

Laura Cirillo, PhD

FORENSIC ANTHROPOLOGIST

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EDUCATION

Doctor of Philosophy

University of Nevada, Reno
Biological Anthropology
December 2022

Master of Arts

California State University,
Chico
Physical Anthropology
May 2017

Bachelor of Arts

Mills College
Anthropology and Sociology
May 2013

Bachelor of Arts

Mount Holyoke College
Neuroscience and Behavior
May 2011

CERTIFICATIONS

Age Estimation

2024
International Organization of
Forensic Odonto-Stomatology

Skeletal Analysis

2022

Commingled Human Remains

2022

Chest X-Ray Comparison

2024

Internal proficiency,
Defense POW/MIA
Accounting Agency (DPAA)

CURRENT RESEARCH

Subadult dental age estimation in a worldwide sample

Ongoing research from my dissertation to create mixed data (ordinal and continuous) models based on dental development and eruption data collected from radiographs, Lodox scans, and CT scans of over 2,500 individuals from 10 countries. Expansion of this work includes increasing the sample diversity through more representation from geographically and socioeconomically diverse populations, more detailed modeling from both ordinal and continuous data, testing on forensic applications for deceased and living individuals, and 3D mapping of the dentition throughout development.

Radiographic dental age estimation in adults

An ongoing research project through the Defense POW/MIA Accounting Agency that utilizes linear and area measurements from periapical and panoramic dental radiographs to improve the existing Kvaal et al. (1995) and Cameriere et al. (2007) methods of dental age estimation in adults. Current sample includes identified WWII service members through DPAA and clinical images in collaboration with the University of Nebraska Medical Center. The result of this work will be multivariate equations that provide increased accuracy and precision through expanded variables.

Statistical association of large-scale commingled remains

Serving as a forensic anthropology mentor and collaborator to Dr. Laura Manthey (Julius-Maximilians-Universität Würzburg, Germany) to resolve a large-scale commingled migrant shipwreck in collaboration with LABANOF (State University of Milan, Italy). The project includes developing equations for statistical association of remains that are not population dependent.

GRANTS AND AWARDS

Internal Department of Defense approval for purchase of microCT scanners and associated research (as a collaborator). 2024.

Albert A. Dahlberg Prize. Dental Anthropology Association. 2021.

Bilinski Fellowship. \$30,000. University of Nevada, Reno. Funding for academic year 2020-2021.

Young Scientist Travel Award. Advanced Light Source, Lawrence Berkley National Laboratory. 2015.

Pollitzer Travel Award. American Association of Physical Anthropology. 2014.

WORK EXPERIENCE

Postgraduate Forensic Anthropologist November 2021- present

SNA International supporting the Defense POW/MIA Accounting Agency

Supervisor: Dr. Catherine Jones (SNA); Dr. Franklin Damann (DPAA)

40 hrs/week

Conducted casework for casualty resolution of American service members for the DPAA laboratory at Offutt Air Force Base, Nebraska. Laboratory subject matter expert in dental morphology and dental age estimation, including conducting trainings for laboratory analysts, new hires, and interns. Mentor to five graduate-level laboratory interns. Facilitator of DPAA Diversity, Equity and Inclusion Initiative. Nebraska co-coordinator for DPAA Peer Mentorship Program. Research coordinator for multi-laboratory research projects.

Duties for this role included:

- Applying technical knowledge of biological anthropology to generate biological profiles to determine sex, age, ancestry, stature, trauma, skeletal anomalies, and other physical characteristics to assist in forensic identification while following laboratory standards and published best practices.
- Segregation of human skeletal remains from non-human bones and non-biological materials.
- Identification and reconstruction of fragmentary remains.
- Radiology of human skeletal remains via radiography or computed tomography.
- Conducting research on methods and applications to improve identification. Scientific findings presented at scientific conferences and disseminated through workshops.

Osteology Consultant, 2020 - present

California State Parks - State Archaeological Collection Research Facility

Contact: Heather Martin

On call

Consultant on archaeological collections including human remains as a subject matter expert in biological anthropology. Assist in determination of human and non-human skeletal material for Native American Graves Protection and Repatriation Act (NAGPRA) repatriation and identification of human remains in comingled historic and prehistoric collections. Assist in creation of archeological reports and NAGPRA consultation opinions.

