

Deaths and Statistics. Discovering the Dead of the East Africa Campaign of the First World War

By George Hay and John Burke

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Deaths and Statistics

Discovering the Dead of the East Africa Campaign of the First World War

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ABSTRACT

This article reassesses mortality in the First World War East Africa Campaign by foregrounding newly recovered cause of death evidence for African soldiers and labourers, many of whom were historically omitted from named commemoration. It situates these findings within the commemorative and administrative frameworks of the Imperial/Commonwealth War Graves Commission and the recent CWGC Non-Commemoration Programme. Drawing on dispersed death lists, theatre casualty returns, and — most significantly — service records and casualty cards of the King's African Rifles (KAR), the study outlines how digitisation, transcription, and the collation of data enable systematic analysis of wartime mortality. The resulting datasets confirm that disease overwhelmingly outweighed combat as a cause of death and identify leading killers including pneumonia, smallpox, dysentery, malaria, and cerebro spinal meningitis, with temporally concentrated peaks linked to operational movement and epidemic dynamics (including late 1918 influenza). Beyond correcting the historical record through improved commemoration, the article argues that these sources offer rare demographic and public health insights for colonial East Africa, opening new avenues for military, epidemiological, and social historical research.

Keywords: First World War, East Africa, King's African Rifles, Commonwealth War Graves Commission

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1 INTRODUCTION: THE WAR GRAVES COMMISSION AND THE NON-COMMEMORATION PROGRAMME

The Imperial War Graves Commission (IWGC) was established in May 1917 to commemorate the dead of the British Empire who fell in the First World War. Its remit was extended in 1940 to cover the Second World War, and today it commemorates by name over 1.7 million men and women across the globe in cemeteries and on memorials. Born out of a desire to provide lasting recognition to all those who fell, the work of the IWGC was framed by the concept of equality in death. In one of the IWGC's founding documents it was "ordained that what was done for one should be done for all, and that all, whatever their military rank or position in civil life, should have equal treatment in their graves" (Kenyon, 1918). For this to be applied not just to British and Dominion dead but to all the dead of empire was particularly novel, given many of those commemorated were likely to receive greater equality in death than they had experienced in life.¹ The way this would be secured was through the imperial state taking ownership of the dead and carefully controlling and curating their commemoration, something that naturally did not receive universal support (Noakes, 2020). Nonetheless, as perhaps might be expected of such an ambitious project, and one with its roots so deeply embedded in empire, the IWGC faced bigger challenges when it came to delivering against its promises and ideals.

In response to increased academic scrutiny, in April 2021 the Commonwealth War Graves Commission (CWGC) published a report from a Special Committee highlighting a series of historical inequalities in its First World War commemorations.² One of the key findings of that report was that over 105,000 casualties, predominantly from East Africa and Egypt, were not commemorated by name (Hay & Burke, 2021). The bulk of this figure, some 88,000, were from East Africa. Out of this report emerged the five-year Non-Commemoration Programme, which continued this research in the hope of rectifying, wherever possible, the errors and omissions of the past. A major part of this programme has been the continued search for the names of those who died without recognition, so that they might be physically commemorated and added to the CWGC's database of casualties.

To date, the names of over 9,000 missing East African personnel have been recovered from a variety of official sources, some deposited in archives and others still in the possession of departments of state. While this article will touch on several different finds, the bulk of this analysis will focus on one key collection of records uncovered during this work: the service records of the King's African Rifles (KAR). These records, stretching back into the 1890s, were long thought to have been destroyed, but provide what is likely to be the only surviving written record of the lives of potentially hundreds of thousands of men. In particular, the unparalleled insights they provide into the causes of death for African soldiers in the First World War makes them especially valuable. The primary purpose of this paper is to draw attention to these records and, via a small number of examples, begin to show what might be learned from them. It will demonstrate the significance of these records not only from a military perspective, but also from a wider demographic and public health perspective.

While the names of the dead recovered by this project have already been added to the CWGC's Casualty Database (hereafter CDB), this lacks information on how those named died. However, in support of the observations made in this paper, and in an effort to enable further research, the East Africa Campaign Causes of Death Database will be made publicly available in the autumn of 2026 via the CWGC's [Non-Commemoration](#) pages.

2 THE SEARCH FOR NAMES

The often-forgotten East Africa campaign of the First World War differed greatly to the static fighting seen on the Western Front. It was a mobile conflict, fought over a vast expanse of sparsely populated territory, characterised by short and small-scale engagements. It was also a conflict fought as much

1 In the aforementioned report, it was stated that "The Commission will no doubt desire that no less honour should be paid to the last resting places of Indian and other non-Christian members of the Empire than to those of our British soldiers" (Kenyon, 1918, p. 11).

2 In 1960, the term "Imperial" was replaced by "Commonwealth". For studies analysing the early history of the Commission, and the inequalities in its work, see for example Barrett (2007), Clarke (2020), Siblon (2016).

against climate and terrain as it was against the enemy, with deaths from disease outweighing those from battle (Macpherson & Mitchell, 1924). The most significant problem facing all combatants in East Africa was transport. With few all-weather roads and tropical diseases often making it impossible to keep pack animals alive, the solution to keeping the armies active and moving was human portage. As a result, it is estimated that around 50,000 African soldiers and upwards of one million African followers (labourers, carriers or porters) were drawn into British and colonial service (Anderson, 2004; Paice, 2007; Strachan, 2004). When combined, it is believed that over 100,000 died during the campaign, with the vast majority, some 88,000, being raised from across East Africa (Hay & Burke, 2025).

Figure 1 *Map of East Africa*



Note: A 1921 IWGC map showing First World War burial locations across East Africa. It clearly demonstrates the scale of the conflict. It should be noted that these burial locations were not comprehensive, as many were not recorded by the armies in the field (TNA, CO 1047/129).

When the IWGC commenced its work in East Africa in the 1920s, a combination of factors meant that very few Africans who died in British service received named commemoration. The reasons for this have been explored in-depth elsewhere, although racialised imperial ideologies fundamentally shaped treatment (Hay & Burke, 2021). For the purposes of this article, it is important to note that a claimed dearth of records concerning East Africans who served and died helped create the conditions for the vast majority being commemorated namelessly by memorials in Nairobi, Mombasa and Dar-es-Salaam. Indeed, when asked in 1927 about the availability of rolls for the dead, officials in the Colonial Office replied to the IWGC that "we have no record (i.e. names) of any casualties except European casualties. We do not think that nominal rolls of native casualties are available at all even in East Africa" (CWGC/1/1/9/D/29).³ As will be demonstrated here, however, this was not the case.

