GRANT SNITKER

Cultural Resource Sciences Program
Center for Applied Fire and Ecosystem Science
New Mexico Consortium
Los Alamos, NM
Email: gsnitker@newmexicoconsortium.org
Web: https://grantsnitker.github.io/
Updated January 2024

CURRENT APPOINTMENT

2022- Director of Cultural Resource Sciences, New Mexico Consortium, Los Alamos, NM

Research Scientist, New Mexico Consortium, Los Alamos, NM

EDUCATION

2019 Ph.D. Anthropology, Arizona State University (Graduate Certificate in Museum Studies)
Dissertation: *Anthropogenic Fire and the Development of Agricultural Landscapes: Connecting Archaeology, Paleoecology, and Fire Science to Evaluate Human Impacts on Fire Regimes*

2013 M.A. in Anthropology, Arizona State University

2010 B.A. in Anthropology, Minor in Geography, Clark Honors College, University of Oregon

PROFESSIONAL APPOINTMENTS AND AFFILIATIONS

2020-22 Postdoctoral Fellow (ORISE), Center for Forest Disturbance Science, U.S. Forest Service, Southern Research Station, Athens, GA

2019-20 Postdoctoral Research Associate, Department of Crop and Soil Sciences, University of Georgia, Athens, GA

2018-20 Archaeological Consultant, Okanogan Wenatchee National Forest / Washington Conservation Science Institute, Seattle, WA

2013-19 Graduate Research Assistant, School of Human Evolution and Social Change, Arizona State University, Tempe, AZ

2011-13 Exhibits Manager, Deer Valley Petroglyph Preserve, Arizona State University, Tempe, AZ

RESEARCH INTERESTS

Environmental Archaeology
Social-ecological Systems Science
Anthropogenic Fire and Fuels
Archaeological Approaches to Ecological Restoration
Technology and Big Data in CRM
Fire Effects on Cultural Resources

Computational Modeling in Archaeology
Geographic Information Science (GIScience)
Data Analysis and Visualization in R
Charcoal Analysis
Paleoecology / Global Paleofire
Tribal Consultation and Collaboration

PUBLICATIONS

Peer-Reviewed Articles

2023   Cegielski, Wendy, **Grant Snitker**, C. Michael Barton, Joan Bernabeu Aubán, Alfredo Cortell-Nicolau, Salvador Pardo-Gordó, Sean Bergin, Agustín Diez Castillo. A multi-method approach with machine learning to evaluating the distribution and intensity of prehistoric land use in Eastern Iberia. *Quaternary International* 677–678, 78–94. https://doi.org/10.1016/j.quaint.2023.08.011

2023   Bergin, Sean and **Grant Snitker**. ArchaeoSRP: An R Package for Extracting and Synthesizing Federal Cultural Resources Data for Research and Management. *Advances in Archaeological Practice* 11(4): 402–412. https://doi.org/10.1017/aap.2023.22

2023   Southerlin, Bobby, Brooke Brilliant, Jason D. Moser, **Grant Snitker**, Christina Stewart, 2023. The Archaeology of Tar and Pitch Production Sites in Francis Marion National Forest. *South Carolina Antiquities* 53, 76–96.

2023   Servera-Vives, Gabriel, Maurici Mus Amezquita, **Grant Snitker**, Assunta Florenzano, Paola Torri, Maurici Ruiz, Anna Maria Mercuri Human-impact gradients through anthropogenic pollen indicators in a Mediterranean mosaic landscape (Balearic Islands). *Sustainability* 15 (11), 8807. https://doi.org/10.3390/su15118807

2023   Servera-Vives, Gabriel, Cristina Ricucci, and **Grant Snitker**. OLEAtool: An open-source software for morphopalynological research in *Olea europaea L.* pollen. *Open Research Europe* 3, 29. https://doi.org/10.12688/openreseurope.15309.1

2022   **Snitker, Grant**, Christopher I. Roos, Alan P. Sullivan, S. Yoshi Maezumi, Douglas W. Bird, Michael R. Coughlan, Kelly M. Derr, Anna Klimaszewski-Patterson, and Rachel A. Loehman. A collaborative agenda for archaeology and fire science. *Nature: Ecology & Evolution* 6, 835–839. https://doi.org/10.1038/s41559-022-01759-2

2022   Servera-Vives, Gabriel, Maurici Mus Amezquita, **Grant Snitker**, Assunta Florenzano, Paola Torri, Joan Estrany, and Anna Maria Mercuri. Modern pollen analogues for the understanding of pollen-vegetation relationships in a Mediterranean mosaic landscape (Balearic Islands, Western Mediterranean). *The Holocene* 32(7):716–734. https://doi.org/10.1177/09596836221088229

2022   **Snitker, Grant**, Jason Moser, Bobby Southerlin, and Christina Stewart. Detecting historic tar kilns and tar production sites using high-resolution, aerial LiDAR derived digital elevation models: introducing the Tar Kiln Feature Detection workflow (TKFD using open-access R and FIJI software. *Journal of Archaeological Science: Reports* 41, 103340. https://doi.org/10.1016/j.jasrep.2022.103340

2021   Krueger, Erik S., Tyson E. Ochsner, Matthew R. Levi, Jeffrey B. Basara, **Grant J. Snitker**, Briana M. Wyatt. Grassland productivity estimates informed by soil moisture measurements: Statistical and mechanistic approaches. *Agronomy Journal* (2021):1–20. https://doi.org/10.1002/agj2.20709