Osteology Consultant, 2024 - present

United Auburn Indian Community – Auburn Rancheria

Contact: Melodi McAdams

On call

Consultant on recovered material from archaeological sites. Osteological analysis of anatomical collections and other skeletal material in the custody of institutions in Northern California for NAGPRA compliance and repatriation.

Museum Assistant, May 2017 - January 2023

University of the Pacific, AA Dugoni School of Dentistry

Supervisor: Dr. Dorothy Dechant

20 hrs/week

Performed anthropological research and museum curation work for the Spencer Atkinson collection at the Institute of Dental History and Craniofacial Study as a subject matter expert in biological anthropology.

Duties for this position included:

- Creation of a database of skeletal and dental material for a collection of 2,872 international skeletal specimens.
- Skeletal analysis to create biological profile reports for age and sex estimations.
- Conducting isotopic analysis, including sample collection, analysis, and interpretation of results.
- Estimation of provenance for the undocumented collection.
- Facilitating skeletal and dental research projects for visiting scientists, dentists, and dental students.
- Facilitating gross anatomy and comparative osteology courses for dental students.

Field Technician/Osteologist, January 2021 - November 2021

PaleoWest

Supervisor: Christina Alonso

50 hrs/week

Excavated and monitored archaeological sites for cultural resource management projects around the Bay Area. Wrote professional and detailed field excavation and burial analysis reports for historic and prehistoric sites. Coordinated excavation with Ohlone tribe as an archaeological liaison.

Cultural Resource Monitor, August 2020- November 2020

TRAC Archaeology

Supervisor: Christopher Borlas

50 hrs/week

Monitored archaeological sites for cultural resource management during construction. Coordinated work design with Army Corps of Engineers, Construction supervisors, and Tribal consultation.

Research Assistant, August 2017 - May 2020

University of Nevada, Reno

Supervisor: Dr. Kyra Stull

20 hrs/week

Performed skeletal research and created 3D digital models of skeletal material from CT scans of over 1,000 subadult individuals for data to be included in the KidStats statistical package. Proficiency with Amira software for model creation and metric data collection.

Laboratory Assistant, 2017 - 2019

University of the Pacific, AA Dugoni School of Dentistry

Supervisor: Dr. Gary Richards

Assistant to Dr. Gary Richards for Gross Anatomy course laboratory demonstrations, dissection instruction, and prosection example preparation. Conducted research on prehistoric skulls and fetal development with dental students through the Institute of Dental History and Craniofacial Study.

Archaeological Monitor and Field Osteologist, June 2015 - September 2018

ICF International

Supervisor: Darren Andolina

40 hrs/week

Excavated and analyzed human remains for cultural resource management projects under the advisement of Native American tribes in the location (Maidu and Miwok). Served as an archaeologist during Phase I, II and III surveys and excavations, including removal and recording over 100 burials with biological profiles and trauma analysis in the field.

Archaeological Monitor and Field Osteologist, April 2017 - June 2017

LSA

Supervisor: Neal Kaptain

50 hrs/week

Conducted archaeological and osteological field excavation and on-site identification and monitored for site impact during heavy equipment construction during Phase III excavation work.

***Human Identification Laboratory Forensic Assistant*, August 2013 - May 2017**

California State University, Chico

Supervisor: Dr. Eric Bartelink

Trained in field recovery methods and excavation techniques in Northern California and Nevada. Processed active homicide and unidentified persons cases and prepared human remains for analysis, assisting in bone measurements and trauma/pathology reports. Experience as field osteologist in over 15 forensic recovery sites, including mass disaster experience from forest fires in Lake County and Paradise, California (as a returning Alumna at the department's request).

