

The story of a bullet

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The subject of this monograph is a small find by Marianna Koromila at the fortress of Van during Panorama's excursion in the highland plateau around Lake Van in Eastern Turkey, between 5th and 11th June 2014.

The find is a small cylindrical piece of lead with a conical tapering at one end and a hollow cavity at the other. Its dimensions are 2.7 cm long and 1.3 cm in diameter. The lips around the cavity are slightly dented outwards. The piece weighs 36 grams.



The bullet from Van

The find from the fortress of Van is a Minié-type rifle projectile. This type was named after the French Army captain Claude-Étienne Minié who designed it in 1847-48. It was the ultimate generation of ammunition

for muzzle-loading firearms and the first generation of projectiles of a conical rather than a spherical shape.

Up until then firearms projectiles were spheres of lead (En. “balls”, Fr. “balles” Sp.“bolas”, Gr.“βόλια”). Their diameter had to be slightly smaller than the caliber of the barrel, so that they could be inserted easily and quickly down the barrel in battlefield conditions.

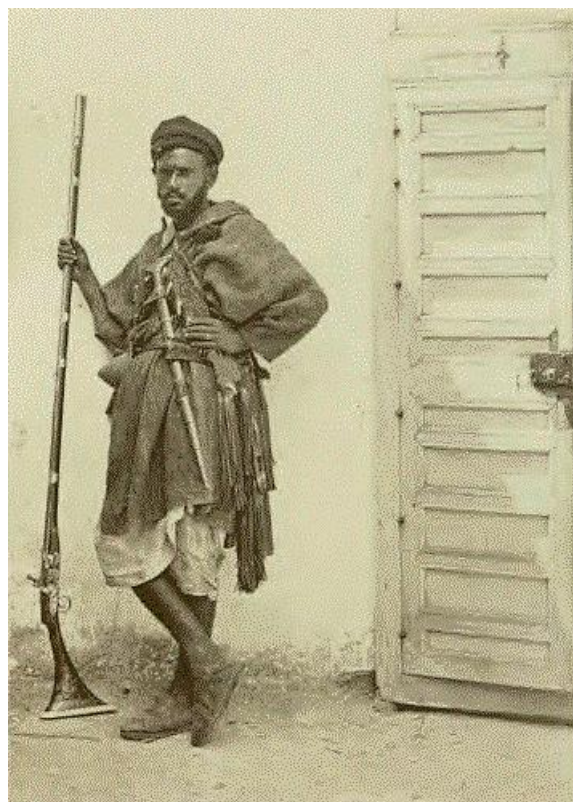


<http://www.asmainegoes.com/content/shooting-matchlock-musket-long-pictures-and-videos>

This way however the projectile would not fit airtight in the barrel resulting in the loss of much of the energy of the detonation. These firearms were termed “muskets” (fr. “mousquets”) and had poor accuracy and range. They mostly relied on the barrel’s length to achieve some degree of accuracy. Such were the “cariofylli” firearms employed in the Greek War of Independence (1821-29), oriental-style muskets.



C. É. Minié participated in the French conquest of Algeria (1830-47) where he witnessed Berber warriors picking his soldiers from afar with their long-barreled cariofylli-style muskets.



<http://milpas.cc/rifles/ZFiles/BlackPowderMuskets/ArabicOrientalMusket/ArabicFlintlock/ArabicFlintlock.html>

After the Algerian campaign Minié designed the groundbreaking projectile that bears his name.

Minié bullets had a hollow cavity at the rear end, the lips of which would slightly deform outwards with the detonation and thus seal tightly the projectile against the inner walls of the barrel. In this manner the propelling energy of the expanding gases was fully harnessed. Furthermore the interior wall of the barrel had spiral grooves (or “rifles”) which were engaged by the expanding bullet lips, thus adding a spinning movement to the bullet throughout its trajectory, greatly enhancing its accuracy. This kind of firearms with internally rifled barrels was thereafter called “rifles”.

The Minié bullet from Van has been fired as indicated by the dented lips at its base.



Such Minié rifles were first taken to combat by the French and British Armies in the Crimean War (1853-56) and they proved immensely superior in terms of accuracy, rate of fire and range over the older smoothbore muskets used by the Russians. The latter had an effective

range of 150-200 metres whereas the Miniés would regularly hit their target at 1,000 metres. The Russian Army hastily ordered the production of Minié rifles in 1854 but very few reached the front in the Crimea in time. From early 1855 Minié rifles started being distributed to the six best marksmen in every Russian company. Throughout the siege of Sebastopol the Russians would regularly raid the enemy trenches at night in order to steal the new rifles.