These outcomes had an enormous impact on the commemorative landscape. For example, the King's African Rifles (KAR) was the largest locally raised fighting force in East Africa, expanding from 2,319 men in 1914 to 30,658 in January 1918. Of these, the regiment recorded 4,237 African dead up to 14 February 1919 (Moyse-Bartlett, 2014; TNA, CO 534/30). However, prior to the commencement of the Non-Commemoration Programme, the Commission only commemorated 198 KAR by name, of which 46 were British officers. The figure was even more stark for the Military Labour Corps (MLC), which despite suffering in excess of 80,000 dead, saw just 25 men commemorated by name by the CWGC. Once again, 23 of these were British officers.⁴

Through the Non-Commemoration Programme, the CWGC has been seeking collections of papers that might tell us who these men were, what happened to them, and how they should now be commemorated. Out of this research, which has involved a comprehensive sweep of archives across the UK and East Africa, over 9,000 names have been recovered from historical documents. While this is a significant number, it accounts for just over 10% of those now believed to have died without commemoration in the East Africa Campaign. Moreover, focussing solely on carriers, who suffered the highest death rates, this percentage becomes even starker: while 3,422 names have been added to the CDB, this only accounts for approximately 4.1% of all carrier deaths in the theatre. Given the context, however, each of these names is extremely valuable.

In many cases, the search has been hampered by the fact that records that are known to have existed appear not to have survived the passage of time. For example, a report produced in 1919 by the director of the MLC, Lieutenant-Colonel Oscar Watkins, stated that the duties of the organisation's statistical section were to "check, compile and summarise deaths, with cause and locality", and order these into official death lists. These lists, which included details of a casualty's backpay, were printed and distributed to Provincial Commissioners across East Africa so that next-of-kin could be informed and paid the sums owed (TNA, CO 533/216). From surviving contemporary reports, it is known that at least 38 of these death lists were produced. To date, only three have been located, all in the Kenya National Archives' papers for the Coastal Province. These invaluable records, spanning the period September 1914 to November 1915, provided the names of 273 carriers previously unknown to history. Of these, 151 had cause of death information, with 148 dying from disease and 3 killed (in action or by wildlife). The single biggest cause of death was dysentery (82), followed by pneumonia (18), malaria (11), Cerebro-spinal-meningitis (CSM, 11), and diarrhoea (8), alongside 26 other causes, including scurvy (2) and plague (1) (KNA, PC/COAST/1/13/70).⁵

From the UK National Archives, war diaries, medal rolls and casualty lists produced by the Adjutant General in the theatre yielded a further 4,046 names (see Figure 2). The MLC again made up the bulk of this number at 2,969, followed by 913 KAR, and then a range of other smaller regiments. In total, the primary cause of death across this cohort was again disease at 3,286, followed by 392 killed

3 The initial request for information by the IWGC was sent on 3 June, alongside a list of units for which the IWGC had no information.

4 With its origins in less formalised transport units, the Military Labour Bureau (MLB) was formed in February 1916 to operate as the main provider of carriers for the campaign. In March 1918 the name was changed to Military Labour Corps (MLC). For the sake of simplicity, MLC will be used hereafter. On the CDB, 18 were recorded under East African Military Labour Corps, and 7 under East African Military Labour Bureau.

5 Of the 82 who died from dysentery, 79 were recorded as dysentery only, with 1 dysentery and debility, 1 dysentery and malaria, 1 dysentery and suppressed cellulitis of right leg.

or died of wounds, 32 from other causes, and 336 not recorded.⁶ The single largest cause was again dysentery (1,067), followed by pneumonia (583), diarrhoea (506), malaria (385), and then a range of other diseases, including CSM (157), debility (76), and bronchitis (74).⁷

Figure 2 Casualty return from East Africa

Reg. No. K.128-

To
The Secretary,
War Office, London S.W.

Sir,

I have the honour to confirm my telegram No. K.128, dated 7th March 1917, addressed to PROELICAS LONDON.

"Regret to report

Died of

Dysentery	5th Mar. A.S.C.	Pte. M2.183552	Dangerfield E.A.
	14th Feb. 2nd Rhod. Rgt.	- 731	Gormack A.
Malaria	date not stated.	- 1481	McAllister J.
	3rd Mar. 8th S.A. Inf.	- 11317	Knipe P.B.
Acute malaria	4th Mar. Cape Corps	- 2118	May E.
Cerebral malaria	- - 6th S.A. Inf.	- 5856	Riddell A.J.
Haemorrhage	- - E.A.S.C.	Sgt. 4025	Davis D.R.
Dysentery	5th Mar. Gold Coast Rgt.	Pte. 8648	Md1 Jaunde.

Disease, African Rank and File two men
(Pneumonia 4th Mar. 1/4 K.A.R. Pte. 6052 Isakan Winbwa.
(Dis. not stated 28th Feb. Rugs Rugs Scts. Pte. 7/238 Mure Boma.

Disease, 10 East African Natives :-

(Pneumonia	2nd Mar. E.A. Carr./2-4 K.A.R.	Pte. ITG. 962921	Gayamba.
(Dis not std.	28th Feb. - -	- ITG. 962263	Kapaya.
(-	21st - E.A. Carriers	- KBU. 508227	Muthaya.
(Pneumonia	20th - -	- KBU. 318089	Jebuwagi.
(Dysentery	- - -	- MSA. 502533	Jumapili.
(-	22nd - -	- MCH. 124505	Dodo.
(-	17th - -	- DOD. 014325	Magili.
(Diarrhoea	22nd - -	- DAR. 711843	Salim.
(Malaria	18th - -	- DAR. 711271	Gefu.
(Pneumonia	- - -	- SAM. 832363	Misisi.
(Abscess & debility	- - -	- DOD. 917438	Tano.

Disease, three Seychelles Porters

(Dysentery	4th Mar. Seychelles Porter	544	Charlot Charlotte.
		123	Jacob Brizilia.
		341	Joseph Moustache.

Disease, one South African Native

(Malaria	4th Mar. South African Native	17998	Klaas Nara.
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From Adjutant General Base"

I have the honour to be,
Sir,
Your obedient Servant,

Dar-es-Salaam,
7th March 1917.

W. A. H. H.

Note: Example of a casualty list produced by the Adjutant General at the Base, East Africa, and submitted to the War Office in March 1917 (TNA, WO 95/5351/5). The information, ordered by column, was listed in the following order: disease, date, regiment, rank, service number, name. It was submitted to the Adjutant General from the regiments and the military hospitals operating across East Africa.

