

# Lisbeth A. Louderback

Anthropology Department, University of Utah  
260 Central Campus Drive, Suite 4447  
Salt Lake City, Utah 84112  
(801) 585-2634

[llouderback@anthro.utah.edu](mailto:llouderback@anthro.utah.edu)  
[Archaeobotany Lab](#)

## CURRENT POSITION

Curator of Archaeology, Natural History Museum of Utah  
Associate Professor, Anthropology Department, University of Utah  
President, Great Basin Anthropological Association

## EDUCATION

<b>Ph.D.</b> , Anthropology, University of Washington	2014
<b>M.A.</b> , Anthropology, University of Washington	2009
<b>M.A.</b> , Anthropology, University of Nevada Reno	2007
<b>B.A.</b> , Psychology and Biology, Mills College	1999

## SELECTED FELLOWSHIPS, AWARDS & HONORS

Great Basin Anthropological Association Presidential Award	2023
CSBS Award for Advancing Equity and Connecting Communities	2023
CSBS Junior Faculty Research Leave Award, University of Utah	2019
Niles Research Fellowship, University of Washington	2014
Graduate School Presidential Dissertation Fellowship, University of Washington	2014
Denise Gaudreau Award for Excellence in Quaternary Studies, AMQUA	2012
Yeager Award for Scholarly Excellence in Archaeology, University of Washington	2012
Yeager Award for Scholarly Excellence in Archaeology, University of Washington	2010
Graduate Opportunities and Minority Achievement Program (GOMAP) Fellowship, Anthropology Department, University of Washington	2006 - 2009
Johnathan O. Davis Scholarship, Desert Research Institute	2006
General Frederick Lander Endowment for Native Americans, Desert Research Institute	2006
Herbert Splatt Scholarship, University of Nevada, Reno	2005
Graduate Student Association Research Award, University of Nevada, Reno	2006
AM-ARCS of Nevada Scholarship	2005

## PUBLICATIONS

\*indicates undergraduate, graduate, or postdoc student author

### Peer-Reviewed:

Pavlik, B.M., del Rio, A., Bamberg, J., and **Louderback, L.A.** (Under Review) Evidence for human-caused founder effect in populations of *Solanum jamesii* at archaeological sites: II. Genetic sequencing establishes ancient transport from the Mogollon Region. *American Journal of Botany*.

Wilks, S.\*, **Louderback, L.A.**, Simper, H., Cannon, W. (Under Review) Geophyte starch granules on open-air bedrock metates in uplands of Warner Valley, Oregon, USA. *American Antiquity*.

- Wilks, S.\*, Paredes, S.\*, and **Louderback, L.A.** (In press) Starch granule yields from open-air metates unaffected by environmental contamination. *American Antiquity*.
- Roberts, H., **Louderback, L.A.**, Hardin, K. (2024) The Hotbed Site: A Basketmaker II Women's Retreat for Birthing or Menarche in Southwestern Utah. *Journal of California and Great Basin Anthropology* 43(2): 3-16.
- Bamberg, J., del Rio, A., Kinder, D., **Louderback, L.A.**, Pavlik, B.M., Fernandez, C. (2023) Mother Tubers of Wild Potato *Solanum jamesii* can make shoots five times. *American Journal of Potato Research* <https://doi.org/10.1007/s12230-023-09927-1>
- Wilks, S.\* and **Louderback, L.A.** (2023) Identification of starch granules on ground stone tools exposed to fire. *Journal of Archaeological Science: Reports* 48: 103923  
<https://doi.org/10.1016/j.jasrep.2023.103923>
- Louderback, L.A.**, Wilks, S.\*, Herzog, N.M., Brown, G.H., Joyce, K.T.\*, Pavlik, B.M. (2022) Morphometric Identification of Starch Granules from Archaeological Contexts: Diagnostic Characteristics of Seven Major North American Plant Families. *Frontiers in Earth Science*, <https://doi.org/10.3389/feart.2022.897183>
- Louderback, L.A.** (2022) Climate-driven Dietary Change on the Colorado Plateau, USA and Implications for Gender-specific Foraging Patterns. *American Antiquity* 87(1): 1-17.  
<https://doi.org/10.1017/aaq.2021.122>.
- Joyce, K.T.\*, **Louderback, L.A.**, Robinson, E. (2022) Direct Evidence for Geophyte Exploitation in the Wyoming Basin. *American Antiquity* 87(2): 236-247.  
<https://doi.org/10.1017/aaq.2021.115>
- Pavlik, B.M., Baker, M.\*, Bamberg, J., del Rio, A., Kinder, D., and **Louderback, L.A.** (2021) Evidence for human-caused founder effect in populations of *Solanum jamesii* found at archaeological sites: I. Breeding experiments and the geography of sexual reproduction. *American Journal of Botany* 108(9): 1808-1815. <https://doi.org/10.1002/ajb2.1737>
- Kinder, D.K., Bamberg, J., **Louderback, L.A.**, Pavlik, B.M., del Rio A. (2021) *Solanum jamesii*: a wild potato found in the desert SW (USA) used by ancestral populations. In *Solanum tuberosum, a Promising Crop for Starvation Problem*, Yildiz, M. (Ed). IntechOpen, London, UK.
- Bamberg, J. del Rio, A., **Louderback, L.A.**, Pavlik, B.M. (2021) Assessing SNP heterozygosity in potato (*Solanum*) species— bias due to missing and non-allelic genotypes. *American Journal of Potato Research*. <https://doi.org/10.1007/s12230-021-09846-z>
- Pavlik, B.M., **Louderback, L. A.**, Vernon, K. B., Yaworsky, P. M., Coddling, B. F. Wilson C., Clifford, A. (2021) Plant species richness at archaeological sites suggests enduring ecological legacy of Indigenous subsistence on the Colorado Plateau, USA. *Proceedings of the National Academy of Sciences* 118(21): 1-5. <https://doi.org/10.1073/pnas.2025047118>
- Coddling, B.F., Coltrain, J.B., **Louderback, L.A.**, Vernon, K.B.\*, Yaworsky, P.M.\*, Brewer, S., Spangler, J.D. (2021) Socioecological Dynamics Structuring the Spread of Farming in the North American Basin-Plateau Region. *Environmental Archaeology*, <https://doi.org/10.1080/14614103.2021.1927480>

