

Martin Welker

The Pennsylvania State Department of Anthropology
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EDUCATION

- May 2018 The Pennsylvania State University, State College, PA. Ph. D. in Anthropology
(Expected) Dissertation Chair: S. B. McClure, PhD.
- Dec. 2015 The Pennsylvania State University, State College, PA. M.A. in Anthropology
Thesis Adviser: S. B. McClure, PhD.
- May 2013 Utah State University, Logan, UT. B.S. in Anthropology with Departmental Honors
and a Museum Studies Certificate
Dean's List: Jan. 2010-May 2013.

ACADEMIC APPOINTMENTS

- 2015-Present Field Director – Pennsylvania State University Field School at Foster Farm
- 2013-Present Teaching Assistant – Pennsylvania State University
- 2014 Research Assistant – Human Geochemistry and Paleoecology Laboratory
- 2014 Research Assistant – Matson Museum of Anthropology
- 2012 Program Assistant – Utah State University Museum of Anthropology
- 2011 Intern – Utah State University Museum of Anthropology

SERVICE AND PROFESSIONAL AFFILIATIONS

- 2016-Present Council for Northeastern Historical Archaeology Member
- 2016-Present Canadian Archaeological Association Member
- 2015-2016 Elementary Student Educational Visit to Foster Farm Field Site
- 2014-Present Penn State Anthropology Graduate Student Colloquium Committee Representative
- 2013 Penn State Anthropology Graduate Student Association Co-Treasurer (\$3036.95 Granted)
- 2013-Present Society for American Archaeology Member
- 2013-Present American Institute for Archaeology Member
- 2012-2013 Utah State University Museum of Anthropology Volunteer
- 2009-Present Golden Key National Honors Society Member

PEER REVIEWED PUBLICATIONS

McClure, S. B. and **M. H. Welker**

(in press) Farming with Animals: The Cardial Neolithic and the Role of Domesticated Animals in the Western Mediterranean. In *Times of Neolithic Transition along the Western Mediterranean*. Springer Book.

Lambert, P. M. and **M. H. Welker**

(2017) Traumatic Injury Risk and Agricultural Transitions: A View from the American Southeast and Beyond. *American Journal of Physical Anthropology* 162(1): 120-142.

GRANTS AND FELLOWSHIPS

submitted **M. H. Welker** *The Untold Tale of Cattle in Colonial North America*. National Geographic Society Young Explorer's Grant.

2016 **M. H. Welker** *Identifying Environmental and Cultural Influences on Dietary Practices at the Historic Fortress of Louisbourg (1713-1768), Cape Breton, Canada*. Penn State

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Department of Anthropology Pre-Comprehensive Hill Fellowship Pilot for Dissertation Research (\$1325)

- 2015 E. Zavodny and **M. H. Welker** *A Pretense of Defense? Hillfort Function in Bronze and Iron Age Lika, Croatia*. The Explorer's Club, Student Grant (\$1000).

TECHNICAL REPORTS

Welker, M. H.

2016 Analysis of Two Dogs (*Canis familiaris*) at the Fortress of Louisbourg, Cape Breton, Canada. Report on file at the Fortress of Louisbourg.

Welker, M. H.

2016 Analysis of a Dog (*Canis familiaris*) From the St. Johns River Site, Grenada. Report on file at the Grenada National Museum, St. George's, Granada.

Welker, M. H.

2016 Cahal Pech Plaza B: The Vertebrate Fauna. In *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2015 Field Season* edited by J. A. Hoggarth and Jaime J. Awe. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

Fowler, B., M. Bloxham, K. Conrad, S. Gasero, S. Shy, **M. Welker**, and B. L. Pitblado.

2011 Southeastern Idaho Northern Utah Paleoindian Project: 2011 Report of Archaeological Fieldwork, Caribou County, Idaho. Archaeological Report Submitted to the Bureau of Land Management-Pocatello Field Office.

AWARDS AND SCHOLARSHIPS

2014-2016 RGSO Conference Travel Award (\$1300)

Apr. 2013 USU Anthropology Student of the Year

2012-2013 Honors Research Fund (\$1500)

Aug. 2012 Anthropology Scholarship (\$500)

Apr. 2012 A-Pin Award for 4.0 GPA in consecutive semesters

Aug. 2009 Dean's Scholarship (\$9452)

Aug. 2009 National Merit Semi-Finalist Stipend (\$2000)

COURSES TAUGHT

Sp 2017 ANTH 425 Zooarchaeology- Dr. Sarah McClure

Fa 2016 ANTH 427W: Forensic Archaeology- Dr. Sarah McClure

Sp 2016 ANTH 425: Zooarchaeology- Dr. Sarah McClure

Fa 2015 ANTH146: Native American Indians (Distance)- Dr. Kirk French

Sp 2015 ANTH 011: Introduction to North American Archaeology (Distance)- Dr. Jonathan Burns

Fa 2014 ANTH 011: Introduction to North American Archaeology (Distance)- Sara Getz, M.A