⁶ Other causes here include 26 accidents, 2 drowned, 2 executed, 1 lightning strike, and 1 suicide.

⁷ In many cases, there were multiple causes of death recorded. To avoid duplications, only the first cause of death is counted here. For example, the total of 385 for malaria excludes 19 who died from dysentery and malaria, 8 pneumonia and malaria, and 4 diarrhoea and malaria, as these are included in the other totals.

In total, of the 3,422 MLC names recovered and added to the CDB from various archival holdings, 3,066 died of disease, 56 were killed or died of wounds, 15 died from other causes, and 285 had no cause of death recorded.⁸ Although these figures are only linked to a small portion of the total number of carriers who died in the campaign, it remains the most comprehensive set of data available. In reinforcing contemporary reports, intestinal infectious disease — dysentery (1,082) and diarrhoea (511) — were the most prominent killers, followed by pneumonia (502) and malaria (365).⁹ For the first two, a lack of sanitary organisation and contaminated food were the main culprits, while the last two were blamed on the mass movement of people into unfamiliar climates (Macpherson & Mitchell, 1924; TNA, CO 533/216). For instance, carriers raised in relatively temperate zones were at times sent to work in the hot and humid coastal regions of East Africa, whilst in other cases, those from lowland zones were deployed to the uplands. As a result, the former contracted malaria, to which they had not previously been exposed, whilst the latter perished from pneumonia as they were unaccustomed to the climatic conditions (TNA, WO 141/31).

Amongst the most significant finds in this search and the main focus of this paper, however, are the service records for the King's African Rifles. Thought to have been destroyed before or shortly after Kenya's independence, this collection was identified as part of a collaborative effort between the CWGC and the Kenya Defence Forces (KDF). A sample of these records has now been digitised and made available through the British Library's Endangered Archives Programme, while First World War death data has been extracted from the whole collection (EAP1556, 2025). The extraordinary rarity and significance of these records cannot be overstated. Dating from the beginning of the formal British colonial presence in the region in the late 19th century, the whole collection is believed to extend all the way to Kenya's independence in the 1960s. The earliest material records information about individuals raised within Kenya and bordering countries, which would otherwise never have been committed to paper.¹⁰

While a civil registration system has existed in the United Kingdom since before the middle of the 19th century, the births, marriages, deaths and other life events of the bulk of African peoples living under British administration were, in the majority of cases, never formally or fully recorded. Taking Kenya as an example, despite the *Births and Deaths Registration Ordinance* of 1904 calling for the compulsory registration of deaths, "including every native occurring within any Township area", there remained a considerable degree of underreporting (Official Gazette, 1906). This is reflected in the 1914–15 Annual Report for Nyanza Province, as general mortality statistics were only available for Kisumu Township (population 6,430 in 1916–17) as opposed to either Kisumu district (c. 285,000) or the entire province (c. 1.1 million). The result is a considerable gap in the published data (AR 1914–15; AR 1916–17). In contrast, those who were recruited into the KAR had a host of details recorded about them and their communities. It is those details, along with their military particulars, that have been captured and preserved by this project. This encompasses a wealth of information: enlistment forms, medical records, service histories, and, occasionally, correspondence from soldiers and next of kin. As a result, these documents offer invaluable insights into the lives of African soldiers during the colonial era, as beyond cause of death, they include other variables covering age, place of residence, tribal particulars, height and chest measurements, region, date of death, and on occasion, place of death. Because of the detailed nature of these documents, these fields provide the framework of the East Africa Campaign Causes of Death Database. In many cases, the service records potentially present the only surviving material that can document this African military and cultural heritage and help tell the stories of these men, whose service is otherwise largely forgotten. Indeed, no other source material found as part of our ongoing research provides anywhere near the level of rich detail as that included within these attestation papers.

8 Other causes here include 14 accidents, 1 snake bite.

9 These figures include those with other recorded causes alongside those referenced here.

10 There are similar holdings within the Malawi National Archives for the 1st and 2nd Regiments of the KAR, which were based in Nyasaland (Malawi).

Figure 3

Examples of the now-digitised source material held within the archives of the Kenya Defence Forces (EAP1556, 2025)

AR Form No. 11

DECLARATION of *George William* (Name)

Mr *George William* King's African Rifles. Regimental Number *689 1925*

Date of Enlistment: *24 November 1918* Term of Enlistment: *Four* years in Army Service

Age: *24* years — months. Tribe: *Swahili* District: *Mombasa*

Height: *5* feet *8* inches. Chief: Village:

Chest Measurement: *37* inches. Fair to Estate: *Willy Mombasa*

Marks: *on right side of chin*

Declaration

I, *George William* Son of *Samuel Songoro* am willing to serve, upon the following conditions, for General Service at Home or Abroad, in the *4/1 R.A.R.* provided my services should so long be required:

(1) For the term of Three Years in Army Service.
(2) If the above-mentioned term of Army Service expires during War, or while a state of Insurrection exists in the Colony or Protectorate, I understand that I may be required to serve for a further period not exceeding 12 months.

I do hereby solemnly and sincerely declare and promise that I will be faithful and bear true allegiance to His Majesty King Edward the Seventh, his heirs and successors, and that I will faithfully serve and defend His Majesty the King, his heirs and successors, and will obey all orders of His Majesty, and of the officers placed over me.

George William
Signature or Mark of Enlistee.

(Sd) Charles E. Collins Capt.
Signature or Mark of Witness.

Certificate of Justice of the Peace or Attending Officer.

Declared before me at *Mombasa* this *31st* day of *August* 1918.

I certify that I have clearly explained to the above-named man the conditions of the engagement which he has undertaken, and that he fully understands the same.

(Sd) Charles E. Collins Capt.
Signature of Justice of the Peace or Attending Officer.

Medical Certificate

I have examined *1925 George William* and find him* for General Service in the

(Date) _____
(Place) _____ Medical Officer.

Final Approval

George William is finally approved and taken on the strength of the *4/1 R.A.R.*

(Date) *2. 11. 18*
(Place) *Mombasa*

(Sd) Charles E. Collins Capt.
Approving Officer.

H.M. Press, Canada, - 1918-1919.

Patric Jackson was born Linear - Rakai.

Note: Front page of attestation paper for George Williams, as contained within the archival collections of the Kenya Defence Forces, and now available through the British Library (EAP1556, George Williams).

To the a/c.

