

## Pathology/Biology – 2018

## H54 The Beaver Dam, Flies, and the Ax: You Can't Hide From Mother Nature

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After attending this presentation, attendees will understand the importance of a cooperative, multidisciplinary approach to investigating and solving a complex homicide.

This presentation will impact the forensic science community by demonstrating the value of incorporating forensic disciplines into complex investigations. Experts in forensic pathology, forensic anthropology, and forensic odontology contributed to law enforcement investigation efforts in the interpretation of homicide injuries and complex postmortem influences occurring within diverse environments (i.e., dismemberment with an edged instrument, mutilation, gunshot wounds from multiple weapons, and evidence of peri-mortem and postmortem influences).

The decedent was taken by two acquaintances to a remote wooded area to inspect a clandestine "below-ground" methamphetamine cooking laboratory. The decedent, who was suspected of being a police informant, was killed and subsequently buried in the same hole as the alleged underground laboratory. Approximately two weeks later, the killers became nervous about the body being discovered and returned to the grave. The decedent was exhumed, dismembered to facilitate removal, packaged in plastic bags, wrapped in tarps, and subsequently submerged in a nearby lake.

The victim remained missing for 22 months and was discovered due to a natural event that changed the landscape. A beaver dam supporting the lake failed, revealing tarps containing the remains. Within the rolled-up tarp were five plastic garbage bags. Initial examination revealed numerous pupal cases associated with the bags. To insure accuracy of trauma interpretation, the contents of each bag were scrutinized and documented.

Radiographs of each bag revealed what appeared to be the fragmented remains of a single decedent, multiple bullets associated with the torso, a severely deformed skull with a "lead snowstorm" appearance, large bone separation that appeared to be straight-edged and occasionally angled, resembling blunt trauma. A cinder block was also observed in the radiographs.

An autopsy on the decomposed remains confirmed a single, incomplete individual. Identification was confirmed through antemortem and postmortem dental radiograph comparisons and DNA analysis. The degree of skeletal representation was highly variable due to the sustained traumatic injuries. The cause of death was diagnosed as multiple gunshot wounds as evidenced by a shotgun wound to the posterior skull and multiple gunshot wounds to the chest and abdomen; gunshot wounds were also observed in the sacrum and lumbar vertebrae.

The sharp trauma was indicative of a heavy edge-beveled blade that cuts soft tissue and bone, but lacks penetration due to a thick blade. The chopping action initially cuts, but does not penetrate far before breaking the bone. Sharp chops associated with blunt trauma occurred on the mandible, posterior C2, and extremities.

The antemortem, peri-mortem, and postmortem analysis of a violent death involved a thorough investigation and the cooperation of personnel representing pathology, anthropology, odontology, forensic autopsy, and local law enforcement. The collective efforts of the above individuals resulted in a positive identification of the decedent, in the determination of the cause and manner of death, and in the conviction of the assailant.

And then there was the ax ....

Dismemberment, Taphonomy, Multidisciplinary Approach