

# Nicollette S. Appel, M.S.

**Phone:** (516) 672-6198 | **Email:** nappel@unm.edu

---

## EDUCATION:

- 2020-present PhD candidate in Evolutionary Anthropology  
The University of New Mexico  
Advisor: Dr. Heather Edgar D-ABFA
- 2020-2023 M.S. in Evolutionary Anthropology  
The University of New Mexico  
Advisor: Dr. Heather Edgar D-ABFA
- 2015-2017 M.S. in Forensic Anthropology with High Honors  
Boston University School of Medicine  
Advisor: Dr. Donald Siwek
- 2011-2015 B.S. in Biology  
Minors in Anthropology, Chemistry, Dance  
The University of Miami
- 

## RESEARCH INTERESTS:

Human Variation, Age Estimation, Quantitative Analysis, Virtual Anthropology, Forensic Anthropology, Biocultural Anthropology, Skeletal Biology, Bioarchaeology

**Dissertation Research:** *Detecting Differences Between Biological and Chronological Age: Considerations to Social Inequality and Health Disparities*

**Master's Thesis:** *Long-Term Cocaine Use and Its Potential Effect on Bone Morphology*

---

## ACADEMIC APPOINTMENTS:

- 2020-Present Research Assistant, University of New Mexico  
(Supervisor: Dr. Heather Edgar)
- Creation of protocols for CT segmentation of cranium and long bones in Amira
  - Creation of protocol for recording 3D coordinate data in Geomorph R package
  - Data collection
  - Supervise undergraduate students assisting with data collection
- 2020-2022 Graduate Teaching Assistant, University of New Mexico  
Forensic Anthropology  
(Professors: Anna Rautman; Paige Lynch)
- Held weekly office hours to provide additional assistance to students
  - Graded weekly lab assignments, quizzes, and exams
- 2021 Graduate Teaching Assistant, University of New Mexico  
Anthropology of the Skeleton

(Professor: Dr. Osbjorn Pearson)

- Taught the lab section two times a week
- Graded weekly lab assignments, quizzes, and exams

2019 - 2020 Adjunct Professor, Long Island University Post  
Forensic Anthropology

- Developed the curriculum for the forensic anthropology course
- Topics covered include: theories of biological anthropology, introductory osteology, creation of a biological profile, trauma analysis, pathology analysis, taphonomy, and report writing

Development of the Human Species, Culture and Society

- Independent Summer Course
- Topics covered include: human evolution, human variation, and relation between human beings and other non-human primates

Human Society

- Independent Summer Course
- Topics covered include: marriage and kinship, leadership forms, spiritual beliefs and sacred practices, social inequalities, and economic reciprocity and exchange

2017 Graduate Teaching Assistant, Boston University  
Experimental Design and Statistics for Forensic Anthropologists  
(Supervisor: Dr. Peter Cummings)

- Held weekly office hours to assist first year master's students
- Advised students on experimental design and methods, and statistical analyses of data based on students individual theses projects

2016 Graduate Teaching Assistant, Boston University  
Advanced Human Osteology  
(Supervisor: Dr. Sean Tallman)

- Provided a workshop on bone histology and histological methods used in creating a biological profile
- Held weekly office hours and created quizzes for first year master's students

2013 Workshop Leader, University of Miami  
Introduction to Biology (Supervisor: Dr. Michael Gaines)

- Lead a small group workshop to mentor students and help them understand the topics taught in Biology 101

---

## PROFESSIONAL EXPERIENCES:

2021-present Anthropology Morphology Technician, Office of the Medical Investigator

- Process human remains for forensic anthropological analysis
- Analyses include biological profile, trauma, pathology, and taphonomy
- Assist with field work for recovery of remains
- Write and edit official reports

2023 Research Collaborator, American Museum of Natural History

- Forensic examination of a subset of skeletal remains
- Analysis of biological profile and trauma
- Development of short report to guide future efforts related to human remains