EAST AFRICA PROTECTORATE.

and: *1000* *1000*

DEATH CERTIFICATE *Nairobi*

Sixth: *Nairobi* Date: *9 December 18*

Name: *No 8177 P.E. YOWANA*

Father's Name: _____

Chief's Name: _____

Nationality or Tribe and District: *227/1000*

Sex and Age: *male*

Religion: _____

Place and Nature of Employment: *1/3 K.R.R. 2 Coy*

Date of Death: *8-12-18 at 6 P.M.*

Cause of Death: *Beli-Beri*

Place of Death: *at K.R.R. Base Hospital*

List of Property with Decree at time of Death: _____

Details and Whereabouts of any other Property: _____

Name and Address of Person who brought Patient to Hospital: _____

Name and Residence of any other Relative: _____

Remarks: _____

(Sd) Kelly
(Sd) P.A.M.C.
(Sd) K.R.R. Base Hospital.

* This form is to be used for all purposes where a Death Certificate is required.

Note: Example of a death certificate produced by military hospitals in East Africa during the First World War, as contained within the archival collections of the Kenya Defence Forces, and now available through the British Library (EAP1556, Kona Wazia).

3 ACCESSING AND TRANSCRIBING THE SOURCE MATERIAL

Most of the source materials naming the dead were found sporadically and in small numbers in archives across East Africa and the United Kingdom. When they are found, they are often in different formats, something shaped by their use and purpose. Despite this, however, they all tend to contain the same form of structured information, typically including name, service number, unit, place, and cause of death. Careful administration of manpower in a war of this scale could mean the difference between victory and defeat — for example, resting fighting assets when possible and reinforcing those known to be depleted by the ravages of war. Monitoring of infectious disease was also crucial, as early detection would have obvious benefits. For the vast majority of disease deaths, which took place in hospitals, these details were confirmed by medical officers, with the information forwarded to the relevant authorities. One of those authorities was the Adjutant General in East Africa (Figure 2), the office responsible for compiling details of all those becoming ineffective (the dead, injured and missing) so this could be fed back to the War Office (TNA, WO 95/5349-5352). What makes this collection unique is the fact that it covers the entire theatre and all the forces fighting within it, rather than specific units. Although not all this paperwork has survived, collections such as this are of vital importance. Most others, however, do not share this order or consistency.

The information held within all the disparate sources identified through this work has been joined together and added to the CDB. After first moving the casualty records online in 1998, the CDB has gone through a series of iterations, and it now contains 17 publicly searchable fields, including name, age, regiment and date of death, amongst others. Although cause of death is not a searchable field within the public database, the Programme's research team has captured this information, where available, so that it can be used to create a live, parallel database including these richer details. Once published, it is hoped this will shed new light on the varied experiences of the East Africa theatre of the First World War, particularly the way in which the campaign impacted different groups raised for service across Africa.

The KAR service records demanded a slightly different approach. This was not only because the files are held within a closed collection, but also because the death data exists within each set of attestation papers rather than collective lists. In a collaboration between the CWGC, the KDF and the British Library's Endangered Archives Programme, a digitisation project was undertaken to preserve these hugely important documents. Prior to the commencement of this exercise, details regarding the arrangement and total number of records within the collection was not well understood, although it was known that the KDF had been re-boxing them into years of attestation — effectively the year in which a man joined the unit. As a result, the initial plan was to focus on digitising the records leading up to, and including, the First World War. As it was, once the digitisation project commenced in August 2023, it became clear that given the total number of records held within the collection, it would not be possible to digitise them all within the initial 12-month timeframe. As such, the records digitised by this pilot project, which are now available through the British Library, cover the period 1899 to 1917. In physical terms this encompassed 25 boxes housing 8,556 service files, which ultimately produced in excess of 94,500 photographs.

Figure 4 *Extracted information for CDB upload*

PORTER
GAYAMBA

Service Number: ITG/962921

Regiment & Unit/Ship
East African Military Labour Bureau
East African Carriers

Date of Death
Died 02 March 1917

Buried or commemorated at
[EAST AFRICA BOOK OF REMEMBRANCE](#)
Online Commemoration

COMMONWEALTH
WAR GRAVES

We are in the process of adding an image
of this casualty's point of commemoration

Note: Example of how the data below is presented online through the CDB, with all the information presented here operating as searchable fields. As noted, cause of death is not referenced in the public database.

Case No.	Evidence Type	Evidence Link/ Reference #	Service Number	Rank	Casualty Name	Date of Death	Cause of Death	Regiment	Unit	Cemetery
NC1466	Casualty Return	TNA: WO 95/5351/5_1, p.80	6052	Private	ISAKAM WIMBWA	04-03-1917	Pneumonia	King's African Rifles	1st/4th Bn.	East Africa Book of Remembrance
NC1467	Casualty Return	TNA: WO 95/5351/5_1, p.80	7/238	Private	MURO BOMA	28-02-1917	Disease (unknown)	East African Scouts	Ruga Ruga Scouts	East Africa Book of Remembrance
NC1468	Casualty Return	TNA: WO 95/5351/5_1, p.80	ITG/962921	Porter	GAYAMBA	02-03-1917	Pneumonia	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1469	Casualty Return	TNA: WO 95/5351/5_1, p.80	ITG/962263	Porter	KAPAYA	28-02-1917	Disease (unknown)	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1470	Casualty Return	TNA: WO 95/5351/5_1, p.80	KSU/308827	Porter	MUTHAYA	21-02-1917	Disease (unknown)	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1471	Casualty Return	TNA: WO 95/5351/5_1, p.80	KSU/312089	Porter	JEBUWAGI	20-02-1917	Pneumonia	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1472	Casualty Return	TNA: WO 95/5351/5_1, p.80	MSA/502333	Porter	JUMAPILI	20-02-1917	Dysentery	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1473	Casualty Return	TNA: WO 95/5351/5_1, p.80	MCH/124505	Porter	DODO	22-02-1917	Dysentery	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1474	Casualty Return	TNA: WO 95/5351/5_1, p.80	DOD/014325	Porter	MAGILI	17-02-1917	Dysentery	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1475	Casualty Return	TNA: WO 95/5351/5_1, p.80	DAR/711843	Porter	SALIM	22-02-1917	Diarrhoea	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1476	Casualty Return	TNA: WO 95/5351/5_1, p.80	DAR/711271	Porter	SEFU	18-02-1917	Malaria	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1477	Casualty Return	TNA: WO 95/5351/5_1, p.80	SAM/632363	Porter	MISISI	18-02-1917	Pneumonia	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance
NC1478	Casualty Return	TNA: WO 95/5351/5_1, p.80	DOD/917438	Porter	TANO	18-02-1917	Abscess; Debility	East African Military Labour Bureau	East African Carriers	East Africa Book of Remembrance

Note: Example of how the names in Figure 2 are transcribed and ordered for inclusion onto the CDB. Please note, "Cause of Death" is included here for internal reference, but it is not a searchable field within the public facing online database.

