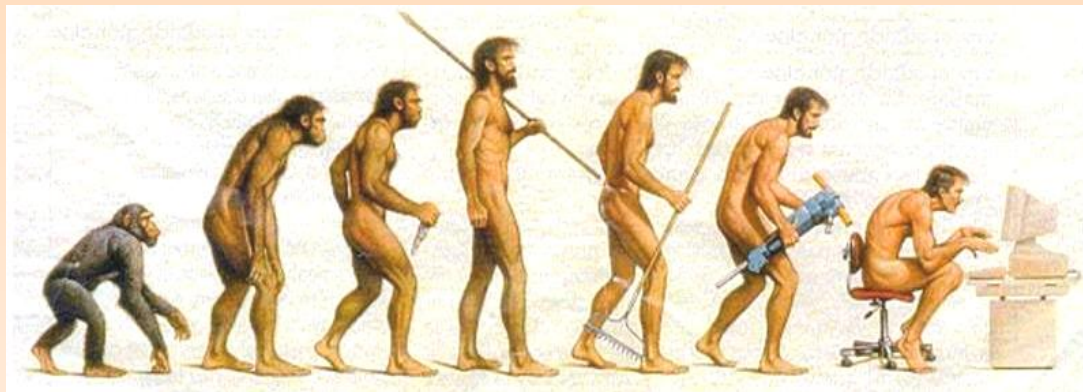


Biological and Forensic Anthropology

Rachel Anderson, Lexy Holfeltz,
Alyssa Felix, and Whitney Seferos

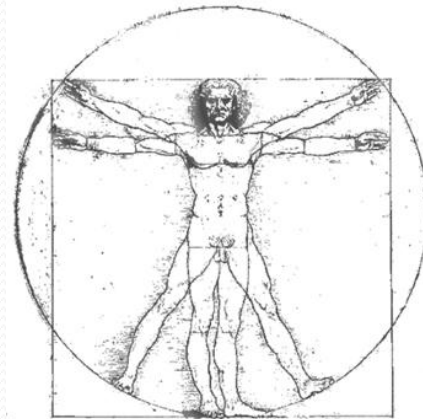
Biological Anthropology . . .

- “Is the study of human biology within the framework of evolution and with an emphasis on the interaction between biology and culture” (Jurmain 2010)
- Combines approaches from the natural and social sciences
- Is responsible for much of what we know about human evolutionary history and phylogeny



Branches of Biological Anthropology

- Primatology
- Paleoanthropology
- Human behavioral ecology
- Molecular anthropology
- Nutritional anthropology
- Medical anthropology
- Neuroanthropology
- Paleopathology
- Anthropometry
- Human and Primate osteology/forensics



Primates

The study of non-human primate species in order to gain insights into the history and evolution of our own species



Careers in Biological Anthropology

- Academia:
 - Teach at a university, conduct research, and publish data (PhD)
 - Teach at a junior college (MA/MS)
 - Work as a field or lab assistant (BA/BS)
- Museums and National or State Parks
 - Ex: curate a natural history museum (MA/MS or PhD) or conduct natural history tours at a national park (BA/BS)
- Zoos and Sanctuaries
 - Ex: work in animal care with non-human primates (BA/BS) or carry out public education programs (BA/BS or MA/MS)
- Government and Private Organizations
- Health and Aid Organizations
 - Ex: work with world populations to reduce health discrepancies (BA/BS or higher)
- Medicine, Dentistry, Veterinary Medicine (MD, DDS, DVM)
- Law enforcement (BA/BS or higher)

How to prepare as an undergrad

- Focus your coursework
- Declare related majors and minors
- Develop relationships with professors
- Seek out TA positions
- Conduct undergraduate research
 - Assist a faculty member in his/her ongoing research
 - or ask a faculty member to sponsor an original study
 - Apply for a UROP assistantship
 - or apply for an outside grant
 - Present your research at a symposium
 - Publish your abstract in the undergrad research journal
 - Achieve Research Scholar designation

How to prepare as an undergrad

- Do volunteer work
- Apply for an internship
 - Paid or unpaid; local, national or international
- Attend a field school
 - Primatology or ethnography
- Research graduate schools
 - Apply to schools with faculty that share your focus
 - Look for specialized programs such as “Biocultural” or “Evolutionary” Anthropology
 - Look for perks, such as language programs, primate collections, labs, etc.
 - Apply for graduate scholarships and fellowships

Forensic Anthropology



- Forensics is the application of a broad spectrum of sciences to questions of interest in legal problems and criminal investigations
- Forensic Anthropology is the application of anthropological knowledge to legal issues
- Specifically, forensic anthropology uses anthropological data, criteria, and techniques to determine the sex, age, race, and other characteristics of skeletal or biological material in questions of civil or criminal law

