D2 Advantages of Forensic Anthropologists' Involvement in Mass Disaster Responses: A Review of the I-75 Mass Fatality

Traci L. Van Deest, MA, Univ of Florida, C.A. Pound Human Identification Laboratory, 2033 Mowry Rd, Rm G-17, Gainesville, FL 32610; Katherine Skorpinski, MA, Univ of Florida, Cancer/Genetics Research Complex, 2033 Mowry Rd., Room G17, Gainesville, FL 32610; Carrie A. Brown, MA, 121 SE 16th Ave, J202, Gainesville, FL 32601; Allysha P. Winburn, MA, Univ of Florida, C.A. Pound Identification Lab, Cancer/Genetics Research Ctr, 2033 Mowry Rd, Gainesville, FL 32610; Sarah Kiley, MS, Univ of Florida, C.A. Pound Human Identification Laboratory, 2033 Mowry Rd, Room G-17, Gainesville, FL; and Kristina M. Ballard, MA, 3224 NW 31st Ave, Gainesville, FL 32605*

After attending this presentation, attendees will learn how anthropological methods can aid in the recovery and identification of individuals in a mass disaster event involving multiple vehicle collisions. A systematic interagency approach using archaeological methods maximized the recovery of skeletal elements and personal effects necessary for identification with minimal damage resulting from the recovery process.

This presentation will impact the forensic community by demonstrating the utility of forensic anthropologists in the recovery of remains from burned and altered vehicles. The archaeological approaches used by forensic anthropologists are extremely useful in mass disasters, particularly when remains are burned, fragmentary, and commingled.

On January 29, 2012, a multi-vehicle crash occurred on Interstate 75 in the Gainesville, Florida, area as the result of reduced visibility due to fog and smoke from nearby wildfires. The crash resulted in 11 deaths and at least 23 injured. The District 8 Medical Examiner's Office consulted forensic anthropologists from the C.A. Pound Human Identification Laboratory at the University of Florida to assist in the recovery of victims within the burned vehicles. Two of the vehicles involved were towed to a secure location at the Alachua County Sheriff's Office for processing. The first vehicle contained the remains of a single individual. Although the majority of this individual was removed by medical examiner personnel with the assistance of an anthropologist at the scene of the accident, the forensic anthropologists present were able to quickly sort through the debris in the car to recover any remaining burned bone fragments.

After completion of the first vehicle, the search and recovery inside the second vehicle, a small pickup truck, began on the afternoon of January 30, 2012, and continued through the morning of February 2, 2012. The truck was severely damaged with the roof, dashboard, and back wall of the cabin collapsed inward toward the seats. Due to the condition of the second vehicle from both the accident and subsequent vehicle fire, vehicle identification information was not accessible until the contents of the vehicle were removed. Although burned remains were evident in the passenger and driver seats, the total number of individuals inside the truck was unknown at the start of recovery. As the recovery progressed, local fire and rescue personnel assisted in removing portions of the truck cab to facilitate access inside of the vehicle. The processing of this vehicle required the modification of traditional archaeological methods. Separate areas of the vehicle (driver seat, passenger seat, backseat, console area) were defined to minimize further commingling of fragmentary remains during the recovery process. All material was removed by hand and screened using 1/8" or ¼" screens. As trained osteologists, the forensic anthropologists on scene were quickly able to distinguish between burned remains and other visually similar materials, including wood, insulation, car seat foam, and other melted and altered aspects of the car interior. In general, the skeletal remains were burned and highly fragmentary, exhibiting black to white coloration. Anthropologists and odontologists examined dental fragments recovered for developmental age and restorations that could facilitate a more rapid identification, with fixation used as needed. Other artifactual evidence useful for identification, including, jewelry and paper materials with writing, were recovered with minimal additional damage to these items. All osseous material upon removal was photographed, bagged, and labeled with the provenience (i.e., associated area of recovery). Debris determined to be non-osseous or non-evidentiary was placed in a designated area separate from bone and other material collected. Additionally, the recovery process was fully documented through photography of the vehicle during excavation.

Ultimately, three individuals were recovered from the vehicle: one in the driver's seat, one in the passenger's seat, and one in the backseat. Maintaining provenience at all times, including separate excavation areas within the vehicle, documentation, and transport to the medical examiner's office, allowed for minimal commingling of remains during recovery. Systematic screening and clearing of all debris in the vehicle resulted in the recovery of as many skeletal elements as possible, as well as personal items, which aided in the rapid identification of those individuals in the vehicle. This incident highlights the importance of interagency collaboration and the inclusion of appropriate specialists to efficiently and effectively recover and identify individuals in a mass disaster event.

Anthropology, Mass Disasters, Burned Remains

 ** Presenting Author*