- Wilks, S.L.\*, **Louderback, L.A.**, Boomgarden, S.A. (2021) Starch Granule Size and Morphology as a Proxy for Water Regime Influence on *Zea mays*. *Ethnobiology Letters* 12(1): 35-43.  
<https://doi.org/10.14237/ebl.12.1.2021.1725>
- Rhode, D., **Louderback, L.A.**, Brugger, S.\* (2021) Holocene subalpine woodland dynamics in Big Cottonwood Canyon, Wasatch Mountains, Utah, USA. *The Holocene* 31(3): 502-510.  
<https://doi.org/10.1177/0959683620972761>
- Brown, G.H.\*, **Louderback, L.A.** (2020) Identification of Starch Granules from Oak and Grass Species in the central coast of California. *Journal of Archaeological Sciences: Reports* 33 (DOI: [10.1016/j.jasrep.2020.102549](https://doi.org/10.1016/j.jasrep.2020.102549))
- Louderback, L. A.**, Kiahtipes, C. A., Janetski, J. C. (2020) Holocene vegetation and climate change on the Colorado Plateau in southern Utah, USA. *Quaternary Research* 94: 31-45.  
<http://dx.doi.org/10.1017/qua.2019.80>.)
- Louderback, L.A.** and Pavlik, B.M. (2018) Integrating Modern Vegetation and Ethnographic Data to Understand Dietary Choices in the Past: the Case of the Southern Paiute, Utah. *Human Ecology* 46: 897-908. (<https://doi.org/10.1007/s10745-018-0040-9>)
- Herzog, N.M., **Louderback, L.A.**, Pavlik, B.M. (2018) Effects of cultivation on tuber and starch granule morphometrics of *Solanum jamesii* and implications for interpretation of the archaeological record. *Journal of Archaeological Science* 98: 1-6.  
<https://doi.org/10.1016/j.jas.2018.07.014>)
- Louderback, L.A.** and Pavlik, B.M., (2017) Starch granule evidence for the earliest potato use in North America. *Proceedings of the National Academy of Sciences* 114(29): 7606-7610.  
<http://www.pnas.org/content/114/29/7606.full>)
- Herzog\* N.M., Baker\* M., Pavlik B.M., Beck, K., Creer, S., **Louderback L.A.**, (2017) A multi-proxy approach to archaeobotanical research: Archaic and Fremont diets, Utah. *Journal of Archaeological Research: Reports*, 15, 169-178.  
<http://www.sciencedirect.com/science/article/pii/S2352409X1730161X>)
- Louderback, L.A.**, Herzog\*, N.M., Pavlik, B.M. (2017) A New Approach to Identifying Starch Granules of Wild Food Plants from Arid Western North America. *Starch: Stärke*. 68, 1-7  
<http://onlinelibrary.wiley.com/doi/10.1002/star.201600167/full>).
- Bamberg, J., Del Rio, A., Kinder, D., **Louderback, L.**, Pavlik, B., Fernandez, C. (2016) Core Collections of Potato (*Solanum*) Species Native to the USA. *American Journal of Potato Research*, 1-8  
<http://link.springer.com/article/10.1007/s12230-016-9536-2>).
- Louderback, L.A.**, Field, J., Janetski, J.C. (2015) Curation Practices and Extraction Methods in Relation to Starch Grain Yields from Ground Stone Artifacts. *Journal of Archaeological Science: Reports*, 4, 535-540. ([doi:10.1016/j.jasrep.2015.10.011](https://doi.org/10.1016/j.jasrep.2015.10.011))
- Louderback, L.A.**, Rhode, D., Madsen, D.B., Metcalf, M. (2015) Rapid Vegetation Shifts in the Uinta Mountains (Utah and Wyoming, USA) during the Late Pleistocene and Holocene. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 438, 327-343.  
[doi:10.1016/j.palaeo.2015.08.026](https://doi.org/10.1016/j.palaeo.2015.08.026)).

- Rhode, D. and **Louderback**, L.A. (2015) Bonneville Basin Environments during the Pleistocene-Holocene Transition. In *The Paleoarchaic Occupation of the Old River Bed Delta*, D. Madsen, D. Schmitt and D. Page (Eds.) University of Utah Press, Salt Lake City.
- Louderback**, L.A., Pavlik, B.M. and Spurling, A.M. (2013) Ethnographic and Archaeological Evidence Corroborating *Yucca* as a Food Source, Mojave Desert, USA. *Journal of Ethnobiology* 33, 281-297. (<http://www.bioone.org/doi/abs/10.2993/0278-0771-33.2.281>)
- Louderback**, L.A., Grayson, D.K., Llobera, M. (2011) Holocene Climates and Human Population Densities in the Great Basin, Western USA. *The Holocene* 21, 366-373. (<http://journals.sagepub.com/doi/abs/10.1177/0959683610374888>).
- Benson, L.V., Lund, S.P., Smooth, J.P., Rhode, D.E., Spencer, R.J., Verosub, K.L., **Louderback**, L.A., Johnson, C.A., Rye, R.O., Negrini, R.M. (2011) The Rise and Fall of Lake Bonneville between 45 and 10.5 ka. *Quaternary International*, 235, 57-69 (<http://www.sciencedirect.com/science/article/pii/S1040618210004829>).
- Louderback**, L.A. and Rhode, D. (2009) 15,000 Years of Vegetation Change in the Bonneville Basin: The Blue Lake Pollen Record, *Quaternary Science Reviews*, 29, 1-19 (<http://www.sciencedirect.com/science/article/pii/S0277379108002680>).
- Rhode, D. and **Louderback**, L.A. (2007) Dietary Plant Use in the Bonneville Basin during the Terminal Pleistocene-Early Holocene Transition. In K.E. Graf and D.N. Schmitt, *Paleoindian or Paleoarchaic? Great Basin Human Ecology at the Pleistocene-Holocene Transition*, pp. 231-247. University of Utah Press, Salt Lake City.