Sp 2014 ANTH 009: Rise of World Civilizations- Dr. Carrie Hritz

Fa 2013 ANTH 427W: Forensic Archaeology- Dr. Sarah McClure

Fa 2012 ANTH 3250 Human Osteology Tutor- Dr. Patricia Lambert

FIELD EXPERIENCE

2016 Field Director - Penn State 2016 Archaeology Field School (PI: Claire Milner)

2015 Cuova de les Cocina (PIs: Oreto Garcia & S. B. McClure)

2015 Field Director - Penn State 2015 Archaeological Field School (PI: Claire Milner)

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- 2014 Field Technician - Rue Environmental (PI: David Rue)
- 2013 Volunteer - Butrint, Roman Forum (PIs: D. Hernandez, D. Çondi)
- 2013 Field Crew - Neolithic Landscapes of Central Dalmatia: Archaeological Survey, Excavation, and Spatial Analysis. (PIs: S. B. McClure & E. Podrug)
- 2012 Student - Viking Discovery Project (PI: D. Carlson)
- 2012 Student - Rampart Scotland, Whitecastle (PIs: D. Connolly & M. Cook)
- 2012 Volunteer - Ground Penetrating Radar Research Project (PI: M. Cannon)
- 2012-2013 Field Technician - USU Archaeological Services (PI: K. Cannon)
- 2012 Student Researcher - Ancient Native American Irrigation in Central Utah: Experimental Archaeology for Modeling of Fremont Agricultural Economics (PI: S. Simms)
- 2011 Volunteer - Dot Cave (PI: K. Cannon)
- 2011 Student - USU Summer 2011 Archaeological Field School (ANTH5300, PI: B. Pitblado)

LABORATORY EXPERIENCE

- 2016 Birch Creek (Idaho) and St John's River Site (Granada) Canid Morphometrical Analysis
- 2016-Present Tel Jemmeh Morphometric Analysis
- 2016-Present Fortress of Louisbourg, King's Bastion Faunal Analysis
- 2015-Present Scare Pond, Massey, and Foster Farmstead Faunal Analysis
- 2015 Faunal Analyst - Cahal Pech Plaza B Faunal Analysis
- 2015-Present Faunal Analyst - Dairying, Transhumance, and Environmental Impact/Resilience: Cultural and Biological Approaches to Domestic Animal Management in Neolithic Dalmatia, Croatia. (PI: S. B. McClure)
- 2014-2015 Volunteer Lab Assistant - Human Paleocology and Isotope Geochemistry Lab
- 2014 Research Assistant - Human Paleocology and Isotope Geochemistry Lab
- 2014 Program Assistant - Matson Museum of Anthropology
- 2013-Present Penn State Zooarchaeology Lab Assistant
- 2013 Co-PI (Honors Thesis) - The Risks of Agriculture: Fracture Trauma and Agricultural Intensification
- 2013 Bluefields Bay Research Project - USU Archaeology Lab
- 2010-2013 Bio-Science Lab Assistant - USDA-ARS-PIRU Bee Biology and Systematics Lab
- 2012 Laboratory Assistant - USU Spatial Data Collection Analysis and Visualization Lab
- 2012 Program Assistant - USU Museum of Anthropology
- 2011-2013 Volunteer Faunal Analyst - USU Archaeological Services
- 2011 ANTH 5800 Independent Study - Zooarchaeology
- 2011-2013 Volunteer Museum Collections Management - USU Museum of Anthropology
- 2011-2012 Volunteer Archaeology Lab Assistant - USU Archaeology Lab
- 2011 ANTH 4810 Museum Internship - USU Museum of Anthropology
- 2011 ANTH 5310 Archaeology Lab - USU Archaeology Lab

PRESENTATIONS

M. H. Welker and R. Duggan

2017 *A Comparison of Dog Shoulder Height in European and Native American Contexts*. Poster to be presented at the 82nd Society for American Archaeology Annual Meeting, Vancouver, British Columbia.

M. H. Welker

2016 *What Can Animal Bones Tell us About European Colonists?* Invited presentation to the Penn State Anthropology Club.

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2016 *Faunal Remains and Food Choice at Historic Fortifications* Poster presented at the 50th Council for Northeast Historical Archaeology meeting, Ottawa, Ontario.

Lambert, P. M. and **M. H. Welker**

2016 *Traumatic Injury Risk with Agriculture: Data from the Southeast and Beyond*. Paper Presented at the 85th Annual Meeting of the American Association of Physical Anthropologists, Atlanta, Georgia.

Billings, S. M.¹, **M. H. Welker**, J. A. Burns, and S. B. McClure

2016 *Testing the Efficiency of Supply Routes: Provisioning at British French and Indian War Fortifications*. Poster Presented at the 2016 Undergraduate Research Exhibition, State College Pennsylvania.

Welker, M. H., J. A. Burns, J. H. Haney, and S. B. McClure

2016 *A Database Approach to Historic Military Provisioning in the Eastern United States and Canada*. Paper presented at the 81st Society of American Archaeology Meeting, Orlando, Florida.

