

MEGAN MUCIOKI

Assistant Research Professor, The Pennsylvania State University

Social Science Research Institute

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EDUCATION

- 2015 **Doctor of Philosophy** Department of Plant Science (social ecological systems). McGill University Montreal, Quebec.
Dissertation: Constructing seed sustaining farms with informal seed systems and crop diversity in semi-arid Kenya
Supervisor: Dr. Timothy Johns
- 2011 **Master of Science** School of Environmental Studies (ethnobotany). University of Victoria, Victoria, British Columbia
Supervisor: Dr. Nancy Turner
- 2009 **Bachelor of Science** Biology (botany) Ohio Northern University Ada, Ohio.
- 2008 **International exchange** (Indigenous studies). James Cook University Cairns, Queensland, Australia

RESEARCH RELATED WORK EXPERIENCE

- 2020-present **Assistant Research Professor** Social Science Research Institute, The Pennsylvania State University
- 2020-2021 **Research consultant** Dept. of Environmental Science, Policy and Management, University California at Berkeley
- 2015-2020 **Post-doctoral Researcher** Tribal food security and agroecosystem resilience. Dept. of Environmental Science, Policy and Management, University California at Berkeley

PUBLICATIONS

Peer-reviewed journal articles

- 2021 **Mucioki, M.**, Sowerwine, J., Sarna-Wojcicki, D., Lake, F.K., and Bourque, S. Conceptualizing Indigenous Cultural Ecosystem Services (ICES) and Benefits under Changing Climate Conditions in the Klamath River Basin and Their Implications for Land Management and Governance. *Journal of Ethnobiology*, 41(3): 313-330.

- 2019 Sowerwine, J., Sarna, D., **Mucioki, M.**, Hillman, L., Lake, F., Friedman, F. Enhancing Indigenous food sovereignty: a 5-year collaborative tribal-university research and extension project in California and Oregon. *Journal of Agriculture, Food Systems and Community Development*, 9(B), 167-190.
- 2019 (*co-lead author with Sowerwine*) Sowerwine, J., **Mucioki, M.**, Sarna, D., and Hillman, L. Reframing food security by and for Native American communities: A case study among Tribes in the Klamath River Basin of Oregon and California. *Food Security*, 11(3): 579-607.
- 2018 **Mucioki, M.**, Pelletier, B., Johns, T., Muhammad, L.W., and Hickey, G.M. (2018). Chronic household seed insecurity in semi-arid Kenya: a case study considering seed and food policy. *Food Security*, 10(3): 571-587.
- 2018 **Mucioki, M.**, Sowerwine, J., and Sarna, D. (2018). Thinking inside and outside the box: local and national considerations of the Food Distribution Program on Indian Reservations (FDPIR). *The Journal of Rural Studies*, 57: 88-98.
- 2016 **Mucioki, M.**, Hickey, G.M., Muhammad, L., and Johns, T. (2016). Supporting farmer participation in formal seed systems: Lessons from Tharaka, Kenya. *Development in Practice*. 26:2, 137-148.
- 2015 **Mucioki, M.**, Johns, T., Muriithi, C., and Hickey, G. (2015). The influence of gender roles and human migrations on the distribution of crop biodiversity in Tharaka, Kenya. *The Journal of Ethnobiology*. 36(1):172-191.
- 2014 **Mucioki, M.**, Mucioki, S.K., and Johns, T. (2014). Intraspecific diversity and seed management of pearl millet (*Pennisetum glaucum* (L.) R. Br) in Tharaka, Kenya: a persistent and valued traditional food crop. *Economic Botany*. 68(4), 397-409.
- 2013 **Dilbone, M.**, Turner, N.J., and von Aderkas, P. (2013). Lodgepole Pine Cambium (*Pinus contorta* Dougl. Ex Loud var. *latifolia* Engelm. Ex S. Wats.): A Springtime First Peoples' Food in British Columbia. *Ecology of Food and Nutrition*. 52(2), 130-147.