The Ottoman Army in the Crimea was equipped with old Prussian smoothbore muskets. It seems however that at least some of the Egyptian Army units deployed in the Crimea by Vali Abbas Hilmi I' might have better and more modern equipment than the Ottomans. This might possibly include Minié rifles purchased in America. In any case C. É. Minié himself was later employed in Egypt as a military advisor.

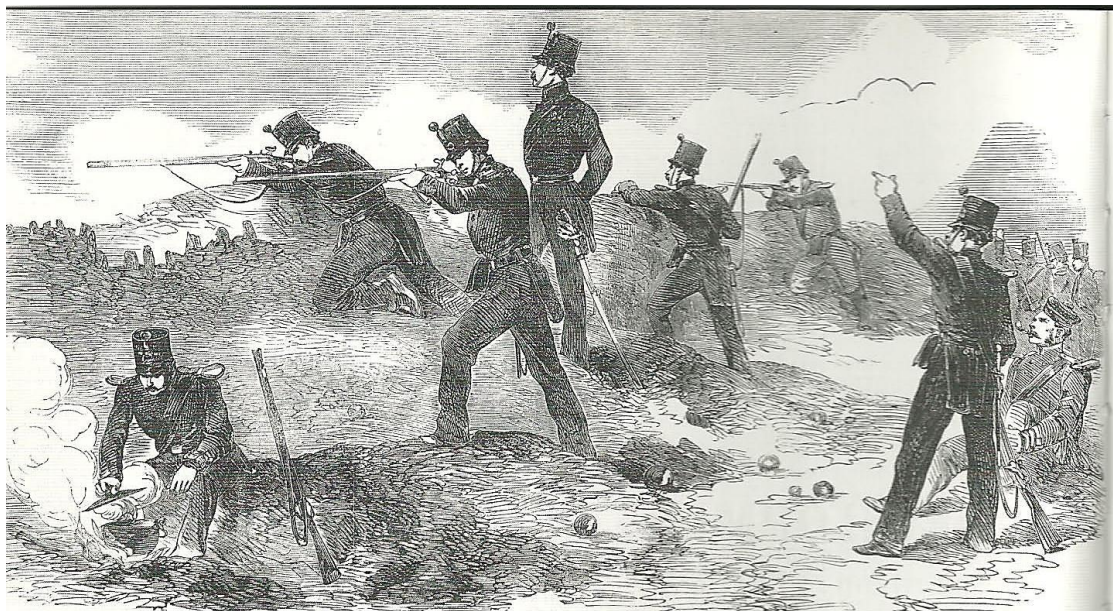
In the autumn of 1855, after the fall of Sebastopol, the Ottoman Army in the Crimea was transferred to Sokhumi in order to relieve Kars from the besieging Russian Army of the Caucasus. Along went the Egyptian and Tunisian contingents from the Crimea. They failed however to prevent Kars from falling to the Russians in November.



Photograph by Roger Fenton depicting English soldiers in the Crimea armed with Minié rifles.



Minié-armed French colonial soldier (Zouave) in the Crimea (right). Photo Roger Fenton

