

# Tabitha Dorshorst

36 Spring St. Chatham, NY 12037 | Phone: 715-570-0754 | tdorshorst@umass.edu

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## Education

- PhD 2019-Present                      **University of Massachusetts, Amherst**  
Biological Anthropology  
Advisor: Dr. Brigitte Holt
- MA 2019                                      **University of Massachusetts, Amherst**  
Biological Anthropology  
Advisor: Dr. Brigitte Holt  
*Thesis: Archery's Lasting Mark: A biomechanical analysis of Archery*
- BS 2017                                      **University of Wisconsin, Oshkosh**  
Major: Anthropology  
Major: Kinesiology Emphasis in Healthcare science  
Minor: Neuroscience

### Research Interests:

*Human anatomy, human osteology, ontogeny, the relationships among specific physical activities, muscle function, and bone structure, functional morphology, and biomechanics*

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## Publications

- 2022**                      **Dorshorst, T.**, Weir, G., Hamill, J., Holt, B. (2022) *Archery's signature: an electromyographic analysis of the upper limb*. *Evolutionary Human Sciences*
- 2021**                      **Dorshorst T**, Gold C, Best A. *The 90th annual meeting of the American Association of Physical Anthropologists*. *Evolutionary Anthropology*. 2021 Jul. 30(4):230-232. DOI: 10.1002/evan.21913. PMID: 34347336.
- 2019**                      Bell, R., Fuchs, A., Rowan, J., Zintel, T., **Dorshorst, T.** and Zamora, A. (2019). *The 88th annual meeting of the American Association of Physical Anthropologists in Cleveland, Ohio*. *Evolutionary Anthropology*, 28: 106-108.

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## Published Abstracts

- Dorshorst, T.**, Reis, H., Holt, B. (2022) Ontogenetic patterns of limb bone robusticity in a Medieval sample. In *American Journal of Biological Anthropology* (Vol. 177, pp. 50)
- Dorshorst, T.**, Hamill, J., Weir, G., & Holt, B. (2021) Archery's Lasting Mark: A Biomechanical Analysis of Archery. In *American Journal of Physical Anthropology* supplement vol. 179 (Issue S69), p. 74.
- Dorshorst, T.**, & Holt, B. (2019, March). Impact of subsistence, latitude, and terrain on lower limb bone robusticity in a globally distributed skeletal sample. In *American Journal of Physical Anthropology* (Vol. 168, pp. 61-61).
- Karsten, J., **Dorshorst, T.**, Kubehl, K., & Scheider, L. (2017, April). Dietary Reconstruction of Winnebago Phase Oneota: A Study of Dental Pathology. In *American Journal of Physical Anthropology* (Vol. 162, pp. 238-238).

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### Research and Fieldwork

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- 2022** Collected electromyography (EMG) data among the Tsimane, an Indigenous population located in lowland Bolivia, to determine how muscle activation changes with age during subsistence activities (i.e., food processing, using a machete, and bow/arrow)
- 2021-2022** Research Assistant for an NSF funded project under the supervision of Drs. Brigitte Holt and Jonathan Stieglitz. The goal of this project is to examine whether greater physical activity levels lead to greater bone strength and protect against age-related bone loss with the Tsimane. My research duties included: Processing and analysis of accelerometry/interview data previously collected and assist with preparation for data collection in San Borja
- 2021-2022** Data collection and analysis for the Medieval San Paragorio-Noli Ontogeny Project. This project used pQCT scanning and microCT scanning to examined ontogenetic changes within cortical and trabecular bone structure within a Medieval skeletal collection from Noli, Italy.
- 2016** Fieldwork for the Tripolye International Archaeological Project, Verteba Cave, Ukraine. This fieldwork included excavation, cleaning, and identifying artifacts and human remains from Vereba Cave.

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### Research Funding, Grants and Awards

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- 2022** University of Massachusetts Amherst Graduate School Fieldwork Grant (\$5,000)
- 2022** University of Massachusetts Amherst Department of Anthropology Pre-Dissertation Grant (\$3,000)
- 2022** University of Massachusetts Amherst Anthropology Department Travel Scholarship (\$550)
- 2021** University of Massachusetts Amherst Natural History Collections Scholarship (\$3,491)
- 2019** University of Massachusetts Amherst Anthropology Department's Richard B. Woodbury Travel Award (\$250)
- 2019** University of Massachusetts Amherst Anthropology Department Travel Scholarship (\$300)
- 2017** Undergraduate Student/Faculty Collaborative Research, University of Wisconsin Oshkosh (\$550).

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### Conference presentations

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- 2022** **Dorshorst, T.,** Reis, H., and Holt, B. (2022) Ontogenetic patterns of limb bone robusticity in a Medieval sample. 91<sup>st</sup> Annual Meetings of the American Association of Biological Anthropologists, Denver, Co.

