



G20 The Identification of Skeletal Remains After Nearly Two Decades

Robert C. Walcott, DDS*, Moraga, CA 94556

Learning Overview: After attending this presentation, attendees will understand the identification of skeletal remains with no antemortem records.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating key investigatory techniques to identify skeletal remains using search and rescue personnel with technicians, forensic odontology, anthropological human Identification (ID) laboratory, the Missing and Unidentified Persons Unit of the Department of Justice (MUPS of DOJ), news publications, DOJ DNA laboratory, and the Federal Bureau of Investigation (FBI) Combined DNA Index System (CODIS) DNA database profiles.

On March 16, 2017, a hiker discovered a skull and remains near a seasonal creek on a secluded steep hillside near the Moraga Lafayette border in California. The hiker returned to the area with Moraga police, field officers, and Contra Costa Sheriffs, including technicians equipped with dogs and metal detectors. Global Positioning System (GPS) coordinates were recorded at the site. The remains were documented at the coroner's office for determination of cause of death and identification. This office requested a forensic odontology examination. The skull, mandible, and restorations were cleaned, and the teeth were placed in their respective sockets, including a four-unit maxillary anterior fixed bridge. The dentition was charted on the DOJ Unidentified Deceased Report. A digital radiographic survey was completed utilizing DEXIS™ software with a NOMAD™ hand-held portable unit. The radiographs and completed charting were emailed to the DOJ MUPS Section in Sacramento. A search of the dental data base did not produce a comparison.

The examination revealed that there were 21 teeth present. The four third molars, maxillary left lateral incisor, and mandibular left first bicuspid were missing antemortem. Five maxillary teeth were missing postmortem. The four mandibular incisors, the right mandibular cuspid, and right first bicuspid all exhibited trauma, which may have been peri-mortem. Four of these had extensive crown fractures, both vertical and horizontal, and the other two exhibited enamel cracks. The right anterior maxillary bone above the right first bicuspid, cuspid, and lateral was missing, possibly peri-mortem, as were these teeth. Five molars had amalgam restorations and four molars had composites. A maxillary, porcelain-to-metal, four-unit fixed bridge replaced the left lateral incisor. The left central incisor had a root canal and post present. The missing mandibular left first bicuspid was also replaced by a porcelain-to-metal three-unit fixed bridge.

Two prosthodontists, six dentists, and four experienced laboratory technicians in four local cities examined the bridges. Two bay area broadcasting stations reported on this case, the *Contra Costa Times* and local newspapers published articles asking anyone with information to contact the Moraga Police Department. The Contra Costa Dental Society's monthly newsletter with photographs and radiographs published an article asking if members could assist with records. Concurrently, the coroner sent a femur bone to the California State University Chico Human Identification Laboratory. This lab provides forensic anthropology services to assist the legal system in resolving criminal cases, missing person cases, and in providing closure to families. The skeletal analysis determined that the remains were most likely a middle-aged Caucasian male approximately 70 inches in height. Subsequently, the coroner sent a femur bone to the California DOJ Bureau of Forensic Sciences, Richmond DNA laboratory. Here, extraction and purification techniques were utilized for the analyzation of the mitochondrial DNA. This lab sent their profile to CODIS, which resulted in a hit. CODIS sent this DNA type profile back to the Richmond DNA lab to be reviewed and confirmed. This positive identification was sent to DOJ MUPS, Contra Costa coroner, and the Moraga Police Department.

The identified was Richard Allen Saimons, who was reported to the Lafayette Police Department as a missing person on August 2, 1998. Saimons had lived in Lafayette and left his home on that day but never returned. He was 37 years old. On July 18, 2017, his parents were notified by the Moraga Police Department.

This case study demonstrates the application of several key techniques to identify skeletonized remains without antemortem records.

Skeletonized, Techniques, Identification