

Full Length Research Paper

The role of elephants as military pack animals in the Abyssinian Campaign, 1867-1868

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In late 1867 the British Government authorized a military expedition to effect the release of 59 hostages being held at Magdala by Emperor Tewodros II. The force consisted of 13,000 soldiers and 40,000 transport and pack animals. Its formidable task was to travel 650 km and ascend 3,050 m of altitude before it reached its goal. The animals comprised horses, mules, donkeys, bullocks, camels and 44 elephants. The elephants were loaded on ships at Bombay by means of slings. Loads for the elephants varied in the range 600 to 730 kg for those transporting 12-lb breech loading Armstrong guns and 800 to 840 kg for those carrying 8-inch mortars. These loads were 12 to 16 times heavier than the normal 55 kg mule load. Tracks had to be cut and levelled before the animals could pass and they struggled to mount the steeper inclines. Only five elephants died during the expedition and 39 returned to Bombay.

Key words: Ethiopia, Eritrea, artillery, mortars, cavalry, infantry, warfare.

INTRODUCTION

In 1862, Tewodros II (Theodore), the Coptic Christian Emperor of Abyssinia (now Ethiopia and Eritrea) asked the British Government for help in obtaining the latest weaponry and for tactical experts to help him in his wars with his mostly Muslim neighbours. He received no answer, took umbrage, and incarcerated several Europeans as hostages at his base at Magdala in the highlands. Among the hostages was the British Consul who was kept in chains for over two years. As there were also British women and children amongst the hostages the general public demanded that the government do something about it. Diplomatic approaches and gifts did not persuade the Emperor to release the captives such that by June 1867 it was reluctantly concluded that military intervention was necessary. The action was not, however, to be a mission of conquest: the military force

would withdraw once the hostages were freed and Theodore punished. Very few personnel were sent from Britain. The expedition was staffed from Bengal and Bombay forces, comprising Indian Army regiments and British regiments serving in India that were usually used to maintain British control. Commanded by Lieutenant-General Sir Robert Napier, a massive force of 13,000 troops and 40,000 baggage and transport animals landed at Zula, now in Eritrea, in December 1867. Magdala was just short of 650 km (400 miles) from Zula and 3050 m (10,000 feet) above sea level. There were no roads to speak of, so these had to be constructed. Indeed, one of the first orders given by Napier after his arrival was to clear and make passable by elephants the road up the escarpment to Senafe, at an altitude of 2,446 m (8,025 ft). At the same time he instructed that loading and

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Figure 1. Map of route taken by the Abyssinian Expedition from Zula to Magdala, showing the principal staging points (Constructed by the Author from information in Holland and Hozier, 1870).

unloading the elephants with the heavy armaments should be practised (Holland and Hozier, 1870: 384). Innovations in the warfare of the period required a harbour to be constructed, 32 km (20 miles) of railway to be built, the laying of telegraph line over most of the distance and the use of desalination plants to turn sea water into fresh water (NAM, 2020)¹. Depots were to be established at strategic points along the route which first went in a generally westerly direction to Senafe then southerly to Magdala (Figure 1). The route taken to Senafe was about 96 km (60 miles) and was a march of five days for the troops.²

¹The 33rd (Duke of Wellington's) Regiment of Foot was a conspicuous element of Napier's army. It is now the 1st Battalion, The Yorkshire Regiment whose Battle Honours include "Abyssinia and whose mascot is an Indian elephant.

²The distance from Zula to Senafe "as the crow flies) is 66 km (41 miles). There is now no direct road from Zula to Senafe and to reach the latter from the former one must travel north to Massawa, west to Asmara and then south to Senafe, a distance of 273 km (169 miles). The author of this paper has mixed

Almost 100 years after the event one noted war correspondent and author wrote:

There has never been in modern times a colonial campaign quite like the British expedition to Ethiopia in 1868. It proceeds from first to last with the decorum and heavy inevitability of a Victorian state banquet, complete with ponderous speeches at the end. And yet it was a fearsome undertaking; for hundreds of years the country had never been invaded, and the savage nature of the terrain alone was enough to promote failure (Moorhead, 1964: 264).

Another description of the Expedition states that this was "a hostage rescue in the 19th century conducted by British forces that is perhaps unparalleled in scope and

memories of Senafe as in August 1974 his vehicle was hijacked and burnt by guerillas of the Eritrean Liberation Front struggling for Eritrea's independence from Ethiopia

audacity” (Zoll, 1988). Yet a third describes a similar situation:

The endeavour of the author of this sketch has been to present to readers a succinct and impartial account of an enterprise which has rarely been equalled in the annals of war. In the Abyssinian campaign the enemies to be feared more than the open foe were natural obstacles and starvation. These were successfully encountered and subdued. The difficulties would have been more apparent, had their reduction been less skilful. The danger and possibility of disaster would have been more manifest had they been less carefully guarded against (Hozier, 1869:v-vi).