#### Popular Magazines:

- Louderback**, L.A. (2019) Ancient Four Corners Potato. *Archaeology Southwest* (<https://www.archaeologysouthwest.org/product-category/archaeology-southwest-magazine/>)
- Pavlik, B.M, Wilson, C., Bamberg, J., delRio, A., **Louderback**, L. (2019) The Archaeology of Potatoes: Understanding the transition from wild to domesticated to market. *Potato Grower Magazine* (<https://www.potatogrower.com/2019/01/the-archaeology-of-potatoes>)
- Louderback**, L.A., Rhode, D., Madsen, D.B., Metcalf, M. (2016) Uinta Mountains and Lakes: Sensitive Indicators of Climate Change. *Mountain Views: Chronicles of the Consortium for Integrated Climate Research in Western Mountains*, Vol. 10, 49-51. (<http://www.fs.fed.us/psw/cirmount/publications/mtnviews.shtml>)

#### RESEARCH GRANTS & CONTRACTS

- |  |      |
|--|------|
| The Lorentz Center (Netherlands) (award total: <b>€35,000.00</b> )<br>“Archaeological Starch Research at 25: Pitfalls, Progress, and Potential”<br>PI: Amanda Henry, Co-PI(s): Lisbeth Louderback, Li Lui, Juanjo Garcia-Granero | 2024 |
| U of U Academic Affairs: Group Teaching Grant (award total: <b>\$1,500.00</b> )<br>“Visualizing the Anatomy of Plants in 3D”<br>PI: Lisbeth Louderback Co-PI(s): Andrea Brunelle, Mitchell Power, Jennifer Watt                  | 2023 |

Lincoln County Archaeological Initiative (award total: <b>\$150,000.00</b> ) “An Examination of Settlement and Subsistence Patterns in the Mt. Irish Range using Starch Granule Analysis and Botanical Surveys” PI: Dayna Tinsley, Co-PI(s): Lisbeth Louderback	2023 - 2025
BLM Oregon (award total: <b>\$66,000.00</b> ) “Determining the Spatial and Temporal Extent of Geophyte Use in the Fort Rock Basin” PI: Lisbeth Louderback, Co-PI: Stefania Wilks	2023 – 2025
URC Faculty Research and Creative Grants (award total: <b>\$6,000.00</b> ) “Re-examining Pollen Aggregates as Cultural Indicators” PI: Andrea Brunelle and Lisbeth Louderback	2022 - 2023
Bureau of Reclamation (BOR) (award total: <b>\$388,218.00</b> ) “Curating BOR Collections” PI: Glenna Nielsen-Grimm. Co-PI(s): Lisbeth Louderback.	2021 - 2026
SITLA and HRA, Inc. (contract total: <b>\$35,440.00</b> ) “Archaeobotanical Services for Sand Hollow Project” PI: Lisbeth Louderback	2021 - 2022
BLM Utah (award total: <b>\$77,568.00</b> ) “Curation Assistance for Cerberus Collection” PI: Lisbeth Louderback. Co-PI(s): Glenna Nielsen-Grimm	2020 - 2022
BLM Oregon (award total: <b>\$65,000.00</b> ) “Paleoindian Plant Use in the Northern Great Basin” PI: Lisbeth Louderback	2020 – 2023
URC Faculty Research and Creative Grants (award total: <b>\$8,600.00</b> ) “Identifying the Monte Verde Potato Fragments” PI: Lisbeth Louderback and Bryn Dentinger	2020 - 2021
Lincoln County Archaeological Initiative (award total: <b>\$122,485.00</b> ) “Testing the Pinyon Premise: Starch Grain Analysis of Bedrock Milling Slicks and Ground Stone Tools at the Mt. Irish and Shooting Gallery ACECs, Lincoln Co.” PI: Dayna Giambastiani, Co-PI(s): Lisbeth Louderback	2020 - 2023
U of U VP Research Funding Incentive Seed Grant (award total: <b>\$19,199.00</b> ) “Plant Resources that Ended the Long Pause: Patterns of Dispersal From West to East Polynesia” PI: Lisbeth Louderback. Co-PI(s): Adrian Bell, Bruce Pavlik	2020 - 2021
NSF Archaeology Program (award total: <b>\$222,024.00</b> ) “Detecting the Early Stages of Domestication of a Native Potato in Western North America” PI: Lisbeth Louderback, Co-PI(s): John Bamberg, Alfonso del Rio, David Kinder, Bruce Pavlik, Cynthia Wilson	2018 - 2023
Utah Dept of Agriculture and Food Specialty Crop Grant (award total: <b>\$97,000.00</b> ) “Developing the Four Corners Potato ( <i>Solanum jamesii</i> ) for Market” PI: Bruce Pavlik, Co-PI: Lisbeth Louderback	2018-2020

