



## Physical Anthropology Section - 2014

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### **H72 The Exhumation and Interdisciplinary Scientific Analysis of a World War II Mass Grave From Hungary**

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After attending this presentation, attendees will better understand the importance and value of interdisciplinary scientific analysis in the excavation and methods of identification of individuals recovered from war graves.

This presentation will impact the forensic science community by demonstrating how multiple disciplines can be brought together in order to achieve a common objective — the scientific analysis of a World War II mass grave. The advantages of combining archaeological research and exhumation, anthropological analysis, museological studies, and military history will be presented through a case study that illustrates how each discipline can contribute.

During WWII, tens of thousands of soldiers died in Hungary. After the autumn of 1944, troops rarely had time to document their losses and many individuals were buried in unknown locations. Current soil exploratory work, farming, and construction work often expose World War II artifacts, explosives, and human remains on the ground surface. This is exactly what occurred at the end of May 2011 in Pettend, Fejér county, where a mass grave was unearthed. The primary objectives in the analysis of the material and skeletal remains recovered from this mass grave were to identify the nationality of the remains if possible, and use anthropological methods to separate commingled remains and determine if any identifying characteristics (antemortem injuries, etc.) were present, that may be unique to a particular individual and potentially useful for future individual identification. These objectives were met through the interdisciplinary nature of the analysis.

During the exhumation of the grave, an odd positioning of the remains was observed. At the lower layer of the grave rested the remains of three soldiers with their bodies placed in a parallel plane. Directly on top of them, three individuals had been buried in two layers in a more uncharacteristic way (one of them was laid facedown). The excavation also uncovered a number of isolated commingled human remains. The anthropological analysis of these bones identified at least three additional individuals besides the initial six. This burial manner was informative as to who might have buried the dead and, in turn, who the dead might be. The haphazard placement of the individuals in the grave refers to an iniquitous funeral, which suggests that either there was not enough time to carry out a proper funeral or respect was deliberately not given to the deceased. Knowing what we know about wartime behavior and historical incidents of burial, especially in mass graves, this case appears to be indicative of a burial carried out by enemy combatants. The items of clothing (boots, buttons) and the type of ammunition and grenades found with the remains were consistent with those used by the contemporary Soviet Red Army. Researching the military history of the area during World War II revealed that Soviet soldiers had been fighting in the region December 7-22, 1944 and January 24-28, 1945. The soldiers lying in the grave in Pettend could have fallen during any of those days. The temperature was below freezing throughout both of these months, so there is a good chance that the burial of these men happened long after their deaths.

Aside from the information gleaned from the grave itself, the skeletal and cultural material provided evidence concerning trauma. Traces of injury were isolated during the exhumation in the form of in situ shrapnel found with the remains, and in one case a Hungarian machine gun bullet tip was observed between two vertebrae. Anthropological analysis also found peri-mortem trauma that was consistent with the type and position of the aforementioned recovered firearm remnants. Finally, one case revealed evidence of antemortem trauma that might be useful for future individual identification.

The interdisciplinary analysis of the World War II mass grave excavated in Pettend provided a number of scientific results. Although the individual identification of the skeletal remains has not yet occurred, the number of individuals interred, the circumstances surrounding their deaths, the relatively precise time period when they died, as well as their service of duty was revealed. As a result of the conclusions drawn from the analysis, the Hungarian Department of Defense, Division of Public Relations and War Grave Office was able to repatriate the remains of the soldiers to the national military cemetery in the presence of adequate representation.

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#### **Interdisciplinary Scientific A, World War II, Mass Grave**