

Weapons of the frontier wars: Firearms and ammunition of the Native Mounted Police in Queensland

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Abstract

Firearms were critical to the activities of the Queensland Native Mounted Police, a frontier force tasked with suppressing Aboriginal resistance in the colony of Queensland, Australia, between 1848 and 1929. Wider colonial processes meant that arming the Native Mounted Police was never straightforward, despite a dedicated program to standardise and update police weaponry from 1864 onwards. In this paper we use historical, archaeological and museum collections data to produce, for the first time, a definitive list of nine weapons and the ammunition known to have been issued to, and used by, the Native Mounted Police. In general, these weapons transitioned to ever more sophisticated and lethal breech-loading technology, and arms were quickly superseded, although older models were retained in use, resulting in detachments often being armed with an assortment of weaponry. This heterogeneity may have contributed to the use of different tactics by detachments in varying environmental zones. Although the identification of the weapons and ammunition outlined here has value for other contexts, the chief contribution of this research lies in its potential to provide an archaeological dataset to identify putative events of frontier conflict involving the Queensland Native Mounted Police.

Introduction

The Native Mounted Police (NMP) force of Queensland was a paramilitary organisation tasked with quelling Indigenous resistance on the colonial frontier (Richards 2008). Initially deployed in 1848 as part of the New South Wales (NSW) police force on what was then the northern outskirts of settlement, the NMP transitioned to the control of the Queensland colony on its separation in 1859 and continued to operate for the next 70 years until the last NMP camp closed in 1929. As opposed to the regular police, who served primarily in urban contexts, the NMP were deployed on the fringes of settlement to protect European lives, commercial interests and property. Although this sometimes took the form of assisting exploration parties, protecting gold escorts and finding new travel routes, they were principally employed to conduct proactive and reactive ‘dispersals’ of Indigenous groups (a well-known and widely applied Queensland euphemism for ‘shooting’) (Barker et al. 2019:25–26; Wallis et al. 2018:15).

Effectively a cavalry unit, each NMP detachment consisted of 4–15 Indigenous troopers commanded by a White police officer. As such, the NMP required reliable arms that could be easily carried on, and deployed from, horseback. To date, however, it has been unclear precisely which firearms they were issued with (Richards 2008:55–56; Robinson 1997), owing to both a lack of records and a lack of detail and clarity in existing records. Secondary sources, such as newspapers, exacerbate the situation, typically being limited to anecdotal and generic references (e.g. ‘Snider’). Together these mean that the specifics of weapons and the periods of their respective use to date have remained open to conjecture.

From an archaeological perspective, a failure to establish what arms the NMP wielded renders a nexus between any violent incident and the NMP problematic, since the only way to demonstrate NMP involvement may be through the material traces of their weapons (Richards 2008:63). To begin

to redress this situation, we review archival, archaeological and museum collections data relating to NMP weaponry from 1848–1929. Together, these otherwise disparate sources enable the first comprehensive characterisation of the weapons and ammunition issued to this force, as well as their identifying characteristics and potential archaeological traces.

Archival documents were drawn primarily from the Queensland State Archives, especially the Colonial Secretary’s inwards correspondence. Historic photographs of NMP detachments were examined, as were more than 200 weapons held in public and private collections, including the Queensland Museum and the Queensland Police Museum, Lithgow Small Arms Factory Museum, Museums Victoria, Victoria Police Ballistic Unit repository and items offered for sale by auction. The Australian Arms Auction website was monitored from 2018–present, and colonial weapons potentially purchased by the Queensland Government for police use were verified, with identifying details recorded. A similar process was followed to understand developments in ammunition. The primary author (AP) has been affiliated with the Arms and Militaria Collectors Club, Australian Cartridge Collectors Association and International Ammunition Association for some years and has an extensive reference collection of pre-1900 ammunition that enabled the positive identification of NMP weapon and ammunition types. The final source of information was 498 weapons and ammunition-related artefacts retrieved from nine NMP camps: Wandai Gumbal (1851–1859), Spring Creek (1862–1872), Belyando River (Mistake Creek) (1863–1879), Barcoo (1866–1884), Puckley Creek (1874–1876), Lower Laura (Boralga) (1875–1894), Burke River (Boullia) (1878–1886), Eyres Creek (Cluney) (1882–1888) and Musgrave (1891–1900) as part of the Archaeology of the Queensland NMP (AQNMP) project (Barker et al. 2019) (Figure 1). Individual catalogue records for all archaeological artefacts are available in the online project database (Burke and Wallis 2019).

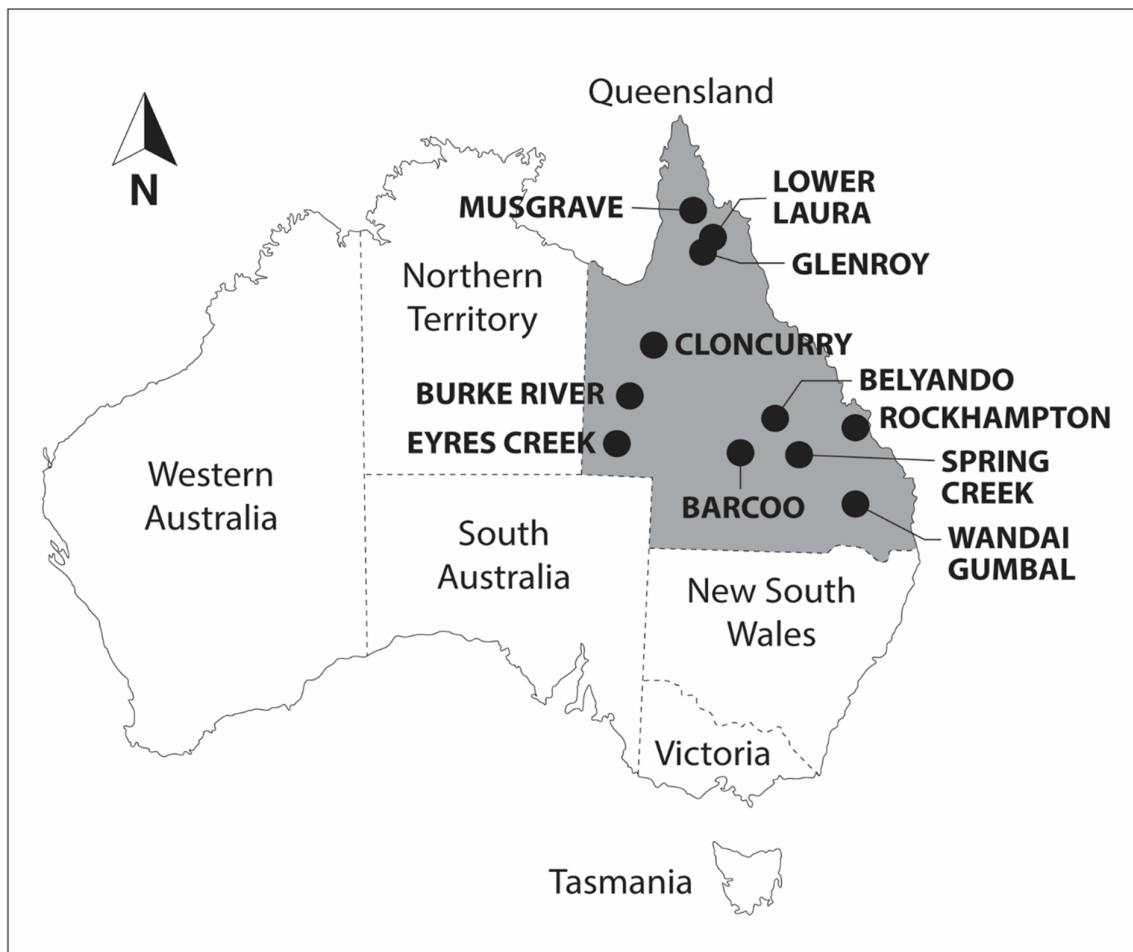


Figure 1. NMP camps referred to in text.

