

# **Scientific Analysis to Determine if the Identity of Skeletal Remains from the Northfield Historical Society is that of Jesse James Gang Member Charlie Pitts<sup>1</sup>**

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Charlie Pitts died in Northfield Minnesota on Sept. 7, 1876 after riding with Jesse James and the rest of the James-Younger Gang to rob the First National Bank. For the last 25 years, the Northfield community thought they had the skeletal remains of Pitts housed in the Northfield Historical Society basement. In 2007 we were asked to determine the identity of the skeletal remains and started DNA analysis to find out: Was this truly the remains of an infamous outlaw? We performed YSTR analysis of known Charley Pitts family members and compared profiles obtained from several section of the skeletal remains.

Three pieces of the skeleton were selected for analysis including a section of the left femur, a molar, a piece of desiccated tissue from the scalp. The samples were extracted, quantitated using the Applied Biosystems Quantifiler Y kit, and analyzed using the Applied Biosystems Y-filer kit. Extracts were amplified that utilizes primers that bind to loci on the Y chromosome. Fifteen microliter reaction volumes were utilized. The bone and tissue extracts were amplified neat without dilution. The tooth was amplified neat and amplified at a total input of 0.75 ng, in a secondary amplification. Capillary electrophoresis occurred on an Applied Biosystems 310 Genetic Analyzer instrument to separate DNA fragments.

Results showed none of the samples profiles matched Charley Pitts family members. Also, interesting that the molar, bone and tissue sample did not match indicating this was a composite skeleton probably was used as a teaching tool at a local Medical School. Shown will be the analysis methods and results.

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