TEACHING EXPERIENCE

***Instructor of Record*, June 2019 - December 2020**

Department of Anthropology - University of Nevada, Reno

Supervisor: Dr. Kyra Stull

Spring 2020 - Anthropology 110L: Intro to Biological Anthropology Lab

Fall 2019 - Anthropology 102: Intro to Biological Anthropology

Summer 2019 - Anthropology 102 + 110L: Intro to Biological Anthropology Lecture and Lab

Course Description:

Lecture topics including modern human variation, evolution, and primate conservation. Hands on learning and experimental extensions of lecture material with lab component, including fossil material analysis and modeling the evolutionary process. Emphasis on understanding human similarity in modern contexts and debunking myths of social race, conspiracy theory, and unfounded science to promote scientific literacy.

***Field Osteologist/Instructor*, 2015 field season**

Betty's Hope Archaeological and Bioarchaeological Field School - Antigua

Supervisor: Dr. Colleen Milligan

Field recovery and instruction of mass grave excavation technique and osteology during the excavation of a historical British naval mass grave on the Caribbean island of Antigua in association with California State University, Chico.

***Laboratory Graduate Teaching Assistant*, September 2014 - June 2015**

Department of Anthropology - California State University, Chico

Supervisor: Dr. Beth Shook

Laboratory instructor for five Introduction to Physical Anthropology courses. Created lesson plans for hands on activities comparing fossil casts to understand human evolution, debates and diagnostic comparisons to foster a deep understanding of speciation among primates. Supervised introductory level projects on forensic analysis and primate conservation theory.

***Field Osteologist/Instructor*, 2013 and 2014 field seasons**

Zamartze Mortuary Archaeology Field School - Navarra, Spain

Supervisor: Emma Bonthorne

Assisted in teaching archaeology and grave excavation technique alongside human osteology lectures. Taught skills in archeological recovery operations, site demarcation, establishing excavation grid, sediment screening, unit excavation techniques, assessment of recovered human skeletal remains and material evidence, stabilizing skeletal remains in the field and preparing them for transportation and curation. Conducted research with students on dental disease in the medieval population. Managed a crew of English-speaking students and a Spanish-speaking team of local volunteers, and utilized language skills for multi-lingual translation and professional communication. Met with local government officials to provide scientific and professional explanation of the site and our impact.

PUBLICATIONS

L Cirillo, B Walter, K Grow, E Wilson. (In Press). Forensic Anthropology and the Defense POW/MIA Accounting Agency, *in Handbook of Forensic Anthropology*. Routledge.

JT Hefner, **L Cirillo**, R Dunn, S Holcombe, A Konda, H Long, A VanBaarle. (In Press). Estimating Population Affinity and Ancestry in Forensic Anthropology: An Overview, *in Handbook of Forensic Anthropology*. Routledge.

AE Houkes and **L Cirillo**. (Accepted). Financial Barriers to Success: Examining Financial Burdens and Graduate Student Experiences in Biological Anthropology. *American Journal of Biological Anthropology*.

L Cirillo. 2022. Mixed Multivariable Models to Improve Human Dental Age Estimation in a Worldwide Sample. PhD Dissertation for University of Nevada, Reno.

LE Cirillo and EJ Bartleink. 2022. The Root of the Problem: What Missing Teeth Mean in Bioarchaeology. *Dental Anthropology*, 35(1)

HM Garvin, MK Stock, Marciniec, Mohamed, E Ternent, **LE Cirillo**, KE Stull. 2021. Sex Estimation of the Subadult Ilium Prior to Acetabular Fusion. *Journal of Forensic Science*, 66(6).

KS Stull, **LE Cirillo**, CN Hulse, SJ Cole. 2020. Subadult Sex Estimation, *in Sex Estimation of the Human Skeleton*. Academic Press.

L Cirillo. 2017. Gaps In Information: What Missing Teeth Mean in Bioarchaeology. Master's Thesis for California State University, Chico.

WORKSHOPS AND LECTURES

Guest Lecturer

Anthropology Department, University of Nebraska, Lincoln, 2025

Guest lecture on ages estimation for forensic anthropology course taught by Dr. Bill Belcher.

Human Bone Identification

UAIC Tribal Monitor Training 2025

Workshop for 50 participants on field osteology (human and faunal) for multiple tribes in Northern California.