Figure 5 *Extract from British Library listing template*

Level	Original Ref	Title	Description	Digital Folder Name	Digital File Name (First)	Digital File Name (Last)	Number of Digital Files
Series	1916	1916		EAP1556_KAR_1916_1			
"Sub-series"	1	Box 1 of 9		EAP1556_KAR_1916_1			
File	133/124	Malid Ahmed	"Service number: 124; Name: Malid Ahmed; Date of earliest recorded enlistment: 01 Sept 1916; Regiment: King's African Rifles; Tribe: Boro; Chief: Gobo; District: Indud; Village: Moyali; Cause of discharge: None recorded; Rank on discharge: None recorded; Date of discharge: None recorded."	EAP1556_KAR_1916_1_133_124	"EAP1556_KAR_1916_1_133_124_001.TIF"	"EAP1556_KAR_1916_1_133_124_006.TIF"	6
File	134/124	Hassan Warsama	"Service number: 124; Name: Hassan Warsama; Date of earliest recorded enlistment: 16 May 1916; Regiment: King's African Rifles; Tribe: Arab Aden; Chief: Dureh Murich; District: None recorded; Village: None recorded; Cause of discharge: Medically unfit; Rank on discharge: Private; Date of discharge: 14 Feb 1919."	EAP1556_KAR_1916_1_134_124	"EAP1556_KAR_1916_1_134_124_001.TIF"	"EAP1556_KAR_1916_1_134_124_010.TIF"	10
File	135/118	Hassan Jama	"Service number: 118; Name: Hassan Jama; Date of earliest recorded enlistment: 08 May 1916; Regiment: King's African Rifles; Tribe: Haba Ismail; Chief: Ali Mohamed; District: Burao; Village: Burao; Cause of discharge: Deserted ; Rank on discharge: None recorded; Date of discharge: None recorded."	EAP1556_KAR_1916_1_135_118	"EAP1556_KAR_1916_1_135_118_001.TIF"	"EAP1556_KAR_1916_1_135_118_006.TIF"	6
File	136/R119	Marjar Singor	"Service number: R 119; Name: Marjar Singor; Date of earliest recorded enlistment: 17 Aug 1914; Regiment: King's African Rifles; Tribe: Soudanese; Chief: Situr Merjan; District: Kisumu; Village: Ngambo; Cause of discharge: Died of Dysentery; Rank on discharge: Private; Date of discharge: 04 May 1918."	EAP1556_KAR_1916_1_136_R119	"EAP1556_KAR_1916_1_136_R119_001.TIF"	"EAP1556_KAR_1916_1_136_R119_012.TIF"	12
File	137/6358	Matingwoin Arap Kitilda	"Service number: 6358; Name: Matingwoin Arap Kitilda; Date of earliest recorded enlistment: 26 May 1916; Regiment: King's African Rifles; Tribe: Lumbwa; Chief: Arap borgochut; District: Lumbwa; Village: kamungei; Cause of discharge: Died of Pneumonia; Rank on discharge: Private; Date of discharge: 05 Feb 1919."	EAP1556_KAR_1916_1_137_6358	"EAP1556_KAR_1916_1_137_6358_001.TIF"	"EAP1556_KAR_1916_1_137_6358_011.TIF"	11

Note: Extract from the British Library cataloguing template, used to feed the transcribed data into the British Library's online database (EAP1556, 2025). The information was organised by level — box, number, file. The key information from each attestation paper, including name, service number, tribe, chief, district, village, cause of death/discharge and date of death/discharge, was manually transcribed into the "Description" field by soldiers of the KDF.

Figure 6 Casualty Card

15344 PTE YOANNA KAGWA

DATE OF DEATH 18. 5. 18. UNIT 57 KAR

CAUSE OF DEATH PNEUMONIA

TRIBE Muganda CHIEF Yusufu Suma

DIST. Kyadondo

Note: Casualty card produced by the King's African Rifles, as contained within the archival collections of the Kenya Defence Forces.

As these files were not catalogued, the first step was to provide each box, and each individual record held therein, with a unique identification number. Following this, the information held in each record was captured on a cataloguing template (Figure 5) to enable the building of a database that links searchable metadata to the digitised images. Once complete, the files were then passed to the photography team for digitisation. Here, a set procedure was followed, with each individual file receiving its own digital folder with the same unique identifier, for the saving of the digital images. Once a file was digitised, and the images checked for clarity, they were then backed up on external hard drives. The files were then returned to their original boxes and placed back into storage.

To synchronise the data in the cataloguing templates with the digital images, the project team produced targeted Python scripts to capture and align data, expediting the process while minimising human error. This included capturing and ordering all the file structure relevant to the listing — the folder names, first image name, last image name and number of images — so the two could be compared. Once complete, the files which formed part of the British Library project were made publicly available in January 2025 (EAP1556, 2025). Around the same time, the details of those who died were extracted from this cataloguing and added to the East Africa Campaign Causes of Death Database and published on the CDB.

During this digitisation work, a discrete collection of 2,349 casualty cards (see Figure 6) from the First World War were also discovered. While these have not been formally digitised, the data extracted from them by the CWGC has dramatically expanded the findings of the service record digitisation pilot, providing a unique dataset of names and causes of death within the KAR.

The KDF is continuing to order and catalogue the remaining files within the wider collection — now believed to number more than 200,000 service records as well as other material — with plans to continue digitisation. It is hoped that these, too, will one day be publicly available, providing unparalleled detail on those who served in British colonial service from the late 1800s to the 1960s.