Key terms

Terminology adopted in this paper follows general practice for characterising arms and ammunition. Measurements are given in inches because the British and American manufacturers used the Imperial system, except for the diameter of shotgun pellets ('loose shot'), which are calculated in millimetres and converted to bore using standardised British and American tables. 'Bore', 'gauge' and 'calibre' describe a barrel's internal diameter. 'Bore' and 'gauge' are used for smoothbore weapons (i.e. shotguns), while 'calibre' replaced 'bore' as the preferred term after the introduction of rifling in the 1850s (Barnes 2016:629; Gunther and Gunther 1935:6). Bore is measured internally from one side of the barrel to the other on smoothbore weapons, and from the surface of one raised land of the rifle to the surface of the opposite land for rifled weapons. 'Grain' is the measurement of weight used for cartridges and gun powder. One grain is equivalent to 0.065 g (Dowell 1987:299). The 'case' contains the gunpowder and projectile; together these two components form the 'cartridge'. The case has a head or disc which may be stamped (headstamp) and is the most common means of dating. A carbine is not defined by a set measurement of barrel/weapon length, though is shorter and lighter than either a musket or a rifle, its reduced length making it easier to handle and therefore preferable for mounted troops. It had fewer bands (typically one or two) down the length of the barrel compared to a rifle, which typically had three.

The armaments of the NMP

Nine weapons – two handguns and seven longarms – were definitively used by the NMP. In chronological order these were the: (1) Constabulary .653-inch carbine; (2) Yeomanry .653-inch carbine; (3) 'Cape' Pattern .653-inch double-barrel carbine; (4) Potts & Hunt 20-gauge double-barrel carbine; (5) Colt revolver (the Colt Navy Model 1851 or Model 1861 .36 inch percussion revolver); (6) Westley Richards & Co. 20-gauge double-barrel pinfire carbine; (7) P. Webley & Son Snider-Enfield artillery carbine MkIII .577-inch centrefire single-barrel carbine; (8) P. Webley & Son RIC No 3 .442-inch centrefire revolver; and (9) Martini-Henry .450-inch centrefire breech-loading single-barrel carbine.

These arms straddle several major developments in weapons technology across the second half of the nineteenth century. While the many permutations in munitions manufacture and design are impossible to outline in detail here, key shifts included how the powder was delivered and ignited, how the shot was loaded, and accuracy. The three critical elements in the material culture associated with these developments are the form of (1) the projectile, (2) the cartridge used to hold the projectile and later also the powder, and (3) the gun itself, including its loading mechanism, barrel and accoutrements.



Figure 2. .653-inch smoothbore Constabulary and Yeomanry carbines and ammunition. (Top) Pattern 1840 Constabulary carbine; (middle) Pattern 1844 Yeomanry carbine; and (bottom L–R) used ‘top hat’ percussion caps and lead ball ammunition. Scale in mm (Photographs: Tony Pagels).

The Constabulary 20-gauge carbine and the Yeomanry 20-gauge carbine

The earliest weapons used by the NMP were the Constabulary and the Yeomanry .653-inch carbines (Figure 2). As their names suggest, the first was intended for police, whereas the second was for an aristocratic volunteer cavalry corps. These earliest arms were distributed in ‘considerable numbers’ from 1840 and 1844, respectively (Skenneron 1975:8–11). Manufactured by British suppliers and stamped ↑ over BO (Board of Ordnance) before being shipped to the colonies and issued by the NSW Storekeeper, they are unlikely to bear Queensland Government marks (Skenneron 1975:8,11).

The Constabulary and Yeomanry carbines were smoothbore, single-barrel, muzzle-loading percussion weapons and both were .653-inch (16–20 bore). Being muzzle-loading, they were not unlike the first longarms that arrived in Australia in 1788: each projectile had to be forced down the barrel using a ramrod, with the projectile and the charge that fired it loaded separately (Skenneron 1975:5–11). Generally, muzzle-loading arms required a larger bore with an undersized bullet, unlike later rifled, breech-loading weapons.

Although older muzzle-loaders required a flint to ignite the powder (flintlock), the Constabulary and Yeomanry weapons used percussion caps (Figure 2). Invented in 1822, the percussion cap was a hollow copper cap filled with a detonating mixture of mercury fulminate that was placed over a ‘nipple’ screwed into the barrel. When the trigger was pulled a hammer struck the cap, causing a spark that ignited the powder in the barrel and discharged the projectile (Hoyem 2005:15). Older flintlock weapons could be cheaply converted to percussion arms and, consequently, percussion muzzle-loading weapons remained in use by civilians until at least the 1870s (see, for example, Andrew Murray’s diary 1863–1867; *Australian Town and Country Journal* 29 March 1879:31; *Queenslander* 1 October 1904:27).

Physically, the key differences between the Constabulary and Yeomanry carbines were their lengths and ramrod

housings. At 36 inches (914.2 mm), the Yeomanry carbine was shorter than the Constabulary carbine, which extended to 42.5 inches (1079.5 mm). The Constabulary ramrod was completely removed from the arm when loading, as opposed to the ‘captive’ ramrod on the Yeomanry carbine that swivelled on a mount below the muzzle, a feature designed to prevent loss while reloading on horseback (Skenneron 1975:74,75). A ramrod for a muzzle-loading arm was retrieved from the Spring Creek NMP camp by a metal detectorist, although it was not possible to determine which weapon type this derived from.

Both the Constabulary and Yeomanry carbines used lead ball projectiles, which could be purchased ready-made, or hand-made using a mould. The barrel diameter of both weapons was .653-inch (c17-bore) and they were designed to discharge a single lead ball of around .615-inch (15.63 mm) or 20-gauge that weighed 350 grains (22.68 g) (Figure 2). The size of the ball was constrained by the need to surround the projectile with paper or cloth to ensure a tight fit (Flatnes 2013:106; Hoyem 2005:6,28; Robinson 1997:220). This contributed to the inaccuracy of such firearms, which could be offset by including a ‘buck and ball’ load containing nine or more smaller buckshot balls (.33 calibre or 8–9 mm), thereby increasing the possibility of hitting a target (Flatnes 2013:115,121).

A photograph of the First Division at Rockhampton, dated 12 January 1864 (Figure 3), shows uniformed White officers with troopers. Trooper Carbine, standing on the far left, is pictured with an unknown make of double-barrel carbine, the other troopers are cradling single-barrel Constabulary carbines. A later image, c.1867, depicts the shorter Yeomanry carbine in the hands of troopers from the Mackenzie River NMP detachment (cf. Skenneron 1975:74,75). There are also several references to ball cartridges and ramrods in NMP correspondence in the 1850s (e.g. Colonial Storekeeper 1850; Fulford 1855; Walker 1855).



Figure 3. The NMP First Division, Rockhampton, 1864. Trooper Carbine, standing far left, is supporting a double-barrel carbine, while the seated troopers hold Constabulary carbines (State Library Queensland Negative No. 10686).

The ‘Cape’ Pattern and Potts & Hunt 20-gauge double-barrel carbines

Long, single-barrel, muzzle-loading weapons prevailed as the dominant form of military arm throughout the 1850s, even though they were effectively useless on horseback. Double-barrelled weapons were available from the fourteenth century, but it was not until the late 1830s that double-barrel, muzzle-loading carbines (i.e. shotguns) were employed by cavalry units. They were fitted with a side bar and sling for attaching the weapon to the rider and provided users with an additional shot in quick succession if the first one misfired or missed its target.

Muzzle-loading, double-barrel carbines had proven highly effective in South Africa, where they had been used by a paramilitary, mounted frontier police unit known as the Cape Mounted Riflemen (Cape Mounted Rifles) (Lucas 1878:50; Robinson 1997:17). These weapons were subsequently acquired for use by the Queensland NMP, although the Queensland version came with two smoothbore barrels instead of one smooth and one rifled barrel (Robinson 1997:17). When the NSW Colonial Storekeeper forwarded the first shipment to Queensland in 1860 (Robinson 1997:16), the double-barrel carbine was one of the shortest arms in the colony. At 41.6 inches (105.66 cm) in length, it was well suited for horseback use. These arms were marked under the fore-end of the barrel with ‘T. Turner’ (Figure 4) (Robinson 1997:17; Skennerton 1975:76).

Like the earlier Yeomanry and Constabulary carbines, the double-barrel was a percussion weapon, using a paper cartridge loaded with ball and powder. The diameter of the 20-gauge barrels on these weapons was .653-inch (16.586 mm), discharging either a .615-inch (350 grains) solid lead ball or a ‘buck and ball’ load with a diameter of .33-inch (8.38 mm) and weighing 54 grains (3.5 g) (Flatnes 2013:115,121; Skennerton 1975:76).