The objective of this paper is to describe the part played by elephants in the campaign and examine the problems they met and the ones they caused.

METHODOLOGY

This paper is largely based on an analysis of the official record of the Expedition published in 1870, two years after the events described herein took place (Holland and Hozier, 1870). Additional contemporary accounts of the campaign together with more recent publications were consulted to complement the main document.

RESULTS AND DISCUSSION

Elephants in war

There is a considerable body of literature on the use of elephants in war and they have been used by man since the earliest historical times (Lightfoot, 1981; Kistler, 2007). Ancient Indian texts detail the various methods used for their capture and training, and Indian drivers or mahouts were acknowledged throughout the ancient world as the most expert handlers of the beasts. The first experience by Europeans of their use in warfare occurs during the campaigns of Alexander in the fourth century BCE. In addition to use as cavalry and transport animals, they were important because their huge size, waving trunks, fearsome tusks, trumpeting and smell alarmed both men and cavalry horses (Charles, 2007). The most well-known use of elephants is related to Hannibal's crossing of the Alps (Glover, 1944). What is perhaps lesser known is that Hannibal took 37 elephants across the Alps but 36 later died (Edwards, 2001).

In the period of the Sasanian Empire (224-651 CE), located in what is now Iran and some surrounding areas, there was extensive use of elephants (Daryaei, 2016: 36-41). These formidable beasts were used in set piece battles, in siege warfare and for transport of material although they were probably most important in the transport role (Rance, 2003). In battle, elephants were fitted with platforms that formed a stable base for carrying archers whose elevated position provided an advantage

over foot soldiers or even conventional cavalry (Figure 2) (Farrokh et al., 2018).

The Asian elephant was once widespread in China and occasionally used in battle there. Many individual animals and some herds were reported from central and southern China in the first ten centuries of the Christian era. When attacked by the maritime state of Wu in 506 BCE the Ch'u commander used elephants with torches tied to their tail to attack the opposing army. In 554 CE two armoured elephants with towers on their backs and driven by Malayan slaves were sent into battle with swords lashed to their trunks. At a later date elephants used in battle carried ten or more men (Schafer, 1957).

Elephants were used in Africa by Hanno during the Libyan war in 240 BCE when he stormed the fortress of Urtica (Glover, 1944). The “conventional wisdom” is that African elephants cannot be captured and trained but this species has been used at least twice in African warfare. There is the case of those used by Hanno just cited and they were also used by Ptolemy II of Egypt about 285 BCE (Gowers, 1947).

The elephants in Abyssinia

The first mention of elephants in the campaign's Official History is in the Preface to Volume I which considered that the different characters of the high and low country would be important in the type of transport animals to be used. In the low country camels could be used but they would be useless in the highlands and would need to be replaced by donkeys, mules, bullocks, elephants or men (Holland and Hozier, 1870).

Napier expressed concern at a suggestion from higher authority that the number of troops should be reduced as his calculations had brought him to the conclusion that the mission would only be successful with the number he had decided on. He conceded, however, reductions could be made were some of the field artillery replaced by mountain batteries. The Viceroy of India was prepared to send a battery, complete in all respects, of light rifled mountain guns. A similar battery had been requested from England. He then proposed to use elephants to transport the guns and carriages of a field battery (Holland and Hozier, 1870). It was considered that most of the transport animals, comprising donkeys, mules, oxen and camels, could be obtained in Abyssinia. Saddles and other harness would need to be taken from India as would sufficient cradles and other equipment required to carry or draw the guns and mortars: wheeled vehicles other than gun carriages and ammunition carts should not be used. The only animals required from India in addition to cavalry horses would be elephants. At this stage Napier asked, among many other things, that one mortar battery with elephants be sent from India. It was later decided that one field battery of Armstrong guns accompanied by elephant carriage also be sent (Holland