4 RECENT RESEARCH USING THE SOURCES

Research connected to the full database of KAR records is currently embryonic as it is still being constructed. Nonetheless, the service record data provides a discrete cohort on which early analysis has been completed. Initial findings show that, of the 8,556 files digitised, 584 have a recorded cause of death during the commemorative period of the First World War. Of these, 393 died of disease, 179 were killed or died of wounds, and 12 died from other causes.¹¹ Of the various diseases recorded,

¹¹ Other causes here include 5 accidents, 5 drowned, 1 suicide and 1 execution after court martial.

the most prominent cause of death was from diseases of the respiratory system (138), followed by dysentery (46), malaria (40), smallpox (20), and CSM (19).¹²

Although these records are a small sample of the whole collection, they nonetheless hold unprecedented levels of detail previously not available. Indeed, alongside cause of death, they provide a wealth of additional information that can shed light on population health and other trends, including an individual's tribe, place and village of origin, their next of kin, their height and chest measurements, as well as details on their service, amongst others. This allows the story of these individuals to be told in greater detail than has ever been possible before. Moreover, from a public health perspective, the height and chest measurements alongside any additional health records included provide unparalleled insights into what is ultimately a focussed but still broad cross section of the young adult male population of East Africa in the early 20th century. In this regard, they are of immeasurable value. This is especially so when considering the often-limited nature of civil data and statistics.

Beyond the service records, the allied collection of casualty cards is perhaps even more significant in this context as the records focus exclusively on deaths. Again, conclusions are preliminary, but as Table 1 shows, of the 2,349 recorded deaths, 1,743 died from disease, 399 were killed in action or died of wounds, 170 had no information recorded, and 37 died from other causes.¹³

Table 1 *Cause of death statistics from casualty card cohort*

Cause of death	Number	Percentage
Disease	1,743	74.2%
Killed/of wounds	399	17%
Not recorded	171	7.2%
Other causes	37	1.6%

Although these cards only represent a sample of all the known African KAR casualties in the war (4,237), the death percentage from disease in the sample closely mirrors that of the overall total of 71.7% in the official statistics (TNA, CO 534/30).¹⁴ What they do provide, as Tables 2 and 3 show, is more detailed information on the specific diseases and their peaks within different regiments and across different months/years.

The most complete data in these casualty cards is for the 4th (Uganda) regiment, for which there are 1,337 cards compared to a total of 1,349 officially recorded African deaths in the unit (CWGC/1/1/7/E/14). Of these, 1,029 died from disease, 226 were killed or died of wounds, 61 had no information recorded, and 21 died from other causes.¹⁵

Table 2 *Highest recorded diseases causing death within the casualty cards — all regiments*

Cause of death	Number	Percentage
Pneumonia	564	24%
Smallpox	268	11.4%
Dysentery	167	7.1%
Cerebral-Spinal-Meningitis	122	5.2%
Malaria (and complications)	66	2.8%
Influenza (and pneumonia)	64	2.7%
Meningitis	40	1.7%
All other diseases	457	45%

12 Respiratory diseases include 132 Pneumonia, 2 broncho-pneumonia, 3 pneumonia & malaria, 1 pneumonia & nephritis, 1 pneumonia following influenza.

13 Of these, 206 from the British Library collection also have casualty cards. Other causes here include 14 accidents, 12 drowned, 2 suicide, 2 natural causes, 1 lightning strike, and 6 other.

14 The cards in Nairobi largely exclude the 1st and 2nd Regiments, which were raised in Nyasaland (Malawi) and headquartered in Zomba. Attestation papers for these men are held in the Malawi National Archives.

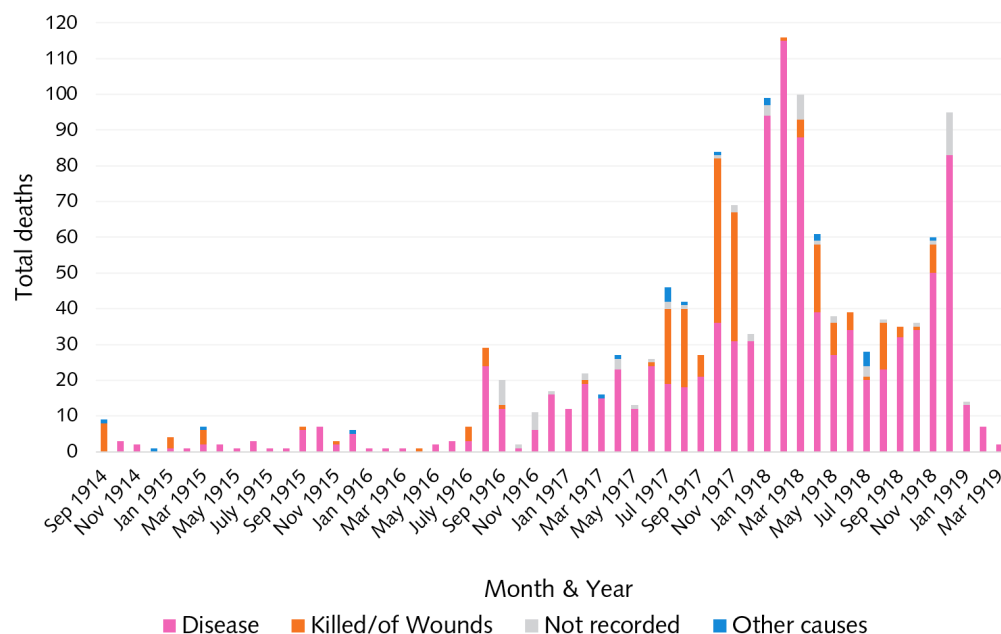
15 Other causes here include 9 drowned, 9 accidents, 2 natural, 1 lightning strike.

Table 3 *Casualty card data by regiment*

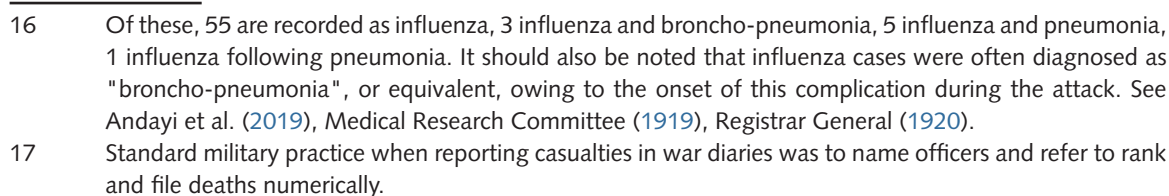
Regiment	Killed/of wounds	Disease	Other causes	Not recorded	TOTAL
1 st KAR	1	1	-	-	2
2 nd KAR	-	-	-	-	-
3 rd KAR	166	665	12	55	898
4 th KAR	226	1,029	21	61	1,337
5 th KAR	6	10	2	50	68
6 th KAR	-	6	2	-	8
7 th KAR	-	15	-	1	16
Not recorded	-	17	-	3	20
TOTAL	399	1,743	37	170	2,349

Of the 1,029 who died of disease, 263 died from pneumonia, 247 from smallpox, 120 from dysentery, and 101 from CSM, amongst a range of other diseases. The way in which these diseases affected specific units at particular times can potentially tell us a great deal about the prevalence of certain diseases within manpower cohorts and the susceptibility of some groups to those diseases. In the case of CSM — an inflammation of the protective membranes around the brain and spinal cord — for example, the 4th KAR accounts for 82.8% of all deaths from the disease within the whole casualty card dataset. This disease was noted as being endemic within parts of Uganda, and recruitment from such areas led to serious outbreaks during the campaign ([TNA, CO 536/90](#), [WO 95/5297/4](#), [WO 95/5300/3](#)). Moreover, controlling the spread of CSM was hampered by a lack of knowledge on its incubation period, whilst a lack of cold storage facilities reduced the availability of serum treatment ([TNA, WO 141/31](#)). Quarantine procedures came too late to save many.

