



THE CASE OF NAPOLEON'S Lost Army

A world-renowned forensic archaeologist reveals the grim fate of Napoleon's French army at Vilnius.

BY DOUGLAS D. SCOTT

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, the Prussians, Napoleon, the Czars 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 the remains of Jews who had been massacred by the Nazis during World War II. But the 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. (See *Special Feature*, p. 40.)

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 that summer, but only about 50,000 battered remnants of the Grande Armée stumbled into Vilnius that bitter winter.

The remains of Napoleon's army arrived in Vilnius on an intensely cold December 9, 1812. One survivor described his entry as maneuvering over a 2-meter-deep pile of dead or 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' 17 monasteries, were noble but largely unsuccessful as the frostbitten 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 found. The soldiers in the grave were from multiple units, as



LEFT: 1812. Napoleon's men retreat from Moscow during the harsh Russian winter. (Painting by Jerzy Kossak.) **RIGHT:** March 15, 2002. Local residents view the bones of Napoleonic-era French soldiers found in a mass grave in a suburb of Vilnius, the capital of Lithuania. Construction workers discovered the grave, which contained as many as 2,000 French soldiers who fought for Napoleon during the 1812 Campaign.

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. 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. The prospect of 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. Lithuanian and French battlefield detectives excavated hundreds of thousands of bones from the grave along with hundreds of artifacts: buttons, military equipment 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 were just tossed into the grave, coming to lie intertwined with their dead brethren. Broken bones found on some of the bodies, mostly on the upper arm, were not old battle wounds, but testimony to the rough handling the soldiers 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 and 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 traveled with wives, laundresses and camp followers who were just as susceptible to the cold, fatigue and disease as were male soldiers. Moreover, in 1805 the French instituted their system of "cantières, 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 from about 18 to 35, with the majority of the females in their twenties to early thirties. The ages of the men in the grave ranged from 15 to over 50. Most of the males were between 20 and 30 years old, but about 10 percent were younger than 20, 10 percent were 30 to 40, and about 2 percent were over 40. The age ranges seem typical of soldiers serving in 19th-century armies, a mix of recruits and veterans. Not all of the remains in the grave were human – the skeletons of three horses and a mule were found near the pit's bottom but were mixed with the soldiers' bodies, indicating the equines were buried at the same time as the humans.



PASCAL ADRIAN

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The remains of the men and women found in 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 persons with diverse diets. In some of the individuals, researchers observed a considerable number of decayed teeth, suggesting 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. That 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, and 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. These factors, however, 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 when 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 or the difficulties of the retreat, but also 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 carried. The French army was not solely defeated by a Russian winter of epic proportions, aided by fierce Cossack attacks, but by exhaustion and debili-

OPPOSITE: The positions of some of the skeletons suggest that the victims had frozen to death during the intense cold of December 1812 and then were quickly buried.



TOP LEFT: 2001. A researcher examines the skeletons of Napoleonic-era soldiers discovered in a mass grave in Vilnius, Lithuania. The French National Centre for Scientific Research has determined that more than 30 percent of these troops were killed by bacterial fever transmitted by lice. **ABOVE:** This piece of a uniform of the 29th French Line Infantry was found among the bodies in the mass grave site. **LEFT:** Researchers found this shako cap with a tricolor cockade during their excavation of the site.

BELOW: June 2003. Burial ceremonies are held at the Antakalnis memorial graveyard, where the remains of 2,000 of Napoleon's French soldiers are finally laid to rest almost two centuries after the men died.



tation brought on by diseases transmitted by body lice. The annoying and small louse literally aided in the destruction of the once-vaunted Grande Armée of Napoleon. ★

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SUGGESTED READING: *1812: Napoleon's Invasion of Russia* by Paul Britten-Austin (Greenhill Books, 2000); *Napoleon's Invasion of Russia* by George F. Nafziger (Presidio Press, 1998); "Discovery of a Mass Grave of Napoleonic Period in Lithuania (1812, Vilnius)," *Human Palaeontology and Prehistory (Palaeopathology)*, Vol. 3 (2004), by Michel Signoli, Yann Ardagna, Pascal Adalian, William Devriendt, Loïc Lalys, Catherine Rigeade, Thierry Vette, Albinas Kuncevicus, Justina Poskiene, Arunas Barkus, Zydrunė Palubeckaitė, Antanas Garmus, Virgilijus Pugaciauskas, Rimantas Jankauskas, and Olivier Dutour.