2020   **Snitker, Grant**. The Charcoal Quantification Tool (CharTool): A Suite of Open-source Tools for Quantifying Charcoal Fragments and Sediment Properties in Archaeological and Paleoecological Analysis. *Ethnobiology Letters* 11(1):103–115. https://doi.org/10.14237/ebl.11.1.2020.1653

2020   Helmer, Matthew, Jennifer Lipton, **Grant Snitker,** Steve Hackenberger, Mallory Triplett, and Lee Cerveny. Mapping Heritage Ecosystem Services in Ecological Restoration Areas: A Case Study from the East Cascades, Washington. *Journal of Outdoor Recreation and Tourism* 31 (2020) 100314. https://doi.org/10.1016/j.jort.2020.100314

2020   Strawhacker, Colleen, **Grant Snitker**, Matthew Peeples, Ann Kinzig, Keith Kintigh, Kyle Bocinsky, Brad Butterfield, Jacob Freeman, Sarah Oas, Margaret Nelson, Jonathan Sandor, and Katherine Spielmann. A Landscape Perspective on Climate-Driven Risks to Food Security: Exploring the Relationship between Climate and Social Transformations in the Prehispanic U.S. Southwest. *American Antiquity* 85(3): 427-451. https://doi.org/10.1017/aaq.2020.35

2019   Levi, Matthew, Erik Krueger, **Grant Snitker**, Tyson Ochsner, Miguel Villarreal, Emile Elias, and Dannele Peck. Enhancing Fire Danger Ratings from the Ground up using Soil Moisture. *Eos: Earth & Space Science News* 100. https://doi.org/10.1029/2019EO137858

2018   **Snitker, Grant**. Identifying Natural and Anthropogenic Prehistoric Fire Regimes through Simulated Charcoal Proxy Records. *Journal of Archaeological Science* 95: 1–15. https://doi.org/10.1016/j.jas.2018.04.009

2018   **Snitker**, **Grant**, Agustín Díez Castillo, C. Michael Barton, Joan Bernabeu Aubán, Oreto García Puchol, and Salvador Pardo-Gordó. Patch-based survey methods for studying prehistoric human land-use in agriculturally modified landscapes: A case study from the Canal de Navarrés, eastern Spain. *Quaternary International* 483: 5–22. https://doi.org/10.1016/j.quaint.2018.01.034

2016   Díez Castillo, Agustín, Oreto García Puchol, Joan Bernabeu Aubán, C. Michael Barton, Salvador Pardo-Gordó, **Grant Snitker**, Wendy Cegielski, and Sean Bergin. Resiliencia y cambio durante el Holoceno en la Canal de Navarrés: recientes trabajos de prospección. *Archivo de Prehistoria Levantina.* 31:169-185.

2008   Erlandson, Jon M., Todd J. Braje, and **Grant Snitker**. Two chipped stone crescents from CA-SMI-680, Cardwell Bluffs, San Miguel Island, California. *Current Research in the Pleistocene* 25:81-83.

Peer-Reviewed Book Chapters

2021   **Snitker, Grant**. Identifying the influence of Neolithic agro-pastoral land-use on Holocene fire regimes through simulated sedimentary charcoal records: Case studies from Eastern Spain. In *Simulating the Transition to Agriculture and Its Ecological and Cultural Consequences,* edited by Sean M. Bergin and Salvador Pardo-Gordó, pp. 165–193. Springer, New York.

2021   Barton, C. Michael, Isaac IT Ullah, Nicolas Gauthier, Nari Miller, **Grant Snitker**, Irene Esteban, Joan Bernabeu Aubán, and Arjun Heimsath. 'Digital Proxies' for Validating Models of Past Socio-Ecological Systems in the Mediterranean Landscape Dynamics Project. In *Simulating the Transition to Agriculture and Its Ecological and Cultural Consequences,* edited by Sean M. Bergin and Salvador Pardo-Gordó, pp. 195–224. Springer, New York.

2017   Strawhacker, Colleen, **Grant Snitker**, Katherine Spielmann, Maryann Wasiolek, Jonathan Sandor, Ann Kinzig, and Keith Kintigh. Risk Landscapes and Domesticated Landscapes: Food Security in the Salinas Province. In *Landscapes, Mobilities, and Social Transformations: Arriving at the Fifteenth Century in the Pueblo Rio Grande*, edited by Katherine Spielmann, pp. 124–150. University of Arizona Press.

Publicly Available Software, Scripts, and Online Tools

2022   **Snitker, Grant**, Gabriel Servera-Vives, Cristina Ricucci. OLEAtool: Tools for morphological pollen analysis, version 1.0. Retrievable from: https://doi.org/10.5281/zenodo.7046771

2021   **Snitker, Grant**. The Charcoal Fragment Quantification Tool (CharTool): ImageJ macros for archeological and paleoecological charcoal quantification, version 3.2. Retrievable from: http://doi.org/10.5281/zenodo.1434479

2020   **Snitker, Grant**. TRS (Township/Range/Section) Conversion Tool for National Forest Lands in Central and Eastern Washington, version 1.0. Retrievable from: https://grantsnitker.shinyapps.io/TRS_Conversion_Tool/

2019   **Snitker, Grant**. Long-Term Vulnerability and Transformation Project (LTVTP) Risk Landscapes Model Scripts. Suite of R Scripts for processing and visualizing geospatial risk landscape datasets, version 2.0 Retrievable from: https://doi.org/10.5281/zenodo.3377717

2018   **Snitker, Grant**. Charcoal Record Simulation Model (CharRec): Netlogo model for simulating sedimentary charcoal record formation, version 1.5.0. *CoMSES Computational Model Library*. Retrievable from: https://www.comses.net/codebases/4795/releases/1.5.0/

2017   **Snitker, Grant**. Geospatial charcoal source area model for archaeological applications (CharSource). R Script for calculating sedimentary charcoal record source areas, version 2.0. Retrievable from: http://doi.org/10.5281/zenodo.1434430

Technical Reports

2023   **Snitker, Grant** and Alexis Malone. Tar Kiln Feature Detection (TKFD) Workflow Validation Survey Report. Submitted to the Francis Marion National Forest Heritage Program, Huger, South Carolina.

