



Physical Anthropology Section – 2009

H53 Anthropologist/Medical Examiner Collaboration at Isolated, Inaccessible, or Disrupted Crime Scenes

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The goal of this presentation is to demonstrate some cases of unusual and difficult body recovery scenarios wherein the on-site efforts of the forensic anthropologist helped the consulting medical examiner correlate autopsy findings with the death scene. The interplay of innovative and traditional techniques will be discussed as well as the inseparable disciplines of forensic anthropology, musculoskeletal anatomy, and anatomical pathology.

This presentation will impact the forensic community by presenting one aspect of the symbiotic relationship between forensic anthropology and forensic pathology.

The Commonwealth of Kentucky combines a coroner system with a single state-wide medical examiner system which is under the ultimate control of the Justice and Public Safety Cabinet within the State Government system. There is an elected coroner in each of Kentucky's 120 counties and there are four separate medical examiner offices, all under the direction of a chief medical examiner. By statute (KRS 72) the state provides medical examiner services to all county coroners, and this provision includes the services of the state's forensic anthropologist. The forensic anthropologist is employed full-time within the medical examiner's office and has dedicated laboratory and office space in the Centralized Laboratory Facility in Frankfort, Kentucky. This anthropologist is on call for response to any of the county coroners for on-site investigations and will demonstrate how the timely arrival at the crime scene and almost simultaneous integration of information to and from the consulting pathologists proves to be advantageous.

It almost goes without saying that each death scene needs thorough documentation and analysis in order to explain some of the disarray and damage seen at autopsy, but it is the anthropologist's on-site analysis on cases with varying degrees of disruption and/or decay (not just skeletal remains) that has helped integrate information from the scene and autopsy. The number of disrupted human remains in each jurisdiction is probably not out of proportion to the overall number of autopsies performed each year (3.5 to 4%) but because of the geography of the state, the range of weather conditions, and varied carnivore predation patterns, on-site analysis by a forensic anthropologist proves especially helpful in cases wherein any combination of taphonomic events may have modified the death scene. Although the primary focus for anthropologist's crime-scene response is skeletal remains, a thorough knowledge of overall soft tissue gross anatomy in addition to osteology has proved to be invaluable for the documentation and collection of evidence with any disrupted remains, regardless of the amount of decay. A working knowledge of entomology, botany, and wildlife biology has also been necessary to incorporate associated evidence into the overall death investigation.

The cases to be discussed in this presentation are those in which the forensic anthropologist assisted with the scene recovery and site analysis while in contact with a morgue-based medical examiner, thus demonstrating the symbiotic relationship between the two. In addition to standard image transfer through phone systems, some of the other scene- to-morgue procedures used in Kentucky involve hand held 3-D microscopes with internet connections and radiographic identification capabilities through mobile data terminals.

Fire-related deaths also comprise a number of the cases to be discussed; from an underwater structure recovery to incidents with multiple homicides disguised by fire. Since the percentage of overall homicides disguised by fire has reached as high as 21% per year, there remains a high level of suspicion in nearly all fire-related deaths across the Commonwealth. Here, as with any skeletonized remains, anthropological recovery techniques help preserve evidence. Therefore the anthropologist's on-site protocol ensures a thorough transfer of information *and* remains to the pathologist.

Anthropology, Medical Examiner, Crime Scene Investigation