The proceedings of a Select Committee enquiry in mid-1861 into the conduct of the NMP confirm that both single-

and double-barrel smoothbore longarms were the only weapons then on issue to them (Queensland Legislative Assembly 1861:149,157). The functionality of the double-barrel carbines had proven ideal for the NMP and in 1862 the Government Agents, Mangles & Co., arranged for the manufacture and delivery of 50 more, which arrived the following year. These were supplied by Potts & Hunt in London, who had been forced to customise their machinery in order to meet the Queensland Government’s order for what was then considered to be an outdated weapon in Britain (Mangles and Co. 1862; Potts and Hunt 1862). The Government was still purchasing smoothbore weapons in 1866 (*Queensland Government Gazette* 26 June 1866:569).

The notion of the double-barrel carbine as the weapon of choice for the NMP in the 1860s (Queensland Legislative Assembly 1861; Seymour 1868) is supported in an historical photograph dated between 1865 and 1868 and depicting troopers Carbine and William Nimble with White officers (Figure 5). Both Carbine and Nimble hold double-barrel carbines with trumpet bracket muzzles and scrolled trigger guards, the same weapon that Carbine was holding in the 1864 photograph (Figure 3).

Copper alloy percussion caps were recovered from Spring Creek (1862–1872), Lower Laura (1875–1894), Burke River (1879–1886) and Eyres Creek (1882–1886). Those from Spring Creek, Lower Laura and Eyres Creek were the earlier, military style caps used in rifles/carbines, with their flanges characteristically splayed, and could have derived from any of the four percussion longarms mentioned above. The smaller, ribbed caps without flanges recovered from Burke River derive from a later model weapon with a nipple of a reduced size, such as a revolver, although the absence of manufacturers’ marks made it impossible to identify them further. An external hammer for the left side of a double-barrel, percussion-type shotgun was recovered from Belyando (1863–1879), but there were no visible manufacturer’s marks or motifs to identify it to any specific weapon (Figure 6).



Figure 4. Arms and ammunition of 'Cape' pattern and Potts & Hunt double-barrel .653-inch smoothbore carbines. (top) 'Cape' pattern carbine (Skenneron 1975:76); (bottom L-R) used percussion caps; and lead ball ammunition (Photographs: Tony Pagels). There is no image available of a Potts & Hunt double-barrel carbine. Scale in mm.



Figure 5. NMP troopers Carbine (far left) and William Nimble (far right), holding 'Cape' pattern double-barrel carbines characterised by the ramrod bracket and scrolled trigger guard extension, c.1866 (State Library Queensland Negative No. 147045).



Figure 6. External gun hammer from the Belyando NMP camp (MIS-41296). The configuration indicates it is for the left side of a double-barrel, percussion-type shotgun (Photograph: Kylie Macey).

Advances in firearms and ammunition technology were occurring at a rapid pace and the Cape Pattern and Potts & Hunt weapons were the last percussion longarms purchased by the Queensland Government. By the late 1860s the modern era of breech-loading weapons and centrefire, self-contained ammunition had arrived.

The Colt Navy Model 1851 or Model 1861 .36-inch percussion revolver

The development of handguns was interwoven with that of longarms, similarly transitioning from flintlock to percussion muzzle-loading pistols before the development of the revolver. Early pistols provided the shooter with a single shot before reloading, which was justifiably impractical while on horseback, with the inaccuracy of the pistol restricting its use to close quarter combat (Flatnes 2013:167; Robinson 1997:28). The revolver changed this situation. Possessing a revolving cylinder with multiple chambers, each time the shooter pulled the trigger a fresh cartridge aligned with the barrel, allowing multiple shots to be fired quickly and easily. This was breech-loading technology, a major shift in the operation of firearms, and perfected much earlier for handguns than longarms. While Samuel Colt did not invent the revolver, he quickly patented a cylinder design feature which prevented cross-ignition between the chambers and introduced mass production, monopolising revolver design until the expiration of his patent (Pegler 2017:18,19).

Although a wide variety of handguns had been available in the Colonies from the mid-1850s, the first revolver known definitively to have been issued to the NMP was the Colt Navy model in 1868. Archival material hints at earlier distributions from 1865, but this is unclear owing to the loss of a substantial file on the Sydney gunsmith, Henry Challener, and discrepancies in a surviving return of pistols purchased and issued between 1862 and 1869 (Hassle 1870; Robinson 1997:30,39–41).

Colt's Model 1851 Navy revolver was a single action, percussion, .36-inch calibre, 6-shot revolver, with a 19 cm (7.5 inch) barrel (Figure 7) (Flatnes 2013:226; Pegler 2017:32). This was later replaced by the Model 1861 Navy model, which was also produced as the Model 1862 Colt Police revolver. The police model was also .36 calibre, but was available with a 6.5 inch or 3.5 inch barrel and was lighter than the Colt Navy.

All Colt Navy revolvers were designed to discharge either a .36-inch (90 bore) conical lead bullet weighing 9.07 g (140 grains), or a 5.18 g (80 grains) round ball with a diameter of .38 inch (9.652 mm). The principles of rifling and conical bullets preceded the development of breech-loading weapons, and handguns evolved more quickly in this respect than longarms because of their lessened explosive power. Rifling had been known of since the 1500s and was the addition of one or more spiralling grooves to the internal bore of a gun barrel to impart a spin to the projectile and make it travel straighter, faster, and further, with greater accuracy (Flatnes 2013:129). Conical bullets were in existence from at least the 1830s, but were not developed en masse until the late 1840s. One example, used extensively in British arms from 1853, was the Pritchett bullet. The original Pritchett was smooth-sided, with a shallow hollow at its base that expanded on discharge. Subsequent modifications added an iron base plug to ensure the bullet was forced into the rifling on discharge,

replaced in 1856 by a boxwood plug and in the 1860s by clay (Majendie 1872:8–11).

Conical bullets were available in a paper, animal skin or foil-wrapped cartridge that was pushed into the revolver cylinder. A piece of string or tape was attached to the rear of the wrapping and pulled immediately before loading to tear the case and expose the powder (Figure 6). Revolver ammunition was manufactured by Eley Brothers for the range of Colt, Tranter, Adams, Deane and Kerr models (Harding 2006:39–41,124) and advertised in the *Moreton Bay Courier* from June 1859 onwards.

Only one possible Colt revolver cartridge base has yet been retrieved archaeologically, although its identification is uncertain. A bullet mould specifically for manufacturing both round ball and conical bullets for the Colt revolver was collected from the Glenroy NMP camp (1882–1886) by a metal detectorist (Figure 8). Collectively, this suggests the NMP made their own projectiles, at least episodically.

Although the Colt revolver was popular, existing archival documents suggest the Queensland Government was slow to purchase and distribute the arm, with 80 (of unknown model) supplied in 1868 (Robinson 1997:39).

The Westley Richards & Co. 20-gauge double-barrel pinfire carbine

In 1867 the Westley Richards & Co. breech-loading, double-barrelled, 20-bore, Lefauchaux-action, pinfire carbine became the first longarm known to have been specifically purchased for the NMP (Figure 9). Fast, safer and easier breech-loading had been invented in 1856 by William Terry (Flatnes 2013:26), although the charge and the cartridge were initially still separate entities, and therefore still required the use of a percussion cap (Terry 1856). However, from the mid-1860s onwards, rapid changes in the system delivering the charge to fire a projectile resulted in the development of various forms of self-contained cartridge which combined the ignition device, powder and bullet into a single package. Self-contained cartridges delivered a reliable, gas-tight seal that critically prevented the explosive gases blowing back and injuring the shooter (Flatnes 2013:26). Such developments substantially increased efficiencies in terms of the rate at which a weapon could be loaded, aimed, fired and reloaded, and by the late 1860s breech-loading longarms employing self-contained cartridges were the norm.

The earliest self-contained ammunition was pinfire, followed by rimfire and centrefire, as the placement of the charge shifted from the rim of the cartridge to the centre of the base. First patented in 1861 by William Thomas Eley (Harding 2006:50), the pinfire cartridge consisted of a cardboard tube with a metal head (Hoyem 2005:117). Protruding from the side of the head was a pin (also sometimes erroneously called a needle) that extended into the cartridge to a percussion cap. With the cartridge in the closed breech, the pin remained exposed and detonated the percussion cap and powder when struck by the falling hammer (Figure 9). The 20-gauge pinfire Eley Bros cartridges were available loaded with shot in a range of sizes (Harding 2006:62,64). The smallest were 'birdshot', followed by mid-size 'buckshot' and larger 20-gauge round balls.