BLM Utah (award total: <b>\$135,645.00</b> ) “Ecosystems and Plant Resources of Archaeological Sites in the Four Corners Region” PI: Lisbeth Louderback Co-PI(s): Bruce Pavlik and Brian Coddling	2017-2022
U of U Academic Affairs: Group Teaching Grant (award total: <b>\$7,000.00</b> ) “Enhancing the student research experience in an interdisciplinary lab” PI: Andrea Brunelle. Co-PI(s): Lisbeth Louderback, Jennifer Watt	2018
Sustainable Campus Initiative Fund (award total: <b>\$10,000.00</b> ) “Gardner Commons Microscope Facility” PI: Samuel Carter, Co-PI(s): Andrea Brunelle, Lisbeth Louderback, Jennifer Watt	2018
Bureau of Reclamation (BOR) (award total: <b>\$202,500.00</b> ) “Curating BOR Collections” PI: Glenna Nielsen-Grimm. Co-PI(s): Lisbeth Louderback.	2016-2021
BLM Utah (award total: <b>\$66,200.00</b> ) “Temporary Storage for Cerebus Collection” PI: Lisbeth Louderback. Co-PI(s): Glenna Nielsen-Grimm	2015-2022
URC Faculty Research and Creative Grants (award total: <b>\$5,700.00</b> ) “Re-evaluating the Earliest Evidence for Wild Potato Use in South-central Chile” PI: Lisbeth Louderback	2017
BLM CESU Agreement (award total: <b>\$27,500.00</b> ) “An Ethnobotanical Approach to Conserving Archaeological and Cultural Resources on BLM Lands” PI: Lisbeth Louderback. Co-PI(s): Nicole Herzog and Jen Rovenpera	2016-2018
U of U Academic Affairs: Group Teaching Grant (award total: <b>\$6,873.00</b> ) “Strengthening Our Hands-On Approach to Science” PI: Lisbeth Louderback. Co-PI(s): Jack Broughton, Andrea Brunelle, Mitch Power	2016
SWCA Environmental Consultants, Inc. (award total: <b>\$104,286.00</b> ) “The Archaeobotany of the Sigurd to Red Butte Transmission Line” PI: Lisbeth Louderback	2015-2016
U of U VP Research Funding Incentive Seed Grant (award total: <b>\$29,690.00</b> ) “The Archaeology and Biology of Early Events in Plant Domestication” PI: Lisbeth Louderback. Co-PI(s): Bruce Pavlik	2015 - 2016
NSF (Doctoral Dissertation Improvement Grant) (award total: <b>\$13,827.00</b> ) “The Paleoecology of Diet Breadth in the Basin-Plateau Region, USA” Co-PI(s): Lisbeth Louderback and Donald Grayson.	2012 - 2013
Desert Research Institute Grant (award total: <b>\$8,000.00</b> ) “Paleobotany of Utah and Wyoming” PI: David Rhode Co-PI(s): Lisbeth Louderback, David Madsen	2011 - 2012
University of Washington, Anthropology Dept. (award total: <b>\$1,500.00</b> ) “Pilot Dissertation Research Grant”, PI: Lisbeth Louderback	2011
Student Technology Fee Grant, University of Washington (award total: <b>\$25,403.00</b> ) “Traditional Computing Facilities for the Burke Museum”	2011

Co-PI(s): Lisbeth Louderback, Kelly Meyers, Andrea Cohen

Student Technology Fee Grant, University of Washington (award total: **\$13,426.58**) 2011  
“Field and Laboratory Equipment for the Burke Museum”

Co-PI(s): Lisbeth Louderback, Kelly Meyers, Andrea Cohen

NSF EPSCoR Increasing Diversity in Science in Nevada (IDIN) (award total: **\$6,000.00**) 2005

PI: Lisbeth Louderback Co-PI(s): David Rhode

### INVITED TALKS/KEYNOTE

*Domestication of the Four Corners Potato: The Genetic Signature of Indigenous People on the Landscape.* Plenary talk. Great Basin Anthropological Conference, Oct. 2023.

*On Our Way to Better Outcomes with Archaeological Starch.* Invited talk and conference organizer. Reconstructing Foodways through Microfossil Analysis in China and Beyond. Stanford Archaeological Center, April 2023.

*Assessing Domestication in the Four Corners Potato.* Invited talk. Ways of Understanding and Protecting Land and Water Resources in the Grand Staircase-Escalante Region Symposium (Escalante River Watershed Partnership), March 2023.

*Climate-driven dietary change on the Colorado Plateau: Implications for gender-specific foraging patterns.* Plenary talk. Great Basin Anthropological Conference, Oct. 2021.

*Plant species richness at archaeological sites suggests ecological legacy of Indigenous subsistence on the Colorado Plateau, USA.* Invited talk. Crow Canyon Webinar and Four Corner Lecture Series, Oct. 2021

*Detecting the Domestication of the Four Corners Potato.* Invited talk. Am-Arcs of Nevada, Oct. 2020.

*Detecting the Domestication of the Four Corners Potato.* Invited talk. San Juan Basin Archaeological Society, August 2020.

*The Archaeology of Diet: Evidence from an Ancient Rockshelter in Southern Utah.* Invited talk. Field Work: Aligning Poetry & Science, SLC Public Library, April 2019.

*The Archaeology of Diet: Evidence from an Ancient Rockshelter in Southern Utah.* Invited talk. Leakey Foundation Board Meeting, Salt Lake City, UT, Sept. 2018.

*The Four Corners Potato: Conserving an Ancient Food in Southern Utah.* Invited talk. Grand Staircase Escalante Partners, Kanab, UT, June 2018.

*The Four Corners Potato: Conserving an Ancient Food in Southern Utah.* Invited talk. NHMU Volunteer Education Lecture Series, Salt Lake City, UT, June 2018.

*The Four Corners Potato: Conserving an Ancient Food in Southern Utah.* Invited talk. Utah Native Plant Society, Salt Lake City, UT, April 2018.

*The Four Corners Potato: Conserving an Ancient Food in Southern Utah.* Invited talk. Four Corners Lecture Series, Edge of Cedars State Museum, Blanding, UT (with B.M. Pavlik), August 2017.

*The Four Corners Potato: Conserving an Ancient Food in Escalante, Utah.* Invited talk/Keynote for the Escalante River Watershed Partnership, Escalante, UT (with B.M. Pavlik), August 2017.

*The Archaeology and Conservation of the Four Corners Potato.* USU Museum of Anthropology Friday Lecture Series (with B.M. Pavlik). Invited Talk, Nov. 2016.

*The Archaeology and Conservation of the Four Corners Potato.* Escalante Arts Festival Speaker Series, Escalante, Utah (co-author B. Pavlik). Invited Talk/Keynote, Sept. 2016.

*The Archaeology and Conservation of the Four Corners Potato.* Grand Staircase Escalante National Monument (GSENM) Science Forum, Kanab Utah (co-author with B. Pavlik). Invited Talk, Aug. 2016.

*Seeds of Change: The impacts of climate change on dietary choice and human occupation patterns in Early Holocene North America.* Invited speaker: Archaeology First Thursdays, Portland State University, Oregon, May 2013.

*Seeds of Change: The impacts of climate change on dietary choice and human occupation patterns in Early Holocene North America.* Invited speaker: BEES Seminar Series, University of New South Wales, Australia, March 2013.

*12,000 Years of Climate and Vegetation Change in the northern Uinta Mountains, western North America.* Invited speaker, paper presented at the American Quaternary Association (AMQUA), Duluth, MN (first author with D. Rhode, D.B. Madsen, and M. Metcalf), June 2012.

