
RESEARCH INTERESTS

Human Growth and Development, Neurobiology, Craniofacial Anomalies, Adult and Juvenile Osteology, Skeletal Biology, Bioarchaeology, and Environmental and Developmental Stress.

EDUCATION

Doctor of Philosophy | Pennsylvania State University, University Park, PA

Advisor: Dr. Joan T. Richtsmeier

2020-current

GPA: 4.0

Master of Arts in Anthropology | Texas State University, San Marcos, TX

Thesis: Using Fluctuating Asymmetry to Understand the Biological Implications of Social Race

Advisor: Dr. Kate Spradley

May 2020

GPA: 4.0

Bachelor of Science in Anthropology | Texas State University, San Marcos, TX

Minor: Biology

May 2015

GPA: 3.5

Associate of Arts | Northwest Vista College, San Antonio, TX

May 2012

GPA: 3.6

PROFESSIONAL EXPERIENCE

Graduate Research Assistant | Penn State University-Department of Anthropology | August 2020 to present

Training and research in morphological, histological techniques, and animal care and husbandry for projects coordinated within the Richtsmeier laboratory.

Graduate Instructional Assistant | Texas State University-Department of Anthropology | August 2019 to May 2020

Teaching and instructional assistant for the Anthropology 3381 Human Osteology class and lab. Facilitated open lab times for undergraduate students, grading of human osteology sketch guides, teaching students about human osteology in preparation for quizzes, and assisted instructors during class times.

Graduate Research Assistant | Texas State University-Department of Anthropology | August 2018 to May 2020

Estimating the biological profile and pathologies of human remains from a historic cemetery in Austin, Texas. Analysis and curation of skeletal remains for reporting to the Texas Historical Commission and use of modern anthropological methods for estimating the biological profile.

Instructional Assistant | Texas State University-Department of Biology | August 2018 to December 2018

Instruction of one functional biology laboratory where weekly lab experiments were conducted by undergraduate students. Prepare for the week's lab, grading of lab reports, assist students with lab experiments, grading of scientific papers, and attendance of weekly lab meetings.

Bioarchaeology Technician | Pape-Dawson Engineers | Austin, TX | January 2017 to August 2018

Estimating the biological profile and pathologies of human remains from a historic cemetery in Waco, Texas. Analyze, curate, and photograph remains for reporting to the Texas Historical Commission, use of modern anthropological methods for estimating the biological profile, assist in survey and shovel testing for land development projects, aid in testing of archaeological sites, and curation of archaeological material for curation facilities.

Projects included:

Texas Ranger Museum Hall of Fame: Skeletal analysis including the biological profile, pathology, photographs, and skeletal data curation of 250+ human remains from an historic cemetery excavated in Waco, TX.

Comal ISD Data Recovery: Phase survey of 299 acres and phase three excavation of a burned rock midden site in New Braunfels, Texas.

Hooten Tract: Phase one survey of a three-kilometer tract of land in San Antonio, TX.

Vista Ridge Data Recovery: Phase three recovery and survey in Comal County, TX.

Alecozay Tract: Phase one survey of ~250 acres of land in San Antonio, TX.

SAWS Westlakes Water Main: Phase one survey of 24.5 acres of land in San Antonio, TX.

Westpointe Medio Sewer Extension Phase II: Phase one survey of 5 miles of wastewater line in San Antonio, TX.

SAWS Masterson Road: Phase one survey of ~3,000 m of wastewater line in San Antonio, TX.

Foster Road: Phase one survey of 2.53 km segment of Foster road in San Antonio, TX.

Martinez Creek Hike and Bike Trail: Phase one survey of 2.45 km in San Antonio, TX.

Zarzamora Creek Hike and Bike Trail: Phase one survey of 3 km in San Antonio, TX.

Kasper Tract: Phase one survey of 212 acres of land in Williamson County, TX.