Figure 7. Colt Navy revolver and ammunition. (top) Model 1851 Colt Navy single action percussion revolver, .36 calibre. The cylinder is marked with London proof marks and the top strap marked ‘→ ADDRESS. COL; COLT. LONDON.←’. The serial number 35112 is marked on the underside of the frame, identifying the arm as a Third London model (Prescott 2014:27) (Queensland Museum H2012); and (bottom L–R) .36 Colt combustible cartridge wrapped in paper case and with paper wrapping removed. Scale in cm (top) and mm (bottom) (Photographs: Tony Pagels).



Figure 8. A of .36 bullet mould for the Colt revolver from the Glenroy NMP camp (Photograph: Tony Pagels).



Figure 9. (top) Westley Richards & Co. breech loading double-barrel carbine, 20g with Lefauchaux-action and ammunition; and (bottom L–R) the action opened to illustrate the design of the drop breech and slot in the top of the barrel to accommodate the pin of the cartridge; a 20-gauge pinfire cartridge with brass head and cardboard body; used brass pinfire cartridge head; unused 20-gauge lead ball. Scale in mm (Photographs: Tony Pagels).

The Westley Richards pinfire carbines possessed several obvious advantages over earlier weapons:

In your deciding upon ordering these arms ... we think you get a greater advantage for the extra cost. First the arms if taken in warfare or meeting cannot not be turned against the force after the usual number of service rounds issued have been expended[,] 2ndly the ammunition cases can be loaded 2 or 3 times and it can also be filled with shot instead of Ball making the arm a very good "Birding Gun", 3rdly the arms when on ... other duty, can be loaded and unloaded as often as necessary without discharging ... whereas in muzzle loaders if once loaded, then the arm must either be discharged or withdrawn at a waste (Richards 1866).

Their distribution to the NMP, however, did not occur as intended. Although purchased specifically for the NMP, many were issued instead (and possibly mistakenly) to ordinary police and jailers, while others remained in the Colonial Store. Only in 1868 was an unknown, and probably relatively small, number issued to the NMP (Robinson 1997:36). By then, however, they were already outdated. The first and very eagerly awaited breech-loading Snider-Enfield rifles and carbines, taking centrefire cartridges, had been delivered in August of the previous year (Skenneron 2003:129), and by 1869 the pinfire carbines were classed as being of no further use (Clerk-in-Charge of Colonial Store 1869).

Archaeologically, ten 20-gauge round lead balls, with diameters ranging from 15.33–15.87 mm and weighing from 21.0–23.2 g, were recovered from Wandai Gumbal (1851–1859), Spring Creek (1862–1872), Puckley Creek (1874–1876) and Lower Laura (1875–1894). These could have derived from either the Yeomanry and Constabulary carbines, the Cape Pattern and Potts & Hunt weapons or the Westley Richards carbine, since their barrels were the same calibre and they all took the same ammunition. A single larger ball of 18.58 mm and 33.3 grams, and a smaller ball of 13.01 mm and 12.9 grams, were recovered from Spring Creek, but these probably derive from an older model musket and pistol. The earliest cartridges retrieved archaeologically were pinfire shotgun heads with the embossed headstamps 'Eley Bros' and 'EB', dating them to between 1861 and 1874 (Harding 2006:61,149). These were found at the Belyando, Lower Laura and Eyres Creek camps, and were particularly common at the latter two, both of which post-date 1874.

Lead bullets and balls could be produced in the field, requiring only moulds, lead and a crucible, and several written sources dating between 1858 and 1861 make reference to lead being provided to camps for this purpose (e.g. Bennett 1858; Jardine 1861; Morisset 1859), seemingly as a result of a colonial-wide lack of ammunition (Queensland Legislative Assembly 1861:140). Melted lead was recovered archaeologically from the later Belyando (1863–1879), Burke River, Lower Laura and Eyres Creek camps (1882–1886), suggesting that the field production of projectiles continued as a general practice.

The single-barrel P. Webley & Son Snider-Enfield artillery carbine MkIII .577-inch centrefire

In 1866, the Snider-Enfield rifle – the first general issue breech-loader – and its associated Boxer centrefire cartridge were adopted by the British War Department. Intended as a 'stop gap' conversion of the earlier Pattern 1853 Enfield rifled muzzle-loading muskets, the alteration involved replacing the

percussion firing mechanism with a breech for loading and unloading (Figure 10).

The Snider-Enfield was named after the Enfield rifled barrel and the Snider breech lock invented by American, Jacob Snider Jnr, who first patented his hinged-block breech-loading mechanism in 1862 (Skenneron 2003:9; Figure 7). Snider's original design underwent several subsequent modifications and improvements, with the variants being referred to as MkI, MkI*, MkII*, MkII** and MkIII (Skenneron 2003:75–117). Variations in length meant that the Snider came in rifle, short rifle and carbine forms (Skenneron 2003:132–181). MkI-MkII** were made by converting Enfield muskets, while the MkIII was a newly made arm. A single-barrel band and sling swivel (used to attach the strap allowing the gun to be carried across the body) for a Snider-Enfield artillery carbine was collected from the Burke River NMP camp (1879–1886). This is a 'Baddeley' model upper barrel band with sling swivel, used on the Enfield Rifle and Snider-Enfield rifle/carbine post-1853 (Figure 11). Two lock plates from a MkIII Snider-Enfield were recovered from the Barcoo NMP camp (1866–1884). Both were marked 'P. Webley, London and Bir. 1874, QP', with a vertical arrow above and were from weapons issued to the NMP (Terry Rauchle, pers. comm., 9 September 2017).

The development of self-contained centrefire cartridges ultimately made the Snider-Enfield one of the most successful weapons of the latter nineteenth century (Majendie 1872:23). The eponymous Boxer cartridge it used was developed by Colonel Edward M. Boxer in 1865, who also developed a conical bullet with a hollow nose to be housed inside it. The hollow nose lengthened the projectile without increasing its weight, as well as causing it to expand on impact, leaving more severe injuries (Majendie 1872:26, 28). Boxer's bullet was also more stable in flight and thus more accurate, and its lesser weight meant that the powder charge was minimal, reducing its recoil when fired (Temple 1977:28–33).

Boxer's cartridge design used coiled brass to maximise strength, and a base disc held in a single shallow cup to provide strength (Figure 10). Over the following five years, Boxer refined the base disc, its composition and the number of base cups to produce a variety of patterns (MkI–MkIX), each with slightly different physical characteristics (Figure 12) (Boxer 1866; Temple 1977:39–58). Boxer's bullet also went through multiple iterations, from Types 1–7, with cartridges also produced in blank and buckshot rounds. All Snider arms could use both the MkVIII and MkIX cartridges and both the weapon and the MkIX cartridge remained in service into the early twentieth century (Temple 1977:43,49).

After 1870 the Snider-Enfield MkIII artillery carbine became the primary weapon of the Queensland NMP, shipments of which are referred to in various documents into the 1880s. Images depicting NMP troopers armed with Snider-Enfield artillery carbines range from the late 1870s through until 1896 (Figure 13). Although the single-barrel did not provide the double shot advantage of earlier weapons, its rifling, self-contained centrefire ammunition and lighter weight made it an ideal cavalry weapon (Seymour 1868).

Twelve conical lead bullets for the Snider-Enfield were recovered archaeologically. These included Type 6 bullets for use in the Boxer MkVIII cartridge from Belyando, Lower Laura and Eyres Creek, and Type 7 bullets for use in the Boxer MkIX cartridge from Lower Laura, Eyres Creek and Musgrave (1891–1900) (Figure 14).



Figure 10. (top) Snider-Enfield artillery carbine MkIII, manufactured by P. Webley & Son and marked Q↑G on the lockplate. (Queensland Museum uncatalogued); and (bottom L-R) loading a Boxer cartridge into the carbine; unused MkVIII and MkIX Boxer cartridges; used Boxer cartridge recovered from Eyre's Creek NMP camp; Type 6 bullet with four cannelures as used in the MkVIII cartridge; Type 7 bullet with three cannelures as used in the MkIX cartridge. Scale in mm (Photographs: Tony Pagels).



Figure 11. Forend barrel band and sling swivel from Burke River NMP camp (BOU-26478) (Photograph: Kylie Macey).