- 2019-2020 Forensic Scientist I: Latent Print Section, Nassau County Office of the Medical Examiner
- Perform comparisons of latent prints from scenes throughout Nassau County, NY.
  - Process latent prints using physical and chemical methods
  - Obtain post-mortem prints in order to identification an individual
  - Accession evidence on a rotating basis
- 2018 Forensic Scientist Trainee: Latent Print Section, Nassau County Office of the Medical Examiner
- Part of the internal training program of the Latent Print Section
  - Read professional articles, performed comparison and processing exercises, and completed two written exams
  - Obtained post-mortem prints in order to identify an individual
- 2017 Educator, Harlem Education Activities Fund
- Taught a middle school level forensic science course to high potential underserved students in Brooklyn, New York
  - Developed my own lesson plans, curricula, and lab activities
- 2016 Medico-legal Death Investigations Intern, Massachusetts Office of the Chief Medical Examiner
- Assisted the medico-legal investigations team on active and cold cases
- Forensic Anthropology Intern, Massachusetts Office of the Chief Medical Examiner
- Worked alongside Dr. James Pokines with reconstruction of the cranium and post cranial elements related to active cases
  - Catalogued and documented past forensic odontological specimen
- 2011 Research Assistant, Feinstein Institute Orthopedic Research Laboratory
- Aided in research with aims to improve treatment for injuries of the musculoskeletal system including cartilage regeneration and repair
- 

## PUBLICATIONS AND PRESENTATIONS:

- In review Kelly Kamnikar, **Nicollette S Appel**, Rachel Menegaz, Tea Jashashvhili, Ethan Hill, Heather JH Edgar. *Technical Note: Measuring Bicondylar Length in Computed Tomography Data*. American Journal of Biological Anthropology.
- 2024 Kelly Kamnikar, **Nicollette S Appel**, Esteban Rangel, Natalie Adolphi, Amaya Abeyta-Brown, Steven D Ousley, Heather JH Edgar. *Stature estimation equations for modern American Indians in the American Southwest*. Forensic Science International, 361, 2024:112151.
- Max Golden, Matthew Lee, John Garrett, Shamsi Berry, **Nicollette Appel**, Heather Edgar, Perry Pickhardt. *AI-Based Body Composition Biomarkers at Post-Mortem CT for Enriching Autopsy Evaluation*. Submitted to be presented at the Society for Advanced Body Imaging Meetings.
- Esteban Rangel, Kelly Kamnikar, **Nicollette S Appel**, Heather JH Edgar. *A comparison of stature estimation methods for contemporary American Indians*. Presented at the 93<sup>rd</sup> Annual American Association of Biological Anthropologist Conference. Los Angeles, California. Winner of the AABA Outstanding Student Presentation Award.
- Nicollette S Appel**, Paige Lynch, Cris Hughes. *Identification trends in forensic anthropology cases at the New Mexico Office of the Medical Investigator*. Presented at the 76<sup>th</sup> Annual American Academy of Forensic Science Conference (Anthropology Section). Denver, Colorado.

Kelly Kamnikar, Heather JH Edgar, **Nicollette S Appel**, Esteban Rangel. *Improving identification of unknown American Indians and Hispanic/Latinx Americans*. Presented at the 76<sup>th</sup> Annual American Academy of Forensic Science Conference (NIJ Section). Denver, Colorado.

2023 **Nicollette S Appel**, Kelly Kamnikar, Heather JH Edgar. *Improving identification of unknown Hispanic Americans and Native Americans in the US. Mejorando la identificación de desconocidos que son Estadounidense Hispanos y gente Indígena de los EEUU*. Presented at the 2023 XXII Coloquio Internacional de Antropología Física Juan Comas. Mexico City, Mexico.

**Nicollette S Appel**, Heather JH Edgar, Shamsi Daneshvari Berry, Keith Hunley. *Error and bias in race and ethnicity descriptions in medical examiner records in New Mexico: consequences for understanding mortality among Hispanic/Latinos*. *Forensic Science International*, 7, 2023:100388.

**Nicollette S Appel**, Heather JH Edgar, Kelly Kamnikar. *Improving forensic identification of unknown Native and Hispanic Americans: results, progress, and future endeavors*. Presented at the 2023 PittCon Conference and Expo. Philadelphia, Pennsylvania.

Heather JH Edgar, Kelly Kamnikar, Taylor Busby, Jordan Martinez, Jana Meyer, Mario Pena Munoz, Roberto Rios, Ian Wallace, **Nicollette S Appel**, Stephen Ousley. *A Reassessment of Stature for Modern Native Americans Using the New Mexico Decedent Image Database (NMDID) Data*. Presented at the 75<sup>th</sup> Annual American Academy of Forensic Science Conference (Anthropology Section). Orlando, Florida.

2022 Heather JH Edgar, **Nicollette S Appel**, Katherine Spradley, Hannah Cantrall, Nichole Benally. *A Pilot Study to Improve the Identification of Unknown American Indians and Hispanic/Latinx Americans*. Presented at the 74<sup>th</sup> Annual American Academy of Forensic Science Conference (Anthropology Section). Seattle, Washington.