2022   **Snitker, Grant**, Carla S. Hadden, and Matthew R. Levi. Sediment Coring and Paleofire Reconstructions for the South Carolina Lowcountry. In *Emergence and Evolution of Carolina's Colonial Cattle Economy,* edited by Martha A. Zierden, Elizabeth J. Reitz, Carla S. Hadden, and Hayden Ros Smith, pp. 145–160. The Charleston Museum Archaeological Contributions 52.

2021   **Snitker, Grant** and Sean Bergin. Initial Results of the Central Cascades Alpine Land-use and Fire History Project: Summary of the 2021 field season of archaeological research related to pre-contact land-use and fire on Kachess Ridge, WA. Submitted to the Okanogan-Wenatchee National Forest, Cle Elum and Naches Ranger Districts (South Zone), Cle Elum, Washington.

2019   **Snitker, Grant** and Heather Davis. Cultural Resources Inventory Report for the Taneum Watershed Restoration Project, Cle Elum Ranger District, Okanogan-Wenatchee National Forest: Report Number R2018061703004. Submitted to the Okanogan-Wenatchee National Forest Supervisor's Office, Wenatchee, Washington.

2018   **Snitker, Grant** and Francis P. McManamon. Final Report Vandenberg Air Force Base Digital Archive Project (2015 – 2018). Submitted to the Digital Archaeological Record (tDAR) and Vandenberg Air Force Base Cultural Resources Office, CA.

2015   **Snitker, Grant**. A Spatial Analysis of Archaeological Sites, Vegetation, and Artifacts within the Agua Fria National Monument: Legacies on the Landscape 2013 Field Season. In

Final Report of the Spring 2013 Field Season, Legacies on the Landscape: Agua Fria National Monument and Tonto National Forest, edited by Katherine Spielmann, pp. 45-52. Submitted to the Bureau of Land Management, Phoenix, Arizona.

2014   Rivers-Cofield, Sara, Jodi Reeves Flores, Francis P. McManamon, Adam Brin, **Grant Snitker**, Chelsea Walter, Michael A. Smolek, and Amanda Vtipil. Evaluating a Cooperative Approach to the Management of Digital Archaeological Records. Submitted to Department of Defense Legacy Resource Management Program, Project 13-711.

Other Professional Contributions

2023   Cochran, Lindsey and **Grant Snitker**. Using Machine Learning and Spatial Statistics to Measure the Geometric Structure of Archaeological Spaces. *Society for Historical Archaeology Heritage at Risk Blog.* March 30, 2023. Accessible via: https://sha.org/blog/2023/03/19598/

2021   Caseldine, Christopher and **Grant Snitker**. A [Digital] Tonto Basin Journey. *Archaeology Southwest Preservation Archaeology Blog.* March 15, 2021. Accessible via: https://www.archaeologysouthwest.org/2021/03/15/a-digital-tonto-basin-journey/

2020   Zierden, Martha A., Carla S. Hadden, Sarah E. Platt, Barnet Pavao-Zuckerman, Laurie J. Reitsema, Elizabeth J. Reitz, Hayden R. Smith, and **Grant Snitker**. Exploring the Cattle Economy of Colonial South Carolina. *The SAA Archaeological Record* 20 (3): 40-43.

2018   Hegmon, M., Peeples, M.A. on behalf of the LTVTP-NABO collaboration (**Grant Snitker** listed as a contributing member of LTVTP-NABO collaboration). The human experience of social transformation: Insights from comparative archaeology. *PLOS ONE* 13:1–29. DOI: https://doi.org/10.1371/journal.pone.0208060

2014   **Snitker, Grant.** "Notes from the Field" report on NSF-funded fieldwork in Valencia, Spain. Published in the SAA Geoarchaeology Interest Group Fall Newsletter.

2008   **Snitker, Grant**. Investigation and Identification of "Fourteen Willow Sticks" from the Chewaucan Cave Cache. *Current Archaeological Happenings in Oregon*. 33(3):6-7.

Works in Progress

in rev.   Reitz, Elizabeth J., Carla S. Hadden, Martha A. Zierden, Katherine L. Reinberger**,** Hayden R. Smith, **Grant Snitker**, and Angelina G. Perrotti. The Emergence and Evolution of Charleston, South Carolina's (U.S.A.) Colonial Economy. Manuscript in revision at *Historical Archaeology.*

GRANTS, FELLOWSHIPS, AND AWARDS

External Research Grants and Agreements

submitted   *Collaborative Research: The nexus of human pyrogeography, environmental change, and climate in the high-elevation ecosystems of Washington's Cascade Range.* PI: **Grant Snitker**, Co-PIs: Sean Bergin, Megan Walsh, and Michelle Steen-Adams. Planned resubmission (Aug. 2023) to the NSF Senior Archaeology Program. $301,000.

2024-27   *Advancing LiDAR applications for DoD cultural resource management through machine-learning algorithms for archaeological survey and risk modeling for cultural resource hazard assessments.* PI: **Grant Snitker**. Funding through the Department of Defense FY24 ESTCP Program. $981,238.