### **SELECTED CONFERENCE PRESENTATIONS**

*Assessing Domestication in the Four Corners Potato.* Paper presented at the SAA, Portland (first author with Bruce Pavlik, Alfonso del Rio, John Bamberg, and Cynthia Wilson), March 2023.

*Evidence for geophyte exploitation in the Green River Basin of Wyoming.* Poster presented at the SAA, San Francisco (second author with Kaley Joyce-Tucker and Erick Robinson), Apr. 2021.

*Starch Granule Size and Morphology as a Proxy for Water Regime Influence on *Zea mays*.* Poster presented at the Society of American Archaeology (SAA), San Francisco (second author with Stefania Wilks and Shannon Boomgarden), Apr. 2021.

*Field Evaluation of *Solanum jamesii* – a Native USA Wild Potato.* Paper presented at the American Society for Horticulture Science (fifth author with John Bamberg et al.), July 2019.

*Archaeo-ecosystem Surveys of Puebloan Sites in Bears Ears, Southeast Utah.* Paper presented at the Great Basin Anthropological Conference (GBAC), Salt Lake City, UT (second author with Bruce Pavlik and Brian Coddling), Nov. 2018.



*Revisiting the Blue Lake pollen core for vegetation change around Bonneville Estates Rockshelter.* Paper presented at the Great Basin Anthropological Conference (GBAC), Salt Lake City, UT (first author with David Rhode, Kaylee Jones, and Ted Goebel), Nov. 2018.

*Preliminary Analysis of Late Pleistocene and Holocene Diatom Assemblages in the Bonneville Basin, western Utah, USA: Blue Lake warm spring.* Paper presented at the Geological Society of America (GSA), Indianapolis, IN (third author with Scott Starratt and David Rhode), Nov. 2018.

*Re-evaluating the Earliest Evidence for Wild Potato Use in South-central Chile.* Paper presented at the Society of American Archaeology (SAA), Washington DC (first author with Nicole Herzog, Ellyse Simons, Bruce Pavlik, Tom Dillehay), Apr. 2018.

*Comparing Starch Granules from Wild and Cultivated Solanum jamesii to Determine the Effects of Domestication.* Paper presented at the Society of American Archaeology (SAA), Washington DC (second author with Nicole Herzog and Bruce Pavlik), Apr. 2018.

*The Archaeology and Conservation of the Four Corners Potato.* Paper presented at the Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region (with B.M. Pavlik), September 2017.

*The Archaeology and Conservation of the Four Corners Potato.* Paper presented at the Utah Rare Plant Meeting, Salt Lake City, UT (with B.M. Pavlik), March 2017.

*Setting New Standards for Starch Grain Identification.* Poster presented at Workshop on the Analysis of Micro Particles in Archaeological Samples (WAMPAS), Max Planck Institute, Germany (with N.M. Herzog and B.M. Pavlik), Dec. 2016.

*Setting New Standards for Starch Grain Identification.* Paper presented at the Great Basin Anthropological Conference (GBAC), Reno, NV. (with N.M. Herzog and B.M. Pavlik), Oct. 2016.

*Establishing an Online Ethnobotanical Database for the Northwest Great Basin.* Paper presented at the Great Basin Anthropological Conference (GBAC), Reno, NV. (second author with N.M. Herzog and J. Rovenpera), Oct. 2016.

*Honoring an Interdisciplinary Giant: David B. Madsen.* Paper presented at the Great Basin Anthropological Conference (GBAC), Reno, NV., Oct. 2016.

*The Archaeobotany of the Sigurd to Red Butte Transmission Line.* Poster presented at the GBAC, Reno, NV. (with N.M. Herzog, M. Baker, K. Magargal, B.M. Pavlik), Oct. 2016.

*Diet breadth and Resource Intensification in Relation to Environmental Change.* Paper presented at the Society of Ethnobiology, Tuscon, AZ., March, 2016.

*Frontiers of Archaeobotany in the Great Basin and northern Colorado Plateau.* Symposium organizer (with Nicole Herzog) at the Great Basin Anthropological Conference (GBAC), Boise, ID., Oct. 2014.

*The Dietary Inventory and Dietary Palette at North Creek Shelter, Utah.* Paper presented at the Great Basin Anthropological Conference (GBAC), Boise, ID (first author with Bruce M. Pavlik), Oct. 2014.

*Patterns of Chenopodium Seed Use at North Creek Shelter, Utah.* Paper presented at the GBAC, Boise, ID (second author with K. Worthey and D. Rhode), Oct. 2014.

*The Ecology of Diet Breadth During the Early to Middle Holocene at North Creek Shelter, Utah.* Symposium participant at the Society of American Archaeology (SAA), Austin, TX (first author with Joel Janetski and Judith Field), Apr. 2014.

*Patterns of Chenopodium spp. use at North Creek Shelter, Utah.* Poster presented at the Society of American Archaeology (SAA), Austin, TX (second author with Kayla Worthey), Apr. 2014.

*Yucca Roasting and Basketmaker to Post-Puebloan Occupations of Coyote Springs Valley, SE Nevada.* Poster at Society of American Archaeology (SAA), Honolulu, HI (4<sup>th</sup> author with Amy Spurling, Mary Ann Vicari, Victor Villagran), Apr. 2013.

*30 Years On: Archaeology and Behavioral Ecology in the Great Basin.* Symposium organizer (with Michael Cannon and Jack Broughton) at the Great Basin Anthropological Conference (GBAC), Lake Tahoe, Nevada, Oct. 2012.

*The Paleoecology of Diet Breadth at North Creek Shelter: Preliminary Analyses of Archaeobotanical Remains.* Paper presented at the Great Basin Anthropological Conference (GBAC), Lake Tahoe, Nevada, Oct. 2012

*Formative Period Research from the Milford Wind Corridor Project.* Paper presented at the Great Basin Anthropological Conference (GBAC), Davis, Utah (third author with Kiera Simms, Amy Spurling, and Mike Cannon), Oct. 2010.

