



D20 The Bullet That Killed Confederate General Ben McCulloch? Firearm Identification and Analysis of a Civil War .58-Caliber Bullet

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After attending this presentation, attendees will understand employing modern firearm identification procedures and theory to historic situations providing an alternative validation process to the field of firearm and tool mark examination.

The presentation will impact the forensic science community by demonstrating the capability and validity of firearm and tool mark examination to very old cold case evidence, in this case an 1862 battle-related death.

A large impact-deformed lead bullet that is purportedly the bullet that killed Confederate General Benjamin McCulloch during the Civil War battle of Pea Ridge, Arkansas on March 7, 1862 was examined using modern firearm identification procedures to ascertain if the bullet type and condition are consistent with the family story of this being the fatal projectile. McCulloch was a prominent Texan who had been appointed a Confederate general officer to command Texas and Arkansas troops in 1861. He had been a Texas Ranger and was a veteran of the Mexican-American War of 1846-1848. McCulloch's daring came to an abrupt and fatal end in Oberson's field on August 7, 1862 at the Battle of Pea Ridge, Arkansas. The bullet purported to have been recovered from McCulloch's body is a .58-caliber hollow base Minié ball or bullet with three rings or canelures around the lower skirt. The purported McCulloch bullet is impressed with three broad shallow land and groove marks. The land and groove marks are consistent with the bullet having been fired from a Model 1855 or Model 1861 rifled musket or other firearms rifled according to U.S. Government specifications such as the altered M1841 "Mississippi" rifle. The hollow base exhibits a rough surface or stippling effect that is consistent with the bullet being fired from a blackpowder weapon. The bullet essentially mushroomed on impact, although the mushroom effect is asymmetrical. The impact deformation on the bullet head is consistent with it having struck and penetrated an object with no intervening hard elements. The deformation is consistent with a bullet that was spin stabilized, and at the time it struck the object was still traveling in trajectory at a velocity well above its terminal limits. The deformation is consistent with having penetrated tissue, but not striking any bony features. On one side of the bullet's impact deformed area a tool mark is evident. The area is slightly flattened and impressed with very fine crisscross striations. These crisscross tool marks are consistent in type with the gripping or inside surface of the jaws of a medical forceps tip of the type in common use in the mid-nineteenth century. The impact deformed bullet was fired in a rifled musket of .58-caliber that is consistent with the type of weapon known to have been issued to the men of Company B, 36th Illinois Infantry Regiment who are credited with killing General McCulloch on March 7, 1862. The impact deformations evident on the bullet are consistent with it having struck McCulloch in the breast, but passing between the ribs, encountering only soft tissue in its path. The tool marks present on one side of the bullet are consistent with the gripping surface of medical forceps of the type known to be part of Civil War era surgical kits. None of the observations are inconsistent with the oral history ascribed to the bullet's origin or that it was removed from General McCulloch's body.

Firearm, Bullet, Historic