

San Bernardino County Sheriff / Coroner
Bone Identification and Skeletal Recovery
Bones

- I. Role of the Forensic Anthropologist
 - A. Intimate knowledge of skeletal articulation
 - 1. May help with body recovery in mass disasters
 - 2. Will usually de-flesh bones for study and analysis
 - B. Examine bones for
 - 1. Human or non-human
 - 2. Sex of individual
 - 3. Stature of individual
 - 4. Health of individual
 - 5. Cause of death
 - 6. Time since death

- II. Determining Human or Non-human
 - A. Skull features
 - 1. Fully enclosed eye sockets
 - 2. Eyes facing front
 - 3. Completely round brain cavity
 - B. Long bone features
 - 1. Ball joints
 - 2. Joint connections
 - 3. Length to diameter ratio
 - C. Flat bones
 - 1. Scapula features
 - 2. Pelvis features
 - D. Other bones

- III. Determining Sex
 - A. Pelvis
 - 1. Sciatic notch
 - 2. Pelvic opening
 - 3. Scars of parturition
 - B. Skull
 - 1. Mastoid process
 - 2. Mandible
 - C. General sexual dimorphism

- IV. Determining Age of Individual
 - A. Teeth eruption
 - 1. Used for small children
 - 2. Teeth erupt in predictable order and ages
 - 3. Molars last at about 21

 - B. Epiphysis
 - 1. Ends of all bones are separated at birth

2. Puberty causes these ends to fuse
 3. Different bones fuse in predictable sequence
 4. Good to about 25 years
 - C. Skull sutures
 1. Skull has wide separation of plates at birth
 2. Sutures fuse from inside to outside
 3. Begins about 17 years
 4. Ends at about 35 – 40
 - D. Bone deterioration
- V. Determining how long individual have been dead (skeletonized)
 - A. Grease / oil content of bone
 - B. Cracks and flakiness of bone
 - C. Color of buried bone
 - D. Presence of ligaments & tendons
 - E. Presence of soft tissue
- VI. Practical Exercise

Student will be provided with numerous skeletal elements and are expected to be able to identify human from non-human bone, various elements of the human skeleton, and identify female skeletons from male skeletons.
- VII. Bone scatter sites
 - A. Search patterns
 1. Grid
 2. Spiral
 3. Line
 - B. Marking remains
 1. Flagging tape
 2. Pin flags
 3. GPS
 - C. Documentation
 1. Notes
 2. Sketches
 3. Measuring
 - D. Photography
- VIII. Practical Exercise – 8hr class only

Students will conduct a line search to find human and non-human skeletal remains and other evidence. Students will mark all significant finds and provide proper documentation and photography of each item identified.

Skeletal elements are scientific polymer casts of actual human skeletons or non-forensic human remains donated and prepared for educational purposes.

Students will be provided with all necessary personal protective equipment.