2022-25   *Cultural Resource Detection using Light Detection and Ranging for Management during Pre-planning in Timber and Fire Activities.* <u>PI:</u> **Grant Snitker**. Funding through a cooperative agreement with the USDA Forest Service, Kisatchie National Forest, LA. $670,000.

2022-23   *Advanced Integrated Fire Science Support.* <u>PI:</u> **Grant Snitker**. Funding through a grant agreement with the U.S. Geological Survey (renewable for 5 years). $499,000.

2022-23   *Advanced Fire Planning Using Coupled-Fire Atmospheric Modeling & Interpretation of Aerial LIDAR Data for Archeological Inventory Monitoring.* <u>PI:</u> **Grant Snitker**. Funding through a cooperative agreement with the US Fish and Wildlife Service (renewable for 5 years). $199,981.

2021-23   *Using Airborne LiDAR to Build Infrastructure for Multiple Applications at Three Experimental Forests.* <u>PI:</u> E. Louise Loudermilk, <u>Co-PIs:</u> Joseph O'Brien, **Grant Snitker**, and Christopher W. Ross. Funding through the USDA Forest Service Southern Research Station and Tall Timbers Research Station & Land Conservancy, FL. $65,000

2021-23   *Reconstructing Fire History and Land Use at the Tonto National Monument, AZ.* <u>PI:</u> Christopher Caseldine. <u>Co-PI:</u> **Grant Snitker**. Funding through the National Park Service, Tonto National Monument Cooperative Agreement. $18,144

2021-26   *Documenting forager adaptations to dramatic climate change at the Pleistocene-Holocene transition in Liguria (Italy).* <u>PI:</u> Claudine Gravel-Miguel. <u>Co-PIs:</u> Fabio Negrino, Julien Riel-Salvatore, Emanuela Cristiani. <u>Senior Collaborator:</u> **Grant Snitker**. Funding through the Social Sciences and Humanities Research Council of Canada. $375,539 ($49,274 for Snitker paleo-fire sub-award)

2020-23   *Quantifying Prescribed Fire's Capacity to Mitigate Wildfire-Induced Damage and Loss of Highly Valued Resources.* Grant # 21-2-02-18. <u>PI:</u> Christopher W. Ross. <u>Co-PIs:</u> Joseph O'Brien, E. Louise Loudermilk, Steven Flanagan, and **Grant Snitker**. Funding through the Joint Fire Science Program (JFSP). $336,574

2020-23   *Movilidad y conectividad de las comunidades prehistóricas en el Mediterráneo Occidental durante la prehistoria reciente: El caso de las Islas Baleares (English: Mobility and connectivity of prehistoric communities in the Western Mediterranean during recent prehistory: A case study from the Balearic Islands).* Grant # PID2019-108692GB-I00. <u>PI:</u> Manuel Calvo Trias, <u>International Research Collaborator:</u> **Grant Snitker**. Funding through Ministerio de Ciencia, Innovación y Universidades. €97,824 ($115,603)

2020-21   *Paleo-fire, soil, and pollen study on the Francis-Marion National Forest, South Carolina.* Francis-Marion National Forest Cooperative Agreement. <u>PI:</u> Carla Hadden. <u>Co-PI:</u> **Grant Snitker.** Funding through USFS Fire and Heritage teams to study fire and vegetation history of Hell Hole Swamp, SC. $5,000

2019-21   *Expanding the Functionality and User-Accessibility of the Newhall Simulation Model through an Updated R Implementation.* Grant # NR193A750025C007. <u>PI:</u> Matthew Levi. <u>Co-PI:</u> **Grant Snitker**. Funding through the USDA Natural Resources Conservation Service Research Grant Program. $117,339

2018-20   *LEIA Paleoenvironmental Pilot Project*. University of Washington Quaternary Research Center Research Grant. <u>PI:</u> Marcos Llobera. <u>Senior Personnel:</u> **Grant Snitker**, Gabriel Servera-Vives, Llorenç Picornell Gelabert, Nari Miller and Jordi Hernandez-Gasch. Funding through University of Washington Quaternary Research Center Research Grant Program. $10,820

2014-18   *Anthropogenic Fire and the Origins of Agricultural Landscapes: Human Niche Construction during the Neolithic Period in Eastern Spain.* Grant # 1656342. PI: **Grant Snitker**. <u>Co-PI</u>: C. Michael Barton. Funding through the National Science Foundation Doctoral Dissertation Research Improvement Award. $28,861

Fellowships

2018-19   School of Human Evolution and Social Change Dissertation Completion Fellowship, Arizona State University. $18,000

2012   National Science Foundation Graduate Research Fellowship (GRFP) – tuition and stipend over 3 years. $36,000/year

Honors, Awards, and Scholarships

2018   Ruppé Prize in Archaeology (Outstanding graduate student paper), School of Human Evolution and Social Change, Arizona State University

2016   Graduate Poster Contest Winner, Institute for Social Science Research, Arizona State University

2015-17   Graduate Excellence Award, College of Liberal Arts and Sciences, Arizona State University

2010   Jones Award, Oregon Archaeological Society

MUSEUM EXHIBITS

2012-16   The Agave Research Exhibit
<u>Role: Curator</u>
May 2012 - September 2016, Deer Valley Petroglyph Preserve, Center for Archaeology and Society, Arizona State University

2013   Looking for the Future in the Past: Archaeology's Long-Term View
<u>Role: Contributor</u>
February - May 2017, Center for Archaeology and Society, Arizona State University

2012-13   Changing Landscapes: A Closer Look at Baby Canyon Pueblo
<u>Role: Curator</u>
October 2012 – May 2013, Deer Valley Petroglyph Preserve, Center for Archaeology and Society, Arizona State University

TEACHING

Instructor

Spring 2022   *M3ES Graduate Course: Environmental change and social resilience in Mediterranean Ecosystems,* Università degli studi di Modena e Reggio Emilia (University of Modena and Reggio Emilia), Instructor, designed graduate-level course in archaeology and paleoecology of global Mediterranean ecosystems, course taught virtually and in English.

