

Shane M. Montgomery

Department of Anthropology and Archaeology
University of Calgary
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EDUCATION

- University of Calgary** **Calgary, AB**
Ph.D., Archaeology (2019—present)
Supervisor: Dr. Kathryn Reese-Taylor
- University of Central Florida** **Orlando, FL**
M.A., Anthropology (2016)
Supervisor: Dr. Arlen F. Chase
- University of New Mexico** **Albuquerque, NM**
B.A., Anthropology (2010)

RESEARCH ACTIVITIES

RESEARCH INTERESTS

Laser scanning (LiDAR) and satellite remote sensing, landscape archaeology, agricultural intensification, paleoenvironmental reconstruction, machine learning and artificial intelligence, geoarchaeology and soil chemistry, digital heritage preservation, Mesoamerican cave use.

ASSOCIATED RESEARCH PROJECTS

Proyecto Arqueológico Bajo El Laberinto (PABEL), Calakmul Biosphere Reserve, Campeche, MX

Project Member, (2019-present). Principle Investigators: Kathryn Reese-Taylor; Felix Kupprat, Armando Anaya-Hernández.

Las Cuevas Archaeological Reconnaissance Project, Vaca Plateau, Belize

GIS Specialist, 2014-Present; Survey Director, 2017-2020. Principal Investigator: Holley Moyes.

Belize Valley Archaeological Reconnaissance Project, Cayo, Belize

Affiliated Researcher, 2015. Field School Student: 2008. Principal Investigator: Jaime Awe.

Caracol Archaeological Project, Vaca Plateau, Belize

Graduate Research Assistant, 2015. Principal Investigator: Arlen Chase.

Pacbitun Regional Archaeological Project (PRAP), San Antonio, Belize Graduate Research Assistant, 2014. Principal Investigator: Terry Powis.

PEER-REVIEWED PUBLICATIONS

Montgomery, Shane, and Holley Moyes

2023 Beneath the Surface, Below the Line: Exploring Household Differentiation at Las Cuevas Using Gini Coefficients. *Ancient Mesoamerica* 34(3):1-12.

Lozano Bravo, Hilda, Eric Lo, Holley Moyes, Dominique Rissolo, Shane Montgomery, and Falko Kuester

2023 A Methodology for Cave Floor Basemap Synthesis from Point Cloud Data: A Case Study of SLAM-based Lidar at Las Cuevas, Belize. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences* Volume X-M-1-2023: 179-186.

Reese-Taylor, Kathryn, Verónica A. Vázquez López, Nicholas P. Dunning, Armando Anaya Hernández, Shane Montgomery, and Debra S. Walker

2022 The Development of Landesque Capital in the Maya Lowlands During the Middle Preclassic. *Ancient Mesoamerica* 33: 500-516.

Thompson, Amy E., John P. Walden, Adrian S.Z. Chase, Scott R. Hutson, Damien B. Marken, Bernadette Cap, Eric C. Fries, M. Rodrigo Guzman Piedrasanta, Timothy S. Hare, Sherman W. Horn III, George J. Micheletti, Shane M. Montgomery, et al.

2022 Ancient Lowland Maya Neighborhoods: Average Nearest Neighbor Analysis and Kernel Density Models, Environments, and Urban Scale. *Plos one* 17(11): e0275916.

Moyes, Holley and Shane M. Montgomery

2019 Locating Cave Entrances Using Lidar-Derived Local Relief Modeling. *Geosciences* 9(98): 1-22.

Walden, John P., Claire E. Ebert, Julie A. Hoggarth, Shane M. Montgomery, and Jaime J. Awe

2019 Modeling Variability in Classic Maya Intermediate Elite Political Strategies through Multivariate Analysis of Settlement Patterns. *Journal of Anthropological Archaeology* 55: 1-22.

Moyes, Holley and Shane Montgomery

2016 Mapping Ritual Landscapes Using Lidar: Cave Detection through Local Relief Modeling. *Advances in Archaeological Practice* 4(3): 249-267.

Moyes, Holley, Pedro Carvajal, and Shane Montgomery

2016 LiDAR at Las Cuevas: Settlement Surrounding an Ancient Maya Pilgrimage Site. *Research Reports in Belizean Archaeology*. Belmopan, Belize: NICH.