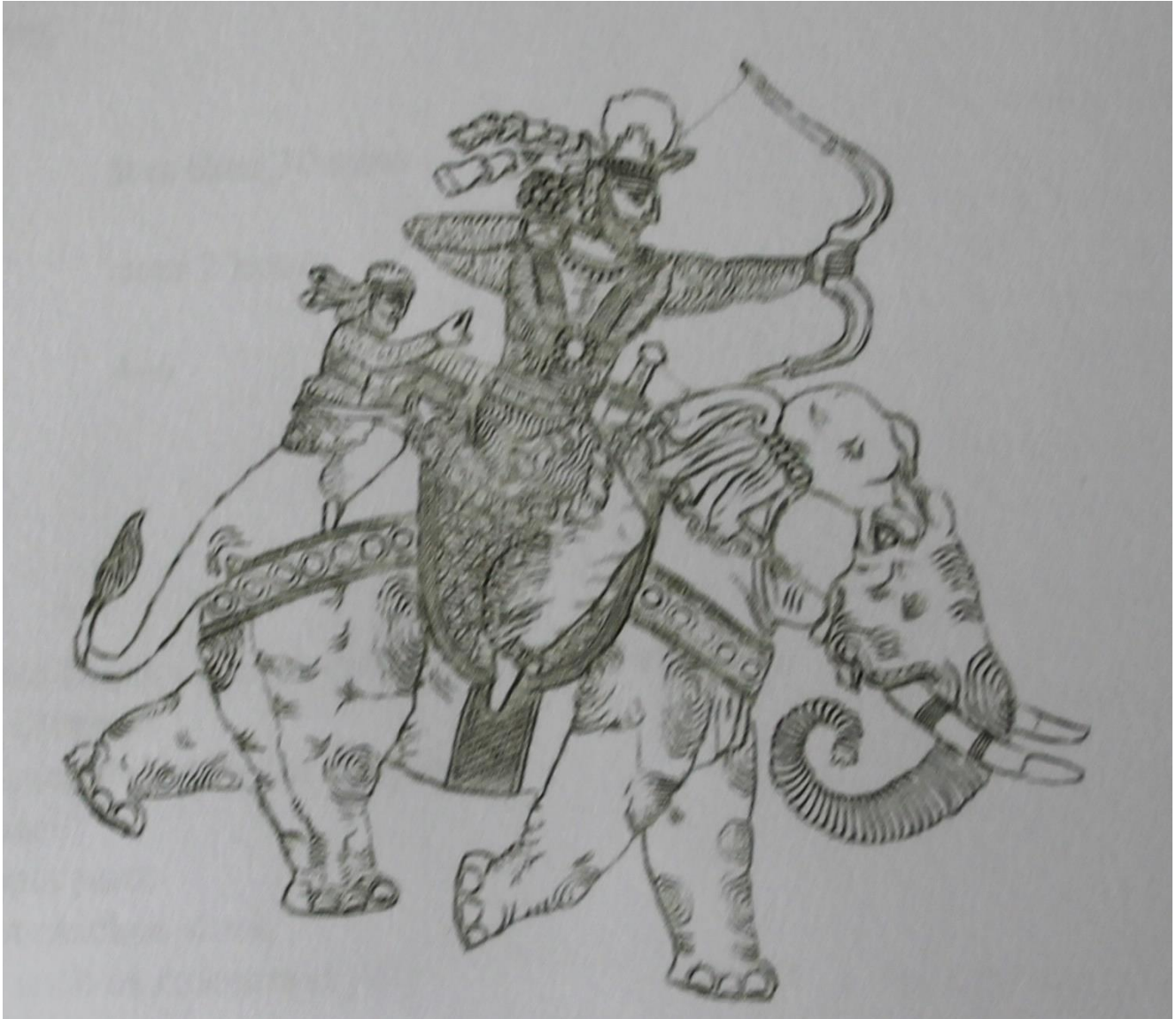


Figure 2. The Sasanian Emperor Shapur II (reigned fourth century CE) riding a war elephant (Original plate in Los Angeles County Museum of Art, inventory number M.76.174.18).

and Hozier, 1870).³

In preparation for the use of elephants totals of 263 maunds and 30 seer of coarse rice were shipped from Bombay to Abyssinia between 8 October 1867 and 15 January 1868 to provide food for them for a 2-month period.⁴ The daily allowance of water for each elephant

was 40 imperial gallons (181.8 L) and of food: gram 4 lb (1.81 kg), rice or flour 20 lb (9.07 kg), salt 2½ oz (56 g) and hay or kirben 175 lb (79.38 kg) (Holland and Hozier, 1870; Vol. 1, pp. 201, 214)

Transports (that is, ships) for all the constituents of the force and for stores of every description were gathered at Bombay. In order to be able to transport equipment and stores in the initial stages of the expedition and the heavy ordinance for the whole period a total of 44 elephants including both males and females was loaded in Bombay with one mahoot and one cooly attached to each elephant. It was intended to embark the elephants by

³The guns eventually used were breech loading rifled "Armstrongs manufactured for a 12-lb shot although other Armstrongs fired shot from as little as 9 lb to as much as 110 lb.