Guest Lecturer

Forensic Department, University of Nebraska, Lincoln, 2022-2023

Guest lectures on skeletal sex estimation and identification of cranial plastic surgery in forensic casework for forensic course taught by Dr. Katie Whitmore.

Forensic Anthropology Meeting Workshop

2nd Annual Forensic Anthropology Meeting 2024

Workshop for 100 participants on Forensic Radiology with a focus on analysis of dental radiographs for age estimation and chest X-ray comparison for identification.

DPAA Scientific Analysis Workshops

Defense POW/MIA Accounting Agency

- ASUDAS Dental Anthropology Method Application – 2021, 2023
- Dental Morphology (Introductory Level) – 2022, 2023
- Dental Morphology (Advanced Level) – 2022, 2023
- Identification of Trans Women in Forensic Cases – 2022
- Third Molar Age Estimation Methods - 2023

ALTERNATIVE MEDIA

American Anthropologist: Anthropological Airwaves Podcast. 2022. Season 04, Episode 02: “The Myth of Closure”. *Alternate Host and Guest Producer.*

PROFESSIONAL MEMEBERSHIPS AND COMMITTEES

Co-Coordinator– Forensic Anthropology Meeting 2023-2026

Member – Dental Anthropology Association; *Outreach and Communications*

Associate Member – American Academy of Forensic Science

Student Member – American Association of Biological Anthropology

CONFERENCE PRESENTATIONS

LE Cirillo and B Oettel. 2025. Interobserver agreement for third molar radiographic age estimation. Annual Meeting for the American Association of Biological Anthropology, Baltimore, MD.

LE Cirillo and K Skorpinski. 2025. Variables impacting the application of radiographic age estimation by pulp/tooth ratios. Annual Meeting for the American Academy of Forensic Sciences, Baltimore, MD.

LE Cirillo. 2024. Trends in Tooth Development and Eruption in a World-Wide Sample: the Foundation of a Generalized Dental Age Estimation Method. Annual Meeting for the American Association of Biological Anthropology, Los Angeles, CA.

AE Houkes* and **LE Cirillo.** 2024. Financial Barriers to Graduate Student Success in Biological Anthropology. Annual Meeting for the American Association of Biological Anthropology, Los Angeles, CA.

D Dechant and **LE Cirillo.** 2024. Identified Sources of Interobserver Error in rASUDAS Trait Definitions: An Investigation of the Persistent Inconsistency in Dental Morphology Scoring. Annual Meeting for the American Association of Biological Anthropology, Los Angeles, CA.

R Tegtmeier Hawke, **LE Cirillo**, K Whitmore, LE McCormick, AK Kindler, ES Tarbet Hust. 2024. A Comparison of Ancestry-Specific Versus Ancestry-Independent Stature Estimation. Annual Meeting for the American Academy of Forensic Sciences, Denver, Colorado.

LE Cirillo, R Tegtmeier Hawke, R Taylor. 2024. A Critical Validation of Dental Morphology as a Method of Ancestry Estimation in a Historical. Annual Meeting for the American Academy of Forensic Sciences, Denver, Colorado.

K Skorpinski and **LE Cirillo.** 2024. Estimating Age in Adults Using Measurements of Dental Radiographs: A Validation of the Kvall Method. Annual Meeting for the American Academy of Forensic Sciences, Denver, Colorado.

LE Cirillo. 2023 Population Specific vs. Pooled Dental Samples: An Argument for More Generalizable Age Estimation Methods. Annual Meeting for the American Association of Biological Anthropology, Reno, Nevada.

LE Cirillo, M Pilloud, and J Haug. 2022. Disciplinary and Community Ethics Surrounding Gender- and Sex-Diverse Individuals in Forensic Casework. Annual Meeting for the American Academy of Forensic Sciences, Online.

AM Adame*, **LE Cirillo**, and KE Stull. 2021. Examining Trends in Permanent Tooth Eruption by Geographic Location. Annual Meeting for American Association of Biological Anthropology, Online.

LE Cirillo, JC Dechamps-Brally, KE Stull, MA Pilloud. 2020. Annual Meeting for the American Academy of Forensic Sciences, Anaheim, California.