As Figure 7 shows, the months with the highest mortality for the 4th KAR were January to March 1918 with a combined 315 deaths. This figure accounts for just under a quarter of all those who died within the unit across the entirety of the war. During this period, over 94% of those who died did so from disease — 94 in January, 115 in February, and 88 in March — as opposed to 6 killed, 10 not recorded and 2 from other causes. The most prominent cause of death was smallpox, which accounted for 44.7% of deaths by disease in January, 71.3% in February and 70.5% in March. The next highest were dysentery and CSM, which peaked in January, followed by pneumonia, which peaked in March.

Figure 7 *4th (Uganda) KAR deaths across the First World War from casualty card cohort*

For the CWGC, these documents do something incredibly important by providing the names of those who died in the First World War who were not commemorated at the time. Whilst correcting this



As Figure 8 shows, the worst month by deaths alone was March 1918 at 162 dead (148 disease, 5 killed, 8 not recorded, 1 other cause), whilst the worst month for combat deaths was July 1917 at 75. The single worst day was 19 July 1917 with 33 deaths, all with the 3rd (Kenya) Battalion KAR. This was the date of the Battle of Narungombe in German East Africa (Tanzania), which was described in the battalion history as "one of the severest fights of the whole campaign" (TNA, WO 106/273). Here a combined British force of over 1,700 men attacked a heavily entrenched German position. After a fierce day of fighting, in which the gunfire ignited the long grass and led many to burn to death, the German forces eventually withdrew (Burke, 2025; Moyse-Bartlett, 2014; Paice, 2007). Such was the significance of this battle that the 3rd KAR's successor regiment, the 3rd Battalion Kenya Rifles, continues to annually observe Narungombe Day on 19 July (KDF, 2025). Although the battalion history did not provide an official disaggregated death count, instead referring to 200 as "killed and wounded", these casualty cards now allow the CWGC to put names to at least some of those who died in this engagement. Individuals who, up until this point, have only ever been officially referenced by number.¹⁷

5 FUTURE RESEARCH AND POTENTIAL USES OF THE SOURCES

For the CWGC, these documents do something incredibly important by providing the names of those who died in the First World War who were not commemorated at the time. Whilst correcting this

17 Standard military practice when reporting casualties in war diaries was to name officers and refer to rank and file deaths numerically.

historical wrong, the rich detail they contain will also allow the organisation to tell their stories in more detail than ever before (Burke, 2024). This means not only connecting the dead to battlefields and potentially long-lost burial sites but also engaging the descendants of these men and reconnecting them with this history.

Beyond this important task, however, the data offers great potential for academic study, particularly exploring the correlation between cause of death, the environment and the background and experiences of those who died. For example, the records include information on tribe, village, chief, father's name and next of kin, as well as age, height, chest measurements, and identifying features. This provides an opportunity to study the impact of disease and other causes of death amongst different cohorts of the dataset who could be grouped by regional, tribal or other particulars. This, combined with general population health indicators like height and chest measurement, as well as familial and other factors, could provide interesting insights into the virulence of diseases amongst the populations involved in this war. Dates of death plotted against the progress of the campaign would also provide new understanding of the impact of communicable disease and other causes of death on the conduct of the war, as well as the success of any mitigations.

By way of example, focussing solely on the British Library data and those casualties dying from disease, recruits from the Kavirondo (41), Nandi (34) and Sotik (11) suffered the most deaths, with the remaining 106 recorded tribes numbering in single figures, such as the Awemba (9), Kikuyu (2), and Masai (1). Amongst the Kavirondo within this sample, the most prevalent diseases were pneumonia (17) and CSM (6); for the Nandi it was pneumonia (9) and dysentery (9); and for the Sotik it was pneumonia (2), dysentery (2), and malaria (2). Such data, combined with the population health information in the files, would allow a study to explore the reasoning behind contemporary claims that the Kavirondo were susceptible to pneumonia when serving in highland areas (TNA, WO 141/31). It could also provide interesting insights into recruiting practices and the influence of British "martial race" theory.

Moreover, these sources maintain a relevance that stretches beyond the military, as they can be used to both compare and expand upon the relatively limited datasets available for the civil sphere. By way of example, the 1916-7 Kisumu District Annual Report only has three causes of death listed by the local medical officer: smallpox 3,000 (165 in the township), 122 dysentery and 66 pneumonia — the latter two were for the township only as "numbers in Reserve not known" (AR 1916–17). More detailed information was available for 1918, where 488 deaths from 47 separate causes were recorded for Kisumu Township only (total population unknown), with dysentery (112), pneumonia (90), diarrhoea (66), smallpox (55) and influenza (47) being the most virulent (AR 1918–19). What these limited statistical datasets do not provide, however, is the more granular personal, tribal and demographic detail set out in the attestation papers. It is this data that can help us answer questions as to whether there was a difference between the virulence and spread of certain diseases between the military and the civil population, and whether some diseases were more prominent in one sphere as opposed to the other.

Although these records and the East Africa Campaign Causes of Death Database that will capture their details do not provide an exhaustive account of First World War fatalities, they do provide an opportunity to analyse the causes of death amongst the different peoples mobilised by the British Empire in the early 20th century. As such, they present an opportunity to gather new insights into wartime mortality in a colonial setting, something that is sorely lacking because of the limited information otherwise collected by colonial powers about subject peoples. By utilising ICD10h classification, it may also be possible to draw comparisons with other datasets.

