

Molly (Martell) Selba

792 Turkey Creek, Alachua, FL, 32615

Phone: (941) 773-9888 • E-Mail: mollyselba@ufl.edu

Personal Website: www.mollyselba.com

Lab Website: <https://people.clas.ufl.edu/vdeleon/>

EDUCATION

University of Florida, Gainesville, FL Expected: May 2021

PhD in Anthropology, Focus in Biological Anthropology

Recipient of a Graduate School Fellowship and a Thompson Earth Systems Institute Science Communication Fellowship

Current GPA: 3.97/4.0

University of Florida, Gainesville, FL December 2017

Master of Art in Anthropology, Focus in Biological Anthropology

Thesis: The Impact of Selection for Facial Reduction in Dogs: Geometric Morphometric (GM) Analysis of Canine Cranial Shape

GPA: 3.96/4.0

Johns Hopkins University, Baltimore, MD December 2014

Bachelor of Art in Archaeology and Anthropology; Minor in Museums and Society

Graduated with both departmental and general honors

GPA: 3.8/4.0; Dean's List: Fall 2011, Spring 2012, Fall and Spring 2013, Fall and Spring 2014.

University of Maryland Baltimore County, Baltimore, MD Summer 2014

Enrolled in and completed *Human Anatomy and Physiology* to supplement JHU curriculum.

State College of Florida, Bradenton, FL Spring 2010

Enrolled in and completed *Intro to Archaeology* to enrich high school program of study.

PUBLICATIONS

Selba MC, Bryson ER, Rosenberg CL, Heng HG, DeLeon VB. 2020. The Impact of Facial Reduction on Endocranial Shape in Dogs. *Anatomical Record* [Early View]

Selba MC, Oechtering G, Heng HG, DeLeon VB. 2020. The Impact of Selection for Facial Reduction in Dogs: Geometric Morphometric Analysis of Canine Cranial Shape. *Anatomical Record*, 303(2), 330-346

Selba MC. 2019. The Human Evolution Teaching Materials Project: A Case for the Incorporation of 3D Prints into K-12 Science Curricula. *EvoS Journal: The Journal of the Evolutionary Studies Consortium*, 43-38.

Smith TD, **Martell MC**, Rossie JB, Bonar CJ, DeLeon VB. 2016. Ontogeny and Microanatomy of the Nasal Turbinals in Lemuriformes. *Anatomical Record*, 299(11), 1492-1510.

PRESENTATIONS AND WORKSHOPS

Workshop: A Comparison of Hominins Using Fossils such as Teeth and Skulls (For Florida Teachers) Fall 2018

- This workshop presented a lesson plan to teachers, which allow them to used 3D printed hominin mandibles to include human evolution into their existing curricula.
- Presented at the Florida Association of Science Teachers Annual Meeting in October 2018.

Workshop: The Human Evolution Teaching Materials Project (For Florida Teachers) Fall 2018

- This workshop presented a lab to teachers that utilized 3D printed hominin crania as a way to introduce the concept of 'splitting and lumping' to middle and high school students.
- Presented at the Florida Association of Science Teachers Annual Meeting in October 2018.

Workshop: A Comparison of Hominins Using Fossils such as Teeth and Skulls (For K-12 Science Teachers) Spring 2018

- This workshop presented a lesson plan to teachers, which allow them to used 3D printed hominin mandibles to include human evolution into their existing curricula.

- Presented at the National Science Teachers Association Annual Meeting in March 2018.

Presentation: The Human Evolution Teaching Materials Project

Spring 2018

- This presentation introduced the Human Evolution Teaching Materials Project to science educators.
- Presented at the Southeastern Evolutionary Perspectives Society Annual Meeting in February 2018.

Presentation: The Human Evolution Teaching Materials Project

Spring 2018

- This presentation got feedback on the Human Evolution Teaching Materials Project from the UF Anthropology community.
- Presented at the UF FASA weekly colloquia in January 2018

POSTERS

The Human Evolution Teaching Materials Project (An Anatomical Perspective)

Spring 2019

- Developed a resource for middle schools and high school educators that helps facilitate the inclusion of human evolution into their existing science curricula
- Presented at the American Association of Anatomists Annual Meeting in April 2019.