PROFESSIONAL PAPERS AND RESEARCH

Montgomery, Shane M.

2016 *On the Back of the Crocodile: Extent, Energetics, and Productivity in Wetland Agricultural Systems, Northern Belize*. Master's thesis, Department of Anthropology, University of Central Florida, Orlando.

PROJECT REPORTS

Shane Montgomery, Nicholas Dunning, Duncan Cook, and Chris Carr

2023 Investigaciones en la Aguada 1 de Calakmul. In *Proyecto Arqueológico Yaxnohcah-Bajo Laberinto Informe de la Temporada 2022*, edited by Felix Kupprat, Armando Anaya Hernández, and Kathryn Reese-Taylor, pp. 271-296. Instituto Nacional de Antropología e Historia, Mexico City, Mexico.

Nicholas Dunning, Jeffrey Brewer, Shane Montgomery, Duncan Cook, Chris Carr, and Felix Kupprat

2023 Investigaciones en la Aguada 2 de Calakmul. In *Proyecto Arqueológico Yaxnohcah-Bajo Laberinto Informe de la Temporada 2022*, edited by Felix Kupprat, Armando Anaya Hernández, and Kathryn Reese-Taylor, pp. 233-270. Instituto Nacional de Antropología e Historia, Mexico City, Mexico.

Jeffrey Brewer, Shane Montgomery, Duncan Cook, Chris Carr, and Nicholas Dunning

2023 Investigaciones en la Aguada 3 de Calakmul. In *Proyecto Arqueológico Yaxnohcah-Bajo Laberinto Informe de la Temporada 2022*, edited by Felix Kupprat, Armando Anaya Hernández, and Kathryn Reese-Taylor, pp. 207-232. Instituto Nacional de Antropología e Historia, Mexico City, Mexico.

Shane Montgomery

2023 Investigaciones de terrazas de caja y otros potenciales rasgos agrícolas en Yaxnohcah. In *Proyecto Arqueológico Yaxnohcah-Bajo Laberinto Informe de la Temporada 2022*, edited by Felix Kupprat, Armando Anaya Hernández, and Kathryn Reese-Taylor, pp. 169-190. Instituto Nacional de Antropología e Historia, Mexico City, Mexico.

2019 LCAR 2018 Summary of Settlement and Karstic Survey. In *Report of the 6th Year Investigations of the Las Cuevas Archaeological Reconnaissance (LCAR)*, edited by Holley Moyes and Erin E. Ray. Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

2018a Settlement and Karstic Survey. In *Dreams at Cuevas: Report of the 5th Year Investigations of the Las Cuevas Archaeological Reconnaissance (LCAR)*, edited by Holley Moyes and John P. Walden, pp. 59-84. Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

2018b LCAR 2017 Cave Survey: Actun P'ook (Sombrero Cave), Actun Uo (Frog Cave), and Eduardo Quiroz. In *Dreams at Cuevas: Report of the 5th Year Investigations of the Las Cuevas Archaeological Reconnaissance (LCAR)*, edited by Holley Moyes and John P. Walden, pp. 135-198. Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

2016 Ofrenda Cave Unit 3 Excavation Summary. In *The Belize Cave Reconnaissance Project: A Report of the 2015 Field Season*, edited by Holley Moyes. Report on File at the Institute of Archaeology, Belmopan, Belize.

Sullivan, Kelsey J., Jaime J. Awe, and Shane M. Montgomery

2016 Welcome to Bedrock: Archaeological Investigations at the Lithic Tool Production Area, the Etz'nab Tunich Group, Cayo, Belize. In *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2015 Field Season*, edited by Julie A. Hoggarth and Jaime J. Awe, pp. 182-212. Institute of Archaeology, Baylor University, Waco, Texas.