Archaeologist | The University of Mississippi | Jackson, MS | June 2016-August 2016

Provide support and excavation knowledge to the removal and relocation of 356 burials from a historic cemetery near Jackson, MS. Techniques included using archaeological excavation and exhumation of skeletal remains, using a Total Data Station for mapping processes, photogrammetry of skeletal remains, extensive note taking of remains for future laboratory analysis, comply with protocol for labeling materials removed from burials, monitoring construction equipment for changes in soil color to distinguish between possible grave shafts and undisturbed soils, and instruction of new field technicians.

Research Assistant | Grady Early Forensic Anthropology Laboratory at Texas State University Forensic Anthropology Center at Texas State (FACTS) | San Marcos, TX | January 2015 to June 2016
Operate and maintain the ProJet 660 Pro 3D Printer, scan and print osteological specimens for teaching purposes, post-processing of 3D printed models using ColorBond and StrengthMax epoxy techniques, operation of Next Engine 3D Laser Scanner, operation of the Breuckmann 3D White Light Scanner, scoring of morphological observations for the Forensic Data Bank including cranial suture closure, epiphyseal union, rib end changes, and pubic symphysis scoring, update forensic databank packets for each donation in the donated skeletal collection, itemize the Texas State Donated Skeletal Collection, systemize and arrange donation boxes and instructional tools for the lab, update and organize living and deceased donor files in Paradox.

AWARDS, HONORS AND FELLOWSHIPS

National Science Foundation Graduate Research Fellows Program | 2019-2023 | \$138,000
The Graduate College Scholarship | Texas State University | 2019-2020 | \$2,000
Celebrity Classic Endowed Scholarship | Texas State University | 2019-2020 | \$4,500
FACTS Thesis Research Grant | Texas State University | April 2019 | \$1,000
Anthropology Department Thesis Research Grant | Texas State University | April 2019 | \$350
The Graduate College Scholarship | Texas State University | 2018-2019 | \$2,000
Sallie Beretta Outstanding Senior Woman Award | Texas State University | May 2015 | \$2,000
Dean's List | Texas State University | Spring 2014, Fall 2014, and Spring 2015
President's Honor Award | Northwest Vista College | 2009-2011

RESEARCH EXPERIENCE

Effect of Cortex Specific Overexpression of BAF170 on Cranial Growth

Society for Craniofacial Genetics and Developmental Biology | October 2021 (accepted)

Authors: Megan F. Veltri, Emily L. Durham, Kate M. Lesciotto, Abigail Coupe, Mizuho Kawasaki, Susan Motch-Perrine, Anastassia Stoykova, Tran Cong Tuoc, Kazuhiko Kawasaki, and Joan T. Richtsmeier.

Does Donor Skin Color Affect Total Body Scores (TBS)?

American Academy of Forensic Sciences, Anaheim, CA | February 2020

Co-author: Crystal L. Crabb, B.S.

Subadult Sex Estimation from Radiographic Analyses of Long Bone Measurements: A Validation Study of Stull et al. (2017)

Co-author: Hailey Collord-Stalder, B.A.

New Methods to Measuring Diffuse Idiopathic Skeletal Hyperostosis

Committee on Diversity Undergraduate Research Symposium

American Association of Biological Anthropologist Meetings, Atlanta, GA | April 2016

Co-author: Jordan Lewman

Advisors: Dr. Daniel Wescott and Dr. Deborah Cunningham

The Effects of Obesity and Diabetes on Diffuse Idiopathic Skeletal Hyperostosis

Call on Diversity Undergraduate Research Symposium

American Association of Physical Anthropologist Meetings, Atlanta, GA | April 2016

Co-author: Jordan Lewman

Advisors: Dr. Daniel Wescott and Dr. Deborah Cunningham

Effects of Body Size on Musculoskeletal Stress Markers

Skeletal Methods Undergraduate Research Project | May 2014

Advisor: Maggie Moore, M.A.

LABORATORY EXPERIENCE

Hematoxylin and Eosin Histological Slide Analysis and Preparation | Richtsmeier Laboratory | May 2021 to present

Training in how to prepare, stain, and analyze histological slides using Hematoxylin and Eosin staining for paraffin slide sections.