Publications in submission

- 2021 **Mucioki, M.**, Sowerwine, J., Sarna-Wojcicki, D., McCovey, K., and Bourque, S.D. Integrating Indigenous Knowledge with Species Distribution Models to understand and predict the effect of historical forest management and climate stressors on the viability of culturally significant species. Submitted to *Society and Natural Resources*.

- 2021 The Intertribal Agriculture Council, Hoover, E., Sowerwine, J, **Mucioki, M.** Native American agriculture and food systems: challenges and opportunities presented by the COVID-19 pandemic. Submitted to *Agriculture and Human Values*

Book chapters

- 2016 **Mucioki, M.**, Johns, T., and Mucioki, S. (2016). Gendered food-and-seed-producing traditions for pearl millet (*Pennisetum glaucum* (L.) R. Br) and sorghum (*Sorghum bicolor* (L.) Moench) in Tharaka-Nithi County, Kenya. (pp 73-89). In Brownhill, L., Njuguna, E., Bothi, K.L., B. Pelletier, Muhammad, L., and Hickey, G.M. (Eds.) *Food Security, Gender and Resilience: Improving Smallholder and Subsistence Farming*. Earthscan/Routledge: Oxford, United Kingdom.

Reports, policy briefs, and other non-peer reviewed

- 2021 **Mucioki, M.**, Sarna-Wojcicki, D., Sowerwine, J., McCovey, K., and Bourque, S.D. Keeping a Detailed Record of the Changing Climate Could Save This Tribe's Foodways. *Civil Eats*. <https://civileats.com/2021/10/08/keeping-a-detailed-record-of-the-changing-climate-could-save-this-tribes-foodways/>
- 2021 Chi, G., Holen, D., Randall, H., **Mucioki, M.**, and Napolitano, R. Rural Alaska has a bridge problem as permafrost thaws and crossing river ice gets riskier with climate change. *The Conversation*. <https://theconversation.com/rural-alaska-has-a-bridge-problem-as-permafrost-thaws-and-crossing-river-ice-gets-riskier-with-climate-change-169345>
- 2021 **Mucioki, M.**, Hoover, E., Sowerwine, J., and Intertribal Agriculture Council. *IAC Report on the Impact of COVID-19 on Tribal Producers and Communities and Opportunities to Strengthen their Resilience*. Berkeley, CA: University of California at Berkeley.
- 2019 Sowerwine, J., **Mucioki, M.**, Hillman, L., Sarna-Wojcicki, D. (2019). *Policy Brief: Restoring Access to Native Foods Can Reduce Tribal Food Insecurity*. Berkeley, CA: University of California at Berkeley.
- 2019 Sowerwine, J., **Mucioki, M.**, Friedman, E., Hillman, L., and Sarna-Wojcicki, D. (2019). *Food Security Assessment of Native American Communities in the Klamath Basin with the Karuk Tribe, Klamath Tribes, Yurok Tribe, and Hoopa Tribe*. Karuk-UC Berkeley Collaborative. Berkeley, CA: University of California at Berkeley.
- 2019 **Mucioki, M.** *Celebrating the work of the Society of Ethnobiology's Graduate Fellowship Winners*. (2019). Forage! Blog. The Society of Ethnobiology.