Careers in Forensic Anthropology

- Majority are employed by an academic or research institution and consult on criminal cases as needed
- Few practice forensic anthropology full time
- Coroner/Medical Examiner
- University or college faculty
- Government
 - Repatriation for claims made under NAGPRA (Native American Graves and Protection and Repatriation Act)
 - Wildlife Forensic Anthropologist with the US Fish and Wildlife Service
- Lab technician in a crime lab
- US Military
 - U.S. Army Mass Graves Investigation Team
 - U.S. Army Central Identification Laboratory
- Curator at a museum
- Pathologist at a hospital
- Virtual Anthropology with EVAN (European Virtual Anthropology Network)



Forensic Anthropology

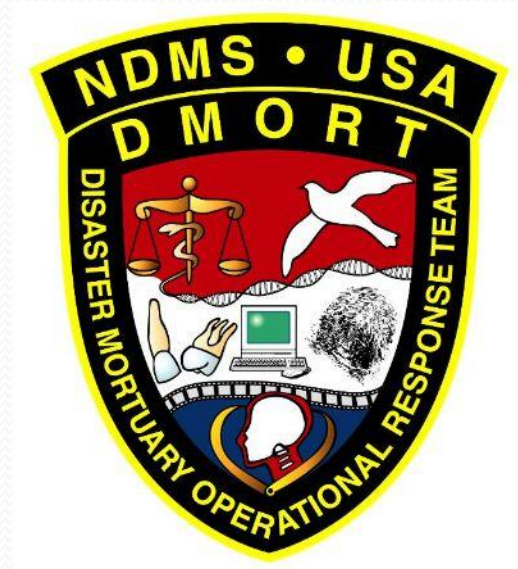


Education and Top Schools

- BS/BA in Anthropology
- Master's and/or PhD in physical or biological anthropology or a related field
 - Coursework in anatomy, skeletal biology, archaeological field methods, legal evidence, pathology, and/or forensic science
- University of Tennessee, Knoxville
- Boston University School of Medicine
- University of Florida, Gainesville

Organizations in Forensic Anthropology

- The American Academy of Forensic Science
 - Supervised casework and participatory membership encouraged
- The American Board of Forensic Science
- DMORT
- The Inforce Foundation
- ICITAP





Dr. Karen Burns

For more info
contact Dr. Burns in
our anthropology
department!



Career Specialties within Forensics

- Criminalists
- Digital and multimedia specialists
- Engineering sciences
- Jurisprudence
- Odontology
- Pathology/Biology
- Physical anthropology
- Psychology/Behavioral science
- Toxicology

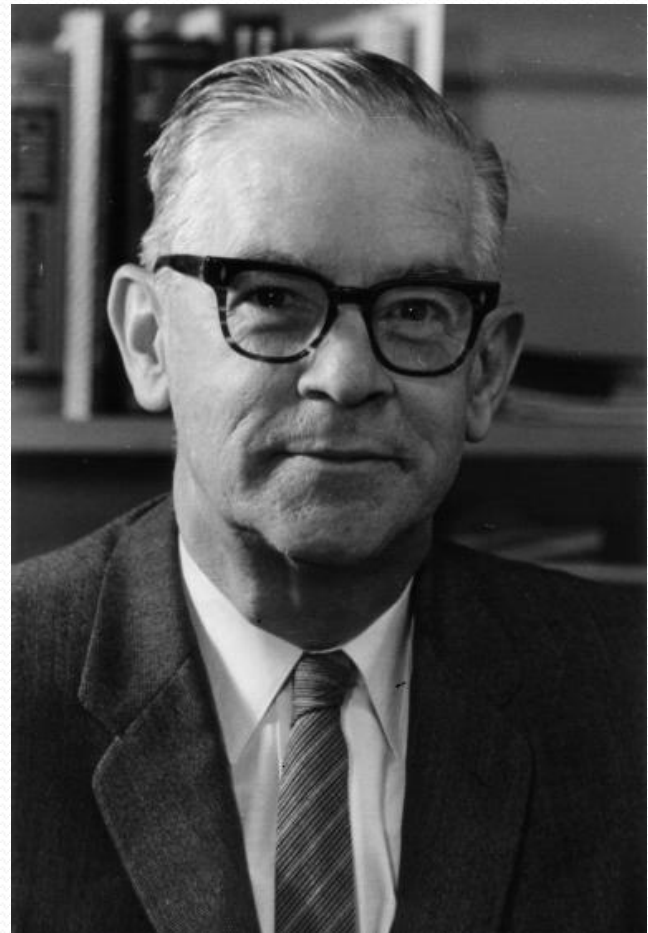


Forensic Radiologist

Criminology

"Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as silent evidence against him. Not only his fingerprints or his footprints, but his hair, the fibers from his clothes, the glass he breaks, the tool mark he leaves, the paint he scratches, the blood or semen that he deposits or collects - all these and more bear mute witness against him. This is evidence that does not forget. It is not confused by the excitement of the moment. It is not absent because human witnesses are. It is factual evidence. Physical evidence cannot be wrong; it cannot perjure itself; it cannot be wholly absent. Only its interpretation can err. Only human failure to find it, study and understand it, can diminish its value."