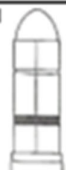




Bullet	Weight (grains)	Cannelures	Nose Plug	Cartridge Used	Cartridge Differences	Issued
Type 1 	525	4 rounded	wood	Mk I, Mk II  	Mk I had a rounded base disc and a single base cup. Mk II and later Mk's have two brass base cups	7/12/1866 14/8/1867
Type 2 	480	3 rounded	Wood	Mk III 	Identical to the Mk II except had the different bullet. The Mk III also used the Type 3 bullet	14/8/1867
Type 3 	480	3 saw-shaped	Wood	Mk III, Mk IV  	The Mk I, II, & III have brass base discs. The Mk IV and later Mk's have an iron base disc.	14/8/1867 14/8/1867
Type 4 	480	4 saw-shaped	Wood	Mk V, Mk VI  	Mk V & VI case exterior is wrapped in brown paper previous Mk's were white paper. Mk VI case has a single black ring. Mk VI and later cartridges have a stronger case.	16/11/1867 & -/12/1868
Type 5 	480	4 saw-shaped	Nil	Mk VII 	Identical to Mk VI except for a different bullet.	-/4/1868
Type 6 	480	4 saw-shaped	Nil	Mk VIII 	Cartridge has a shellac layer specially for tropical use. Case has two black rings and copper primer pocket.	-/1869
Type 7 	480	3 saw-shaped	Nil	Mk IX 	Mk IX has no shellac layer, and different bullet to Mk VIII. The primer pocket is brass and the inner base cup is higher. Case has a single red ring.	-/1871

Figure 12. Comparison of the differences in Boxer Cartridges for Snider-Enfield rifles and carbines (after Temple 1977:36–49) (Photographs: Tony Pagels).

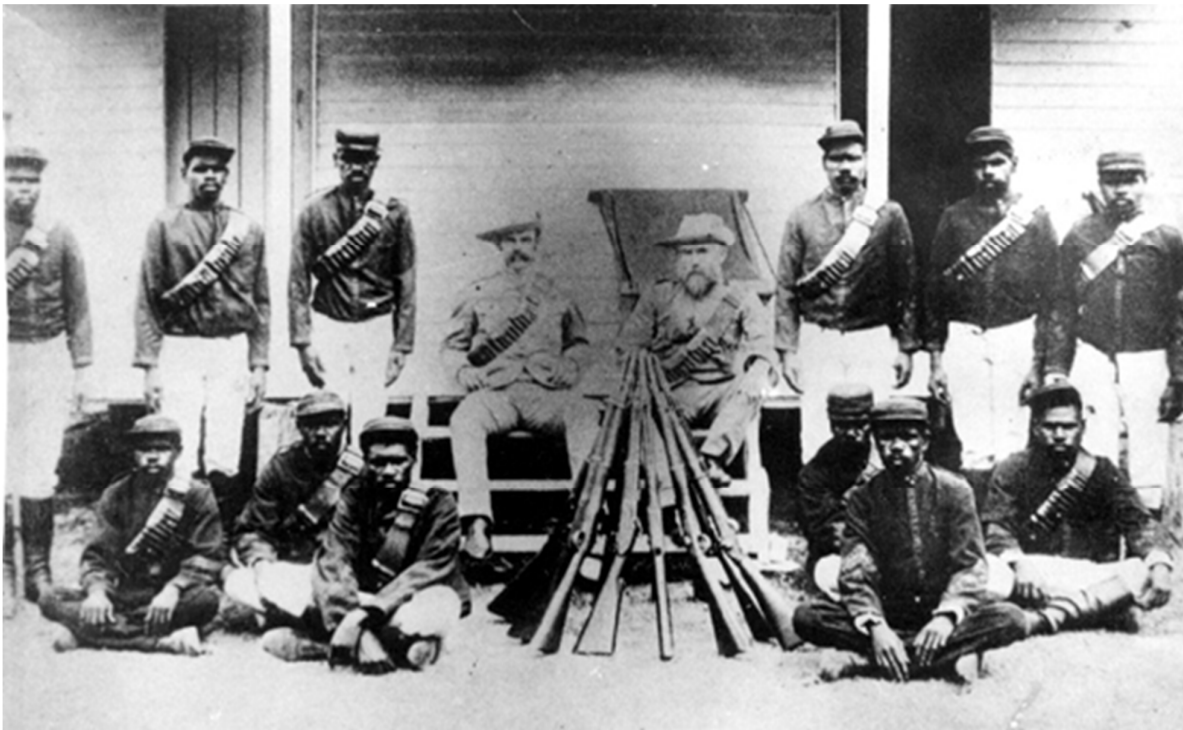


Figure 13. NMP detachments at Coen c1896 with Snider-Enfield artillery carbines; troopers and officers are wearing bandoliers filled with Boxer cartridges (Queensland Police Museum PM0635).



Figure 14. (left) Type 6 bullet with four cannelures for a Snider-Enfield MkVIII cartridge from the Lower Laura NMP camp; and (right) a Type 7 bullet with three cannelures for a Snider MkIX cartridges from Eyres Creek. Scale in mm (Photographs: Tony Pagels).

Eight bullets and 107 identifiable Boxer rolled brass foil cartridge cases for Snider arms in varying states of preservation were retrieved from the Lower Laura, Burke River, Belyando and Eyres Creek camps.

The P. Webley & Son RIC No 3 .442-inch centrefire revolver

In 1867 Birmingham gunmaker Philip Webley & Son introduced a revolver that was adopted by the Royal Irish Constabulary (RIC) and subsequently by policing agencies worldwide. It had a solid frame with a double action six-shot chamber and grooved rifling, and the barrel came in different lengths. It became known as the Webley RIC revolver, and was efficient, durable and accurate, remaining in production until at least 1914 (Prescott 2014:94). While the Webley RIC had subtle variations between models, it was the No.3 first and second patterns that were purchased by the Queensland Government (Figure 15). This was a cheap variation, with a removable arbor pin (holding the cylinder in the revolver frame) and cylinder. More expensive Webley revolvers had a side pivoting cylinder for easier loading, and an extraction rod for unloading. The No.3 first and second patterns remained in production until 1881 (Prescott 2014:94–104).

The Webley RIC .442 calibre revolver used a simplified form of Boxer cartridge consisting of an elongated cup riveted to the brass base disc by the wad and brass primer pocket, often referred to as a battery cup, as well as a copper primer (Figure 15) (Temple 1977:104–107). The bullet was conical with a flat base and one cannelure, and weighed 219 grains (14.19 g) (Dowell 1987:252; Temple 1977:104–107).

Unfired .442" bullets were recovered from Burke River and Lower Laura and a fired .442" bullet from Belyando. While these might have been used in a variety of centrefire revolvers, they were intended for use in the Webley RIC revolver (Figure 16).

Webley RIC centrefire cartridge bases were recovered from Belyando (1863–1879), Lower Laura (1875–1894), Burke River (1879–1886) and Eyres Creek (1882–1886). These cartridges were headstamped with both Eley Brothers and Kynoch marks, indicating manufacturing date ranges of post-1869 (Kynoch) and 1851–1874 (Eley) (Harding 2006:149). Many were made using a method of construction that dates them to before 1885, when drawn brass cartridges came into use.



Figure 15. (top) P. Webley & Son R.I.C No. 3 Second Pattern revolver, with frame marked ‘C.I.B. 1005’, and ↑over Q.G. (Queensland Museum H1909); (centre, L–R) .442-inch cartridges for the P. Webley & Son RIC revolver, a pre-1874 Boxer constructed, battery primed cartridge with headstamp ‘ELEY BROS’ and a post-1874 cartridge with the headstamp ‘ELEY .442 LONDON’; and (bottom L–R) .442 bullet, base of a pre-1874 .442 cartridge, and base of a post-1874 .442 cartridge. Scale in mm (Photographs: Tony Pagels).



Figure 16. (left) An unfired .442-inch bullet (BOR-35119); and (right) an unfired 44-40-inch bullet, both from the Lower Laura NMP camp (BOR-26803). Scale in mm (Photographs: Tony Pagels).

The Martini-Henry .450-inch centrefire breech loading single-barrel carbine

Originating in 1866, the Martini-Henry was an entirely new longarm that superseded the Snider-Enfield. It combined a barrel designed by Alexander Henry with .45-inch calibre, seven groove right-hand twist rifling (aka ‘Henry’s Rifling’), and a single shot, lever action, rear-hinged falling block designed by Frederick von Martini to make loading and unloading more efficient (Majendie 1872:26). As with the Snider-Enfield, the Martini-Henry was available in shorter and more versatile carbine configurations from 1871 onwards. Following more than 10 alterations, the Martini-Henry MkII pattern was approved for service in the British Forces on 25 April 1877 (Manning 2013:21; Temple and Skennerton 1996:111), although Queensland did not receive shipments until the 1880s. Regular police were first issued with them after 1885 (Figure 17) (Robinson 1997:59; Skennerton 1975:32).