LE Cirillo, D Dechant, RS Jabbour, GD Richards. 2019. Anatomic and Geometric Morphometric Assessment of the Herto 16/5 Endocranium (Middle Awash, Ethiopia). Annual Meeting for the American Association of Physical Anthropologists, Cleveland, Ohio.

- D Dechant and **LE Cirillo**. 2019. Quest for consilience: Using dental morphology, craniometrics, and stable isotopes to classify an undocumented skill collection. Annual Meeting for the American Association of Physical Anthropologists, Cleveland, Ohio.
- S Hay, **LE Cirillo**, T Vlemincq-Mendieta, D Kenessey, RL Perash, SJ Cole, KA Broehl, GR Scott. 2019. Interobserver agreement in scoring dental morphology using ASUDAS in South Australian Whites. Annual Meeting for the American Association of Physical Anthropologists, Cleveland, Ohio.
- J Cronin, A Shaugnessy, J Vannaheuang, **LE Cirillo**, GD Richards, RS Jabbour. 2019. Geometric morphometric assessment of skull symmetry in 6-8.0 year old humans. Annual Meeting for the American Association of Physical Anthropologists, Cleveland, Ohio.
- MK Stock, LK Corron, **LE Cirillo**, HM Garvin, CN Hulse, SJ Cole, KE Stull, AR Klales. 2019. Quantifying error in virtual data collection: the impact of MSCT scan segmentation protocol and inter-observer error in 3D landmark placement in the human subadult pelvis. Annual Meeting for the American Association of Physical Anthropologists, Cleveland, Ohio.
- LE Cirillo**, GD Richards, EJ Bartelink, D Parkinson 2018. Tracking damage to stable isotope values in bone exposed to x-ray microtomography. Annual Meeting for the American Association of Physical Anthropologists, Austin, Texas.
- LE Cirillo**. 2017. The root of the problem: exploring postmortem tooth loss as a symptom of dental pathology. Western Bioarchaeological Group Conference Annual Meeting, Reno, Nevada.
- LE Cirillo** and D Dechant. 2017. Practical efforts to identify unknown skeletal collections. Society for California Archaeology Northern Data Sharing Meeting.
- DE Becker, NA Castellon-Hinkle, **LE Cirillo**, GD Richards, RS Jabbour. 2017. Growth differences and shape change in six to eight year old humans based on standard metric and 3D coordinate data. Annual Meeting for the American Association of Physical Anthropologists, New Orleans, Louisiana.
- LE Cirillo**, AT MacKinnon, JR Prince,, EJ Bartelink, GD Richards. 2016. Effects of X-ray Microtomography on Stable Isotope Values. Annual Meeting for the American Association of Physical Anthropologists, Atlanta, Georgia.
- J Ding, **LE Cirillo**, AM McGough, RS Jabbour, GD Richards. 2015. Facial shape in trigonocephaly: a metric and geometric morphometric assessment. Annual Meeting for the American Association of Physical Anthropologists, St. Louis, Missouri.
- DE Becker, NA Castellon-Hinkle, **LE Cirillo**, EM Burke, J Ding, RS Jabbour, GD Richards. 2015. Impacts of the number and types of teeth employed in assessing developmental ages from skeletal samples. Annual Meeting for the American Association of Physical Anthropologists, St. Louis, Missouri.
- LE Cirillo**, AM McGough, J Ding, RS Jabbour, GD Richards. 2015. Geometric morphometric assessment of cranial shape change in trigonocephaly. Annual Meeting for the Society for American Archaeology, San Francisco, California.
- LE Cirillo**, and EJ Bartelink. 2015. Oral Pathology in the Prehistoric San Francisco Bay Area. Annual Meeting of the Society for California Archaeology, Redding, California.
- LE Cirillo**, AM McGough, J Ding, RS Jabbour, GD Richards. 2014. Geometric morphometric assessment of cranial shape change in trigonocephaly. Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada.
- AM McGough, **L Cirillo**, J Ding, RS Jabbour, GD Richards. 2014. Skull and brain anatomy of a trigonocephalic juvenile: Description of the first known prehistoric case. Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada.