

Battlefield Detective: The Case of Napoleon's Lost Troops

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Vilnius, the capital of Lithuania, lies on the main Berlin to Moscow corridor and has for centuries been a battlefield for the armies of the Poles, Prussians, Napoleon, the Tsars of Russia, as well as Hitler and Stalin. Late in autumn 2001, while demolishing some Soviet-era barracks on the outskirts of Vilnius, workers found human bones that turned out to be associated with a mass grave. Thousands of skeletons were discovered there, laid out in rows with some overlaying others. The initial thought was that these were Jews, massacred by the Nazis during World War II. But, discovery of metal buttons -- one with "61" stamped on it, another stamped "29" -- a patch of a blue uniform cloth, a French Imperial infantry shako, and a Napoleonic 20-franc gold coin quickly demonstrated the mass grave contained the remains of some of Emperor Napoleon's army that invaded Russia in 1812.

Construction work was halted and an international team of archaeologists, Lithuanian and French, was assembled to recover and analyze the remains to learn more about how Napoleon's vaunted French army was lost on its disastrous retreat from Moscow.

Battered Remnants

Napoleon's invasion of Russia during the summer of 1812 is well-known as is his pyrrhic victory at the bloody September 7, 1812 Battle of Borodino. Following the French occupation of Moscow during which Napoleon waited in vain for the Russians to surrender, the crippling Russian winter and hit and run attacks by Cossacks nearly destroyed the Grande Armée during its long westward retreat. Ten army corps containing 690,000 soldiers and composed of about one-half French and the remainder conscripted units from all over Europe had entered Russia, but only about 50,000 battered remnants of the Grande Armée stumbled into Vilnius in early December 1812.

The remains of Napoleon's army arrived in Vilnius on an intensely cold December 9, 1812. One survivor described his entry as manoeuvring over a two-meter deep pile of dead and dying men overcome by fatigue and falling into a permanent sleep induced by hypothermia. Attempts to aid the French soldiers, principally by monks of Vilnius' seventeen monasteries, were noble but largely unsuccessful as the frost bitten and exhausted men died in droves.

Some of these men likely ended up in the mass grave discovered in 2001 and excavated in total in 2002, and undoubtedly there are more graves to be discovered. The men in the grave were from multiple units, indicated by the uniform buttons and other paraphernalia. The button stamped "61" is probably from a uniform of a soldier of the 61st Line Regiment, made up mostly of Dutch conscripts, and the button stamped "29" is likely from a soldier of Loison's reserve division that tried to salvage what it could of Napoleon's wrecked army. They had deployed in their summer uniforms and paid a heavy price for being unprepared for the brutal Russian winter. A crushed shako with an Imperial eagle and tricolor cockade may have belonged to a Frenchman of one of the Imperial regiments, perhaps a Battle of Borodino veteran. The archaeologists identified buttons and other uniform items from 40 different units, mostly line infantry and cavalry. Among the units identified were household cavalry, dragoons and foot artillery, as well as Italian, Polish, Bavarian and Dutch units, plus members of the Imperial Guard.

Expedient Grave

The mass grave was over 500 square meters with an average of seven skeletonized bodies per square meter. The grave was not dug for the dead, however, but was originally part of a second line of defensive fortifications, an artillery redoubt established in July

1812 for the defense of the city. Digging a large grave in the dead of winter must have been daunting and the redoubt was a ready-made excavation put to an expedient use. Hundreds of thousands of bones were excavated from the grave by the Lithuanian and French battlefield detectives along with hundreds of artifacts: buttons; military equipments; and personal items. Biological anthropologists determined there were at least 3,269 individuals buried in the old redoubt. The archaeological evidence suggests the bodies -- many likely frozen in grotesque manners -- were rather haphazardly laid or thrown into the grave which was quickly filled in. It is not difficult to imagine survivors of the army and local citizens carrying frozen soldiers' bodies in the numbing cold to their final resting place. Some were laid out with care by comrades or concerned citizens, others just tossed into the grave coming to lie intertwined with their dead brethren. Broken bones found on some of the men, mostly the upper arm, were not old battle wounds, but testimony to the rough handling the bodies received at the time of their burial.

Sisters In Arms

Yet, the anthropology reveals more: not all the dead were men. Among the bodies deposited in the grave were between 29-47 women (the exact number of female skeletons remains unknown since sex can be difficult to assess if all skeletal bone elements of an individual body are not present). This discovery is a grim reminder that early-19th century armies travelled with wives, laundresses and camp followers who were just as susceptible to the cold, fatigue and disease as male soldiers. Moreover, in 1805 the French instituted their system of "cantinières, blanchisseuses et vivandières," women attached to army regiments as sutlers and canteen operators. Some females found in the grave likely represent those serving in this capacity.

The women's ages ranged about 18-35, with the majority in their twenties to early thirties. The men in the grave ranged in age from 15 to over 50. Most were between 20-30 years of age, but about 10-percent were under 20, 10-percent between 30-40 years old, and about 2-percent over 40. The age ranges seem typical of soldiers serving in 19th century armies, a mix of recruits and veterans. Not

all of the grave's remains were human -- three horses and a mule skeleton were found near the pit's bottom, but mixed with the soldiers' bodies indicating the equines were buried at the same time as the humans.

The remains of the men and women from the Vilnius grave were once again laid to rest in a solemn ceremony on June 1, 2003. However, the scientific studies have continued on retained samples of teeth and bone. And the artifacts associated with the skeletons continue to tell their story.

Tale Of The Teeth

A study of human teeth from the Vilnius grave published in the *International Journal of Osteology* in 2006 concluded that the general dental status of those recovered was characteristic of young individuals: low tooth loss and low rates of dental decay. Dental caries (cavity rate) in the Vilnius sample is on average similar to other populations of the late-18th and early-19th centuries and typical for individuals with diverse diets. Researchers observed a considerable number of decayed teeth in some individuals. This suggests that their consumption of sugar and sweet drinks coupled with poor oral hygiene would have resulted in significant tooth loss had they not died in the winter of 1812. Poor oral hygiene of some individuals aside, the teeth and the general skeletal analysis indicate the fittest individuals were selected for military service.

Yet, if these men and women were generally fit, why did they succumb to the elements in such large numbers? Cossack hit and run attacks can account for some deaths, or wounds may have been fatally exacerbated by fatigue and the numbing cold. Many soldiers were unprepared for winter campaigning in their summer uniforms and this likely raised the ultimate death toll; but these factors do not clearly account for the loss of most of the army. A fit group of young men should not die in such large numbers even in bone-numbing cold or harassed by enemy attacks.

New studies of DNA extracted from the pulp found in the core of the teeth have led to an interesting and unexpected find that may help explain the fatigue and weakness that resulted in death for so many in Napoleon's army. It was not

just exposure to extreme cold nor the difficulties of the retreat, but disease caused by lice and the bacteria they carry. Dr. Didier Raoult and others reported in the *Journal of Infectious Diseases* in 2006 that their study identified lice-borne diseases in many of the skeletal remains. At least one-third of those found in the Vilnius grave died from typhus and trench fever as well as the result of environmental exposure.

Napoleon's Grande Armée, like most armies of the 19th century, was riddled with lice and afflicted by the diseases the tiny insects carry. The French army was not solely defeated by a Russian winter of epic proportions, aided by fierce Cossack attacks, but by exhaustion and debilitation brought on by diseases carried by body lice. The annoying and small louse literally aided in the destruction of the once-vaunted Grande Armée of Napoleon.