Fall 2019 - *CRSS 4960: Undergraduate Research in Crop and Soil Sciences*, University of Georgia,
Spring   Instructor, developed undergraduate course to teach introductory GIS data processing
2020   and research methods to complement field sampling.

Spring -   *ASM 484: Research Apprenticeship*, Arizona State University, Instructor, developed course to
Fall 2016   emphasize hands-on/participatory instruction in archaeology-related methods and
                   theory for non-anthropology majors for two undergraduate cohorts.

Summers   *ANTH 408: Fieldwork in Archaeology*, University of Oregon, Instructor, led fieldwork-based
2010-11   instruction in excavation and survey methods for two cohorts of undergraduate
                   students.

Guest Lectures and Lecture Series

Spring   Guest lecturer for *2021: Seminar in life Sciences*, Università degli studi di Modena e Reggio
2021   Emilia (University of Modena and Reggio Emilia), lecturer for session on charcoal
                   analysis and fire archaeology (virtual).

Spring   Guest lecturer for *Interim 2021: Fire Ecology of the Southern Appalachians*, Wofford
2021   College, lecturer for session on fire archaeology.

Spring   Guest lecturer for *ASB 231: Intro to Archaeological Field Methods*, Mesa Community
2018   College, lecturer for session on paleoecology and environmental archaeology.

Spring   Guest lecturer for *ASB 326: Human impacts on the Environment,* Arizona State University,
2018   lecturer for session on archaeology of the peopling of North America.

Fall 2017 Lecturer for the *Osher Lifelong Learning Institute Series*, Arizona State University,
                   developed lecture on general archaeological and paleoecological methods/theory.

Spring   Guest lecturer for *ASB 222: Buried Cities and Lost Tribes*, Arizona State University, lecturer
2016   for session on archaeology of climate/environmental change.

Other Teaching and Mentoring Activities

2021-22   Undergraduate thesis advisor for student in paleoecology concentration, Università degli studi
                   di Modena e Reggio Emilia (University of Modena and Reggio Emilia)

2021   Research contributor to the Charleston Museum's "Bragg Boxes", which are traveling
                   museum educational kits for K-8 students unable to visit the museum due to
                   transportation or funding challenges, Charleston Museum and University of Georgia

2019-20   Certificate in Diversity & Inclusion for teaching in higher education, Office of Institutional
                   Diversity, University of Georgia

2019   Mentor to Young Scholars Program student participant, College of Agricultural and
                   Environmental Sciences, University of Georgia

2016-17   Undergraduate Mentor in the Undergraduate Research Apprenticeship program, School of
                   Human Evolution and Social Change, Arizona State University (mentor to 4 students)

CONFERENCE ACTIVITIES

Symposia and Workshops Organized

2021   *Archaeological approaches to anthropogenic fire and global pyrodiversity*. Forum at the 85th
                   Annual Meeting of the Society for American Archaeology (virtual). April 22-26, 2020.

2019   *Soil Moisture and Wildfire Prediction Workshop.* Workshop hosted at the IAWF 6th
           International Fire Behavior and Fuels Conference in Albuquerque, NM. April 29, 2019.

2016   *Human-Environmental Interactions in the Mediterranean Basin.* Symposium at the 81st
           Annual Meeting of the Society for American Archaeology, in Orlando, FL. April 6-10,
           2016.

Invited Presentations

2023   **Snitker, Grant**. *Leveraging archaeological perspectives in reconstructing historical fire and
           fuel conditions: a case study from coastal South Carolina, USA.* Paper presented at the
           7th Fire in Eastern Oak Forests Conference, Tyler, TX. May 16-18, 2023.

2022   Cochran, Lindsey, **Grant Snitker**, and Kerice Doten-Snitker. *Using Machine Learning and
           Spatial Statistics to Measure the Geometric Structure of Archaeological Spaces.* Paper
           presented at the Digital Archaeological Archive of Contemporary Slavery:
           Conversations with Collaborating Scholars (virtual). February 25, 2022.

2021   Moser, Jason D. and **Grant Snitker**. *Current Research in Evaluating the Distribution and
           Morphology of Tar Kilns and Pitch Production Sites Using Aerial LiDAR within the
           Francis Marion National Forest, SC.* Paper presented at the Southeastern Archaeological
           Conference 77th Annual Meeting, Durham, NC. October 24-26, 2021.

2021   **Snitker, Grant**, Angelina G. Perrotti, Carla S. Hadden, and Matthew R. Levi. *A Multi-proxy
           Reconstruction of Paleo-fire, Vegetation Change, and Historic Livestock Activity in Hell
           Hole Swamp, South Carolina.* Paper presented at the Southeastern Archaeological
           Conference 77th Annual Meeting, Durham, NC. October 24-26, 2021.

2020   Levi, Matt, **Grant Snitker**, Matthew Molini, Damian Hans and Joan Deitsch. *Using soil
           magnetic susceptibility to understand fire history and burn severity in Georgia.* Paper
           presented at the Universities for a Greener Georgia Conference (virtual). May 7-8, 2020.