Haney, J. H. and **M. H. Welker**

2015 *Subsistence and Site Function in Historic Contexts*. Poster presented at the 80th Society of American Archaeology Annual Meeting, San Francisco, California.

Welker, M. H., J. A. Burns, and S. B. McClure

2015 *Investigating Diet Variability at Early Fortifications in the American Colonies*. Poster presented at the 80th Society of American Archaeology Annual Meeting, San Francisco, California.

Welker, M. H. and P. M. Lambert

2014 *Subsistent and Trauma: The Southeast in Perspective*. Poster presented at the 79th Annual Society of American Archaeology Annual Meeting, Austin, Texas.

Webb, D., **M. Welker**, and C. Kuehn

2013 *Experimental Archaeology and the Costs of Fremont Irrigation*. Guest lecturer at the Range Creek Field Station Faculty Meeting, Salt Lake City, Utah.

2013 *Experimental Archaeology and the Costs of Fremont Irrigation*. Presentation at the Utah Professional Archaeology Council's 2013 Winter Annual Meeting, Logan, Utah.

Webb, D., **M. Welker**, and C. Kuehn

2013 *Experimental Archaeology and the Costs of Fremont Irrigation*. Poster Presented at the National Conference on Undergraduate Research, La Crosse, Wisconsin.

2012 *Experimental Archaeology and the Costs of Fremont Irrigation*. Poster Presented at the 33rd Biennial Great Basin Anthropological Conference, South Lake Tahoe, Nevada.

Patten, J. and **M. Welker**

2012 *The Influence of Economically Important Plants on Historic Shoshone Mobility Strategies*. Poster Presented at the National Conference on Undergraduate Research, Ogden, Utah.

2012 *The Influence of Economically Important Plants on Historic Shoshone Mobility Strategies*. Poster Presented at the Utah State University Undergraduate Research Symposium, Logan, Utah.

¹ Student or Volunteer Author

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2011 *The Influence of Economically Important Plants on Historic Shoshone Mobility Strategies*.
Poster Presented at the 10th Biennial Rocky Mountain Anthropology Conference, Missoula,
Montana.

ARCHAEOLOGICAL SKILLS AND EXPERIENCE

Field Skills:

- Artifact Photography
- Artifact Illustration
- Excavation (Natural & Arbitrary Layers)
- Ground Penetrating Radar
- GPS Mapping and Navigation
- Magnetometry
- Pedestrian Survey
- Profile, Section, and Plan Mapping
- Total Station & RTK Setup and Use

Laboratory Skills:

- AMS 14C Date Preparation
- Bone Collagen Extraction and Purification (Ultrafiltration & XAD)
- Faunal Analysis
- Faunal Specimen Preparation
- Fourier Transform Infrared Spectroscopy (FTIR)
- Floatation
- Isotope Sample Packing (C-N & Sulfur)
- Lithic Analysis
- Macrobotanical Sample Sorting
- Museum Collections Management and Curation
- Site and Survey Report Writing
- Morphometric Analysis

Computer Skills:

- Adobe Photoshop and Illustrator
- ArcGIS Spatial Analysis
- Microsoft Access Database Creation
- Filemaker Pro Database Creation
- Past Perfect Data Entry
- SPSS Statistical Analysis
- Golden Grapher Figure Creation
- R Statistical Analysis

WORK HISTORY

Field Director

2015-present Pennsylvania State University Archaeology Field School
Pennsylvania State University, University Park, PA (Dr. Claire M. Milner)
Student Management, Teaching Basic Excavation, Survey, and Laboratory Methods

Research Assistant - (May-August)

2014 Human Geochemistry and Paleoecology Laboratory
Pennsylvania State University, University Park, PA. (Dr. Douglass Kennett)
Bone Collagen Extraction and Purification, Charcoal sample preparation, AMS and
Isotope sample preparation, FTIR

Research Assistant - (May-August)

2014 Matson Museum of Anthropology
Pennsylvania State University, University Park, PA. (Dr. Claire Milner)
Collections organization, Visitor reception, Educational activity design

Field Technician

2012-2013 Utah State University Archaeological Services (USUAS)
Logan, UT. (Dr. Kenneth Cannon)
CRM survey and excavation, Artifact photography, GPS mapping, Magnetometer grid
establishment

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Program Assistant - (May-June)

2012 Utah State University Museum of Anthropology
Utah State University, Logan, UT. (Dr. Elizabeth Sutton)
Collections organization, Artifact curation, Artifact photography, Database management,
Condition assessment

Lab Technician - (January-May)

2012 Utah State University Spatial Data Collection, Analysis, and Visualization Laboratory
Utah State University, Logan, UT. (Dr. Molly Cannon)
Spatial data analysis, Historic document transcription

Bio-Science Lab Assistant

2010-2013 USDA-ARS-PIRU Bee Biology and Systematics Laboratory
Logan, UT. (Dr. Theresa Pitts-Singer)
Alfalfa leafcutter bee management, Nest counting, Data entry, Bee releases, Parasite
identification, Greenhouse experimentation.