

The Two Main Divisions of E1a1, With An Emphasis on North Africa

Eleven years ago, after discovering that I had what is considered an African male line, other men of my haplogroup tested and it soon was apparent that we had two distinct lines of what was known at first as E1. There were those with a Middle Eastern background and the rest of us with no known links to the Levant. Since then, we have learned a lot, but our initial impression that there were basically two groups of us has not changed. In fact, it has been confirmed.

Today, with all the confusion of labels in y-dna, caused by an abundance of knowledge about the delineation of haplogroups, we often refer to our male lines by the last known positive mutational test available. But, basically, we who started out being known as E1 are known today as E1a1. And this is the nomenclature that speaks to me. Such a designation avoids the more lengthy letter and numbers that are often difficult to remember. And it also clings to a place in the alphabet that suggests age and rarity.

Still, though, we cannot avoid using the newer designations with the more lengthy letter and numbers. This is necessary because we are dependent upon the scientific community for their indispensable input. Such language communicates. So, looking to YFull,¹ a company that provides interpretation of y-dna data from the extensive testing done by other companies, I am relying on their y-tree for the information upon which I am expounding.

Until we have more information than we have now, which could occur at any time, we will go with the idea that there are two main divisions of our E1a1 haplogroup, which is what we see in YFull's tree, which, by the way, is the focus of this paper.[^] Somewhere along the way, a split occurred. One group became what we will call the Middle Easterners. They are designated by the mutation, Z17699. The rest became more Africa-centered. Their mutation is labeled Z17467.

It appears that the split occurred either in northeast Africa or in the Levant. The reason for this likelihood is because the Dogon, who are the strongest African carriers of E1a today and seemingly the parent of E1a1, seemed to live in northeast Africa before moving to northwest Africa and then to the sub-Saharan region. This assumption is based on data provided by the 2009 Tishkoff study, which showed the descending order of the Dogon's closeness to other African groups.² But make no mistake—the story is complicated, and conjecture, at times, must be a willing participant.

In order to avoid confusion about the spread of E1a1, I should mention that while the Dogon appear to be the parent of our subclade, it is highly probable that it was the Fulani who spread E1a1. I say this because it is the nomadic Fulani of the sub-Sahara that carries 10% of E1a1, the highest percentage known.³ Interestingly, the Fulani also carry E1b1b1 at the rate of 18.8%, which is associated with North Africa.

To date, the Z17699 group of E1a1 shows the following migrants from the northeast African area or the Levant: a European family with an English surname, two Lebanese families, and several families who eventually settled in eastern Europe in such countries as Romania, Ukraine, and others. The Z17467 group is comprised of Sardinians, sub-Saharan Africans, English families with English surnames, and a family with Sicilian ties. With additional testing of other known E1a1 men who, to this date, have not tested for one of the two groups, it could easily be determined which group is theirs.

The Z17699 group appears to have been born out of what happened in northeast Africa some 3400 years ago when Moses led the children of Israel out of Egypt. As this group was being formed, some of the E1a1 in the area apparently became followers of Moses and adopted Judaism as their religion. With the passage of time some of the Jewish population headed north into Europe establishing communities in what is France today. In fact, such communities were in place as early as 6 A. D. in Gallia Celtica (France, Switzerland, Luxembourg, and part of Germany).⁴ While this is not the whole story, it is certainly part of the story that explains E1a1 transition northward into mainland Europe.

Interestingly, although the Z17699 group has many adherents who are practicing Jews, there are others who are not Jewish. Maybe they were at one time and, perhaps, lost that ancient connection. Or, maybe they adopted a different religion, such as Christianity, Islam, or the Abrahamic religion of the Druze. Of these, there are those who have remained close to their original homeland and others who have become scattered.

Like other haplogroups, E1a1 is most always on the move. So, as the E1a1 population of North Africa moved about, some went north through the Levant, these being the Z17699 group, and others, the Z17467 group, stayed in the Mediterranean region, primarily North Africa. And with the establishment of the city of Carthage, planted by the Phoenicians from Tyre in 814 B. C., E1a1 (the Z17467 division) came under the rule and culture of the Carthaginians, which was pervasive throughout North Africa.

Carthage quickly became the Phoenicians' home away from home. Continuing the sea-going ways of their fathers, the transplanted sailors explored and sought conquest amongst the Mediterranean islands of Malta, Sardinia, Corsica, and Sicily, as well as others, in the 6th century B. C.⁵ Along the way they established colonies of their people and spread their influence in sundry locations, not only along the North African coast and in the Mediterranean islands, but along the southern and southeastern coast of Spain as well.