⁴A maund was a unit of mass in India which generally comprised 40 seer. Although the actual mass of a maund varied across the country the maund in this case was probably the standard Bombay one of 82.28 lb (37.32 kg) with a seer weighing 2.057 lb (0.93 kg). Introductory Notes to the Imperial Gazetteer of India, Vol. 2, p. vii. <https://dsal.uchicago.edu/reference/gazetteer/pager.html?objectid=DS405.1.I34>

_V02_007.gifth (accessed 28 July 2020). The total weight of rice thus transported was 9,943 kg.



Figure 3. Loading elephants by means of slings onto ships at Bombay.
 Source: British Battles.com, Magdala. <https://www.britishbattles.com/abyssinian-war/battle-of-magdala/>
 (accessed 29 July 2020).

means of shear legs but this proved impossible so they were hoisted up in slings (Figure 3). On board, the elephants were put in the hold on a temporary floor of stones and shingle arranged back to back with their heads facing the ship's sides. Stall breadths were 6 feet (1.83 m) divided by two cross beams resting on a longitudinal shelf fastened to the ship's side by cleats located along the side (Holland and Hozier, 1870).

On 6 January 1868, 19 elephants inbound from Bombay were landed in good condition at Zula. Good condition they may have been in but they were not unloaded without considerable difficulty. It had first been intended to sling them over the side of the ship and then let them swim to the shore but it was realized that it would be difficult to get the slings off in the water. It was decided to sling them into a barge instead. This was eventually successful but took time as the elephants were recalcitrant about the slings (having experienced them when lading). According to a report by the Special Correspondent of *The Standard* (a war correspondent "embedded" in the Expedition) there were further problems at the landing dock when the elephants refused to cross the landing platform until eventually, and after

having been given time for their own inspection, they crossed sedately onto dry land (Henty, 1868).

Towards the end of January a further 25 elephants were landed. All 44 animals were first employed in transporting stores before the railway became operational from Zula towards Kumayli which was the first way point on the route. This was only temporary work, however, as they had been sent to Abyssinia with the express purpose of transporting the heavy ordnance comprising four 12-pounder Armstrong guns of G Battery, 14th Brigade, Royal Artillery and two 8-inch mortars manned by a detachment of the 5th Battery, 25th Brigade, Royal Artillery. The mortars were to be packed on elephants from Zula all the way to Magdala whereas the Armstrong guns would be hauled to Antalo and thence packed by elephant. Four elephants were required for the transport of each gun and its attachments and a further three elephants were needed to carry the carriage wheels or 19 elephants in all (Table 1) (Holland and Hozier, 1870).

It proved impracticable to use shears for loading as the animals would not remain quiet under the fall. The method used, with the elephant couched, was thus to use a single skid for the gun and two skids for the carriage

Table 1. Details of elephant loads and their weights for transport of Armstrong guns.

Elephant load	Item and weight (lb) ^a	Total weight (lb)	Total weight (kg)
Gun	Gun (924), cradle (150), pad and strapping (500)	1574	714
Carriage	Carriage (966), cradle (150), pad and strapping (500)	1616	733
Ammunition	2 boxes (510), 1 wheel (314), pad and strapping (500)	1324	601
Wheels	3 wheels (942), pad and strapping (500)	1442	654

^aSome weights estimated by the Arsenal in Poona.

Table 2. Details of elephant loads and their weights for transport of 8-inch mortars.

Load	Item and weight (lb) ^a	Total weight (lb)	Total weight (kg)
Mortar	Mortar (924), travelling bed (168), cradle (252), pad + strapping (500)	1844	855
Bed	Iron bed (840), travelling bed (168), cradle (252), pad + strapping (500)	1760	798

^aSome weights estimated by the Arsenal in Poona.

with one end resting on the ground and the other on the cradle (that is, the pack saddle). For the gun the breech-screw was removed and handspikes inserted in the bore at both breech and muzzle, the gun then being lifted along the spar by eight men until it rested in the cradle. A rope was also attached to the gun trunnions and passed over the cradle to be pulled on the other side by three or four men which also kept the gun steady while the lift men took a new grip. As the carriage was heavier 12 men were needed for the operation. The limber was lifted up directly without skids and a single wheel was tied on top. On the ammunition elephant one box was carried in a sling on each side and a wheel was tied on top of the pad. On the wheel elephant one wheel was slung on each side and one tied on the top (Holland and Hozier, 1870).