Boxer’s cartridges were also designed for the Martini-Henry and were issued in different configurations for rifles and carbines, as opposed to the Snider-Enfield, which had the same pattern for both (Figure 18). Both the Snider-Enfield and Martini-Henry cartridges were charged with 85 grains of

black powder and weighed 480 grains. The brass case of the Snider-Enfield cartridge was straight-walled and easily damaged, a problem resolved by altering the shape to the now distinctive ‘bottleneck’ design patented by William Eley in 1869 (British Patent No.166). Like its Snider-Enfield counterpart, the Martini-Henry Boxer case was constructed of thin rolled brass (‘foil’) and went through various iterations, each with slightly different physical characteristics (Figure 18). When combined with a Henry bullet in .450-inch calibre it became known as the ‘Boxer-Henry’ cartridge (Temple 1977:60). This was stronger and shorter than the Snider-Enfield version, with a .577-inch case diameter.

Henry bullets were produced in two weights: a heavier version that was 480 grains and 1.27-inches long (Type 1), with a variant form with one or two cannelures for use in the Martini-Henry rifle (Type 2), and a lighter and shorter version (Type 3) that was 410 grains and 1.115 inches long, with two cannelures for use in the Martini-Henry carbine. The reduced diameter of .450 inches created a flatter trajectory with greater range and accuracy (Majendie 1872:33). Henry bullets were also swaged (formed under pressure rather than moulded), a quicker process that produced a more uniform projectile (Temple 1977:82,83).



Figure 17. (top) Martini-Henry Cavalry carbine marked VR, Enfield 1888 I.C.1 on the right-hand side receiver and stamped with Queensland Government marks on the right-hand side of the butt, Q↑G over 'P'. This alteration to the mark suggests the weapon was initially issued to a Queensland government force before it was transferred to the police (Photograph: Roland Martin); and (bottom L-R) Type 3 carbine bullet and Mk II carbine cartridge; Mk III Martini-Henry cartridge case with site inspection hole circled in red. Scale in mm (Photographs: Tony Pagels).




Bullet	Weight (grains)	Cannelures	Cartridge Used	Cartridge Differences	Issued
Type 1 	480	one	Rifle Mk I Mk II	Mk II differed from the Mk I by having a simplified base construction. These cartridges were not successful	1/10/1871 Not issued
Type 2 	480	two	Rifle Mk III Contract E	Mk III reverted to two base cups and internal reinforcing with site inspection hole. Remained unchanged. White paper patch Contract E lacks the site inspection hole. White paper patch	1/10/1873 1/03/1888
Type 3 	410	two	Carbine Mk I, II & III	All three Mk's use Mk III rifle cases with a smaller, lighter bullet. Red/maroon paper patched. Mk I Mk II internal differences only Mk III three cuts in paper patch	1/12/1877 1/05/1878 1/10/1879

Figure 18. Comparison of the differences in Boxer cartridges for Martini-Henry rifles and carbines (after Temple 1977:82–96) (Photographs: Tony Pagels).

Table 1. Physical features identifying the variations in Snider-Enfield and Martini-Henry cartridges.

Cartridge	Calibre	Shape	Case Length	Case Neck Width	Cannelures	Base Cups
Snider-Enfield	.577	Straight sided	2-inches (50.80 mm)	.620-inches (15.74 mm)	1	1
Martini-Henry	.577/.450	Bottleneck	2.32-inches (58.92 mm)	.502-inches (12.80 mm)	2	2

While the Queensland Police had Martini-Henry rifles and carbines on hand from 1885, they were not universally issued to the NMP and, in at least some circumstances, were removed from their possession in favour of the Snider-Enfield (Stuart 1894).

The final development in Boxer ammunition was the introduction of a solid drawn brass cartridge in 1885 (Temple 1977:49), dispensing with rolled brass and separate base cups. These were introduced for the Martini-Henry rifle in 1885 and for the carbine in 1887 (Temple 1977:84–96). While historically the Martini-Henry cartridges appear later in the operational life of the NMP than Snider cartridges, both were found at the Burke River (n=1) (1879–1886) and Lower Laura (n=6) (1876–1894) NMP camps. The two cartridges are distinct in calibre, shape, case length, neck width and the number of cannelures (Table 1).

The presence of spent Martini-Henry cartridge cases and bullets at NMP camps is thus far highly limited, with only six identifiable cases being recovered from Lower Laura and one from Burke River. Thirty-nine cartridge heads and pieces of rolled brass lacked diagnostic features (e.g. site inspection hole, ‘bottleneck’ foil with vertical fold lines and cannelure impressions) and therefore could derive from either Snider-Enfield or Martini-Henry ammunition.

Understanding the NMP through their weapons

Table 2 provides details of all known purchases of the nine weapons by the Queensland Government. The archives reveal orders received for a total of 3,102 weapons of the types issued to the NMP between 1860 and 1895. Although it is not possible to know how many of these made their way into NMP hands, it demonstrates the Queensland Government’s desire for police of all kinds to be adequately armed. It must be noted that, while it is possible that other weapons issued to the regular police or held in Government Stores could have filtered through to the NMP, there is insufficient information to date to draw any definite conclusions. It is also possible that NMP officers purchased weapons privately, since this was a relatively common practice for wealthier men.

Several patterns are revealed in the foregoing data, not all of which are intuitively consistent with the nature of the NMP as a mounted and permanently armed corps.

First, as a broad generalisation, the archaeological signature of NMP weapons activity is likely to vary geographically according to major shifts in armament technology (Figure 19; Table 3). Mapping the location of 150 known NMP camps by decade both visualises the movement of the frontier and illustrates the expected material patterning from NMP activity within each zone. NMP activity connected to camps established in the 1840s and 1850s, restricted to the southern and southeastern portion of the colony, will yield muzzle-loading weapons and ammunition. Activities associated with camps established during the 1860s and 1870s, extending into central and western Queensland but also the far northern tip of Cape York Peninsula at Somerset,

should yield artefacts linked to pinfire and Snider carbines, as well as Webley R.I.C. revolvers. NMP activity in the 1880s and 1890s in the far west and north of the colony will show an increased proportion of Martini-Henry artefacts.

Second, this picture is complicated by a pattern of older weapons being kept in use for considerable lengths of time. Combining both the archaeological and archival data, Figure 20 depicts the projected period of use for each weapon against the dates of camps mentioned in this paper and the overall period of operation of the NMP.

Archival evidence makes it clear that, even when issued with new weapons, some were considered obsolete at the time of their distribution or shortly after, simply because the colony lagged behind the rapid changes in weapons technology occurring internationally. During the 1860s, in particular, makes, forms and models changed rapidly, and were issued to the NMP episodically and unevenly, meaning that both older and newer models were in use simultaneously.

The retention of older weapons was a result of both necessity and design. Certainly, obsolete arms were still being issued from Colonial Stores well after their original purchase date. As late as 1878, for example, Alexander Douglas complained of the ‘old muzzle loading carbine’ – presumably either the Cape Pattern or Potts & Hunt weapons from the 1860s – being issued to recruits in far north Queensland (Douglas 1878). Percussion caps retrieved archaeologically from Burke River (1879–1886) and Lower Laura (1875–1894) attest to the Constabulary and Yeomanry carbines and Colt revolvers, issued in the early and late 1860s respectively, still being in use at least a decade after their initial purchase. Pinfire cartridges from Lower Laura and Eyres Creek (1882–1886) are evidence of a similar use-life for the 1868 Westley Richards carbine, possibly extending for up to two decades. Historically, Snider-Enfields, although first introduced in 1870, continued in use into the 1900s, despite the availability of the Martini-Henry carbines and other advanced arms, and Martini-Henry ammunition on hand in 1890 was still in store and serviceable in 1903 (Figure 21).