*Development of Grinding Stone Technology in the Great Basin, western North America.* Paper presented at the 75<sup>th</sup> Meeting Society of American Archaeology (SAA), St. Louis, MO, Apr. 2009.

*Packrats, Pollen and Pine I: Holocene Vegetation History in Northwest Colorado.* Paper presented at the Rocky Mountain Anthropological Conference (RMAC) Gunnison, CO (second author with D. Rhode, D.B. Madsen, and M. Metcalf), Oct. 2009.

*Packrats, Pollen and Pine II: The Flat Tops Pollen Records and Implications for Regional Millennial-Scale Climate Cycles.* Paper presented at the Rocky Mountain Anthropological Conference (RMAC), Gunnison, CO (third author with D.B. Madsen, D. Rhode and M. Metcalf), Oct. 2009.

*Holocene Vegetation History in Northwest Colorado and Southwest Wyoming: New Results from Packrat Middens and Pollen Cores.* Poster presentation at PACLIM Conference, Asilomar, CA (with D. Rhode), March 2009.

*Into the Holocene: Archaeological Implications for Climatic and Biotic Variations.* Symposium presented at the 31<sup>st</sup> Biennial Great Basin Anthropological Conference (GBAC), Portland, Oregon (Symposium organizer), Oct. 2008.

*Middle Holocene Climate Variations and its Implications for Human Response in the Great Basin.* Paper presented at the 31<sup>st</sup> Biennial Great Basin Anthropological Conference (GBAC), Portland, Oregon (with D.K. Grayson), Oct. 2008.

*Climate Change and Human Adaptation in the Bonneville Basin: The Blue Lake Pollen Record and Archaeology of Bonneville Estates Rockshelter.* Paper presented at the Society for American

Archaeology (SAA) 72<sup>nd</sup> Annual Meeting, Vancouver, Canada (with Ted Goebel, Kelly Graf, Bryan Hockett, and David Rhode), Apr. 2008.

*Middle Holocene Human Behavioral Responses in the Great Basin of Western North America.* Paper presented at the Society for American Archaeology (SAA) 72<sup>nd</sup> Annual Meeting, Vancouver, Canada (second author with Donald K. Grayson), Apr. 2008.

*Paleoenvironmental Research on the Piceance Basin Lateral and REX Pipeline Project: A Preliminary Report.* Paper presented at the Rocky Mountain Anthropological Conference (RMAC), Jackson Hole, Wyoming (with David Rhode, David B. Madsen, and Michael Metcalf), Oct. 2007.

*Holocene Vegetation Change and Human Plant use in the Northwest Bonneville Basin, Nevada/Utah.* Poster presented at the Society for American Archaeology (SAA) 71<sup>st</sup> Annual Meeting, Austin, Texas (with D. Rhode), Apr. 2007.

*Latest Pleistocene/ Holocene Vegetation Change at Blue Lake, western Bonneville Basin, Utah.* Paper presented at the 30<sup>th</sup> Biennial Great Basin Anthropological Conference (GBAC), Las Vegas, NV (with D. Rhode), Oct. 2006.

*Latest Pleistocene/ Holocene Vegetation Change at Blue Lake, western Bonneville Basin, Utah.* Poster presented at American Quaternary Association (AMQUA) Biennial Meeting. Bozeman, MT (with D. Rhode), June 2006.

*Latest Pleistocene/ Holocene Vegetation Change at Blue Lake, western Bonneville Basin, Utah.* Poster presented at PACLIM (Climate Variability of the Eastern North Pacific and Western North America) Conference. Asilomar, CA (with D. Rhode), March 2006.

*Into the Archaic: Dietary Plant Use in the Prearchaic (Paleoarchaic?) in the Bonneville Basin.* Paper presented at SAA 70<sup>th</sup> Annual Meeting, Salt Lake City, Utah, (with D. Rhode), Apr. 2005.

## TEACHING EXPERIENCE

### Course Instructor:

Paleoethnobotany (Graduate and Undergraduate level, Anth 5340/6340, Spring 2016, 2022, Fall 2024)

Archaeology and Paleoecology of the Arid West (Graduate Seminar Anth 6425, Spring 2021, 2024)

Humans in the World of Plants (Undergraduate/Graduate Anth 4339/6339, Spring 2017, Fall 2018)

Introduction to Museum Collections (Undergraduate Anth 4850, Fall 2018, 2019)

Principles of Archaeology (Undergraduate level, Arch 205, Fall 2012, Spring 2012)

Ancient Environments Changing Cultures (Undergraduate level, Arch 340, Summer 2011)

Field School in Alaskan Prehistory and Paleoecology (Co-Instructor, Summer 2006)

## MENTORING

### Current students:

- Sara Rickett (Anthro PhD Committee chair)
- Stefania Wilks (Anthro PhD Committee chair, expected graduation: Spring 2025)
- Abby Baka (Anthro PhD Committee member)
- Samantha Paredes (Anthro Undergraduate student)

- Ishmael Medina (Anthro MA Committee member)
- Haden Kingrey (Anthro PhD Committee member)

Past students:

- Roxanne Lamson (Anthro MA Committee member)
- Kaley Joyce-Tucker (Anthro MA Committee chair, 2018 - 2021)
- Taylor Townsend (Anthro MA Committee chair, Spring 2022)
- Dr. Jory Lerback (Geology PhD Committee member, 2017 - 2021)
- Maisie Schwartz (Anthro MA Committee member, Spring 2021)
- Gloria Brown (Anthro MA Committee member, Spring 2021)
- Elizabeth Whisenhunt (Anthro MA Committee member, Spring 2022)
- Lauren Lewis (Anthro Honor's Thesis Advisor, Spring 2021)
- Swayze Hansen (NHMU Internship Supervisor, Spring 2021)
- Dr. Nicole Herzog (Postdoc advisor, 2015 - 2017)
- Jaydee Dolinar (Anthro MA Committee chair, 2017 - 2019)
- Dr. Kate Magargal (Anthro PhD Committee member, 2014 - 2019)
- Ellyse Simons (Anthro MA Committee chair, 2017 - 2018)
- Caroline Kisielinski (Anthro MA Committee member, 2014 - 2016)
- Margaret Baker (Anthro Honor's Thesis Advisor, 2014 - 2016)

