** | Research Team Led by NYBG Scientist Identifies the Likely Original Relative of Many Food Crops, a Resource That Could Make Them More Environmentally Resilient | May 24, 2021
- 2021 **Miragenews** | First we tamed turnips. Then we turned them into bok choy and other veggies | May 20, 2021
- 2021 **Phys.org** | First we tamed turnips, then we turned them into bok choy and other veggies | May 20, 2021
- 2021 **SeedQuest** | First we tamed turnips - Then we turned them into bok choy and other veggies | May 19, 2021
- 2021 **UW-Madison News** | First we tamed turnips. Then we turned them into bok choy and other veggies | May 19, 2021
- 2021 **Arstechnica** | Indigenous forest gardens remain productive and diverse for over a century | May 18, 2021.
- 2021 **National Post** | Ancient Indigenous forest gardens still yield bounty 150 years later
- 2021 **Pro Science** | Лесные сады канадских индейцев | Apr. 30, 2021
- 2021 **The Tyee** | Unearthing the Work of Indigenous Master Horticulturalists | Apr. 28, 2021.
- 2021 **SFU News** | Ancient Indigenous forest gardens promote a healthy ecosystem | Apr. 22, 2021

- 2019 **EurekAlert!** | Tracing the roots: Mapping a vegetable family tree for better food [https://www.eurekalert.org/pub\\_releases/2019-07/uom-ttr070819.php](https://www.eurekalert.org/pub_releases/2019-07/uom-ttr070819.php) and
- 2019 **Fork and Life podcast** | Contributor to podcast about food and culture <https://www.forkandlifepodcast.com/>
- 2017 **ScienceDaily** | Archaeologists on the vanguard of environmental research | Feb. 26, 2017

## PROFESSIONAL SERVICE

### Advisory roles

- 2022- **Contributor**, Periodic Table of Food Initiative, Developing Regenerative Agriculture Ontologies.
- 2023- **Expert**, Regen10 Experts Network.

### Leadership roles in academic societies

- 2023- **President Elect**, Society for Ethnobotany (formerly Society of Economic Botany)
- 2021- **Executive board member: Secretary**, Society of Ethnobiology.
- 2021- **Alliance for Diversity and Inclusivity in Ethnobiology**, Society of Ethnobiology, Society for Economic Botany, and International Society of Ethnobiology.
- 2018 **Public relations officer**, Botanical Society of America.
- 2016-2019 **Board member and promotion and outreach coordinator: student engagement**, Society of Ethnobiology.
- 2011-2012 **Undergraduate outreach coordinator**, Society of Ethnobiology.

### Editor and reviewer for academic journals

- 2020-present **Editorial Board**, Journal of Ethnobiology and Ethnomedicine
- 2018-2023 **Associate Editor**, Journal of Ethnobiology
- 2018 **Guest Editor**, Journal of Ethnobiology | Special issue on Allyship, Activism, and Social justice in Ethnobiology | Journal of Ethnobiology.
- 2016-present **Ad-hoc reviewer for journals and federal grants** | Journal of Ethnobiology (8), Ethnobiology letters (2), Journal of Ethnobiology and Ethnomedicine (2), Frontiers in Sustainable Food Systems (1), Economic Botany (4), Climatic Change (2). Heredity (1), Agriculture and Human Values (1), Botanical Review (1), Current Opinion in Plant Biology (1), Ethnobotany Research and Applications (1), Journal of Agriculture and Food Research (1), Society and Natural Resources (1), Trends in Ecology and Evolution (2), Veterinary Medicine and Science (1), Basic and Applied Ecology (1), Sociolinguistics Studies (1), People and Nature (1).

### Reviewer for federal grants

2021-present **Ad-hoc reviewer** | Israeli Science Foundation (1)

### Institutional service

2022 **Strategic planning committees**, Transformational Ideation and Foundation Ideation (Exploration) committees | New York Botanical Garden.

2022 **Planning committee member**, Psychoactive Plants display | New York Botanical Garden

2021-2022 **Planning committee member**, Foodways: Around the Table exhibition | New York Botanical Garden.

2021-2022 **Planning committee member**, Indigenous Land Acknowledgement and Convening | New York Botanical Garden.

2021 **Judge**, Abundant Future: Cultivating Diversity in Garden, Farm, and Field | American Society of Botanical Artists New York Botanical Garden Triennial | New York Botanical Garden

2017 **Teaching and undergraduate committee**, Department of Botany | UW–Madison.

2015-2016 **Awards committee member**, Department of Botany | UW–Madison.

### Conference and symposium organization

2018 **Assistant organizer**, Joint meeting of the Society for Economic Botany and Society of Ethnobiology.

2016 **Assistant organizer**, Wirikuta Weekend Academic Forum.

2016 **Assistant organizer**, First Annual Wisconsin Medicinal Plant Symposium.

2015 **Assistant organizer**, New International Historical Ecology Community.

2011 **Volunteer**, Society for Applied Anthropology.

### Conference session chair and session organizer

2021 **Session chair**, Botanical Society of America | Darwins' reversals: What we now know about Feralization and Crop Wild Relatives | Virtual.

2021 **Session chair**, Society of Ethnobiology | Traditional Ecological Knowledge | Virtual.

2018 **Session chair**, Botanical Society of America | Crop wild relatives and domestication | Rochester, MN, USA.