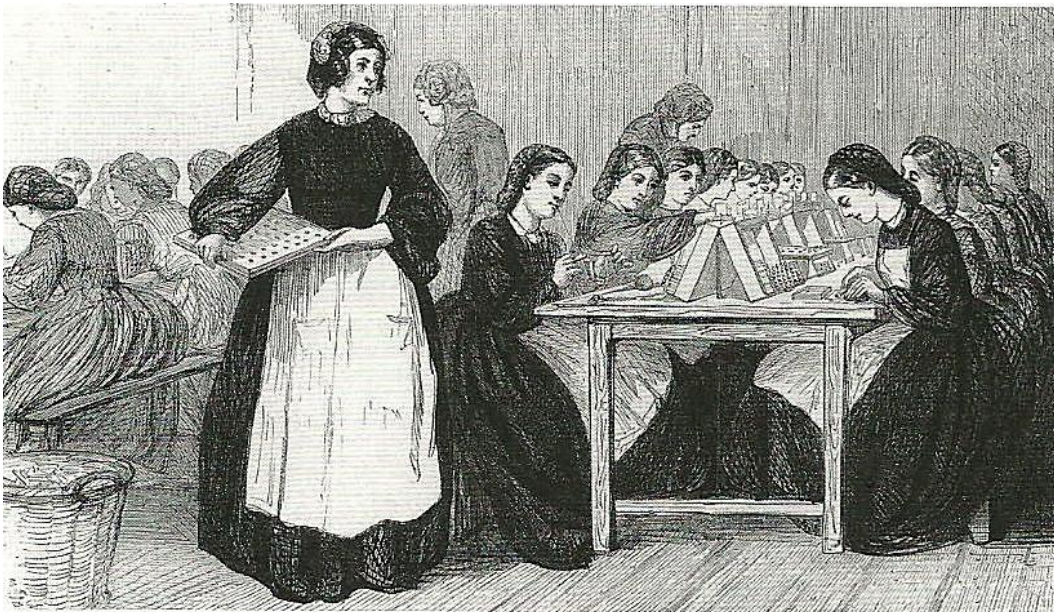


British sharpshooters at the lines outside Sebastopol

P.Smithurst, *The Pattern 1853 Enfield Rifle*, Osprey Ltd., Oxford 2011, p. 10



The Minié cartridge in its paper casing



Young girls at work preparing the empty cartridge tubes at Woolwich. They worked a five-day week of nine and a half hours per day with time off for breakfast and lunch. (*Illustrated London News*, 1862/Private collection)

Production of Minié cartridges at the Royal Arsenal at Woolwich in South London. The workers were mostly soldiers' young daughters. The nature of the work required thin delicate fingers.

P. Smithurst, *op.cit.* p. 69

This particular type of firearms was directly related to the Great Mutiny of the Sepoy Native Soldiers in India in 1857-58.

After the Crimean War, the East Indies Company planned to introduce the new rifle to its troops. There emerged the following issue: to load the rifle the soldier had to tear the paper casing open with his teeth, pour the black powder into the barrel and then ram the bullet, paper and all, down the barrel with his ramrod. To facilitate this, the paper was soaked in lubricant, which in those days consisted mostly of animal (beef and pork) fat. The consumption of those animals' flesh though was against the religious beliefs of Hindus and Moslems respectively and the rumor spread that this constituted a deliberate policy by the Company in order to contaminate the troops (haram), rendering them impure and unworthy of their faith so as to subsequently convert them to Christianity. The massive refusal to receive the new rifles sparked the outbreak of the Great Mutiny (or the First War of Indian Independence) in 1857.

Το νέο τουφέκι Pattern 1853 Enfield Rifle



Τα νέα φυσίγγια

The Enfield rifle



This percussion-lock rifle was produced in the British Ordnance Factory at Enfield near London. It came into use in the British army in 1853. Shortly afterwards it was sent out for trials for the Company army in India. The 'rifling' on the inside of the barrel made the shot more accurate and gave the weapon a greater range. It was an enormous improvement on the Brown Bess smooth-bore flintlock musket which had been the standard weapon of all British forces since the early eighteenth century.

A greased cartridge



Paper case
Powder
Bullet
Grease

How it was loaded



1. The soldier tears open the end of the cartridge with his teeth.
2. He pours the powder down the muzzle of his rifle. Then he thrusts the bullet, still wrapped in the cartridge paper which makes it a tight fit, into the muzzle.
3. He takes his ramrod from its slot beneath the rifle barrel, and rams paper, bullet and powder to the bottom of the barrel.

<http://www.nam.ac.uk/online-collection/detail.php?acc=1972-03-37-1> www.apan.gr <http://www.guns.com/2013/01/19/how-gun-lube-brought-down-the-british-empire/>

From the fifth lecture on India (Panorama, March 2014)

