## H10 A Summary of Trauma Specimens at the Armed Forces Institute of Pathology, National Museum of Health and Medicine

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The objective of this poster is to heighten awareness of this valuable resource for qualified researchers in the forensic sciences. In particular the collections contain approximately 2359 trauma specimens of interest to forensic anthropologists.

The extensive collections of trauma and pathology housed at the museum cover a large historic period (antebellum to present) and can provide abundant data for research in wound ballistics, sharp force injuries, and blunt force trauma that can be used to expand knowledge in the forensic sciences, particularly in forensic anthropology.

The Anatomy Department of the Armed Forces Institute of Pathology (AFIP) National Museum of Health and Medicine (NMHM) in Washington, DC houses a large number of specimens of interest to the forensic research community. The objective of this poster is to heighten awareness of this valuable resource for qualified researchers in the forensic sciences. In particular the collections contain approximately 2359 trauma specimens of interest to forensic anthropologists.

The NMNH began as the Army Medical Museum (AMM) with the collection of thousands of surgical and autopsy specimens of Civil War gunshot wounds (GSW) collected at field hospitals and on the battlefield. Over time the AMM evolved into the world class pathology consultation organization that is known today as the Armed Forces Institute of Pathology (AFIP) with the NMHM as one of its many divisions. To this day, the museum continues to collect specimens relevant to forensic and medical investigations. Cataloged collections at the museum contain approximately 12,000 specimens of forensic, medical, surgical and historic significance, 19% of which documents the terminal effects of GSW and low velocity trauma. Specimens are often accompanied by medical records, narrative accounts and descriptions such as bullet caliber, make / model of weapon, blade type or other relevant information. Among these specimens there is also ample evidence of the body's responses to bone trauma (i.e., healing and infection.)

Of the museum specimens, high velocity GSW comprise the greater part (95%) of the trauma collections (n = 2249), with low velocity blunt force trauma (BFT) and sharp force trauma (SFT) comprising the remainder of the collection. Examples of gunshot injuries from a variety of civil and military weapons are present that document the effects of contemporary and historic firearms and the effects of cannon fire and shrapnel. High velocity trauma specimens found in the collection represent a span of time from ante- bellum into modern day medical examiner contexts.

There are 42 examples of blunt force trauma represented in the collection consisting mostly of depressed fractures from diverse implements and contexts such as bricks, stones, falls, aircraft accidents, hammers, firearm butts, and other sources; dates of death from this portion of the collection range from 1863 to 1987.

Examples of sharp force trauma consist of a total of 66 specimens. Implements include swords, hatchets, knives, ice-picks, unidentified sharp instruments and surgical saws, historic and modern. Sharp force trauma from historic battles can be found ranging from a variety of edged weapons partic- ularly those identified as sabers.

The high number of GSW in the collection is directly related to the museum's history of accessioning specimens recovered from military conflicts making this one of the largest repositories of GSW specimens in the world. Select counts for individual collections are as follows: Milton Helpern New York City Medical Examiner collection (n = 162), Louis LaGarde cadaver study (n = 60), Bruce Ragsdale Antique and Modern Firearms Study (n = 8), U.S. Army Frontier Soldiers (n = 77), Civil War Soldiers (n = 1746), General Collection (n = 89).

This presentation details some of the biological resources available at the NMHM to the research communities of the forensic and medical sciences. The extensive collections of trauma and pathology housed at the museum cover a large historic period (antebellum to present) and can provide abundant data for research in wound ballistics, sharp force injuries and blunt force trauma that can be used to expand knowledge in the forensic sciences, particularly in forensic anthropology. Research visits are coordinated by appointment only through the museum's collections manager (BFS) following standard administrative procedures. Interested researchers and donors can reach the collections manager by following the links to the anatomical collections at http://nmhm.washingtondc.museum.

**Forensic Anthropology Research, Trauma, National Museum of Health and Medicine**

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