The Impact of Selection for Facial Reduction in Dogs

Spring 2019

- The purpose of this study was to analyze the effects of breeding on facial reduction, cranial size and shape in domestic dogs
- Presented at the American Association of Physical Anthropologists Annual Meeting in March 2019.

The Human Evolution Teaching Materials Project (An Anthropological Perspective)

Spring 2018

- Developed a resource for middle schools and high school educators that helps facilitate the inclusion of human evolution into their existing science curricula
- Presented at the American Association of Physical Anthropologists Annual Meeting in April 2018.

The Impact of Selection for Facial Reduction in Dogs

Spring 2018

- The purpose of this study was to analyze the effects of breeding on facial reduction, cranial size and shape in domestic dogs
- Presented at the American Association of Anatomists Annual Meeting in April 2018.

Relationship of Turbinal Surface Area and Nasal Cavity Volume in Primates

Spring 2017

- This study investigated the relationship of turbinal surface area and nasal cavity volume in select primates.
- Presented at the American Association of Physical Anthropologists Annual Meeting in April 2017.

Heterochrony of Nasal Turbinal Development in Primates

Spring 2016

- Researched the development of the nasal turbinals in select primates from neonate to adult stages using CT scans in the DeLeon visual morphology lab.
- Presented at the American Association of Physical Anthropologists Annual Meeting in April 2016.

An Investigation of Elemental Biogenic Uptake:

Spring 2016

The Examination of Portable X-ray Fluorescence as a Method of Osteological Analysis

- This study tested the capacities of pXRF as a means of qualitative, non-destructive analysis on bone in two sample populations to determine whether or not heavy metal poisoning was present.
- Presented at the Paleopathology Association Annual Meeting in April 2016.

Ontogeny of Nasal Turbinals in *Lemur catta*

Spring 2015

- Researched the development of nasal turbinals using CT scans of *Lemur catta* of various ages in the Johns Hopkins University Center for Functional Anatomy and Evolution.
- Presented at the American Association of Physical Anthropologists Annual Meeting in March 2015.

Distribution of Rhomboid Fossa by Sex and Ancestry

Spring 2015

- A study of the collections at the Smithsonian Institution Museum of Natural History to understand the distribution of rhomboid fossa across different geographical locations and time periods and how that relates to the practiced distribution of labor.
- Presented at the Paleopathology Association Annual Meeting in March 2015

AWARDS AND HONORS

Travel Awards:

Anthropology Department	2015-2019
College of Liberal Arts and Sciences	2015-2019
Office of Research	2015-2017

Nominated for the P.E.O Scholars Award, CQ Chapter Fall 2018

- Nominees demonstrate academic excellence and achievement, the ability to make significant contributions in their chosen field of study, and a record of leadership positions in university academics

American Association of Anatomists Short-term Visiting Scholarship, University of Florida Spring 2018

- Received an award of \$1000 to visit Dr. Timothy Smith at Slippery Rock University and learn histological methods as a capstone to a histology independent study

Society for the Study of Evolution Small Grants Program for Local and Regional Outreach Promoting the Understanding of Evolutionary Biology Grant Spring 2018

- Received a second award in the amount of \$1000 to continue development and implementation of the Human Evolution Teaching Material Project. This grant included monetary support for undergraduate volunteers to help progress HETMP

University of Florida Department of Anthropology Poster Contest, Second Place (\$500 prize) Fall 2017

University of Florida Graduate School Fellowship Fall 2015-Present

O. Ruth McQuown Scholarship Award, University of Florida Spring 2017

- Awarded on the basis of academic achievement, commitment to helping others break down barriers, and contribution to the community

Society for the Study of Evolution Small Grants Program for Local and Regional Outreach Promoting the Understanding of Evolutionary Biology Grant Spring 2017

- Received an award in the amount of \$1000 to develop the Human Evolution Teaching Material Project, an outreach initiative which provides resources for middle and high school educators to facilitate the inclusion of human evolution in science curricula

Dean's Undergraduate Research Award: The Raymond Westbrook Undergraduate Research Award in Near Eastern Studies, Johns Hopkins University Spring 2014

- Awarded \$2500 to research the effectiveness of Portable X-Ray Florescence to Analyze Elemental Biogenic Uptake