In time the Carthaginians eventually traveled outside the Mediterranean. In the 5th century under the leadership of Himilco they explored the southwest coast of Iberia, eventually traveling as far north as Gaul (France today) and the British Isles. Their objective seemed to be to obtain tin from Gaul and Britain. In the same period another

Carthaginian, known as Hanno, took 65 ships with 30,000 men and women and traveled around the coast of northwest Africa, going southward all the way down to Mount Cameroun. Neither of these expeditions was reported directly by the Carthaginians themselves, although, early on, they may have written about them. Instead, we know about Himilco's expedition because it was related by a Roman named Avienus, and Hanno's, because it was reported by an anonymous author of a Greek work called the *Periplus (Voyage)*.

One of the Mediterranean islands Carthage subjugated, Sardinia, became very important to the Carthaginians. The island, which was close to Carthage, and which, according to Pausanias' mythical history, had earlier been visited by sailors from Libya under their leader, Sardus, became Carthage's breadbasket.⁶ So, from about 450 B.C. until the Romans arrived in 237 B. C., Sardinia was an extension of Carthaginian power. In the last few decades of the 400s B. C. Carthage settled much of the overflow of its population there, especially those who were malcontents with little prospects for the future. By doing so, Carthage was increasing the agricultural potential of the island, the products of which could be exported to Carthage.

As Carthage used Sardinia for its purposes, the population became more African. This occurred because the Carthaginians intermarried with the local North African population and carried a part of that population to Sardinia. An example of these intermarriages was the betrothal of the daughter of the Carthaginian, Hasdrubal, a nobleman and son of Gisco, to Masinissa, son of a powerful Numidian king in the early 200s B.C. The son had been educated in Carthage and was acceptable to Hasdrubal, even though he was a Numidian.⁷ Indeed, according to Desanges in *The Proto-Berbers*, it has not been unusual to find Negroid remains in Carthaginian burial grounds. The numbers from the 2013 Francalacci et al. study of Sardinia tell the story of this Africa admixture. The results show that 139 individuals out of 1204 tested have a distinctly African legacy. Surprisingly, A1b1b2b and E1a1 share about 1% of the y-dna on the island, with each one having about .5%.

According to Francalacci's study of the snps revealing A1b1b2b and E1a1, the two haplogroups do not appear to have as lengthy a history in Sardinia as some of the other haplogroups on the island. Judging from the variability of 7-10 snps, the authors believe the two haplogroups could have arrived in more recent ancient times, such as during the Roman period and that of the Vandals.

The settlement of Sardinia by Carthaginians, Phoenicians, Libyans, and Liby-Phoenicians, which started in earnest about 450-425 B. C., almost 400 years after the founding of Carthage, made Sardinia an extension of Carthage, and by association, North Africa. By the first century B. C., the Roman politician and orator, Cicero, summed up his assessment of the island succinctly by stating that Sardinians were "sons of Africa," thereby leaving the impression, fully substantiated by others later on, that North African immigration had had a significant impact on Sardinian society.

For those of us who are part of the Z17467 division of E1a1, the two main locations for our male line in ancient times were Sardinia and North Africa; although if we consider Y-Full's E-M44 (E1a1) Tree for our upstream y-dna connections, we cannot ignore Sicily, the western part of which was controlled by Carthage before the Romans took over. Yet, because Sardinia was an earlier conquest than Sicily, Sardinia takes precedence. We must remember, though, that the lines we see today in Sardinia and Sicily were likely in North Africa 2000 years ago. @

As we analyze the Z17467 YFull E tree division, we see the following groupings+:

1. A Sicilian family, Sardinians from Cagliari, and an Englishman;
2. Two sub-Saharan families;
3. More Sardinians and three English families; and
4. Several related families with an English background.

Seeing these groupings, how do we trace the European-oriented families from Sardinia/North Africa to England? At this point it is somewhat an uneven process because while there may be a good deal of certainty about some Z17467 origins, there yet remains uncertainty about others. Let's take one group at a time.

The first grouping includes the Sicilian family. This family claims a heritage in Sicily with their ancestor dying in Italy in 1956. Because of this background, the sensible conclusion would be that the male line has been in Sicily for a very long time, and before Sicily, either in North Africa, Sardinia, or Spain. Spain is mentioned because it was the origin of many who migrated to Sicily. The Sardinians in this group live in Cagliari today, an area of Sardinia which received many North African migrants, from ancient times forward. Their lines most likely migrated directly to Sardinia from North Africa. As for the English line in group 1.....Since the line shares the terminal snp of the group, Z17467,* and became a part of England, the assumption could be that the line was one of the earliest E1a1 lines to leave Sardinia or North Africa for Europe.