- 2021** **Tabitha Dorshorst**, Joseph Hamill, Gillian Weir and Brigitte Holt. Archery's Lasting Mark: A Biomechanical Analysis of Archery. 89th Annual Meeting of the American Association of Physical Anthropologists, Los Angeles, CA. American Journal of Physical Anthropology supplement vol. 179 (Issue S69), p. 74.
- 2018** **Dorshorst, T.** (2019, October) Archery's lasting mark: A biomechanical analysis of archery. University of Massachusetts Engaging Anthropology Conference. Amherst, Massachusetts.
- 2019** **Dorshorst, T., & Holt, B.** (2019, March). Impact of subsistence, latitude, and terrain on lower limb bone robusticity in a globally distributed skeletal sample. In *American Journal of Physical Anthropology* (Vol. 168, pp. 61-61). 111
- 2017** Karsten, J., **Dorshorst, T.**, Kubehl, K., & Scheider, L. (2017, April) Dietary Reconstruction of Winnebago Phase Oneota: A Study of Dental Pathology. American Journal of Physical Anthropology, 162 p238-p238, 1p. Supplement: 64
- 2016** **Dorshorst, T., & Karsten, J.** (2016, October). Frequency Distribution of Individual Traits within and Between Populations of Different Ancestry. Midwest Bioarchaeology and Forensic Anthropology Association Annual Meeting. Chicago, Illinois.
- 2016** **Dorshorst, T.** Karsten, J. (2016, December). Frequency Distribution of Individual Traits within and Between populations of Different Ancestry. University of Wisconsin Oshkosh Honors Symposium. Oshkosh, WI
- 2015** **Dorshorst T., Karsten J.** (2015, April). Dietary Reconstruction of the Winnebago Phase Oneota: A Study on Dental Caries. University of Wisconsin System Symposium for Undergraduate Research and Creative Activity., Stevens Point, Wisconsin.

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#### Invited Lectures

- 2021** **University of Massachusetts Amherst (Department of Anthropology)**  
Archaeology: Humans Past and Present
- 2021** **University of Massachusetts Amherst (Residential Academic Programs)**  
Ancient Civilizations
- 2019** **University of Massachusetts Amherst (Residential Academic Programs)**  
Human Nature
- 2019** **University of Massachusetts Amherst (Department of Anthropology)**  
Pro-Seminar in Anthropology
- 2019** **University of Massachusetts Amherst (Department of Anthropology)**  
Bioarchaeology and Forensic Anthropology Field School
- 2018** **University of Massachusetts Amherst (Department of Anthropology)**  
Bioarchaeology and Forensic Anthropology Field School
- 2018** **University of Massachusetts Amherst (Department of Anthropology).**  
Pro-Seminar in Anthropology
- 2018** **University of Massachusetts Amherst (First Year Seminar)**  
The Human species

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### Teaching and Academic Positions

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- 2021**      **University of Massachusetts (University Without Walls)**  
Medical Anthropology - Summer session online (Instructor)  
Anatomy (Teaching Assistant)
- 2020**      **University of Massachusetts (Department of Anthropology)**  
Ancient Civilizations (Teaching Assistant)  
Human Ecology- Summer session online (Instructor)  
Undergraduate Advising Assistant
- 2019**      **University of Massachusetts (Department of Anthropology)**  
Anatomy (Teaching Assistant)
- 2018**      **University of Massachusetts (Department of Anthropology)**  
Humans Origins and Variation (Teaching Assistant)
- 2017**      **University of Massachusetts (Department of Anthropology)**  
Human Origins and Variation (Teaching Assistant)
- 2015**      **University of Wisconsin, Oshkosh (Center for Academic Resources)**  
Applied Statistics (Peer Tutor)  
Medical Terminology (Peer Tutor)
- 2014**      **University of Wisconsin, Oshkosh (Center for Academic Resources)**  
Applied Statistics (Peer Tutor)  
Medical Terminology (Peer Tutor)

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### Undergraduate Student Mentoring

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- 2021-2022**      I supervised Herzen Reis, a current undergraduate student at UMass, on collecting cortical bone data on the Medieval San Paragorio-Noli skeletal collection. This project uses a life-history approach to examine how different stages of life, from infancy to adulthood, impacts cortical bone properties.
- 2019-2020**      I oversaw Alana Gabriel (BA 2020) on a project involving the San Paragorio-Noli medieval skeletal collection housed in Dr. Brigitte Holt's lab. The purpose of this project was to collect CT scans of individual's ulna and perform cross-sectional geometric analysis to reconstruct aspects of behavior from this group of people. Throughout this project, I guided Alana on protocols when working with skeletal collections along with current techniques (i.e., using pqCT scanner and image J analysis) in the field.
- 2018-2019**      I trained Vikram Norton (BS 2020) in applications of kinematic techniques to anthropological questions. I included him on a project focused on testing skeletal morphological approaches to behavior reconstruction through the biomechanics of archery. I helped Vikram navigate through an interdisciplinary project and how to approach studies with human subjects.

## **Outreach and Professional Experience Outside Academia**

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- 2019** Flying Cloud Institute: Young Women in Science STEM after school program (Presentation and Workshop)
- 2019** Engaging Anthropology Conference Program Committee (Member)
- 2019** Flying Cloud Institute: Young Women in Science STEM Summer Program (Presentation and workshop)
- 2016- 2017** Elite Medical Scribe in Emergency Room, Fond du Lac, WI