PROFESSIONAL EXPERIENCE: BIOLOGICAL ANTHROPOLOGY

DeLeon Virtual Morphology Lab, University of Florida 2015-Present *Research Assistant/Lab Member*

- Analyzing and segmenting microCT scans in the NSF primate database
- Creating housing for collection of fetal remains

The Smithsonian Institution National Museum of Natural History, Museum Support Center 2014-2015 *Intern, Supervisor: Dr. David Hunt, Physical and Forensic Anthropologist*

- Analyzed and documented the human remains in The Robert J. Terry Anatomical Skeletal Collection.
- Created a concise and accessible pathology database that documents all of the osteological pathologies and anomalies in the Terry Collection.
- Assisted in necropsies to supplement the Smithsonian's research and growing comparative collection.

The Journal of Young Investigators, The Premier Undergraduate Research Journal 2014-2015 *Associate Editor in the Psychology and Social Sciences Division*

- Reviewed and edited undergraduate research for publication in the Journal of Young Investigators

Center for Functional Anatomy and Evolution, Johns Hopkins Medical Campus 2014-2015 *Lab Technician, Supervisor: Dr. Valerie DeLeon*

- Used Amira for post-processing CT scans of juvenile *Lemur catta* for use in academic research pertaining to ontogeny and dental eruption patterns in strepsirrhines.
- Assisted in photography of slides depicting human diseases in mouse models.

The Office of the Chief Medical Examiner, Baltimore, MD 2013-2014
Intern, Supervisor: Dr. William Rodriguez, Forensic Anthropologist

- Performed analysis on desiccated human remains, attended autopsy rounds, performed dissections, created inventories of remains in storage, and learned to recognize osteological evidence of various pathologies and trauma.

The Field School in Medieval Archaeology and Bioarchaeology at Badia Pozzeveri, Lucca, Italy Summer 2013
Student Bioarchaeologist

- Attended field school cosponsored by Ohio State University and University of Pisa. Faculty sponsors include: Dr. Giuseppe Vercellotti, Dr. Gino Fornaciari, and Dr. Clark Larsen.
- Participated in six weeks of excavation and in on-site Material Culture, Osteology, and GIS labs.
- Spent a significant amount of time excavating, handling, and analyzing human remains from burials on site.
- Presented on fieldwork to the faculty and students in the JHU archaeology department to fulfill the archaeology major's fieldwork component.

Crow Canyon Archaeological Center, Cortez, CO 2008-2009
Student Archaeologist

- Completed field school and excavated at the Goodman Point Site.
- Attended courses offered by Crow Canyon Archaeological Center and gained experiences both in the field and in the lab.

PROFESSIONAL EXPERIENCE: MUSEUM STUDIES

Florida Museum of Natural History, University of Florida Fall 2016-Present
Volunteer

- Cataloging and accessioning the museum's paleontological collections

The Johns Hopkins Archaeological Museum, Baltimore, MD 2012-2014
Undergraduate Student Assistant

- Accessioned collections into museum database, made and lined boxes to aid in the museum's conservation efforts, and helped create case maps for use at the museum.
- Presented research done at the museum to a variety of student groups including CTY (Center for Talented Youth).

2nd Annual Museum Symposium, Johns Hopkins Archaeological Museum April 2013

- Presented on research done on an object in the Johns Hopkins Archaeological Museum (research from Archaeology at the Crossroads academic course)
- <http://archaeologicalmuseum.jhu.edu/writer/molly-martell/>

Center for Talented Youth and Roland Park Country Day School 2013

- Presented on research conducted at the museum and answered questions about archaeological inquiry and investigation.

The Visual Resources Collections, The History of Art Department, Johns Hopkins University 2012-2013
Work-Study Student

- Edited photographs from excavations conducted by Johns Hopkins faculty as well as other photos for use in the History of Art Department.

The Libby Museum, Wolfeboro, NH Summer 2012
Museum Staff

- Employee- Accessioned collections into museum database, helped design and assemble several exhibits (writing wall texts, conducting research, etc.), provided tours as a docent, designed a floor plan map for the museum, and helped coordinate the museum's 100th anniversary centennial activities.