**PROFESSIONAL & EDITORIAL SERVICE**

Editorial Board: *Utah Archaeology, University of Utah Press*

Guest Editor: *Proceeding of the National Academy of Sciences*

Ad-hoc Reviewer (Journals): *Proceedings of the National Academy of Sciences, Nature, PLOS One, American Antiquity, Boreas, Plant Biosystems, Utah Archaeology, American Antiquity, Journal of Archaeological Science, Journal of Archaeological Science: Reports, Journal of Ethnobiology, Journal of California and Great Basin Anthropology, Geological Society of America, Quaternary Science Reviews, Journal of Quaternary Science, Anthropological and Archaeological Sciences, Vegetation History and Archaeobotany, Journal of Anthropological Archaeology.*

Ad-hoc Reviewer (Grants): National Science Foundation, U of U VP Research Seed Grant

**OUTREACH/IN THE MEDIA**

The Four Corners Potato Project:

Press coverage: <https://unews.utah.edu/utah-home-to-earliest-use-of-wild-potato-in-north-america/>

Community engagement: <https://www.youtube.com/watch?v=sMClutu4d68&feature=youtu.be>

Exhibits: <https://nhmu.utah.edu/museum/exhibits/news-our-scientists>

Facebook Live: <https://www.facebook.com/universityofutah/videos/10154920529490636/>

Online/print media:

NHMU Blog (<https://nhmu.utah.edu/articles/2023/05/archaeological-evidence-suggests-men-and-women-have-different-responses-climate>)

The Counter (<https://thecounter.org/four-corners-potato-species-indigenous-crop-navajo-nation-usda-southwest-future/>)

Yale Climate Connection (<https://yaleclimateconnections.org/2021/08/11000-year-old-solution-to-modern-problem-ancient-potato-could-thrive-in-changing-climate/>)

Navajo Times (<https://navajotimes.com/ae/culture/tiny-tuber-rematriated-to-indigenous-farmers/>)

NHMU Blog (<https://nhmu.utah.edu/blog/2021/ecological-legacy-bears-ears/>)  
 Salt Lake Tribune (<https://www.sltrib.com/news/environment/2021/05/17/ancient-native-americans/>)  
 University of Utah (<https://attheu.utah.edu/facultystaff/co-indigenous-management-bears-ears/>)  
 NHMU Blog (<https://nhmu.utah.edu/blog/2020/plants-reveal-how-people-lived-bears-ears/>)  
 University of Utah Magazine (<https://magazine.utah.edu/issues/spring-2020/ancient-spuds/>)  
 Atlas Obscura (<https://www.atlasobscura.com/articles/four-corners-potato>)  
 Archaeology Magazine (<https://www.archaeology.org/issues/374-2003/letter-from/8449-four-corners-potato>)  
 The Durango Herald (<https://durangoherald.com/articles/309899-on-the-trail-of-tiny-tubers-four-corners-potato-a-staple-of-native-american-diets>)  
 Northern Arizona University 'Earth Notes' (<https://www.knau.org/post/earth-notes-four-corners-potato>)  
 Heated (<https://heated.medium.com/one-of-the-oldest-spuds-in-the-world-is-poised-for-a-comeback-551ac0551cd4>)  
 Southwest Magazine (<https://www.archaeologysouthwest.org/product/asw33-1-2/>)  
 Devour Magazine (<http://devourutah.com/index.php/2019/03/15/scholars-of-sustenance/>)  
 Potato Grower Magazine (<https://www.potatogrower.com/2019/01/the-archaeology-of-potatoes>)  
 Salt Lake Tribune (<https://www.sltrib.com/news/2018/10/06/ancient-potato-that-has/>)  
 Salt Lake Tribune (<http://www.sltrib.com/home/5454302-155/did-potato-cultivation-begin-in-utahs?fullpage=1>)  
 Deseret News (<http://www.deseretnews.com/article/865684157/Utah-home-to-earliest-use-of-wild-potato-in-North-America.html>)  
 Utah Daily Chronicle (<http://dailyutahchronicle.com/2017/07/25/researchers-discover-ancient-potato/>)  
 Research blogs (<https://nhmu.utah.edu/blog/2016/08/08/tiny-world-starch-grains-bigger-better>) and (<https://nhmu.utah.edu/blog/2016/08/25/good-news-about-carbs-told-archaeobotanists>)

#### TV/radio interviews:

Utah Public Radio “Cropping Up: Repatriating the Four Corners Potato” ([Cropping Up: Repatriating the Four Corners potato | UPR Utah Public Radio](#))  
 KRCL “RadioActive” with Lara Jones (<https://krcl.org/blog/radioactive-011222/>)  
 KSL “Money Making Sense” with Heather Kelly (<https://www.ksl.com/?nid=1387&showid=2032>)  
 KSL Doug Wright show (<https://player.fm/series/the-doug-wright-show-182866/trying-the-four-corners-potato>)  
 Fox 13 News – Utah Researchers Re-harvest Ancient Potato (<http://fox13now.com/2017/11/22/utah-researchers-re-harvest-ancient-potato/>)  
 KUER NPR Utah (<http://kuer.org/post/utah-researchers-petite-potatoes-offer-new-insights-ancient-life#stream/0>)  
 KSL News Radio (<https://audioboom.com/posts/6074094-wild-potatoes-have-long-history-in-utah>)  
 Fox 13 News - Ancient Artifacts Recovered from Restricted Military Testing Range. (<https://fox13now.com/2016/08/28/uniquely-utah-ancient-artifacts-recovered-from-restricted-military-testing-range/>)  
 Fox 13 News - Interview about Danger Cave. (<https://fox13now.com/2015/05/19/mysterious-wendover-caves-yield-relics-from-the-past/> )

#### Public talks:

NHMU Scientist in the Spotlight and Science Café Talks: <https://nhmu.utah.edu/spotlight>  
 Escalante Canyons Art Festival: <http://escalantecanyonsartfestival.org/speakers/speaker-series-2/>  
 Escalante River Watershed Partnership (ERWP): <http://escalanteriverwatershedpartnership.org/>