2018 **Session chair**, Society of Ethnobiology | Ethnobotany | Madison, WI, USA.

2017 **Session organizer and chair**, Society of Ethnobiology | Solidarity, Allyship, & Justice in an "Applied" Ethnobiology | Montreal, QC, Canada.

2016 **Session Moderator**, Society of Ethnobiology | Hosted session on

Landscape Management and Agriculture.

## ENGAGEMENT AND OUTREACH

### Non-profit

- 2018- **Volunteer, native-lands.ca**, Contributor to mapping effort to raise awareness of traditional Indigenous territories.
- 2014-2022 **Board member, Herbal Anthropology Project**, Organizing projects, assisting with grant-writing, documenting traditional plant knowledge.
- 2010 **Supporter, Black Mesa Indigenous Support**, Acted as land rights and human rights observer on Diné territory while living with elders.
- 2010 **Teacher, grant writer, and volunteer coordinator, Huichol Center for Cultural Survival and Traditional Arts**, Taught culture-based curriculum to 5-10-year-old Wixárika (Huichol) children. Applied for grants and developed volunteer infrastructure.
- 2009-2010 **Student Representative**, Schome Arboretum Board of Governors.
- 2004-2008 **Washington Native Plant Stewardship Program**, Washington Native Plant Society.

### Community engagement

- 2023 **Farmer radio** | Traditional Grain Mixture Project featured on Ethiopian Radio Show on Dessie Fana 96.0 FM which reaches millions of farmers in the Amhara region.
- 2023 **Booth presenter** | Presented on local wild edible plants to the public as part of the New York Botanical Garden's Fall Forest Weekend event.
- 2022 **Workshop** | Co-hosted a networking workshop on cultural ecosystems in the Pacific Northwest of North America with researchers and representatives from Tseshaht and Sts'ailes Canadian First Nations, and Quinault, Muckleshoot, and Nooksack U.S. Tribal Nations, and various non-native researchers | Sts'ailes, Canada.
- 2022 **Workshop** | Co-hosted Ethnobotany and linguistics two-day workshop for the Department of Applied Linguistics at the Autonomous University of Nayarit | Tepic, Mexico.
- 2022 **Workshop** | Shinnecock Culture Camp Youth Event | The Shinnecock Ethnobotany Project hosted the Shinnecock Culture Camp, a summer youth group, for a day to share about the plants on the Nation's territory and their traditional uses | Shinnecock Nation, NY
- 2021 **Workshop leader** | Shinnecock Ethnobotany Program | Organized workshop to train members of the Shinnecock Nation in plant specimen collection, pressing, and curation.
- 2020 **Volunteer** | Lehman Alternative Community School Teach-In | We are this



- place: when people are necessary for environmental health | Lehman Alternative Community School, Ithaca, NY.
- 2017-2018 **Volunteer** | Indigenous Arts and Sciences program | Taught two workshops with Ho-Chunk middle schoolers during STEM visits | University of Wisconsin-Madison.
- 2015-2018 **Volunteer** | Pre-college Enrichment Opportunity Program for Learning Excellence | Taught four ethnobotany workshops for prospective first-generation STEM college students | University of Wisconsin-Madison.
- 2014-2016 **Workshop volunteer**, Rarámuri Traditional Edible Plant Workshop, 2 workshops
- 2013/2014 **Booth coordinator** | Darwin Day Outreach Event | Coordinated and manned a booth about evolution at the UW-Madison Darwin Day event.
- 2013 **Science fair mentor** | Madison Middle School Science Symposium | Mentored a 7<sup>th</sup>-grader with his project on Mangrove ecosystem services.
- 2016 **Educational garden designer** | Centro Hispano | Designed and established an educational medicinal plant garden and traditional Mexican demonstration farm at a non-profit Latino resource center in Madison, WI.
- 2014 **Educational garden designer** | Sidama medicinal plant garden | Established a garden of medicinal plants on the UW-Madison campus.
- 2008 **Co-presenter** | Lilawagila School | Helped lead Dzawada’enuxw First Nation elementary students on an educational tour of traditional salt-marsh gardens.
- 2004 **Educational garden designer** | Mercer Island Library | Designed and established a Pacific Northwest ethnobotany garden.

### Podcasts, blogs, interviews, Wikipedia, and social media engagement

- 2023 **Plant Talk** | NYBG Scientists Working at the Nexus of Food Security, Plant Biodiversity, and the Climate Crisis. November 29, 2023
- 2022 **Wikipedia article** | Contributed to Wikipedia article on Wisconsin Fast Plants (*Brassica rapa*)
- 2022 **Plant Talk** | East End Story: Protecting Shinnecock Plant Knowledge and Biodiversity on Long Island” | July 27, 2022
- 2021 **National Museum of the Federal University of Rio de Janeiro Social Media** | Decolonizing Institutions, Projects, and Scholarship in Ethnobiology <https://www.instagram.com/p/CTkSGa-nlBx/> | Sept. 9, 2021
- 2019 **Decolonial Anthropology Project YouTube channel** | David Berga | [https://www.youtube.com/watch?v=rToPmohva\\_g](https://www.youtube.com/watch?v=rToPmohva_g)

## LANGUAGES

**English** (Native proficiency) | **Spanish** (Professional working proficiency) | **Mongolian, Japanese, Amharic, Mandarin, Italian** (Elementary proficiency).