Not all such curation was a result of parsimony or lack of resupply, however. It was also the case that some weapons proved more serviceable in particular environments and were therefore preferentially retained in certain contexts. One example is the MkVIII ammunition for the Snider-Enfield carbines, first issued in 1869. This was held in high regard in the far north because of a waterproofing additive that made it less likely to be affected by tropical moisture (Temple 1977:42,49), perhaps the reason that an example was recovered from the Lower Laura camp in southeast Cape York Peninsula. Similarly, Robert Johnstone found the Westley Richards carbine to be a particularly serviceable weapon during his time in the north in the 1870s and 1880s, noting that some were still in use in 1904, although by then they had been converted to centre fire ammunition (Johnstone 1905).

Table 2. Known purchases of the types of weapons issued to the NMP.

Date Requisitioned	Date Received	Weapon	Quantity	Notes
-	Mar 1860	Constabulary 20-gauge carbine &/or Yeomanry 20-gauge carbine	20	Initially used by the NMP on transfer from NSW. Order supplied from NSW stores.
-	Jan 1860	'Cape' Pattern 20-gauge double-barrel carbine	12	Acquired from NSW Storekeeper
Dec 1861	Sept 1860	Potts & Hunt 20-gauge double-barrel carbine	40	
	Oct 1862		10	
Nov 1866	Apr 1867	Westley Richards & Co 20-gauge double-barrel pinfire carbine	200	Arms arrived without assembled ammunition
27 Jul 1868	Sep 1868	Colt Navy Model 1851 or Model 1861 .36-inch percussion revolver	80	
-	b/w Oct 1869 & Nov 1870		17	Colt revolvers in store
	Mar 1870		25	4 issued to NMP at Barcoo
	20 Sep 1870			
-	Jul 1870	P. Webley & Son Snider artillery carbine MkIII .577-inch centrefire single-barrel carbine	50	
Oct 1871	Post-Jul 1872		50	
Post-Sep 1872	24 Jan 1873			
Mar 1874	1874		250	50 with swords
27 Mar 1877	-		300	Marked Q↑P 100 with swords
			300	100 with swords
21 Jun 1883	Post-Nov 1883		50	Marked Q↑G
-	Jul 1870	P. Webley & Son RIC No 3 .442-inch centrefire revolver	50	
Oct 1871	Post-Jul 1872		50	
	24 Jan 1873			
Post-Sep 1872			200	Marked Q↑G; Numbered 1–200
26 Feb 1875	-		150	Marked Q↑G; Numbered 201–350
27 Mar 1877	-		200	
21 Jun 1883	Post-Nov 1883		100	Marked Q↑G
Post-1878	-	Martini-Henry MkIII .45-inch centrefire breech loading single-barrel carbine	500	1 st order for Volunteers
	b/w 1885 & 1895	Rifles & carbines	299	Issued to police
			449	

Table 3. Correlation between decade of issue of NMP weapons and expected archaeological finds.

Decade	Weapons Issued to the NMP	Weapons-Related Artefacts
1840–1850	Constabulary and Yeomanry percussion carbines	Metal firearm components (e.g. barrel, lockplates, trigger and screws). Percussion caps and 20-gauge lead balls.
1850–1860	Constabulary, Yeomanry and double-barrel carbines	Metal firearm components. Percussion caps and 20-gauge lead balls.
1860–1870	Constabulary, Yeomanry and double-barrel percussion carbines and double-barrel pinfire carbines	Metal firearm components. Percussion caps, 20-gauge lead balls and pinfire cartridge heads.
1870–1880	Double-barrel pinfire carbines, Snider artillery carbine and Webley RIC revolver	Metal firearm components. 20-gauge lead balls and pinfire cartridge heads. .577" cartridge cases and bullets for Snider carbines and .442" cartridge cases and bullets for Webley RIC revolver.
1880–1890	Double-barrel pinfire carbines, Snider artillery carbine, Webley RIC revolver and Martini-Henry carbine	Metal firearm components. 20-gauge lead balls and pinfire cartridge heads. .577" cartridge cases and bullets for Snider carbines and .442" cartridge cases and bullets for Webley RIC revolver and cartridge cases and bullets for Martini-Henry carbine.
1890–1900	Snider artillery carbine, Webley RIC revolver and Martini-Henry carbine	Metal firearm components. .577" cartridge cases and bullets for Snider carbines and .442" cartridge cases and bullets for Webley RIC revolver and cartridge cases and bullets for Martini-Henry carbine.

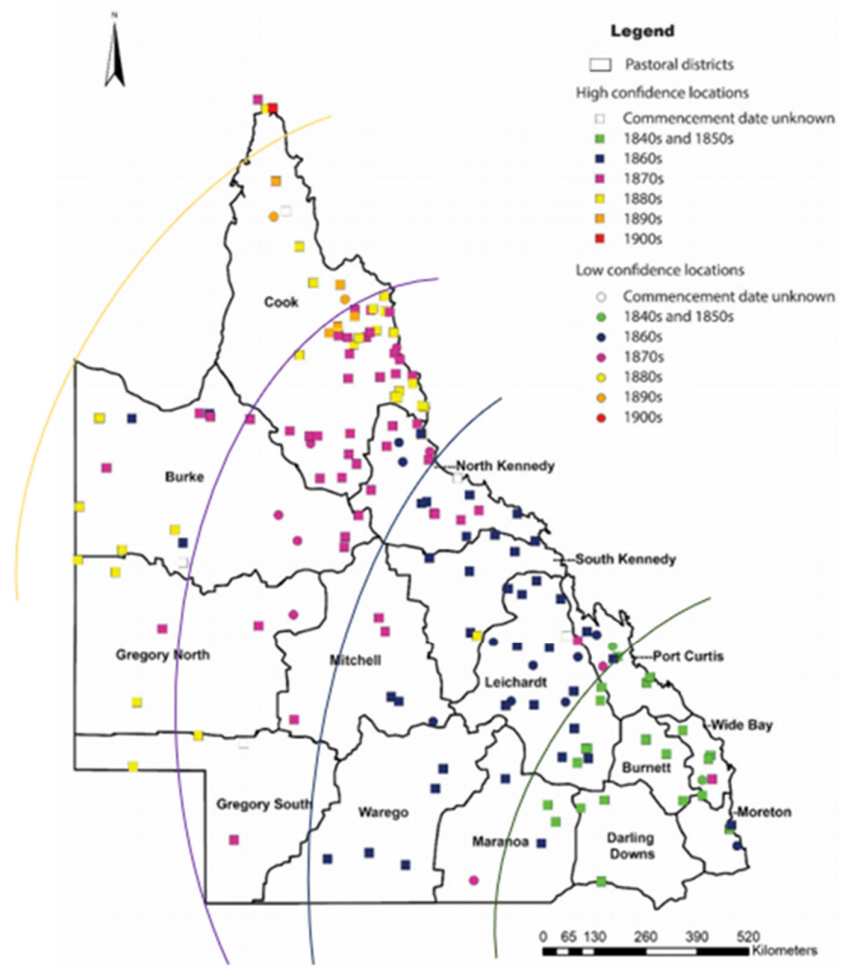


Figure 19. Geographic spread of NMP camps over time. Radiating lines correspond to key shifts in firearms technology (base map by Wayne Beck based on data from Burke and Wallis 2019).

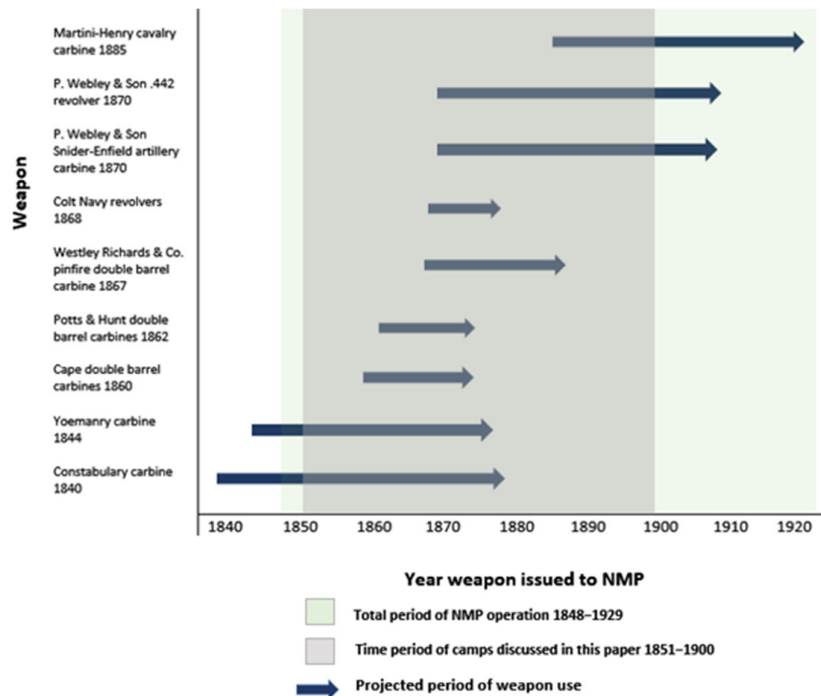


Figure 20. Projected periods of use for the nine NMP weapons derived from historical and archaeological data.