**CRM/TECHNICAL REPORTS**

\*indicates undergraduate, graduate, or postdoc student author

- Pavlik, B.M., Louderback, L.A., Simper, H.M., Wilks, S.\* (2023) Documenting Potential Gathering Areas of Ethnographically Significant Plant Species on the Utah Test and Training Range. Report to Hill Airforce Base, Utah.
- Louderback, L.A., Wilks, S.\*, Simper, H. (2022) *Paleoindian Geophyte Use: Starch Granule Analysis of Bedrock Metates in Warner Valley, Oregon*. Report to the US Department of the Interior Bureau of Land Management, Lakeview, Oregon.
- Louderback, L.A. and Paredes, S.\* (2022) *Archaeobotanical Analyses of Thermal Features and Ground Stone Tools from Johnson Canyon, Utah*. Prepared for The Colorado Plateau Archaeological Alliance.
- Louderback, L.A., Baker, M.\*, Joyce, K.\*, Wilks, S.\*, Paredes, S.\* (2022) *Archaeobotanical Analyses of Thermal Features and Grinding Implements from Sand Hollow, Utah*. Prepared for HRA, Inc. Conservation Archaeology.
- Pavlik, B.M., Louderback, L.A., Coddling, B.F., Veron, K.B.\*, Simper, H.S., McCool, W.\*, Wilks, S.\* (2022) *Archaeo-Ecosystems of the Four Corners: Ethnobotanical Surveys of Puebloan Sites, San Juan County, Utah, Project Year 3*. Prepared for BLM Utah.
- Tinsley, D., Louderback, L., Pavlik, B., Baker, M.\*, Townsend, T.\*, Tucker, K.\*, Wilks, S.\* (2021) *Testing the Pinyon Premise: Archaeobotanical Analyses of Sediments, Bedrock Milling Features, and Ground Stone Artifacts from West-Central Lincoln County, Nevada*. Prepared for BLM Ely District and Caliente Field Offices.
- Louderback, L.A. Wilks, S.\*, and Tucker, K.\* (2021) *Starch Grain Analysis on Stone Tools from CA-LAN-905 in Hungry Valley State Vehicle Recreation Area*. Prepared for Far Western Anthropological Group.
- Louderback, L.A., Pavlik, B.M., Coddling, B.F., Vernon, K.B.\*, Yaworsky, P.\* (2020) *Archaeo-Ecosystems of the Four Corners: Ethnobotanical Surveys of Puebloan Sites in San Juan Co., Utah Year 2*. Prepared for BLM Utah.
- Louderback, L.A. and Baker, M.\* (2020) *Macrobotanical Analysis of Prehistoric and Historic Features at sites 26WP3990, 26WP9078, 26WP10574, 26WP11363 in White Pine County, Nevada*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A. and Herzog, N.M. (2019) *An Ethnobotanical Approach to Conserving Archaeological and Cultural Resources on BLM Lands*. Prepared for BLM Applegate Field Office.
- Louderback, L.A. and Tucker, K.\* (2019) *Starch Grain Analysis on Ground Stone Assemblage Sites (26WA5548 and 26WA9955) in Washoe County, Nevada*. Prepared for Far Western Anthropological Group.
- Louderback, L.A., Pavlik, B.M., Coddling, B.F. (2018) *Archaeo-Ecosystems of the Four Corners: Ethnobotanical Surveys of Puebloan Sites in San Juan Co., Utah*. Prepared for BLM Utah.
- Louderback, L.A. and Simons\*, E. (2017) *Macrobotanical Analysis of a Thermal Feature at site 26EK5906 in Elko County, Nevada*. Prepared for SWCA Environmental Consultants, Inc.

- Louderback, L.A., Baker\*, M., Oliveria\*, C., Simons\*, E. (2017) *Macrobotanical Analyses of Thermal Features and Pinyon Caches at sites 26WP3981 and 26WP3997 in White Pine County, Nevada*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A., Herzog\*, N.M., Baker\*, M., Magargal\*, K., Pavlik, B.M. (2016) *Archaeobotany of the Sigurd to Red Butte Data Recovery Project, Utah*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A. and Baker\*, M. (2015) *Macrobotanical and Flotation Analyses of Sediments from Little Boulder Basin, Elko and Eureka counties, NV*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A., Madsen, D.B., Rhode, D. and Metcalf, M.D (2013) *Palynological and Packrat Midden Investigations in the Vicinity of the Ruby Pipeline Corridor in Wyoming*. On file with Metcalf Archaeological Consultants, Inc., Eagle, Colorado.
- Louderback, L.A. and McAuley\*, H (2013) *Macrobotanical and Flotation Analyses of Sediments from the Little Boulder Basin and the Mooney Basin Projects*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A., Kaser\*, S.K.R. and Pavlik, B.M. (2012) *Macrobotanical Analyses of Feature Sediments from the ON Line Data Recovery Project, western and southwestern Nevada*. Prepared for SWCA Environmental Consultants, Inc.
- Louderback, L.A. and Kaser\*, S.K.R. (2012) *Macrobotanical and Flotation Analyses of Sediments from the Little Boulder Basin Project*. Prepared for Michael Cannon at SWCA Environmental Consultants, Inc.
- Louderback, Lisbeth A. and Rhode, David (2010) *Pollen Analysis of UNEV Geoarchaeological Samples*. Prepared for John Raveslout at William Self Associates.
- Louderback, Lisbeth A. (2010) *Report for Flotation and Macrobotanical Analyses from the Milford Wind Corridor Project*. Prepared for SWCA Environmental Consultants, Inc.
- Madsen, D.B., Rhode, D., Louderback, L.A., Metcalf, M. (2009) *Packrats, Pollen, and Pine Along the El Paso-Piceance Pipeline*. Submitted to Metcalf Archaeological Consultants, Inc.

## AFFILIATIONS

Great Basin Anthropological Association (GBAA)  
American Quaternary Association (AMQUA)  
Nevada Archaeological Association (NAA)  
Utah Professional Archaeological Council (UPAC)  
Society for American Archaeology (SAA)  
Society for Ethnobiology (SOE)  
Utah Native Plant Society (UNPS)  
Pacific Climate Workshop (PACLIM)