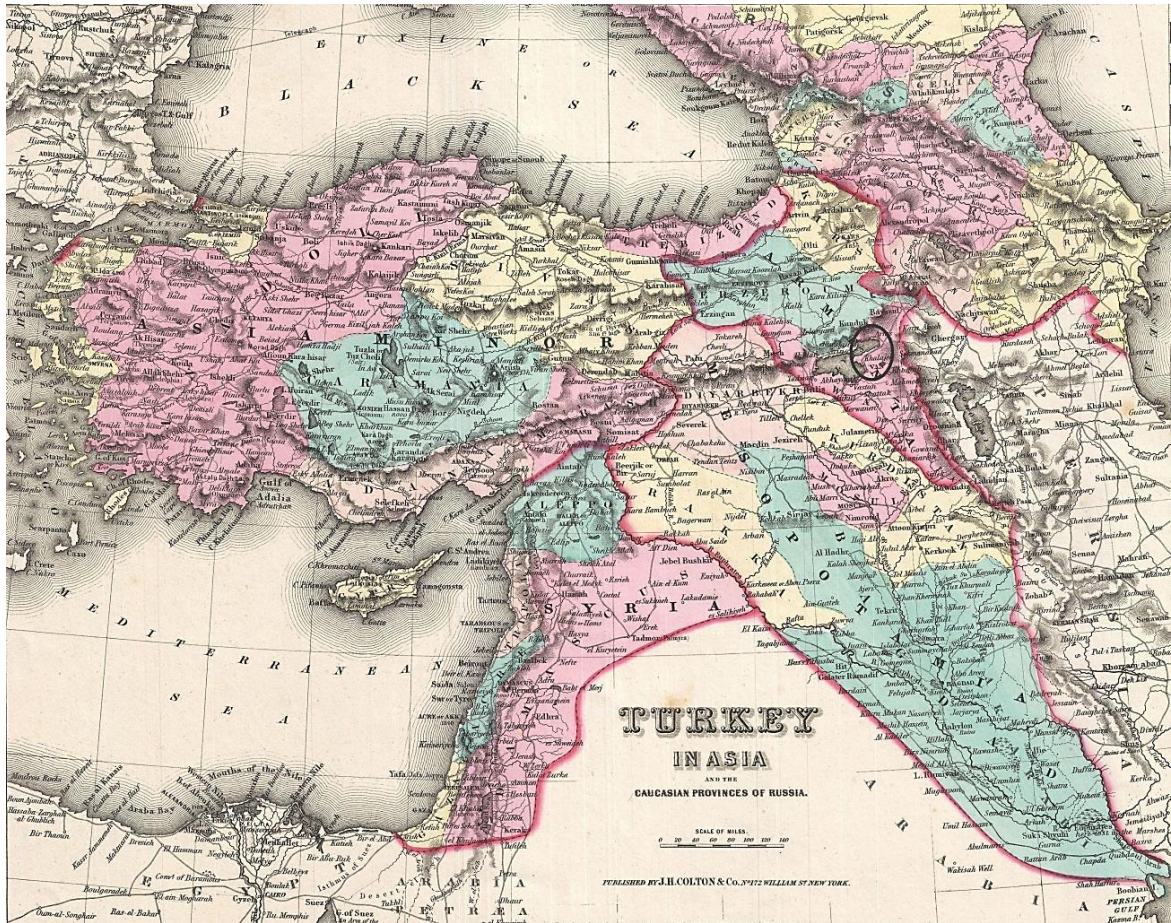
The widest employment of Minié rifles was during the American Civil War (1861-65) from both sides (the Union and the Confederate States). Resulting in terrifying casualty figures (620,000 + combat dead) the highest in American history.

Minié rifles remained in front line service until the mid-1860s when started being replaced by breech-loading rifles, which had the cartridge inserted from the breech (the rear end of the barrel). Obviously however the Miniés continued being used by irregulars, guerrillas etc. for some time. In any case during the next Russo-Ottoman War of 1877-78, both combatants were armed with breech-loaders.

It could be argued that most probably our bullet left its barrel sometime during the two-decade period 1855-1875.

To conclude the “bullet of Van” case, over and above the documentation, this little piece of metal which ended in our hands, must be linked to a tragic moment at the shores of the lake in the Armenian Highlands many decades ago when someone pulled a trigger aiming to take a life. Who these two were, and whether this little metallic piece succeeded in extinguishing a life, will never be known. Neither will it be known where that life, which may have expired there, was born. Could it have started somewhere on the Anatolian Plateau, in the Ionian Valleys, the Balkan Mountains, the Pontic Meadows or possibly at the very same Armenian Highlands? Or even at the villages of Aleppo, the Kurdish communities of the Upper Tigris, the Caucasian Gorges or by the mighty Russian Rivers? One god knows. All we can do is to stand in veneration.

Kostas M. Karamalis, July 2014 (for the Panorama Archive apan.gr)



Geographicus 1855, Colton 'Map of Turkey, Iraq and Syria'.