- 2019 **Mucioki, M.** *Spring workshop at the UC-Jepson Herbaria to expand our collection skills and the Karuk Herbarium.* Karuk-UC Berkeley Collaborative Newsletter.
- 2018 **Mucioki, M.** *Revitalizing native food systems and supporting food security through collaborative research in the Klamath River Basin.* (2018). Forage! Blog. The Society of Ethnobiology.
- 2018 **Mucioki, M.,** Sowerwine, J., Sarna, D, and The Karuk Tribe. (2018). *Policy Brief: Integrating traditional and local foods into the tribal commodities program.* Berkeley, CA: University of California at Berkeley.
- 2018 **Mucioki, M.,** Sowerwine, J., Preston, M.D. (2018). *Policy Brief: Making WIC more accessible to Native American families in remote regions of the middle and lower Klamath River Basin in California.* Berkeley, CA: University of California at Berkeley.
- 2016 The Yurok Tribe, **Mucioki, M.,** and Sowerwine, J. (2016). *Klamath Basin Food System Assessment: Yurok Tribe Data Summary.* Klamath, California and Berkeley, California: Yurok Tribe and University of California at Berkeley.
- 2016 The Karuk Tribe, **Mucioki, M.,** and Sowerwine, J. (2016). *Klamath Basin Food System Assessment: Karuk Tribe Data Summary.* Orleans, California and Berkeley, California: Karuk Tribe and University of California at Berkeley.
- 2016 The Klamath Tribes, **Mucioki, M.,** and Sowerwine, J. (2016). *Klamath Basin Food System Assessment: Klamath Tribes Data Summary.* Chiloquin, Oregon and Berkeley, California: Yurok Tribe and University of California at Berkeley.
- 2016 **Mucioki, M.** (2016). Learning about your herbaria: a special collection of plants. Karuk Tribe K-12 Curriculum. Grade 8, Lesson 5.
- 2015 **Mucioki, M.** (2015). Learning about your herbaria: a special collection of plants. Karuk Tribe K-12 Curriculum. Grade 5, Lesson 5.
- 2013 **Dilbone, M.** (2013). Pearl Millet Diversity in Tharaka-Nithi County, Kenya. *InRef News, KARI-McGill Innovations for Resilient Farm Systems.* Issue 3.
- 2013 **Dilbone, M.** (2013). Humble pine provides springtime treats. *Williams Lake Tribune, Casual Country Edition.* 93-95.

SELECT PRESENTATIONS

- 2021 *Conceptualizing Indigenous Cultural Ecosystem Services (ICES) and benefits under changing climate conditions in the Klamath River Basin*

and its implications for land management and governance. The Society of Ethnobiology. Indigenous People and Local Communities and Climate Change. (accepted for May 12-15). Virtual.

- 2019 *Reframing food security by and for Native American communities: A case study among Tribes in the Klamath River Basin of Oregon and California.* Association of the Study of Food and Society/ Agriculture, Food, and Human Values Society Annual Meeting. (June 26-29). Anchorage, Alaska.
- 2019 *Karuk Agroecosystem Resilience and Cultural Foods and Fibers Revitalization Initiative: Xúus Nu'éethi – We Are Caring For It.* Association of the Study of Food and Society/ Agriculture, Food, and Human Values Society Annual Meeting. (June 26-29). Anchorage, Alaska.
- 2019 *Karuk Agroecosystem Resilience and Cultural Foods and Fibers Revitalization Initiative: Xúus Nu'éethi – We Are Caring For It.* The Society for Economic Botany Annual Meeting. (June 2-6). Cincinnati, Ohio.
- 2017 Klamath River Basin Food Security Assessment: Data from Karuk households. (Nov. 15). Orleans, CA.
- 2016 An introduction to plant pressing. Karuk Youth Culture Camp. (August 25). Happy Camp, CA
- 2016 Ethnobotany and herbarium collections. Yurok Language Immersion Camp. (July 30). Tully Creek, CA
- 2016 *Native Food Sovereignty in the Klamath Basin of Oregon and California.* Association of Geographers Annual Meeting. (March 29-April 3). San Francisco, CA.
- 2015 *Integrating western science with traditional ecological knowledge to revitalize Native food resources and wisdom.* California Indian Conference (October 15-17). Berkeley, CA
- 2014 *Building seed sustaining households.* African CIFS RF Symposium (June 23-27). Nairobi, Kenya
- 2014 *Intraspecific diversity and seed security.* KARI-McGill Knowledge Integration Conference (June 19). Nairobi, Kenya
- 2013 *Local seed, certified seed, and resource poor farming systems: the role of variety access and variety utilization in Tharaka County, Kenya.*