Jewish Museum of Maryland, Baltimore, MD January 2012
Staging Suburbia - Academic Course
Student Curatorial Assistant

- Collaborated with the museum's curatorial team to assist with research, design, and label writing in preparation for a traveling exhibit focusing on the migration of Baltimore's Jewish population to the suburbs.

- <http://krieger.jhu.edu/magazine/2012/11/undergrads-curate-exhibit-about-post-war-jewish-life-in-baltimore/#>
- Conducted primary source research on artifacts in the museum's collection and archives.

Johns Hopkins Archaeological Museum, Baltimore, MD

Archaeology at the Crossroads – Academic Course

Fall 2011

Student Researcher

- Conducted the first significant historical research completed on a ceramic Cypro-Geometric amphora in the museum's collection. Research was catalogued in the object's official record in the museum and presented at the 2nd Annual Museum Symposium.

EMPLOYMENT EXPERIENCE

Thompson Earth Systems Institute

Fall 2019-Present

Scientist in Every Florida School Educator

- Develops lessons plans and does classroom visit in K-12 classrooms across the state of Florida

Marieb/Brady Human Anatomy 9th Edition

Fall 2018-Present

Contributor

- Helped edit teaching materials from the 8th Edition

QualQuant Website

Fall 2017-Fall 2018

Webmaster

- Updating and maintaining the QualQuant website

Family and Children Services

Fall 2017-Fall 2018

Graphic Designer

- Developed promotional materials for their 165th anniversary celebration using archived information and photographs

SERVICE

Alpha Epsilon Lambda, University of Florida

Spring 2018-Spring 2019

President

- Planning and presiding over Eboard and General Body Meetings, restructuring dues system, and planning outreach events

City of Gainesville Parks, Recreation and Cultural Affairs Department

Fall 2017-Present

Tutor

- Helping elementary school students with their homework and planning educational activities

Alpha Epsilon Lambda, University of Florida

Spring 2017-Spring 2018

Membership Chair

- Coordinated the application process and inducted new members

Florida Anthropological Student Association (FASA)

Fall 2016-Spring 2017

New Graduate Student Liaison

- Helped new graduate students adjust to graduate school life

Museums and Society Student Advisory Committee, Johns Hopkins University, Baltimore, MD

Spring 2012-2015

- Provided input to Johns Hopkins faculty on the Museums and Society program, served as a student advocate for the minor, and helped develop and plan events during the academic year.

Archaeology and Ancient Civilizations Club, Johns Hopkins University, Baltimore, MD

Fall 2011-2013

Events Coordinator

- Served as liaison between AACC and museums to plan trips and informational sessions with university faculty.

TEACHING EXPERIENCE

Teaching Associate: Osteology and Osteometrics

Fall 2019-Present

- Facilitated labs totaling 15 students, delivered labs and practical exams, handled grading and attendance

- Teaching College Faculty: Comparative Neuroanatomy** Fall 2019-Present
- Facilitated class totaling 15 students, delivered lectures and practical exams, handled grading and attendance
- Teaching Assistant: Functional Human Neuroanatomy** Summer 2019
- Facilitated labs totaling 30 students, delivered labs and practical exams, presented multiple lectures
- Teaching Assistant: Introduction to Biological Anthropology** Fall 2017-Spring 2018
- Facilitated labs totaling 45 students, delivered labs and practical exams, handled grading and attendance
- Teaching Assistant: Human Sexuality and Culture** Fall 2016-Spring 2017
- Facilitated breakout sections totaling 80 students, helped students complete their research projects, responsible for grading and attendance

ADDITIONAL EDUCATIONAL TRAINING

- Preparing Future Faculty Program** Spring 2020
Learning important aspects of being a successful faculty member and preparing accordingly during my training at UF
- Course: Engaging Online Learners** Spring 2019
Completed the course and awarded a badge for successful completion of all requirements
- Course: Designing an Inclusive Course** Spring 2019
Completed the course and awarded a badge for successful completion of all requirements

INVITED LECTURES

- Course: Human Anatomy and Embryology** Spring 2020
Lecture on Heart Anatomy
- Course: Functional Human Neuroanatomy at the University of Florida** Fall 2018
Lecture on Comparative Neuroanatomy
- Course: Applied Human Anatomy w/ Lab at the University of Florida** Fall 2018
Lecture on Anatomy and Adaptation
- Course: Digital Anthropology** Spring 2018
Lecture on Technology and Biological Anthropology

EDUCATIONAL OUTREACH

- Thompson Earth Systems Institute** Fall 2019-Present
- Working as a Science Communication Fellow on the Scientist in Every Florida School Initiative. Completes 2-3 school visits a week to classrooms across the state of Florida.
- Human Evolution Teaching Materials Project** Fall 2016-Present
- Created a resource to middle and high school educators to facilitate inclusion of human evolution in science curricula by helping teachers generate 3D models of hominin fossil crania and providing accompanying lesson plans. Funded by SSE.
- Human Evolution Summer Teacher Workshop** Summer 2019
- Received \$15,000 to host a 3-day summer teacher workshop to help educators from the Southeastern United States incorporate human evolution into their science curriculum. Worked with over a dozen schools (both in person and virtually) across the United States to help them incorporate human evolution into their science curriculum
- iDigFossils 3D Printing and Paleontology for Student Engagement in Science** Summer 2018
- Presented on 3D printing and science education/outreach to 50 teachers from across the country

Center for Precollegiate Education and Training Human Evolution Module

Summer 2017

- Helped present human evolution to AP Biology students through hands-on labs using both morphological and genetic evidence

WEBINARS/WORKSHOPS ATTENDED

SciComm 101 Workshop

Workshop hosted at the Florida Museum of Natural History

Spring 2020

CommSciPaleo Symposium

Workshop hosted at the Perot Museum in Dallas, TX

Spring 2020

Integrate Interactive, 3D Tools in Human Anatomy Courses and Curriculum

AAA Sponsored Webinar

Fall 2018

Enhancing your Professional Portfolio through Educational Research, Part II: Conducting an Educational Research Project – Getting things Organized

AAA Sponsored Webinar

Spring 2018

Enhancing your Professional Portfolio through Educational Research, Part I: Setting up an Educational Research Project – Where do I Start?

AAA Sponsored Webinar

Spring 2018

Bringing Classroom Technology Funding Home

UF Grants Office

Spring 2017

AFFILIATIONS AND MEMBERSHIPS

Sigma Xi: 2018-Present

The Southeastern Evolutionary Perspectives Society: 2017-Present

Florida Anthropological Student Association: 2016-Present

Alpha Epsilon Lambda (Graduate Student Honors Society): 2016-Present

Society for the Study of Evolution: 2017-Present

American Association of Physical Anthropologists: 2014-Present

American Association of Anatomists: 2015-Present

Paleopathology Association: 2014-2016

SKILLS

Language: Proficient in French, Intermediate knowledge of Latin

Software: Microsoft Office, Photoshop CS3, PastPerfect, Adobe Lightroom, ArcGIS, AutoCAD, Adobe Bridge, Sofortbild, Amira, Filemaker, NIS Elements, R, ImageJ, MorphoJ, MeshLab, Wordpress, and Adobe Illustrator

PRESS MENTIONS

https://www.houmatoday.com/news/20190911/nicholls-professor-to-teach-teachers-about-3-d-printing-and-evolution?fbclid=IwAR2_Sjo1x-ACZjWG7ZyxnoPyjGXdB9W-J1bBmUOQwOBEAaeClrG62cqddMU

https://www.gainesville.com/news/20190705/teachers-gain-expertise-in-human-evolution-through-uf-workshop?fbclid=IwAR1ZF79zjGv21oyyRF8sFo_VbXiPKK6OjuWOGdbCHADSwb1BF6_oENHEseY

<https://www.palmcoastobserver.com/article/your-town-palm-coast-teacher-selected-for-3d-printing-workshop>

<https://www.floridamuseum.ufl.edu/earth-systems/blog/human-evolution-summer-teacher-workshop-empowers-educators/>

<https://www.thehartwellsun.com/local/teacher-learns-about-navigating-evolution>

<https://www.floridamuseum.ufl.edu/earth-systems/blog/trends-over-time-an-observational-analysis/>

<https://weartv.com/news/local/scientists-visit-escambia-county-students>

References Available Upon Request