2018   **Snitker, Grant**. *Identifying the Influence of Neolithic Agro-Pastoral Land-use on Holocene
           Fire Regimes through Simulated Sedimentary Charcoal Records.* Paper presented at the
           24th Annual Meeting of the European Association of Archaeologists, Barcelona.
           September 5-8, 2018.

2018   Bergin, Sean and **Grant Snitker**. *Vegetation Transformation during the European Neolithic:
           The Effects of Agro-Pastoral Subsistence on Plant Communities in Europe.* Paper
           presented at the 24th Annual Meeting of the European Association of Archaeologists,
           Barcelona. September 5-8, 2018.

2018   Barton, C. Michael, Isaac I.T. Ullah, Nicolas Gauthier, Nari Miller, **Grant Snitker**, Irene
           Esteban, Joan Bernabeu Auban, and Arjun Heimsath. *'Digital Proxies' for Validating
           Models of Past Socio-Ecological Systems in the Mediterranean Landscape Dynamics
           Project.* Paper presented at the 24th Annual Meeting of the European Association of
           Archaeologists, Barcelona. September 5-8, 2018.

2018   **Snitker, Grant**. *The Nuts and Bolts of Agent-Based Modelling for Archaeological Science.*
           Paper presented during forum discussion at the 83rd Annual Meeting of the Society for
           American Archaeology, Washington, D.C. April 11-15, 2018.

2018   **Snitker, Grant**. *Anthropogenic Fire and the Origins of Agricultural Landscapes during the
           Neolithic Period (7,700-4,500 cal. B.P.) in Eastern Spain.* Paper presented at the 83rd
           Annual Meeting of the Society for American Archaeology, Washington, D.C. April 11-
           15, 2018.

2017   **Snitker, Grant**. *Fire, Humans, and Landscape Change: Simulating Charcoal Proxy Records to explore Anthropogenic Fire and Neolithic Landscapes in the Western Mediterranean*. Paper presented at the COMSES Net Virtual Conference 2017, Tempe, AZ. Online October 2-20, 2017.

2017   Strawhacker, Colleen, **Grant Snitker**, Keith Kintigh, Ann Kinzig, and Katherine Spielmann. *Measuring Risk to Food Security in the Prehispanic U.S. Southwest: The Salinas Region in the Broader Southwest World.* Paper presented at the 82nd Annual Meeting of the Society for American Archaeology, Vancouver, BC. March 29-April 2, 2017.

2016   **Snitker, Grant**. *Fire, Humans, and Landscape Evolution: Modeling Anthropogenic Fire and Neolithic Landscapes in the Western Mediterranean*. Paper presented at the 81st Annual Meeting of the Society for American Archaeology, Orlando, FL. April 6-10, 2016.

2015   **Snitker, Grant**. *Linking the Social and Ecological Dynamics of Anthropogenic Fire Regimes through Agent-Based Modeling (ABM) and Geographic Information Systems (GIS)*. Paper presented at the 6th Association for Fire Ecology Fire Congress, San Antonio, TX. November 16-20, 2015.

2013   McGovern, Thomas, Jette Arneborg, Seth Brewington, Laura Comeau, Andrew Dugmore, George Hambrecht, Keith Kintigh, Christian Madsen, Michelle Hegmon, Scott Ingram, Margaret Nelson, Richard Oram, Matthew Peeples, Brenda Shears, Ian Simpson, Konrad Smiarowski, **Grant Snitker**, Katherine Spielmann, Colleen Strawhacker, Andrea Torvinen, and Orri Vésteinsson. *Completed Long-Term Experiments? Mobilizing Archaeology in the Anthropocene*. Paper presented at the Theoretical Archaeology Group, Chicago, IL. May 9-11, 2013.

Contributed Presentations and Posters

2023   Cochran, Lindsey, **Grant Snitker**, and K. C. Jones. *Machine Learning Applications for Exploring Sociocultural and Environmental Perspectives Embedded within the Historical Past.* Poster presented at the Southeastern Archaeological Conference 79th Annual Meeting, Chattanooga, TN. October 25-28, 2023.

2023   **Snitker, Grant**, Sean Bergin, Jonathan Paige, and Anna Jansson. *Exploring High-Elevation Social-Ecological Relationships through Two Pilot Field Seasons of the Central Cascades Alpine Land-Use and Fire History Project.* Paper presented at the 87th Annual Meeting of the Society for American Archaeology, Portland, OR. March 29-April 2, 2023.

2022   Perrotti, Angelina, **Grant Snitker**, Carla Hadden. *Fire and Vegetation Impacts of Domestic Cattle Introduction in the Carolina Lowcountry*. Paper presented at the Southeastern Archaeological Conference 78th Annual Meeting in Little Rock, AR. November 9-12, 2022.

2022   Mercuri, Anna Maria, Cristiana Ricucci, **Grant Snitker**, Assunta Florenzano, P. Torri, and Gabriel Servera-Vives. *In search of new tools to trace back the history of olive cultivation*. Paper presented at the MedPalynoS 2022 Conference, Modena, Italy. September 13-15, 2022.

2022   **Snitker, Grant** and Dexter Strother. *Expanding the interpretation of anthropogenic fire in the paleo-charcoal record through modern prescribed fires: A study of charcoal production and morphology during the 2021 Hitchiti Experimental Forest prescribed fire campaign, Georgia, USA*. Paper presented at the EGU General Assembly 2022, Vienna, Austria. May 23-27, 2022.