Figure 21. An 1890 packet of Martini-Henry Carbine cartridges, with Queensland provenance, examined and deemed serviceable in 1903 (Photograph: Tony Pagels).

The way an arm was used while on patrol is also critical to understanding the value afforded by older weapons. Here, the contrast between the single-barrel Snider-Enfields and the double-barrel Westley Richards pinfire carbines is instructive. The Snider-Enfields were ideal for aimed shooting over long distances, while the smoothbore, double-barrel pinfire shotguns were best suited for close-quarter combat. This suggests that close-range surprise ambushes would have been the preferred tactic for detachments armed with pinfire carbines, whereas those armed with Snider-Enfield carbines could more effectively pursue their targets at a distance. The presence of pinfire cartridges at Lower Laura (1875–1894) in Cape York Peninsula suggests that these weapons remained useful in this environment, whereas their absence from Burke River (1878–1886) supports the Snider-Enfield being the preferred option in the more open country of western Queensland. Although Eyres Creek (1882–1888) also possessed pinfire cartridges, and is arguably less vegetated than Burke River, based on extensive spatial analysis of the ammunition and the most likely fields and directions of fire (Pagels 2023:124–128), it is more likely that here this weapon was being used for hunting for food, in line with the 1866 observation of their utility as birding guns.

Third, and archaeologically, the character of an NMP ammunition assemblage is likely to be heterogenous, even within the same detachment or a single event. Since archaeological traces of weapons themselves are rare, the most prolific remains will be the metal components of ammunition – projectiles, percussion caps and, after the 1860s, self-contained cartridges. The various versions of paper, skin or cardboard cartridges will typically not survive, and the different construction methods for metal cartridges will leave different kinds of traces (see Figure 22). It is important to note that, while in some cases the existence of a particular type of cartridge can be irrefutable evidence of a particular weapon’s presence, at others the correlation is less precise. For example, the Boxer cartridge for Snider-Enfield rifles and carbines is unique to the arm, while the presence of

20-gauge lead ball or shot could indicate either the Constabulary, Yeomanry or double-barrel carbines, or another weapon of equivalent bore. A considerable time lag can also be expected for ammunition, given the length of service typical of an NMP arm.

Conclusion

The identification of weapons known to have been issued to the NMP lays a foundation for future research. Although it is possible that archaeological work on pre-1859 NMP camps – the date of the earliest camp investigated by the AQNMP project – could expand the known range of weapons, the general pattern of NMP armaments will hold true. This has several repercussions for understanding frontier conflict in Australia.

Arguably, before the introduction of centrefire weapons in 1870, the NMP were tactically on a relatively equal footing with Indigenous people, who could throw spears faster than a trooper could reload a muzzle-loading weapon. The double-barrel carbine introduced in the mid-1850s afforded the NMP a specific advantage, although these were issued in limited numbers (Robinson 1997:16,17; Skennerton 1975:12,13,76). Shooting became more accurate following the introduction of rifling and the arrival of the Snider-Enfield artillery carbines in 1870, enhanced by the introduction of the Martini-Henry in 1885 (Robinson 1997:59). In terms of the NMP’s effects on Indigenous peoples, technological advances delivered arms which became progressively more lethal due to increased range, accuracy and rapidity of fire, though the mere availability of new armaments did not necessarily result in their mass distribution or the wholesale replacement of older weapons. Wider colonial circuits of economics, politics, war, distance and demand periodically constrained the availability of both weapons and ammunition from British suppliers. Entrenched patterns of parsimony on the part of the Queensland Colonial Government also ensured that the NMP were often under-resourced and ill-equipped, and re-arming from Colonial Stores was both episodic and uneven. In these respects, the NMP were not unlike other frontier forces whose armaments lacked standardisation and lagged behind technological advances (e.g. Leoni 2014).

More importantly, the analysis of ammunition assemblages associated with frontier conflict events in Queensland – if such are ever located – may provide evidence for identifying the presence of the NMP, just as the interpretation of the spatial patterning of recovered ammunition may provide insights into the nature of such events and how they unfolded. Despite the low probability of ‘massacre’ sites – however they are defined – being found in the Australian context (Barker 2007; Litster and Wallis 2011), archaeology can contribute in other ways to a process of truth-telling. Guns were a physical symbol of European attitudes, actions, assumptions and intent towards Indigenous people. The NMP, armed with these weapons, took part in numerous conflicts, both large and small, so being able to recognise the material traces of these weapons is a critical first step towards potentially being able to identify such actions archaeologically.







Weapon	Calibre inches (mm)	Length Inches (mm)	Weight grains (grams)	Projectile	Cartridge
Constabulary, Yeomanry, Cape & Potts & Hunt Double Barrel carbines	.653" (16.59)		350 (22.68)	20 gauge round ball 	paper
Westley Richards & Co pinfire carbine	.615" (15.62)		350 (22.68)	20 gauge round ball 	Cardboard body with brass head 
Buckshot 00	.33" (8.38)		54 (3.5)	buckshot 	As above
Birdshot BB	.19" (4.83)		10.2 (.66)	birdshot 	As above
Colt Navy Revolver Model 1851 & 1861 Conical bullet	.36" (9.14)		140 (9.07)	Conical bullet or round ball 	Skin/paper
Round ball	.375" (9.45)		80 (5.18)		

Figure 22. Physical characteristics of ammunition used by the NMP (after Flatnes 2013; Skennerton 1975; Temple 1977) (Photographs: Tony Pagels).





Weapon	Calibre inches (mm)	Length Inches (mm)	Weight grains (grams)	Projectile	Cartridge
Snider-Enfield artillery carbine	.577" (14.64)			conical bullet	Brass straight walled brass cartridge
Bullet					
Type 6	.573" (14.55)	1.065" (27.05)	480 (31.10)	with 4 cannelures	Mk VIII case: straight walled brass case, iron base disc, copper primer pocket, double base cups and single crimp. Nil headstamp
Cartridge					
Mk VIII case length		2.0" (50.8)			
Base cup depth Inner cup		.425" (10.79)			
Outer cup		.225" (5.72)			
Bullet					
Type 7	.573" (14.55)	1.04" (26.42)	480 (31.10)	With 3 cannelures	Mk IX case: brass primer pocket, higher inner base cup. Nil headstamp
Cartridge					
Mk IX Case length		2.0" (50.8)			
Base cup depth Inner cup		.500" (12.7)			
Outer cup		.225 (5.72)			

Figure 22. Physical characteristics of ammunition used by the NMP (after Flatnes 2013; Skennerton 1975; Temple 1977) (Photographs: Tony Pagels) (cont.).





Weapon	Calibre inches (mm)	Length Inches (mm)	Weight grains (grams)	Projectile	Cartridge
P. Webley & Son RIC revolver	.442" (11.23)			conical bullet	Straight walled brass
Bullet	.442" (11.23)	.675" (17.15)	219 (14.19)		
Cartridge					Headstamp
Case length		.66" (16.76)			'ELEY BROS' and battery primer date b/w 1868 and 1874.
Base diameter	.50" (12.70)				'ELEY LONDON .442' date b/w 1874 & 1919
Martini-Henry Calvary Carbine	.577/.450"			Conical bullet	Bottleneck brass cartridge
Bullet Type 3	.450" (11.43)	1.115" (28.32)	410 (26.57)	With 2 cannelures	Mk I, II & III carbine case uses the rifle cartridge case but has a smaller bullet The case has two base cups and internal reinforcing with site inspection hole. Neck has 4 folds and 2 bullet crimps
Cartridge					
Case length		2.32" (58.93)			
Case base diameter	.66" (16.76)				
Base cups depth					
Inner cup		.500" (10.70)			
Outer cup		.225" (5.72)			

Figure 22. Physical characteristics of ammunition used by the NMP (after Flatnes 2013; Skennerton 1975; Temple 1977) (Photographs: Tony Pagels) (cont.).

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