REFERENCES

- Andayi, F., Chaves, S. S., & Widdowson, M.-A. (2019). Impact of the 1918 influenza pandemic in coastal Kenya. *Tropical Medicine and Infectious Disease*, 4(2), 91. <https://doi.org/10.3390/tropicalmed4020091>
- Anderson, R. (2004). *The forgotten front: The East African Campaign 1914–1918*. Tempus.
- Barrett, M. (2007). Subalterns at war: First World War colonial forces and the politics of the Imperial War Graves Commission. *Interventions*, 9(3), 451–474. <https://doi.org/10.1080/13698010701618703>

- Burke, J. (2024). Uncovering the past: The story of George Williams DCM. *Commonwealth War Graves Commission*. <https://www.cwgc.org/our-work/blog/uncovering-the-past-the-story-of-george-williams-dcm/>
- Burke, J. (2025). The Battle of Narungombe: Uncovering the fallen of the East African Campaign. *Commonwealth War Graves Commission*. <https://www.cwgc.org/our-work/blog/the-battle-of-narungombe-uncovering-the-fallen-of-the-east-african-campaign/>
- Clarke, T. (2020). *Threads of memory: A culture of commemoration in Kenya Colony, 1918–1930* [Doctoral dissertation, University of Waterloo]. <http://hdl.handle.net/10012/16605>
- CWGC (Commonwealth War Graves Commission Archive). (n.d.). *Memorials to missing — East Africa*. CWGC/1/1/9/D/29, Letter: Sir Charles Strachey to Arthur Browne, 12 July 1927. <https://archive.cwgc.org/Record.aspx?src=CalmView.Catalog&id=CWGC%2f1%2f1%2f9%2fD%2f29&pos=1>
- CWGC (Commonwealth War Graves Commission Archive). (n.d.). *Sudan — Graves in*. CWGC/1/1/7/E/14, Letter: OC 6th KAR, Dar es Salaam, to OC War Records, Nairobi, 13 September 1923. <https://archive.cwgc.org/Record.aspx?src=CalmView.Catalog&id=CWGC%2f1%2f1%2f7%2fE%2f14&pos=1>
- EAP1556 — British Library Endangered Archives Programme. (2025). *A forgotten military heritage — Rescuing the 'lost' service records of the King's African Rifles*. <https://dx.doi.org/10.15130/EAP1556>
- EAP1556 — British Library Endangered Archives Programme. (2025). *George Williams*. <https://eap.bl.uk/archive-file/EAP1556-1-1-328>
- EAP1556 — British Library Endangered Archives Programme. (2025). *Kona Wazia*. <https://eap.bl.uk/archive-file/EAP1556-1-19-20>
- Hay, G., & Burke, J. (2021). *Report of the special committee to review historical inequalities in commemoration*. Commonwealth War Graves Commission. <https://www.cwgc.org/media/noantj4i/report-of-the-special-committee-to-review-historical-inequalities-in-commemoration.pdf>
- Hay, G., & Burke, J. (2025). African manpower statistics for the British Forces in East Africa, 1914–1918: A reassessment. *British Journal for Military History*, 11(2), 25–50. <https://bjmh.gold.ac.uk/index.php/bjmh/article/view/1891/1995>
- KDF (Kenya Defence Forces). (2025). *3KR commemorates Narung'ombe Day: A heritage of valour*. <https://www.mod.go.ke/news/3kr-commemorates-narungombe-day-a-heritage-of-valour/>
- Kenyon, F. (1918). *War graves: How the cemeteries abroad will be designed*. HMSO. <https://archive.cwgc.org/Record.aspx?src=CalmView.Catalog&id=CWGC/1/1/5/7/2&pos=8>
- KNA (Kenya National Archives). (n.d.). *PC/COAST/1/13/70, Military Labour Corps: Death lists-credit lists and distribution of pay & personal property*.
- Macpherson, W. G., & Mitchell, T. J. (1924). *Official history of the war: Medical Services general history* (Vol. IV). HMSO.
- Medical Research Committee. (1919). *Studies of influenza in hospitals of the British Armies in France, 1918*. HMSO.
- Moyse-Bartlett, H. (2014). *The King's African Rifles: A study in the military history of East and Central Africa, 1890–1945*. Naval & Military Press.
- Noakes, L. (2020). *Dying for the nation: Death, grief and bereavement in Second World War Britain*. Manchester University Press.
- Official Gazette. (1906, February 1). *The Official Gazette of the East Africa and Uganda Protectorates*. <https://archive.gazettes.africa/archive/ke/1906/ke-government-gazette-dated-1906-02-01-no-150.pdf>
- Paice, E. (2007). *Tip and run: The untold tragedy of the Great War in Africa*. Weidenfield & Nicolson.
- Registrar General. (1920). The influenza epidemic of 1918–19. Mortality statistics. *British Medical Journal*, 2(3110), 211–212.
- Siblon, J. (2016). Negotiating hierarchy and memory: African and Caribbean troops from former British colonies in London's imperial spaces. *The London Journal*, 41(3), 299–312. <http://doi.org/10.1080/03058034.2016.1213548>
- Strachan, H. (2004). *The First World War in Africa*. Oxford University Press.
- Syracuse University. (n.d.). *AR 1914–15. Nyanza province annual report 1915*.
- Syracuse University. (n.d.). *AR 1916–17. Kisumu district annual report 1916–17*.
- Syracuse University. (n.d.). *AR 1918–19. Nyanza province annual report, 1918–19*.
- TNA (The National Archives). (n.d.). *CO 533/216, Report by Lieut-Colonel O.F. Watkins, Director of Military Labour to the B.E.A. Expeditionary Force on the period from August 4th, 1914 to September 15th, 1919*.

- TNA (The National Archives). (n.d.). CO 534/30, *KAR strength and casualties, 1919*.
- TNA (The National Archives). (n.d.). CO 536/90, *The handbook of Uganda* (II Edition).
- TNA (The National Archives). (n.d.). CO 1047/129, *Naval and military cemeteries in East Africa*.
- TNA (The National Archives). (n.d.). WO 95/5297/4, *General Headquarters Branches and Services; Adjutant and Quarter Master General*.
- TNA (The National Archives). (n.d.). WO 95/5300/3, *General Headquarters Branches and Services; Director Medical Services*.
- TNA (The National Archives). (n.d.). WO 95/5349-5352, *Headquarters Branches and Services, Adjutant General (Base)*.
- TNA (The National Archives). (n.d.). WO 95/5351/5, *Lines of Communication Headquarters Branches and Services; Adjutant General (BASE)*.
- TNA (The National Archives). (n.d.). WO 106/273, *Record of the 3rd Battalion during the campaign in East Africa, 1914–1918*.
- TNA (The National Archives). (n.d.). WO 141/31 (1918), *Report on medical & sanitary matters in German East Africa 1917*. Swift Press.