

# Cassandra M. Turcotte, Ph.D

[ct1313@nyu.edu](mailto:ct1313@nyu.edu)

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## Education/Employment

New York University: Post-Doctoral Researcher

- Research Associate (October 2018 - Present)

Max Planck Institute for Evolutionary Anthropology: Visiting Researcher

- Research Associate (December 2017 - June 2018)

George Washington University

- Doctoral Student (August 2012 - November 2018)

2018            PhD in Human Paleobiology

2015            MPhil in Human Paleobiology

University of Pennsylvania

2012            BA in Physical Anthropology and Geology

2009-2012     Assistant Keeper of the Skeletal Collections, University of Pennsylvania  
Museum of Anthropology and Archaeology (Dr. Janet Monge)

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## Teaching Experience

2016 Introduction to Biological Anthropology (GWU) - Course Instructor

- A survey of human evolution, physical variation, forensic science and primatology.

2015 Human Anatomy (GWU Medical School) - Abdomen and GI

Human Anatomy (GWU Medical School) - Musculoskeletal System

2014 Honors Hominin Evolution (GWU) - Teaching Assistant

- Review of the human fossil record and methods for reconstructing living behavior from skeletal remains.

Human Anatomy (GWU Medical School) - Anatomy for Anthropologists

2013 Introduction to Biological Anthropology (GWU) - Graduate Teaching Assistant

2012 Introduction to Biological Anthropology (GWU) - Graduate Teaching Assistant

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## Research Experience

### Doctoral Research Projects

**2017-2018: GWU/Max Planck Institute for Evolutionary Anthropology.** Project - *Distribution of Extrinsic Fiber Bundles on the Bone Surface of Muscle Attachment Sites.*

Calculates extrinsic fiber morphological variation to investigate the response of the enthesis' histologic environment to mechanical loading, using new application of nanofocus confocal microscopy and motif surface metrological analysis.

- **Skills:** histological preparation of bone, microscopy.

**2012-2018: GWU Hard Tissue Research Lab.** Project - *Behavior and the Bone-Muscle Interface: the effects of habitual activity on musculoskeletal attachment site morphology.*

This project investigates exercise-mediated change in bone cross-sectional geometry and muscle architecture using an experimentally exercised mouse model in order to assess the archaeological method of enthesis rugosity indexing.

- **Skills:** mouse dissection, microCT operation, 3D modeling, supervision of undergraduate student projects.

**2012-2018: GWU/Howard University.** Project - *Interspecific Variation in Enthesis Characteristics across Primates: a guide to behavioral reconstruction in fossils.*

This project investigates variation in muscle characteristics (e.g., muscle force-generating capacity) across a diverse sample of primate specimens to help elucidate the relationship between musculature, musculoskeletal attachment site morphology, and loading regime.

- **Skills:** Dissection of primate remains, microCT operation, 3D modeling, multivariate statistics, statistical package ‘R’.

#### Post-doctoral Research Projects

**2018-Present: New York University.** Project - *Soft Tissue Reconstruction from Skeletal Remains in the rhesus macaques of Cayo Santiago, Puerto Rico.*

This post-doctoral position is focused on the reconstruction of soft tissue and life history variables from skeletal remains using the rhesus macaque population of Cayo Santiago, Puerto Rico. This project takes advantage of an existing social group cull to collect antemortem morphometric and microbiome data for comparison against skeletonized tissues to assess the utility of forensic skeletal markers for the reconstruction of living behavior.

- **Skills:** Live primate research, forensic skeletal measurement, skeletal material curation, database management, student training

#### **Publications**

Diogo R, Potau JM, Pastor JF, de Paz FJ, Arias Martorell J, Turcotte C, Hammond A, Shearer B, Vereecke E, Vanhoof M, Nauwelaerts S and B Wood (2017) *Photographic and Descriptive Musculoskeletal Atlas of Bonobos*, 1st ed. Springer.

#### **Grants/Funding**

2017 NSF Doctoral Dissertation Improvement Grant (\$29,500)  
 2015 Cotlow Grant (\$1500)  
 2014 AMNH Collections Study Grant (\$625)  
 William Warren Fieldwork Grant (\$3000)  
 NSF Graduate Research Fellowship  
 2013 Sigma Xi Research Grant (\$900)

#### **Selected Volunteer Work/Additional Information**

2017 Undergraduates in Anthropology Mentorship Day  
 2015 Smithsonian Institution Scientist-Is-In Exhibit Expert  
 Whitman Middle School Event (Taught class on evolution)  
 Stars: Women in Science Event (Lab tour and discussion with high school girls)  
 2013 CASHP curriculum committee member  
 Bradshaw Foundation online content contributor  
 2012 ReBio academic mentor  
 Oregon Young Scholars mentor  
 Center for Undergraduate Research and Fellowships mentor