**Nicollette S Appel**, Heather JH Edgar, Keith Hunley, Shamsi Daneshvari Berry. *Misidentification of Hispanic Individuals During Death Investigations: The Impact of Identification Error on Research in Anthropology and Public Health*. Presented at the 91<sup>th</sup> Annual American Association of Biological Anthropologist Conference. Denver, Colorado.

2018 **Nicollette Appel**, Donald Siwek, Tara Moore. *Long-Term Cocaine Use and Its Potential Effect on Bone Morphology*. Presented at the 70<sup>th</sup> Annual American Academy of Forensic Science Conference (Anthropology Section). Seattle, Washington.

2017 James Pokines, **Nicollette Appel**, Corey Pollock, Christopher Eck, Amanda Maki, A. Skylar Joseph, Lindsey Cadwell, and Christina Young. *Anatomical Taphonomy at the Source: Alterations to a Sample of 84 Teaching Skulls at a Medical School*. *Journal of Forensic Identification*, 67(4) 2017:600-632.

James Pokines, **Nicollette Appel**, Corey Pollock, Christopher Eck, Amanda Maki, A. Skylar Joseph, Lindsey Cadwell, and Christina Young. *Anatomical Taphonomy at the Source: Alterations to a Sample of 84 Teaching Skulls at a Medical School*. Presented at the John McCahan Medical Campus Education Day, Boston University School of Medicine.

---

## FIELD EXPERIENCES:

2023-present Team Member, Kenyon International

- Deployment has needed in mass disaster and disaster recovery situations
- Provide aid for cases involving forensic anthropology, forensic archaeology, fingerprint comparison, search and recovery, and more

- 2016 Field School Participant, Odyssey Field School, Limassol, Cyprus
- Learned excavation and preservation methods related to modern cemetery human skeletal remains
  - Was exposed to a variety of pathological changes and trauma to the remains not commonly seen in a forensic context
- 2014 Field School Participant, The Azoria Project, Kavousi Crete, Greece
- Participated in an excavation of a Neolithic, Late Minoan III C, and early Iron Age- Archaic site
  - Learned excavation, preservation, and conservation methods related to an archaeological site
- 

## GRANTS, AWARDS, AND HONORS:

### Grants:

- 2024 National Science Foundation Doctoral Dissertation Research Improvement Grant. "Doctoral Dissertation Research: Assessing differences between biological age-at-death estimations and known chronological age-at-death in humans." (\$26,257). Co-PI.
- 2022 National Institute of Justice. "Improving identification of unknown American Indians and Hispanic/Latinx Americans." 15PNIJ-21-GG-04139-SLFO (\$532,833). Research Assistant. FY22 Congressional Spending. "Pilot Project: Improving identification of unknown American Indians and Hispanic/Latinx Americans." (\$373,800). Research Assistant.

### Awards:

- 2024 Evolutionary Anthropology Research Award (\$2,500)  
 Anthropology Research Development Award (\$1,000)  
 Joseph Powell Anthropology Endowment Fund (\$1,500)
- 2023 Forensic Science Foundation Student Travel Award (\$1,500)  
 New Mexico Research Grant – High Priority (\$5,000)  
 Doctoral Conference Presentation Award (\$1,200)  
 GPSA Professional Development Grant (\$500)  
 NIJ consultant for the 6<sup>th</sup> NIJ Forensic R&D Symposium at PittCon (Full funding for attendance)
- 2022 Student Conference Award Program (\$600)  
 Pollitzer Prize Winner. American Association of Biological Anthropologists (\$500)  
 GPSA Student Research Grants (\$500)  
 Joseph Powell Anthropology Endowment Fund (\$800)
- 2011-2015 University of Miami Dickinson Scholarship

### Honors:

- 2015-2017 Boston University High Honors
- 2014-2015 Gamma Sigma Alpha Academic Honor Society  
 University of Miami President's Honor Roll
- 2013-2015 University of Miami Dean's List  
 University of Miami Provost's Honor Roll
- 2011-2015 National Society of Collegiate Scholars
- 2011-2013 PRISM Program, University of Miami
- 

## SKILLS AND CAPABILITIES:

### Laboratory Techniques

- Osteological analysis
- Tissue preservation and sectioning
- Histological staining

- Physical and chemical processing for latent print analysis

#### Field Techniques

- Field search and recovery
- Burial excavation (solitary and commingled graves)
- Site mapping with Leica TS02 Total Station with Nomad Data

#### Computer Software

- Amira
- FORDISC 3.1
- 3Skull program and digitizer
- ImageJ Analysis
- Laboratory Information Management System (LIMS/Beast)
- MideoCaseworks computer software
- SPSS statistical software
- R Programming
- Microsoft Office

FEMA certifications (ICS-100, ICS-200, IS-700)