Embryonic Mouse Ontogenetic Staging System (EMOSS) | Richtsmeier Laboratory | November 2020 to present

Sectioning of embryonic mouse hind limbs to quantify accurate developmental age. Duties include creating agarose gel for the embryonic sample, sectioning the hind limbs to image using a high-powered microscope, adding images into the EMOSS website to calculate embryonic age, and lastly to incorporate these values into the Richtsmeier Laboratory's mouse database.

Phosphotungstic Acid (PTA) Staining of Mouse Embryos | Richtsmeier Laboratory | January 2020 to present

Laboratory training for staining mouse embryos using PTA methods and protocols in order to visualize embryonic organ and skeletal development from micro-CT images.

Case Analysis Team (CAT) Assistant Member | FACTS CAT | May 2019 to present

Fulfills the requirements of a forensic anthropologist I by passing the basic and advanced human osteology exams and the map making exam. Duties include laying out remains for case analysis, photographing remains, and co-authoring biological profile and full case report sections under the direction of a Full member.

Human Remains Processing Technician | Osteology Research and Processing Laboratory (ORPL) | San Marcos, TX | November 2015 to Present

Aid Dr. Kate Spradley with Operation Identification (OpID) including intake and inventory of human remains, maceration, processing of remains down to skeletal material, and curation of skeletal remains before photographing for entry into the National Missing and Unidentified Persons System.

Teaching Assistant | Field Methods in Forensic Anthropology | FACTS | May 2015

Assist Dr. Michelle Hamilton and Dr. M. Kate Spradley and students with methods of location, excavation, mapping, and exhumation techniques of human remains, systematize dig kits, inventory of remains, and assist students with questions.

FIELD EXPERIENCE

Team Member | Texas State University-Operation Identification | December 2019

Assist a team of five to apply archaeological methodology to the exhumation of unidentified human remains in Texas. Hand and digital mapping of possible burial sites and trenches, photography, photogrammetry, and 3D spatial plotting of buried remains.

Search and Recovery Team (SRT) Assistant Member | FACTS SRT | May 2019 to present

Fulfills the requirements of a forensic anthropologist I by passing the basic and advanced human osteology exams and the map making exam. Duties include participation in FACTS search and recovery efforts, directing trainee members in the absence of a Full member, mapping scenes, and carrying out additional responsibilities as assigned by a Full member.

OpID Exhumation Team Full Member | FACTS OET | May 2019 to present

Fulfills the requirements of a forensic anthropologist I by passing the basic and advanced human osteology exams and the map making exam. Additionally, members must have previous cultural resource management, archeological, or bioarchaeological field school experience. Duties include assisting the OpID team with exhumations of unidentified migrant remains in South Texas.

Team Leader/Team Member | Texas State University-Operation Identification | January 2019

Leading a team of five to apply archaeological methodology to the exhumation of unidentified human remains in Texas. Hand and digital mapping of possible burial sites and trenches, photography and photogrammetry of buried remains.

Student | Field Methods in Forensic Anthropology | FACTS | May 2014

Review methods of location, excavation, mapping, and exhumation techniques of human remains using archaeological methods.

Student | 2-Day Recovery Course | FACTS | March and October 2014

Practice of locating, excavation, mapping and exhumation techniques of human remains in a short time frame.

RELATED EXPERIENCE

Social Media Committee | Dental Anthropology Association | April 2019 to October 2020

Use of social media to engage the public and academics with dental anthropology. Responsibilities include interacting with followers via the Dental Anthropology Association's Twitter account through #ToothTuesdays, #FossilFridays, and other interesting news.

Data Collection for Clara Alfsdotter's Dissertation | Principal Investigator: Clara Alfsdotter | April 2019 to July 2020

An Experimental Evaluation of Skeletal Disarticulation Sequence and Human Decomposition in Voids
Collection of decomposition and joint disarticulation for four donated individuals. The purpose of the research is to document the decomposition process, as well as the movement of the anatomical joints and compare among donations in open, above ground, and underground burials. Methods used include Megyesi et al. (2005) for total body scoring and Mickleburgh and Wescott (2018) for joint disarticulation.

REPORTS

Author | *Archaeological Monitoring and Exhumations for the City of Austin's Oakwood Cemetery Chapel Resotation Project, Travis County, Texas. Volume II: Bioarchaeology* | Texas State University, San Marcos | December 2019

SERVICE

Anthropology Graduate Student Association (AGSA) | Penn State University | May 2021 to present
Secretary for the anthropology graduate student association for the department of anthropology. Planning of events, writing retreats, workshops, and fundraisers.

AGSA Graduate Welfare Committee | Penn State University | May 2021 to present
Mentor, guide, and plan events for the AGSA Graduate Welfare Committee.

AGSA Outreach Committee | Penn State University | July 2020-present
Organization of outreach and diversity and inclusion to participants intrested in anthropology through Pennsylvania State University.

Inclusion, Diversity, and Equity in Anthropology (IDEA) Committee | Penn State University | August 2021 to present
Promotion of diversity and inclusion in the Department of Anthropology at Penn State. Creation of workshops, speaker series, training, teaching, and other welfare tools to support and promote diverse minds in anthropology.

Anthropological Research in Science Education (ARISE) Committee | Penn State University | August 2021 to present
Fully funded summer program with a focus on teaching and training in integrative anthropology for undergraduate students from underrepresented groups. Training modules for May 2022's program include anthropological research in genetics, isotopic analysis, geographic information systems, and medical anthropology.

Graduate Undergraduate Mentorship Program | Penn State University | September 2020 to present
Mentor, guide, and meet with 3 undergraduate students whose research interests are within biological anthropology. Guidance includes offering advice on research opportunities within the department of anthropology at Penn State, information about graduate school, job prospects and networking in anthropology.

Lecturer | Human Osteology Course | New Braunfels High School | FACTS | November 2019
Lecture on the biological profile, pathology, taphonomy, and help students gain an understanding of elements of the human skeleton.

Assistant | Human versus Non-human Remains Course | FACTS | June 2019
Assist the director, Dr. Wescott, with a course on Human versus Non-human remains by collecting donation information, organizing donations used, setting up stations with human and non-human bone, and picking up lunch for attendees.

Assistant | Human Remains Recovery Course | FACTS | June 2019

Assist the grave leader, Dr. JP Fancher, with the exhumation of human remains during a one-week course for law enforcement officials. Duties included leading the group through mapping exercises, assisting with stations regarding the biological profile, photographing the group during excavation, and assisting with lunch pick up and drop off.

Volunteer | American Association of Physical Anthropologist Meetings | March 2019

Aid the volunteer coordinator with the set up and break down of the silent auction and live auction, assist with payment of live auction items and organization of receipts.

Volunteer | American Academy of Forensic Science Meetings | February 2019

Assist the Academy with set up of rooms for the day's events, check in guests for special lectures, coordinate with the Volunteer Manager for the rest of the day's duties.

Lecturer | Human Osteology Course | New Braunfels High School | FACTS | February 2019

Lecture on the biological profile, pathology, taphonomy, and help students gain an understanding of elements of the human skeleton.

Volunteer | Texas Association of Biological Anthropologists Meetings | November 2018

Support Dr. Deborah Cunningham with checking in guests to the 2018 meetings hosted in San Marcos, Texas, and preparing a tourist document for guests visiting the city.

Assistant | High School Osteology Workshop | FACTS | October 2018

Aid the coordinator with lecture on the biological profile, pathology, taphonomy, and help students gain an understanding of elements of the human skeleton.

Volunteer | FACTS | August 2018 to present

Volunteer for the Willed Body Donation program at Texas State University. Responsibilities include transportation, intake, placement, documentation, photography, and blood, nail and hair samples of human remains at the Forensic Anthropology Research Facility (FARF) as part of the longitudinal decomposition study.

Volunteer for the Army Criminal Investigation Command (CID) | FACTS | March 2019

Assist the Army CID with access to research facilities including FARF, ORPL, and the Grady Early Building (GEB), aid investigators with set up of crime scenes at FARF, maintain cleanliness of work areas.

Volunteer | FACTS | August 2013 to August 2016

Assist the director and coordinator with donation organization, enter living and deceased donor information in Paradox, itemize the donated skeletal collection, photograph donated skeletal collection, disarticulation and processing of human skeletal remains, assist with donation intakes and placements, and assist with Operation Identification intakes, processing, hand washing of personal effects, and curation.

INTERNSHIPS

Intern | FACTS | Fall 2014 | Advisors: Dr. Kate Spradley and Dr. Daniel Wescott

Assist with OpID including hand washing personal effects of deceased unidentified border crossers (UBCs), label and organize personal effects, photograph personal effects for addition into NamUs, measure post-crania of UBCs, and manage hand written notes for entry into NamUs, operate the ProJet 660 Pro 3D Printer including printing osteological specimens for laboratory and professional use, post-processing techniques of 3D printed parts, manage 3D Print programs, and maintain the 3D printer, assist graduate students with donation pick-ups, intake and placement procedures.

WORKSHOPS

Scholar | Committee on Diversity Increasing Diversity in Evolutionary Anthropological Sciences (COD-IDEAS) | American Association of Biological Anthropologists (AABA) | October 2021

Applied for and selected as a participant in a one-day workshop held by the AABA. Faculty mentored students from underrepresented and minority groups. Topics included applying for funding, creating academic families, navigating unfamiliar landscapes, collaboration, professional presentation, and discussion of hardships as a minority in biological anthropology.

Participant | Dental Anthropology Workshop | Dental Anthropology Association | AABA Meeting 2019

Participant in a one-day workshop held by the Dental Anthropology Association at the 2019 AABA's in Cleveland, Ohio. The workshop included information on dental age estimation and hands on experience using an array of dental age estimation methodology.

Student | Human Osteology Short Course | FACTS | August 2018

Attended a one-week intensive course on the identification of human skeletal remains under the direction of Dr. Daniel Wescott, Dr. Deborah Cunningham, and Dr. Nicholas Herrmann.

PROFESSIONAL AND ACADEMIC MEMBERSHIPS

Member | Society for Craniofacial Genetics and Developmental Biology | 2021

Member | American Association for Anatomy | 2021

Member | American Association for the Advancement of Science | 2020-2021

Member | American Association of Biological Anthropologists | 2016-present

Member | American Association of Forensic Sciences | 2020

Forensic Anthropology Society | Texas State University, San Marcos, TX | 2013-2015

President-Spring 2015 | Internal Vice President-Fall 2014 | Member-Fall 2013-Spring 2014
Coordinate the 2nd Annual Forensic Anthropology Conference at Texas State University, a symposium on migrant identification along the US-Mexico border, plan and update members on events including meetings, fundraisers, and game nights, delegate duties to officers and members, volunteer at events like Bobcat Build and Missing in Harris County Day, begin development of the 3rd Annual Forensic Anthropology Conference at Texas State. Contact members and officers regarding events and meetings, plan fundraising events for members and officers.

RELEVANT SKILLS

3D Edit Pro 2.0

3D Print

3D Post-Processing Techniques

3Skull

ADBOU

Advantage Database Systems

Breuckmann 3D White Light Scanner

ColorBond and StrengthMax Epoxy Methods

EMOSS

FORDISC 3.0

Euclidian Distance Matrix Analysis

ImageJ

Meshlab

Microscribe Digitizer

Morphological Observation Scoring

NextEngine 3D Laser Scanner

Osteoware

ProJet 660 Pro 3D Printer

PTA Staining

FDB 2.0

Histological slide preparation