



D12 Disinterments in the Desert: A Comprehensive Project to Identify the Missing and Unidentified Persons in Maricopa County, Arizona

Laura C. Fulginiti, PhD, John A. Piakis, DDS, and Christen Eggers, MS, OCME, 701 W Jefferson St, Phoenix, AZ 85007*

After attending the presentation, attendees will gain an understanding of the successful methods used to aid in the identification of unidentified remains that had been buried for more than 40 years.

This presentation will impact the forensic science community by demonstrating how a comprehensive approach to longstanding “Jane and John Does” can result in successful resolution, regardless of the length of time since death. The advancement of technology gives promise to the idea that it is possible to identify all of the deceased currently listed as unidentified. Every unidentified person is a missing person, and one of the responsibilities of the medical examiner is to identify the unidentified so that families and investigations can move forward.

The Maricopa County Medical Examiner’s Office has approximately 230 unidentified persons dating back to 1979. The unidentified cases range from young children to adults. The causes of death range from natural to homicide. The Maricopa County Medical Examiner’s Office received a federal grant from the Arizona Criminal Justice Commission (through NIJ) to exhume 50 unidentified persons in the hope that these individuals can be identified and notification to family can proceed. An exhumation team composed of medicolegal death investigators, forensic anthropologist, forensic odontologist, and funeral home representatives was formed. The main concentration of cases are cases from the 1970s through the 1990s when DNA technology was not as advanced as today so DNA samples were not collected and processed. Also, digital dental radiographs were not taken as that technology did not exist decades ago. The exhumations were performed at the Tempe Twin Buttes Cemetery in Tempe, Arizona, which is a Maricopa County indigent burial cemetery. Once the decedent is exhumed, the remains are moved to a portable examination table where the anthropologist examines the remains and collects samples for age estimation and ancestry. Specific demographics of the decedent’s hair, length, type, and facial hair, etc. are noted so that a postmortem sketch can be created and posted on various missing and unidentified websites. The lead investigator documents all of the clothing, documents, and any individualizing characteristics. DNA samples are then collected by the lead investigator and the anthropologist; the DNA samples usually consist of clavicles, teeth, hair, and/or femur bone. The lead investigator submits the samples to the Arizona DPS Crime Lab where a profile is derived and entered into a federal DNA database. The odontologist conducts his examination using a portable digital dental radiography unit and laptop. A full mouth series of dental radiographs are completed and the radiographs are then automatically downloaded onto a laptop. Written documentation of the dental information is done, as well as dental charting. After the lead investigator confirms that the documentation is complete, all samples are collected, and the dental radiographs are complete, the decedent is placed into a new casket and returned to his/her respective gravesite. The lead investigator ultimately creates a written report of all the events during the exhumation and synthesizes the findings. The information is entered into national and local missing person/unidentified websites by the lead investigator who also contacts the law enforcement agency with jurisdiction to update them on the results.

A detailed explanation of the exhumation process and present summary data on the identifications will be presented. Nine scientific identifications have been made as a result of our efforts and there are solid leads on four other cases. Multidisciplinary efforts are coordinating into successful resolutions as the end goal is to make the identification and notify family. The presentation will point out that new technologies are always being developed and that the decision to cremate unidentified remains, a more common practice with some Medical Examiner Offices, eliminates the possibility of further examination in these important cases. Every unidentified person is a missing person and every person should be laid to rest with their name. While these cases are very challenging, they are solvable with appropriate resources.

Exhumations, Unidentified, Scientific ID