



Physical Anthropology Section – 2008

H110 Missing in Amazonian Jungle: A Case Study of Suspected Dismemberment

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After attending this presentation attendees will understand the differences that exist between cut marks caused by bladed instrument and power saw in a case of homicidal dismemberment.

This presentation will impact the forensic community by showing the benefits of an experimental approach using an animal model when examining forensic cases of suspected dismemberment under technological constraints.

The aim of this presentation is to illustrate a practical approach in the analysis and interpretation of bone trauma related to a possible case of dismemberment.

Intentional separation of body fragments is well documented in forensic literature. Generally, injuries related with dismemberment are caused by cutting, chopping and chiseling. Biomechanical properties of bone are essential for the analysis and interpretation of cut marks as the bone response will differ according to location, frequency and causative agent. Dismemberment patterns are of particular importance as the actions and instruments used are a clear expression of the perpetrator intentions and therefore the manner of death can be established.

This case study presents the results of a forensic examination performed on three sets of disarticulated and incomplete human remains found in Amazonian jungle. A few months before this finding, two European tourists went missing in this area. Anthropological analysis for identification and the clothing associated with the decomposed remains were consistent with the antemortem data of the two missing persons. Body parts sustained a number of cut marks situated on different aspects of the skeleton. Despite intensive searches including a canine team, the recovery of victim's remains was not complete (one of the two is only represented by lower half part of body). The location (Amazonian jungle) and the perpetrators' actions (dismemberment and dispersion of body parts in river) were effective. DNA analysis was performed and confirmed reassembly of body parts and identification of the two victims.

Each cut mark was fully described with location, number, type (e.g., false start) and measures (e.g., width, length and depth) following standard anthropological protocols. An experimental study was conducted by the author on pig bones and pieces of wood to examine and compare wound and witness marks produced by different instruments in order to corroborate causative agents and evaluate the manner of death. Despite incompleteness of the remains and a lack of laboratory facilities, a reconstruction of the possible sequence of traumatic events based on results of forensic examination and an experimental study provide evidence for a first attempt of dismembering at the level of knee joint of one of the victim with a long and heavy blade (possibly a machete) followed by a successful separation of body parts (trunk, legs...) using a power saw that have caused most of the damage present on both victim's remains. The cause of death was ascertained for one of the two victims showing a penetrating injury through the right scapula inflicted by a sharp bladed instrument. Due to its location the injury was considered as lethal.

This case study constitutes for the forensic community a complement of the researches on bone trauma related to dismemberment activity through an anthropological and practical approach based on an experimental comparison of cut marks with a basic microscope, looking at a variety of weapons and mechanism of injury.

Dismemberment, Bone Trauma, Forensic Anthropology