2022   Marcos Llobera, **Grant Snitker**, Gabriel Servera-Vives, Joan Fornós-Astó and Lluís Gómez-Pujol. *Reading across the Lines: A Multiproxy Reconstruction of Human-Environmental Interaction in a Western Mediterranean Landscape (Mallorca, Balearic Isles, Spain).* Paper presented at the 86th Annual Meeting of the Society for American Archaeology, Chicago, IL. March 30–April 3, 2022.

2021   Servera-Vives, Gabriel, **Grant Snitker**, Lluís Gómez-Pujol, Llorenç Picornell-Gelabert, Joan J. Fornós, Assunta Florenzano, Manuel Calvo, Anna Maria Mercuri. *Transported landscapes and social resilience in the Balearic Islands since prehistory. The study-case of Santa Ponça (Mallorca, western Mediterranean).* Paper presented at the 27th Annual Meeting of the European Association of Archaeologists (virtual). September 6-11, 2021.

2021   **Snitker, Grant**, Sean M. Bergin, and Pete Cadena. *R-based solutions for synthesizing archaeological survey data to assess changing land-use patterns in the Okanagan-Wenatchee National Forest, WA.* Poster presented at the 85th Annual Meeting of the Society for American Archaeology (virtual). April 22-26, 2020.

2021   Levi, Matthew, **Grant Snitker**, Erik Krueger, Tyson Ochsner, Miguel Villarreal, and R. Panda. *Integrating Detailed Soil and Climate Information in a Simple Model for Soil Moisture Predictions Across Large Areas.* Am. Meteor. Soc. (virtual) January 10-15, 2021.

2020   **Snitker, Grant**, Matthew R Levi, Tyson E Ochsner, Erik S Krueger, Miguel L Villarreal. *Adapting the Newhall Simulation Model (NSM) to Predict Soil Moisture Conditions Associated with Elevated Wildfire Risk.* Poster presented at the ASA, CSSA and SSSA International Annual Meetings (virtual). November 9-13, 2020. https://scisoc.confex.com/scisoc/2020am/meetingapp.cgi/Paper/127892

2020   **Snitker, Grant**, Hayden Smith, Martha Zierden, Carla Hadden. *Contours, Cattle, and Colonialism: Environmental Change in Early-Colonial South Carolina.* Paper presented at the 13th Biennial Longleaf Conference (virtual). October 20-23, 2020.

2020   Levi, Matt and **Grant Snitker**. *An improved Newhall simulation for modeling soil moisture and temperature regimes.* Poster presented at the 2020 Southern Regional Cooperative Soil Survey Conference (virtual). May 19-21, 2020.

2019   **Snitker, Grant**, Matt Levi, Erik Krueger, and Tyson Ochsner. *An improved Newhall Simulation Model for predicting soil moisture.* Poster presented at the 2019 American Geophysical Union Fall Meeting, San Francisco, CA. December 9-13, 2019.

2019   Deitsch, Joan, Matt Levi, **Grant Snitker**, David Leigh, and Jill Mullican. *Soils remember the human footprint on the landscape.* Poster presented at the 2019 Young Scholars Pre-Collegiate Research Conference, Athens, GA. July 10, 2019.

2019   **Snitker, Grant** and Sean Bergin. *Did the Neolithic Revolution Revolutionize the European Landscape? An analysis of the relationship between climate, vegetation, and the arrival of agro-pastoral subsistence.* Poster presented at the 84th Annual Meeting of the Society for American Archaeology, Albuquerque, NM. April 10-14, 2019.

2018   Bergin, Sean and **Grant Snitker**. *Large-Scale Socioecological Transformation: The Effects of Subsistence Change on Holocene Vegetation across Europe.* Poster presented at the 83rd Annual Meeting of the Society for American Archaeology, Washington, D.C. April 11-15, 2018.

2017   Díez Castillo, Agustín, **Grant Snitker**, Joan Bernabeu Aubán, Oreto García Puchol, Salvador Pardo-Gordó, and C. Michael Barton. *Examen de las dinámicas socio-ecológicas en el*

valle medio del Xuquer (Valencia) desde el Paleolítico Medio hasta el Calcolítico. Paper presented at the XII Congreso Ibérico de Arqueometría, Burgos, Spain. October 25-28, 2017.

2017   Ullah, Isaac, Nicholas Gauthier, Nari Miller, and **Grant Snitker**. *Connecting the Human and Natural: Coupled Human-Earth Systems Models and the "Digital Proxy Record."* Poster presented at the 2017 Community Surface Dynamics Modeling System Annual Meeting, Boulder, CO. May 23-25, 2017.

2017   **Snitker, Grant**. *Reconstructing Anthropogenic Fire Regimes Using Multidisciplinary Methods: Preliminary Results from the Neolithic (7,700–4,500 cal. BP) in Eastern Spain.* Paper presented at the 82nd Annual Meeting of the Society for American Archaeology, Vancouver, BC. March 29-April 2, 2017.

2014   Diez Castillo, Agustín, Joan Bernabeu Aubán, Michael C. Barton, Oreto García Puchol, Sean Bergin, Salvador Pardo-Gordó, Wendy H. Cegielski, and **Grant Snitker**. *Paperless survey? New methodological approaches to archaeological fieldwork, the case of La Canal de Navarrés (València).* Paper presented at the Workshop: Dando sentido a la prospección arqueológica, Jaén, Andalucía, Spain. November 13-14, 2014.

2014   **Snitker, Grant**. *Exploring the Dynamics of Anthropogenic Fire Regimes through Agent Based Modeling (ABM) and Geographic Information Systems (GIS)*. Poster presented at the 79th Annual Meeting of the Society for American Archaeology, Austin, TX. April 23-27, 2014.

2014   Cegielski, Wendy, **Grant Snitker**, Gayle Timmerman, C. Michael Barton, and Bette Otto-Bliesner. *Reconstructing Local Paleoclimate Data with Global and Local Variables: A Re-examination of "Downscaling" with Updated Paleoclimate Models.* Poster presented at the 79th Annual Meeting of the Society for American Archaeology, Austin, TX. April 23-27, 2014.

2013   **Snitker, Grant**, Andrea Torvinen, and Rhian Stotts. *Testing the Application of Adaptive Governance of Common Pool Resources: An Archaeological Perspective*. Poster presented at the 78th Annual Meeting of the Society for American Archaeology, Honolulu, HI. April 3-7, 2013.

2012   Torvinen, Andrea, **Grant Snitker**, and Rhian Stotts. *An Archaeological Perspective on Adaptive Governance of Common Pool Resources.* Poster presented at the 1st Annual Human Ecodynamics Research Center Workshop in Sustainability, New York, NY. October 15, 2012.

2010   Jenkins, Dennis L., **Grant Snitker**, Craig E. Skinner, Jennifer J. Thatcher, Thomas M. Origer, and Janine M. Loyd. *Current Results of Obsidian Sourcing and Hydration Studies at the Paisley Caves, Oregon*. Paper presented at the 63rd Northwest Anthropological Conference, Ellensburg, WA. March 25-28, 2010.

SERVICE

Departmental Service

2013-14   Treasurer, Association of All Graduate Students (AAGS), School of Human Evolution and Social Change, Arizona State University

2012-13   Mentor for incoming graduating students, School of Human Evolution and Social Change, Arizona State University

Professional Service

2022-23 Guest Editor for *Frontiers in Environmental Archaeology,* with co-Editors Alan P. Sullivan III and Christopher Roos. Special issue entitled: "Archaeological and Paleoecological Approaches for Investigating Human Pyrogeography."

2022-25 Review Editor, *Frontiers in Ecology and Evolution: Paleoecology Section*

2022-25 Member of the Committee on Climate Change Strategies and Archaeological Resources, Society for American Archaeology

2022-25 Member of the Geoarchaeology Student Awards Committee, Society for American Archaeology

Reviewer

Journals: *Quaternary International*; *Palaeogeography, Palaeoclimatology, Palaeoecology; Nature: Sustainability; Frontiers in Earth Science; Climatic Change; Vegueta: Anuario of the School of Geography and History; Nature Geosciences; Fire Ecology*

Grants: *Social Sciences and Humanities Research Council (SSHRC)*

Invited Public Lectures

2021 *Leveraging archaeological perspectives in reconstructing historical fire and fuel conditions: a case study from coastal South Carolina, USA.* Seminar given for the International Paelofire Network (IPN) and PAGES ECR Network, October 20, 2021. https://ipn.paleofire.org/?p=1151

2020 *Exploring the Interplay between Climate and People in the Ancient US Southwest.* Webinar given at the Crow Canyon Archaeological Center Webinar Series, September 3, 2020.

2020 *Anthropogenic Fire and the Development of Neolithic Agricultural Landscapes: Connecting Archaeology, Paleoecology, and Fire Science to Evaluate Human Impacts on Fire Regimes.* Presentation given at the Pennsylvania State University Department of Anthropology, February 11, 2020.

2019 *Creating new connections between archaeology, paleoecology, and fire science to evaluate long-term human impacts on fire regimes.* University of Georgia, Joint Georgia Initiative for Climate & Society and Center for Archaeological Sciences seminar series.

2017 *Anthropogenic Fire and the Origins of Agricultural Landscapes Human Niche Construction (HNC) during the Neolithic (7,700-4,200 cal. BP) in Eastern Spain.* University of Washington, Department of Anthropology, Friday Afternoon Archaeology Lecture Series.

Other Service

2017-19 Co-Organizer of Interagency Fire Archaeology Cohort monthly calls and meetings

2016 Intel International Science and Engineering Fair Grand Awards Judge, Behavioral and Social Sciences, Phoenix, AZ

2014-16 Conference Volunteer - 81st Annual Meeting of the Society for American Archaeology, Orlando, FL; 6th Annual Congress for the Association for Fire Ecology, San Antonio, TX; 79th Annual Meeting of the Society for American Archaeology, Austin, TX

OTHER PROFESSIONAL EXPERIENCE

2021   Completion of NWGC Wildland Fire Resource Advisor course (N-9042).

2019-   Member of the Register of Professional Archaeologists (RPA).

2010-   Archaeological Resource Advisor (ARCH) and Wildland Firefighter (FFT2 Qualified) with the US Forest Service (Appointment through the Georgia Interagency Coordination Center, GA; Okanogan-Wenatchee National Forest, WA; Coconino National Forest, AZ; Deschutes National Forest, OR).

2016   Klamath River Prescribed Fire Training Exchange (TREX), Collaborative wildland firefighting training between the US Forest Service, the Nature Conservancy, and the Karuk Tribe, Happy Camp, CA.

2014   FFT2 certification, Wildfire and Incident Management Academy, basic wildland firefighting training, Prescott, AZ.

PROFESSIONAL MEMBERSHIPS

Society for American Archaeology
Interagency Fire Archaeology Cohort
PAGES (Past Global Changes)
SAA Public Archaeology Interest Group
SAA Open Science in Archaeology Interest Group