- Semi-annual food security KARI conference (February 19). Nairobi, Kenya.
- 2012 Lodgepole pine cambium: a spring treat of Chilcotin First Peoples. Introduction to Ethnoecology. (March 4). University of Victoria.
- 2011 Place based knowledge and foods of Central British Columbia. Introduction to Ethnoecology. (December 1). University of Victoria

GRANTS AND AWARDS

- 2021 NSF EAGER SAI (Co-PI) entitled *Collaborative Research: Bridging the Arctic: Community-Driven Innovation for Resilient Bridges in Rural Alaska Communities*. \$300,000
- 2021 SSRI seed-grant (Co-PI) entitled, *Mobility Patterns and Their Influence on Food Security in Alaskan Communities: Using Digital Trace Data for Social and Behavioral Research during the COVID-19 Pandemic* awarded through the COVID-19 Pandemic Emergency Research Funding in Social and Behavioral Sciences Request for Proposals. \$30,000.
- 2021 NSF Research Experience for Undergraduates Supplement. \$9,000.
- 2018-2022 *Karuk Agroecosystem Resilience and Cultural Foods and Fibers Revitalization Initiative: xúus nu'éethi – we are caring for it*. AFRI-USDA grant. \$1.2 million
- 2011-2014 International Development Research Centre Canada Fellowship. \$60,000.
- 2012-2013 International Development Research Centre Canada Field Work Fellowship. \$25,000.
- 2011-2014 Graduate Excel Fellowship. McGill University. \$15,000.
- 2009-2011 Pacific Century Award. University of Victoria. \$18,000.
- 2007 Travel Grant. AustralLearn. \$1000.
- 2007 Travel Grant. Ohio Northern University. \$500.
- 2005-2009 Entrance Scholarship. Ohio Northern University. \$40,000.

TEACHING AND MENTORSHIP EXPERIENCE

- 2021-present Supervising and mentoring undergraduate and graduate research assistants at Penn State University
- 2018-2020 Supervising and mentoring undergraduate research assistants at UC Berkeley through the SPUR program
- 2015-2020 Community trainings on the Tribal Herbaria University-Jepson Herbaria, Karuk Tribe, Yurok Tribe

2015-2020	Community food focused workshops for Native adults and youth Karuk Tribe Orleans, CA
2009-2011	Ecological Processes School of Environmental Studies, University of Victoria. Primary instructor for labs.
2010	Ethnoecology School of Environmental Studies, University of Victoria. Teaching assistant
2008-2009	Plant Systematics Biology Department. Ohio Northern University. Teaching assistant

SERVICE AND PROFESSIONAL MEMBERSHIPS

2020	Panelist for “How to be a successful SPUR Applicant” for undergraduate students at UC Berkeley.
2020-present	Peer Reviewer <i>Agriculture and Human Values</i>
2019-present	Member of the Society of Ethnobiology
2019-present	Editor of <i>Forage!</i> by the Society of Ethnobiology
2019-present	Member of Earth Science Women’s Network
2018-2019	Contributing editor of <i>Forage!</i> by the Society of Ethnobiology
2017-present	Peer Reviewer <i>Food Security</i>
2015-present	Peer Reviewer <i>Development in Practice</i>
2015-2019	Student Editor <i>Economic Botany</i>
2011	Society of Ethnoecology Conference volunteer Victoria, British Columbia.

LANGUAGES

Swahili (functional knowledge)
Spanish (elementary knowledge)

FIELD EXPERIENCE AND COLLABORATIONS

- Klamath River Basin of Northern California and Southern Oregon in
collaboration with Karuk, Yurok, and Klamath Tribes;

- The Intertribal Agriculture Council (national representation of Tribes and Nations);
- Kenya;
- British Columbia Canada in collaboration with Tsilhqot'in First Nations;
- Ecuador