Two elephants were needed to carry each of the two 8-inch mortars and their beds. These weighty machines meant that elephant loads (one for the mortar and one for the bed) were slightly heavier than the ones carried by the Armstrong gun elephants. The weights of skids, implement boxes, handspikes and other equipment were not known but they were a good load for a single elephant. Powder was carried on another elephant (four shells were carried on mules). In total, therefore, six elephants were required to transport the mortars (Table 2) (Holland and Hozier, 1870).

To load the mortars, the elephants were couched, two parallel skids were placed with their upper ends resting on the cradle and their lower ends on the ground, the two being kept parallel by iron stays. These skids had a groove along which the flanged iron trucks of the travelling bed ran. Tackle that was attached to the travelling bed passed over rollers fixed in the cradle and passed to the opposite side of the animal. It required four men with handspikes to heave the mortar or bed up to

the skid when the load was run up into its cradle by hauling on the tackle. The pad was prevented from moving while loading by a third shorter skid on the hauling side (Figure 4).

The pads were kept in place by passing a rope over them and round under the belly, that is, not a girth strap as would be the norm for horses. This arrangement caused serious chafing and the development of galls and sores from the friction created and the long working periods of 12 to 20 hours without relief. This situation led to the suggestion that in future use in mountainous country the pads should be fitted with breechings and breast-pieces which would more firmly fix the pad and thus prevent the load from slipping backwards on steep inclines (Holland and Hozier, 1870).

The British had taken the precaution of enlisting local chieftains, many of whom were in open conflict with Tewodros, as allies. The most powerful of these was Dejazmatch Kassai, the ruler of Tigray, whose base was at Adigrat.⁵ Napier halted in Adigrat where he was joined by several military units including G Battery, 14th Brigade, Royal Artillery. At this time the Abyssinians considered that elephants were untameable and refused to believe that they could be subordinated by man. The elephants' passage through the country was thus followed by crowds of the local populace goggling in awe at the spectacle. Two elephants were brought to be shown to Kassai at a meeting that was to be held between Napier and Kassai on the road from Adigrat to

⁵Dejazmatch was an Abyssinian military title for the commander of the central body of a traditional Ethiopian armed force composed of a vanguard, main body, left and right wings and a rear body and equivalent in some respects to a European "Count" or "Earl" in British usage. Dejazmatch Kassai was issue of several ruling families in Tigray and was in revolt against Emperor Tewodros II in 1864-1867. On the death of Tewodros he united all the Provinces of Ethiopia and was crowned King of Kings Emperor Yohannes IV.



Loading the elephants

Figure 4. The 8-inch mortar being loaded on to an elephant.
Source: *The Illustrated London News*, 1 August 1868.

Antalo. Napier mounted an elephant and had a second follow him as he rode out to meet Kassai, the elephant being used to impress on Kassai the strength and power of the British. Before the actual meeting, however, Napier got down from the elephant and mounted his horse, “lest the approach of the huge earth-shaking beast should create a panic and cause disaster among the cavalry of Tigré” (Holland and Hozier, 1870). Probably in order to titivate the British public one war correspondent described Napier as sitting on a “large elephant decked in holiday ribbons and trappings followed by another and his staff and a select body of cavalry” (Stanley, 1874).⁶

If two elephants had caused a sensation when Napier met Kassai the local people were in for another shock. This was the arrival of the Armstrong guns and their passage from Senafe to Adigrat. A sensation, second only to that caused by the elephants, was created by the arrival of the battery of Armstrong guns. It had been thought doubtful as to whether it would be possible to get guns, at this stage hauled by horses and pushed by men, over the very difficult road between Senafe and Adigrat. The gunners did achieve the task but only with considerable difficulty (Holland and Hozier, 1870). In the meantime the two 8-inch mortars were ordered to go

forward, escorted by a couple of units of Indian troops, and left Senafe on 29 February together with 40 elephants (Holland and Hozier, 1870).

With most of the force and transport animals at Antalo, preparations began in earnest for the assault on Magdala. The Pioneer Force was sent two days ahead to improve the tracks and make them passable by the elephants. The 8-inch mortars and the elephants for the Armstrong Battery, escorted by Indian troops arrived at Antalo on 11 March: they had with them 50,000 dollars for various expected purchases (Holland and Hozier, 1870).⁷

By the evening of 14 March the road had been cleared sufficiently to allow orders to be sent back to Antalo that the Armstrong Battery of Artillery now loaded on the elephants should move up to the front. Ashangi was reached in the evening of 23 March without accident t o

⁶Henry Morton Stanley (the “man who presumed” who he met David Livingstone on the shores of Lake Tanganyika was a Special Correspondent of the *New York Herald* and one of several journalists of well known newspapers accredited to the Expedition.

⁷The “dollar” here referred to was the Maria Theresa dollar or thaler. This was the only monetary medium trusted (and even then not always) by the Abyssinians at the time. It is difficult to assign an accurate value to it. The expedition did buy, however, this silver coinage at a rate of 2.18 Indian rupees to the dollar, see Holland and Hozier (1870); Vol 1, p. 146. There were approximately 4 rupees to the pound sterling (£) (Indian Rupee, https://www.wikiwand.com/en/Indian_rupee) so 50,000 dollars would have a value of £27,250: in 2020 numbers this would be equivalent to £3,101,713.16 (US\$3,897,674.79) on 19 July 2020. A thaler weighed about 28 g and according to Richard Pankhurst (1968) *An Economic History of Ethiopia, 1800-1935*. Addis Ababa, Haile Sellassie I University Press a load for a mule would be not more than 2000 pieces which would be about 56 kg for each of the 25 mules required to carry the money.



Figure 5. The Chetta Ravine, Abyssinia.

Source: Watercolour by Lieutenant Frank James, Bombay Staff Corps, 1868, National Army Museum.

the men or damage to the guns after nine days of trek and forced marches from as early as 7.30 a.m. to 11.00 p.m. In addition to the elephants 154 mules were need to carry rations for 30 days and spare ammunition for the gun and mortar crews (Holland and Hozier, 1870).

One of the newspaper correspondents wrote that the elephants, fed 35 lb (15.9 kg) of bread and 40 lb (18.1 kg) of straw or coarse hay, toiled labouriously on the steep hills (Figure 5). An ascent of 1500 feet (457 m) had them puffing and trumpeting that were eloquent of their suffering. On moderate roads, however, they carried their 1800 lb (816 kg) with ease and made excellent time. Some of the older elephants “were a great deal larger than the renowned Hannibal of Barnum” but most were comparatively young and were less subject to fatigue

than their seniors (Sanley, 1874).

On 1 April 1868 the 2nd Brigade of the 1st Division of the Expeditionary Force was at Gahso, one day’s march to the west of the major camp at Santara at an altitude of 2,996 m. The 1,749 troops belonged to various cavalry, sapper, miner and infantry units and included 92 men with the Armstrong guns and 35 with the mortars (Holland and Hozier, 1870). On 6 April the Armstrong battery made a steep ascent to the top of the plateau. The elephants carrying the guns were exhausted and, when they were halfway up, and there was a violent storm of rain and hail, they refused to move until it had abated. They then tackled the second half of the incline when it rained again and there was another delay. Two elephants threw their loads, a now common occurrence, but when

the rain stopped the loads were quickly strapped on again. The rain had made the road very slippery but the elephants kept going slowly and by about 4 a.m. only eleven had not yet reached the top. As the leader was about to step on to the comparatively level ground her feet slipped she slid down about 50 or 60 yards (46-55 m) but she stopped without going over the side. She was unloaded but she refused to stand and the others now refused to move. All were unloaded and there was then a wait until the track dried. Fresh elephants were brought out from the camp, the battery arriving at its destination at about noon having struggled without rest since 8 a.m. the previous morning. Most of the captives were released on the evening of 12 April. On the morning of 13 April a senior commander of Theodore was shown the mortars and the elephants before he was allowed to return to Magdala and was told that the arms used in the action of the previous evening were like toys when compared to these armaments. Napier assured him that if Theodore did not surrender the big mortars and the Armstrongs would be brought in to action (Holland and Hozier, 1870). Both the guns and the mortars were deployed on the morning of 13 April and placed where they could give long range cover to the troops storming the fortress but it was found that they were largely ineffective as the range to the fortress was too far, at 2,400 yards (2,194 m), for their throw (Markham, 1869).⁸

Theodore and his commanders attempted a stalwart defence of his citadel and tried to make use of his own enormous canon. When defeat became inevitable Kassai himself refused to surrender and committed suicide. The British army hacked and mutilated the Abyssinians and burned their houses. Abyssinian treasures including precious and unique manuscripts and religious icons were looted. Looting was part of the culture at the time and loot was usually auctioned and the moneys shared amongst the troops, officers and other ranks (Pankhurst, 1985). The spoils were first transported on 15 elephants and almost two hundred mules to a nearby Dalanta Plain. One of the principal buyers at the 2-day auction was the British Museum whose representative had enough money to outbid most of the opposition (Stanley, 1874).⁹

The elephants and heavier ordnance were ordered to return north and commenced their journey on 21 April. Shortly after the fall of Magdala two elephants had died from exhaustion as they had been deprived of their proper forage and were often short of water: one of these was disposed of by throwing its carcass down the ravine.

⁸Markham was an Assistant in the India Office in London who was attached to the Expedition in the Scientific Department as Geographer. He was one of several people who were of or travelled with the Expedition to "cash in" on his experiences. There are very few references to elephants in his book and these have obviously all been taken from the official account.

⁹Much of the loot is still to be found in many European museums in spite of many Ethiopian requests for its return. The remains of Prince Alemayehu, a son of Theodore who was taken to Britain after the battle and who died in 1879, are still buried at Windsor Castle in spite of multiple requests that they be returned to Ethiopia.

Three others died at Bulago about 150 miles (241 km) north of Magdala. The return march from Magdala "was a work of no slight difficulty".

Most of the elephants were now very tired. There was none to replace those that broke down and in such a situation the beast had to be left with his load until it recovered or until another one could be sent back from the camp to bring the load in. Throughout the march 26 non-commissioned officers and men were directly employed with 29 elephants the others being employed to guard the baggage. That 18 men were needed to unload a gun carriage gives an indication of the work that had to be done every day unloading and loading. In addition there were numerous occasions during the course of the trek when the guns were taken to pieces and put together again to be hauled a short distance by the mules (Holland and Hozier, 1870). The elephant party did not arrive at Antalo, a distance of 196 miles (315 km) until 10 May, three weeks after its departure from Magdala. On reaching Antalo the Armstrongs were put back on their carriages and hauled the rest of the way to Zula by mule or horse teams. Most of the elephants were then walked down to Zula unladen (Holland and Hozier, 1870).

The work of loading the elephants onto the ships for the return journey to India appears to have been simpler than the arrangements at their arrival in Abyssinia. Large iron barges were used that were admirably adapted for the job: these would hold any of 300 men, 120 mules, 60 Cavalry men and their horses and eight to ten elephants. G Battery, 14 Brigade Royal Artillery with six European Officers, 48 European troops, 120 followers, seven horses and 77 mules left Zula for Bombay on 28 May. A total of 17 elephants were loaded on the sailing vessel Compta with 22 loaded on the sailing vessel Hahneman: both ships left Zula on 31 May, bound for Bombay, each with one European Officer in charge and supporting, mainly Indian, troops (Holland and Hozier, 1870; Vol. 2, pp. 108-111).

Conclusions

Elephants carried the entire mortar battery from Zula to Magdala and the Armstrong guns with their carriages, limbers, ammunition and other bits of equipment from Antalo to Magdala, and doing the same on the return journey, over extremely difficult and mountainous country. Providing them with suitable forage was no easy matter and the difficulty of obtaining water for them, especially at Magdala, certainly contributed to the loss of the five animals that died. It was said that they "did their work well in carrying, as they did, loads varying from 8 to 16 cwt (406 to 812 kg) each and without them it would have been impossible to have taken the heavy guns and mortars to Magdala, unless very considerable delay had taken place in making roads fit for wheel carriage" (Holland and Hozier, 1870).

At the conclusion of operations the Commander-in-Chief Lieutenant-General Sir Robert Napier wrote a series of despatches to the Secretary of State for India. In Despatch No. 6 dated 1 June 8 he wrote:

Elephants have frequently been employed for the transport of artillery in Indian warfare, but it has been generally by means of draught; when guns have been carried, it has only been for short distances. It has been the privilege of this campaign to prove that elephants could carry Armstrong 12-pounder guns and 8-inch mortars over steep mountains for many hundreds of miles. There were 42 elephants employed in the conveyance of ordnance and ammunition, and of these five have been lost from hard work and want of water during the operations before Magdala (Holland and Hozier, 1870).¹⁰

The achievements of the elephants can probably be described as magnificent. It needs to be remembered, however, that there were only 44 of them and they did not all reach Magdala. In contrast, the Expedition's Transport Train on the day that Magdala was captured numbered 7,365 camels, 11,155 mules, 1,708 ponies, 6,922 pack bullocks, 901 draught bullocks, 784 donkeys 305 mule carts, and 345 bullock carts (Holland and Hozier, 1870). The contribution of the elephants to the overall transport operations was thus extremely small. In addition, what should have been their major contribution, landing artillery shells and mortar bombs on the Magdala fortress, did not materialise as neither guns nor mortars could get close enough to the intended target to achieve that goal.

As Napier indicated, the expedition had proved that elephants could be used to carry heavy loads over long distances over extended time periods. The main outcome, however, may have been the impression they created in the local populations that the Invading force was something to be feared not only because of its size and organization but also because it was using some kind of magic that allowed it to have power over elephants and bend these formidable creatures to its will.

Postscript

The Abyssinian Expedition has received approbation from many and varied sources since it was mounted more than 150 years ago. It is regarded as a military operation that was well planned, well organized, well executed, integrated various arms of the military and that achieved its objectives with a minimum loss of human life on the British side (Bates, 1979).

The Expedition has been described as "an enormous

undertaking, in size, in duration, and in financial cost.

Essentially a hostage rescue operation, it is one of the classic examples of combined expeditionary warfare" (Ashcroft, 2001). It has also been depicted as "one of the most expensive affairs of honour in history" (Marcus, 1995).

With regard to its cost a best estimate of the expense is eight million pounds sterling at 1868 prices. This is roughly equivalent to £ 910,594,688.60 or US\$ 1,172,030,976.67 in 2020 values.¹¹ All 59 hostages (a baby was born the next day to make the total 60) were released on 12 and 13 April 1868 and were transported out of the country although several returned there at a later date. The unit cost of rescuing a hostage, not necessarily for the sole benefit of the one person but for the pride of the British Empire, was thus £ 15,433,808 (US\$ 19,864,931).

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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REFERENCES

- Ashcroft AC (2001). As Britain Returns to an Expeditionary Strategy, Do We Have Anything to Learn from the Victorians. *Defence Studies* 1(1):75-98.
- Bates D (1979). *The Abyssinian Difficulty: the Emperor Theodorus and the Abyssinian Campaign, 1867-1868*. Oxford, Oxford University Press.
- Charles MB (2007). The Rise of the Sassanian Elephant Corps: Elephants and the Later Roman Empire. *Iranica Antiqua* 42:301-346.
- Daryaei T (2016). From Terror to Tactical Usage: Elephants in the Partho-Sasanian Period. In: Sarkhosh Curtis V et al (eds) *The Parthian and Early Sasanian Empires: Adaptation and Expansion*. Oxford, Oxbow Books.
- Edwards J (2001). The Irony of Hannibal's Elephants. *Latomus* 60(4):900-905.
- Farrokhi K, Karamian G, Maksymiuk K (2018). A Synopsis of Sasanian Military Organization and Combat Units. Siedlce-Tehran, Publishing House of Siedlce University of Natural Sciences and Humanities 59-60.
- Glover R (1944). The Elephant in Ancient Warfare. *Classical Journal* 39:257-261.
- Gowers W (1947). The African Elephant in Warfare. *African Affairs* 46(182):42-49.
- Henty GA (1868). *The March to Magdala*. London, Tinsley Brothers., 1868).
- Holland TJ, Hozier HM (1870). *Record of the Expedition to Abyssinia completed by Order of the Secretary of State for War (2 Volumes)*. London., Topographical and Statistical Department, War Office.
- Hozier HM (1869). *The British Expedition to Abyssinia, Compiled from Authentic Documents*. London: Macmillan and Co.

¹⁰Note the error in this Despatch where Napier states there were 42 elephants whereas 44 was the actual number.

¹¹<https://www.in2013dollars.com/uk/inflation/1868?amount=8000000>

- Kistler JM (2007). War elephants. Lincoln NE, University of Nebraska Press.
- Lightfoot CS (1981). The Eastern Frontier of the Roman Empire with Special Reference to the Reign of Constantius II, Unpublished D.Phil. Thesis, St. John's College, Oxford.
- Marcus HG (1995). The Life and Times of Menelik II: Ethiopia, 1844-1913. Trenton NJ, Red Sea Press.
- Markham CR (1869). A History of the Abyssinian Expedition. London, Macmillan and Co.
- Moorhead A (1964). The Blue Nile. London: The Reprint Society.
- NAM (2020). Abyssinia Expedition. London: National Army Museum. <https://www.nam.ac.uk/explore/abyssinia> (accessed 30 July 2020).
- Pankhurst R (1985). The Napier Expedition and the Loot from Maqdala. *Présence Africaine Nouvelle série* 133/134: 233-240.
- Rance P (2003). Elephants in Warfare in Late Antiquity. *Acta Antiqua Academiae Scientiarum Hungaricae* 43:355-384.
- Schafer EH (1957). War Elephants in Ancient and Medieval China. *Oriens* 10(2):289-291.
- Stanley HM (1874). Coomassie and Magdalla: The Story of Two British Campaigns in Africa. New York, Harper & Brother, Publishers.
- Zoll DA (1988). The British Hostage Rescue in Ethiopia: 1867-68. *The Military Review* 68:53-63.