



Physical Anthropology Section – 2003

H69 Anthropology at Fresh Kills: Recovery and Identification of the World Trade Center Victims

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The purpose of this paper is to review the role that anthropologists played in the recovery and identification of the victims of the September 11th attack and discuss flexibility in the application of methodologies in dynamic field conditions.

The terrorist attacks of September 11, 2001, initiated an unprecedented challenge for forensic scientists. The massive scale and scope of the recovery and identification effort, the force and uniqueness of both the traumatic and taphonomic mechanisms, and the psychological stress of working in such an emotional environment, combined to make the events of September 11th a powerful and lasting experience for all involved. Forensic anthropologists deployed to New York's World Trade Center by the U.S. Public Health Services' Disaster Mortuary Operational Response Team (DMORT), working at the behest of the Office of Chief Medical Examiner, were integrated into the operation at three primary arenas of action: the New York City Medical Examiner's Office, the on-site staging areas on Trinity and Vesey Streets, and the Fresh Kills landfill on Staten Island. This paper will discuss the anthropologist's role at the Fresh Kills site and describe the conditions and challenges that confronted the team.

The Fresh Kills (*Fresh stream*; Dutch) landfill on Staten Island opened in 1948 and was, at one time, the largest human-made object on earth. Fresh Kills received its last barge of New York City garbage in March of 2001, after which the mountain of refuse was capped. Immediately after the events of September 11th, the landfill was re-opened to serve as a repository for the massive amounts of debris transported from the World Trade Center complex. Additionally, the Fresh Kills site was the final stage of recovery for the World Trade Center victims. After the initial on-site search and recovery failed to discover human remains, the structural debris was removed by heavy equipment to barges and ferried across the bay to Staten Island. During the early weeks of the operation the debris was sifted, sorted and recovered by law enforcement officers and additional personnel. Material suspected to represent human remains, as well as additional material thought to have evidentiary value, was brought to on-site staging areas operated by the New York Police Department (NYPD) Crime Scene Unit and the Federal Bureau of Investigation. The anthropologists were stationed with the NYPD crime scene unit, where possible human remains were examined and, if found to be human, were given identification numbers, photographed, and stored for transport to the Office of Chief Medical Examiner in Manhattan. As time passed, the operation became more mechanized, with the use of large sifters and conveyor belts that provided searchers examining passing material some protection from the inclement winter weather.

The decision by the Medical Examiner's Office to depend heavily on genetic testing of specimens to establish positive identification meant that many of the usual techniques employed by DMORT anthropologists, such as determining group and individual skeletal characteristics, would not be utilized. As a consequence, the primary role of the anthropologists stationed at the Fresh Kills site was to differentiate organic material from various types of debris, and then identify human from non-human remains. The contribution of the Fresh Kills teams was ultimately to increase the efficiency, and decrease the expense, of genetic testing by excluding non-human specimens from entering into the chain of evidence. On a more immediate basis, the examination and triage of potential human remains by the Fresh Kills teams greatly reduced the numbers of items requiring photographic and written documentation by overworked NYPD crime scene personnel.

The anthropologists encountered a singular taphonomic phenomenon in terms of the magnitude of forces resulting from the aircraft impact, burning, and collapse of the World Trade Center's twin towers. These same taphonomic forces (extreme heat, compression, torsion, commingling, etc.) created unique "pseudo human remains" from construction and other material that often confounded the law enforcement personnel collecting the evidence – almost all of whom were untrained in the recognition of fragmented human remains. Additional circumstances that complicated the recovery process were the incredible amount of organic material already within the landfill, including an unexpected amount of non-human organic material from the large number of restaurants in the World Trade Center complex and surrounding streets. The debris, massive amounts of organic material and associated methane gas produced a hazardous and confusing condition for the cadaver dogs, many of whom had not been trained to avoid indicating (or alerting) on food or dead animal remains.

The identification effort at the Fresh Kills site can be considered a model that demonstrates the essence of the DMORT mission statement. Each deployment is unique in that each scenario may require that the DMORT experts demonstrate flexibility in the application of their methodologies contingent upon the needs and desires of the requesting Medical Examiner's Office or other agencies.

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