Paul L. Kirk, PhD
"Father of Criminalistics"



Criminalist Education

- Bachelor of Science in biology, chemistry, physics, molecular biology, or a related science is recommended
 - Must establish a background in at least one science
 - A master's degree may be required in the future
- Continuing education classes throughout career

Working as a Criminalist



Examining a sheet for
trace evidence

- Forensic lab work
 - Local police and sheriff departments
 - District attorneys' offices
 - Regional/state agencies
 - Medical examiners' offices
 - Private companies
 - Colleges and universities
 - Federal agencies such as the DEA, ATF, FBI, USPS, SS, CIA, military forces, and the US Fish and Wildlife Service
- Assist other countries in creating or updating forensic services

Expert Witness Testimony

- Where the loyalty lies:
 - 1) Evidence
 - 2) Court
 - 3) Hiring attorney
 - 4) Yourself
- Expert qualifications:
 - Educated in the field of testimony
 - Credibility
 - Experience

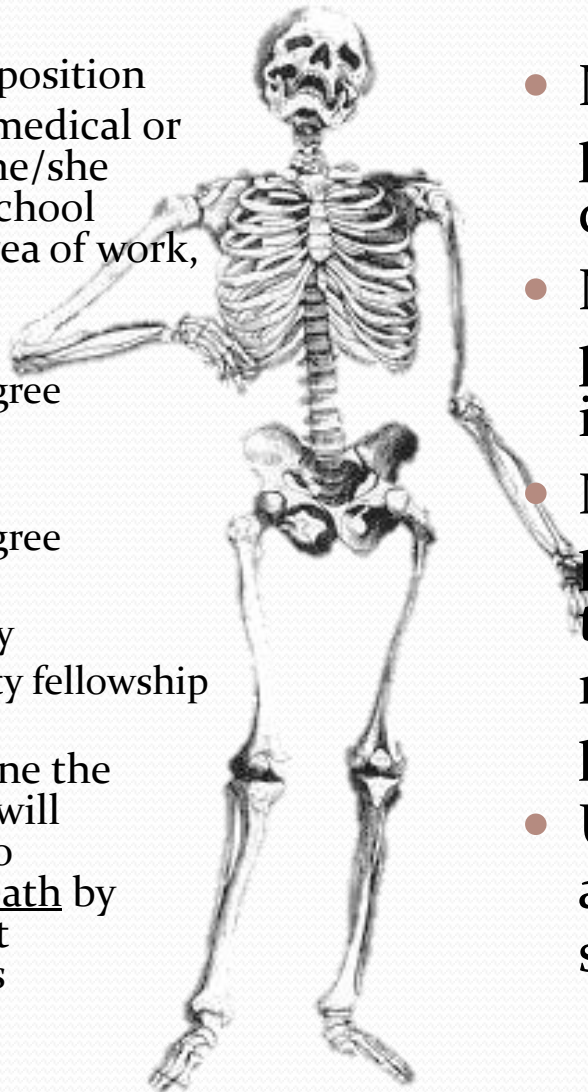


Coroner/ Medical Examiner



CORONER

- Coroner is an elected position
- A coroner can have a medical or legal degree, though he/she need only have high school diploma, live in the area of work, and be of voting age
- For a legal career:
 - Undergraduate degree
 - Law degree
- For a medical career:
 - Undergraduate degree
 - Medical degree
 - 4 years of residency
 - A one-year specialty fellowship (optional)
- Coroners can determine the manner of death and will contract a physician to determine cause of death by autopsy if they are not themselves physicians



MEDICAL EXAMINER

- Medical examiners perform autopsies to determine cause of death
- ME's are licensed physicians who specializes in forensic pathology
- ME's must be licensed physicians and complete their residency requirements in forensic pathology programs
- Utah uses both coroner and medical examiner systems

Manner versus Cause of Death

- Manner of Death

- Broken down into 5 categories:
 - Natural
 - Accidental
 - Suicidal
 - Homicidal
 - Undetermined

- Cause of Death

- How the death actually occurred:
 - Heart attack, blunt force trauma, gun shot, etc.



Not for the faint of heart

Utah STATE Office of Medical Examiner

- Utah has four medical examiners in Salt Lake City
- There are about 80 part-time employees that include odontologists, anthropologists, coroners, etc. that send preliminary reports and bodies to the OME office in Salt Lake City
- OME Jurisdiction is based on a state code that dictates what types of deaths the OME has jurisdiction over
 - Any death of a child or infant
 - Some natural deaths
 - Any death under the jurisdiction of the SLCPD
 - Motor vehicle accidents are not included unless a police department requests OME involvement