Micheletti, George, Shane Montgomery, and Jacob Gresham

2015 In Search of Architectural Functionality: Continuing the Investigation of the “Eastern Triadic Shrine” at the Ancient Maya site of Pacbitun. In *Pacbitun Regional Archaeological Project (PRAP): Report on the 2014 Field Season*, edited by Terry G. Powis. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

PROFESSIONAL PRESENTATIONSMontgomery, Shane, Armando Anaya Hernández, Nicholas P. Dunning, Christopher Carr, and Jeffrey L. Brewer

2023 Contextualización de las Modificaciones del Paisaje en la Región del Bajo Laberinto. Paper presented at the XII Congreso Internacional de Mayistas, Mexico City, Mexico.

Montgomery, Shane

2022 Identifying Forgotten Landscapes through Aerial and Terrestrial LiDAR. Paper presented at the UNAM - U of C LiDAR Workshop, Mexico City, Mexico.

Montgomery, Shane and Holley Moyes

2022 Exploring Household Differentiation in the Las Cuevas-Monkey Tail Region Using Gini Coefficients. Paper presented at the 87th Annual Meeting of the Society for American Archaeology, Chicago, Illinois.

Montgomery, Shane and Holley Moyes

2021 GIS Approaches to Ancient Maya Settlement Distributions at Las Cuevas, Belize: Preliminary Results of Xtent and Kernel Density Modeling. Paper presented at the 86th Annual Meeting of the Society for American Archaeology, San Francisco, California (Virtual Meeting).

Montgomery, Shane

2019 The Treasure You Seek Will Not Be the Treasure You Find: Bushing the Path between Expected and Observed at Las Cuevas. Paper presented at the 84th Annual Conference for the Society for American Archaeology, Albuquerque, New Mexico.

Montgomery, Shane and Jaime Awe

2017 Beneath the Blue-Green Trees: Understanding the Built Environment of Yaxox through Lidar Analysis. Paper presented at the 82nd Annual Conference for the Society for American Archaeology, Vancouver, British Columbia.

Montgomery, Shane

2016 On the Back of the Crocodile: Extent, Energetics, and Productivity in Wetland Agricultural Systems, Northern Belize. Paper presented at the 81st Annual Conference for the Society for American Archaeology, Orlando, Florida.

Moyes, Holley and **Shane Montgomery**

2015 Finding Caves Using LiDAR Imagery: Yes and No. Paper presented at the 13th Annual Belize Archaeology and Anthropology Symposium, San Ignacio, Belize.

Moyes, Holley, Shayna Hernandez, Lauren Phillips, and **Shane Montgomery**

2014 Little Finds, Big Results: The Utility of Small Artifacts in the Spatial Analyses of Looted Sites. Paper presented at the 48th Annual Chacmool Archaeological Conference, University of Calgary, Alberta, Canada.

Reviews

2023 Manuscript review for *Geoarchaeology*.

2021 Manuscript review for *Geomorphology*.

TEACHING EXPERIENCE

2023 University of Calgary, Sessional Instructor for Archaeology 325 (Fall 2023): Ancient Civilizations.

University of Calgary, Sessional Instructor for Archaeology 329 (Winter 2023): Fringe Archaeology.

2022 University of Calgary. Guest lecturer for Anthropology 321: Ethnographic Overview of Latin America (Instructor of Record: Chelsea Rozanski).

University of Calgary. Guest lecturer for Archaeology 531: Advanced Topics in Archaeology – Remote Sensing (Instructor of Record: Dr. Kathryn Reese-Taylor).

2017 Northern Arizona University Department of Anthropology. Guest lecturer for Anthropology 509: Spatial Archaeology (Instructor of Record: Dr. Francis Smiley).

GRANTS AND AWARDS

2023 Martha Biggar Anders Memorial Award, University of Calgary (\$2,400)

2021 Alberta Graduate Excellence Scholarship (AGES), University of Calgary (\$15,000)

Martha Biggar Anders Memorial Award, University of Calgary (\$2,700)

2020 John C. Carter Endowment for Archaeological Research, University of Calgary (\$1,175)

2015 Graduate Anthropology Association Travel Award, University of Central Florida (\$500)

2014 Student Government Association (SGA) Activity and Service Fee Travel Award, University of Central Florida (\$250)

Graduate Anthropology Association Travel Award, University of Central Florida (\$500)

ACADEMIC VOLUNTEER EXPERIENCE

Graduate Undergraduate Mentorship Program (GUMP)

2021—Present

Graduate mentor for archaeological undergraduate student at the University of Calgary. Responsible for meeting with mentee on monthly basis and providing guidance concerning field school participation, CV creation, and preparing for graduate school.

Graduate Anthropology Association (GAA)

2013—2016

Secretary (Fall 2014) and past member of the GAA, a registered student organization at the University of Central Florida. The GAA is responsible for securing graduate student funding for professional conferences, hosting departmental lectures, organizing community outreach events, and performing community service within the greater Central Florida area.

EMPLOYMENT HISTORY

Graduate Teaching Assistant

Sept. 2019—April 2023; Jan. 2024—Present

Employer: University of Calgary Department of Anthropology and Archaeology, Alberta, Canada
Supervisor (current): Dr. Francisco Rivera Amaro, (514) 386-7300

Sessional Instructor

Jan.—Dec. 2023

Employer: University of Calgary, Department of Anthropology and Archaeology, Alberta, Canada
Supervisor: Dr. Kathryn Reese-Taylor, (403) 220-6369

Archaeological Crew Chief

Dec. 2016— May 2019

Employer: Cornerstone Environmental, Flagstaff, AZ
Supervisor: Josh Edwards, (928) 522-4148

Archaeological Field Technician

Apr.—Oct. 2016

Employer: U.S. Forest Service, Mogollon Rim Ranger District, AZ
Supervisor: Mark Swift, (928) 477-505

Archaeological Field Technician

Sept.—Nov. 2015

Employer: PaleoWest Archaeology
Supervisor: Ryan Spittler, (201) 739-3635

Graduate Teaching Assistant

Aug. 2013—Apr. 2016

Employer: University of Central Florida Anthropology Department, Orlando, FL
Supervisor: Dr. Amanda Groff, (407) 823-3757

Archaeological Crew Chief

May 2011—July 2013

Employer: Ecosystem Management, Inc., Albuquerque, NM

Supervisor: Garth Hayden, (505) 884-8300

Archaeological Field Technician

July—Sept. 2010

Employer: Cienega Environmental, Albuquerque, NM

Supervisor: Hollis Lawrence, (505) 331-8408

ARCHAEOLOGICAL PERMITS (Previously Held)

Bureau of Indian Affairs (Navajo Nation and Uintah-Ouray Reservation)

Utah Bureau of Land Management (Anasazi/Northwest Region)

Navajo Nation (New Mexico and Utah)

State of New Mexico; Arizona

U.S. Forest Service (Coconino, Prescott, Kaibab National Forests, Arizona)

PROFESSIONAL AND TECHNICAL SKILLS

Archaeological excavation and stratigraphic documentation	Aerial point cloud and raster-based image analysis
Ground-based survey techniques/Total Station	Advanced geospatial modeling techniques
Artifact analysis (lithics and ceramics)	Photogrammetry and CAD
Phytolith/starch analysis	Section 106 NHPA; NAGPRA

TECHNICAL PROGRAM KNOWLEDGE

ArcGIS Pro	ERDAS Imagine
Adobe Photoshop and Illustrator	CloudCompare
Trimble Terrasync	SAGA GIS
Agisoft Metashape	LP360

PROFESSIONAL REFERENCES

Dr. Kathryn Reese-Taylor (Current Supervisor)

University of Calgary

Title: Professor, Interim Head, Department of Anthropology and Archaeology

Contact Number: (403) 220-6369

Contact Email: kreeseta@ucalgary.ca

Dr. Felix Kupprat

Universidad Nacional Autónoma de México

Title: Investigador Asociado (Associate Professor), Instituto de Investigaciones Antropológicas (Institute of Anthropological Research)

Contact Number: +52 (552) 678-6630

Contact Email: kupprat@unam.mx

Dr. Armando Anaya Hernández

Laboratorio de Geomática, CEDESU
Universidad Autónoma de Campeche, Mexico
Title: Profesor Investigador Titular B
Contact Number: +52 (981) 811-9800
Contact Email: armanaya@uacam.mx

Dr. Holley Moyes

University of California, Merced
Title: Associate Professor, Department of Anthropology
Contact Number: (520) 820-6748
Contact Email: hmoyes@ucmerced.edu