In the second grouping, one family now living in Canada has been on the North American continent for 200-300 years. This line first appeared in colonial America, and only in Canada afterwards. Because of Big Y testing, we know the line is a part of what is now regarded as sub-Saharan E1a1. However, if the question is: Has this line been in the sub-Sahara for 2,000 years? The answer is: Probably not!

The third grouping of families seems to have a significant link to Sardinia, a supposition based on the number of Sardinians in its deep ancestry. Upon leaving Sardinia/North Africa, the two English lines, which might have been just one line 2,000 years ago, migrated to England where one line still lives. The other line, which resides in the U. S., has a terminal snp that is adjudged by YFull to be only 50 years downstream from that of the English family. The Sardinians in this group live in Cagliari today.

The fourth group is comprised of two different English surname families, several of whom have tested. They, too, have a deep link to the Sardinians, though it is not as

close as that of the third group. This particular line seems to have migrated to England from Sardinia/North Africa like the others who took residence in England.

The Z17467 division of E1a1 greatly benefited from the Carthaginians' language and culture and participated in its military and economic pursuits. As citizens and constituents of Carthage, this division engaged in war against African tribes, participated in Mediterranean island disputes, and even assisted in the Punic Wars. And, with the passage of time, the involvement they had with Carthage was transferred to the Romans and Vandals who became the powerful successors to Carthage.

In all the y-dna studies done over the last 20 years, very little E1a1 has been found in North Africa. Yet, we know it was present there at one time because it is found in Sardinia today. But, as always, war takes its toll and this happened to North Africa and E1a1. The Punic wars, three in all, surely devastated minor clades and sub-clades of all stripes. Remember, Cato, the Roman patriarch, lobbied for the *complete* destruction of Carthage, and *got his wish*.

Additionally, once Carthage was no more, the Romans took over North Africa and drafted a significant number of North Africa's population for service in Britain, a part of which was an auxiliary unit of horsemen from Mauritania (modern-day northern Morocco and northwest Algeria) known as Numerus Maurorum Aurelianorum,⁸ which may have contained some E1a1. Lastly, but not inconsequential, the Vandals invaded North Africa and sent groups of the same population, Mauritians by name, to Sardinia.

The Mauritians of North Africa, like their neighbors, the Numidians, "had significant sedentary populations living in villages, and their peoples both tilled the land and tended herds."⁹ Tilling the land and tending herds was important to them, but also to their overlords, the Carthaginians and the Romans. However, the Mauritians were also prepared to do battle and were considered outstanding fighters.¹⁰

Although the Mauritians in Britain, and even in Sardinia, get our attention, perhaps because they were known as "Moors" from Africa and may have carried E1a1, it is not certain that they were the group which contributed to Sardinia's .5% E1a1 or carried E1a1 to Britain. E1a1 has been around for more than 18,000 years, which means there has been ample time for this sub-clade of E1a to be spread far and wide in the area of its environment, meaning that both great and small could have been carriers. All we can say for sure is that it was there during the period of the Carthaginians, the Romans, and the Vandals,¹¹ all of whom may have facilitated its migration.

According to Michael Brett and Elizabeth Fentress who wrote about North Africa's population in 1996, authoring the book, The Berbers: The People of Africa, all the groups in North Africa, whether Mauritanian or otherwise, are properly referenced as the Berber population.¹² Perhaps this is because the Berber language, which is used to a considerable extent in North Africa today, actually *covered* North Africa at one time. Furthermore, the Berbers are not a single small population of Africa as some

think. Rather, they are a very *heterogeneous* people. They not only moved about in North Africa during antiquity, but during the middle ages, they even occupied Spain and Sicily.

During the Carthaginian period, the Berbers had a real stake in the Carthaginian empire. As early as the fourth century B. C., according to B. H. Warmington in his book, Carthage, the Berbers comprised the largest single element in the Carthaginian army. So, assuming that some E1a1 was entrenched in Carthage and its armies, we must also assume that where the Carthaginians went E1a1 followed.

For those of us with an English background, our history really comes alive at the point in time when the Romans took control of North Africa and continued to expand its empire throughout Europe. The empire took its legions and auxiliaries northward, many all the way to Britain. Interspersed in the groups were North Africans, some soldiers and some civilians. Their presence was, perhaps, best personified by the auxiliary unit already mentioned, Numerus Maurorum Aurelianorum.

Numerus Maurorum Aurelianorum were horsemen stationed at the Aballava fort at the western end of Hadrian's Wall in Britain. It has been suggested that the unit consisted of at least 500 men and that Septimus Severus, a North African emperor, was the one who brought the unit with him when he arrived in Britain in 208 A. D.¹³ However, presently, the time-line of their entry remains unsettled. What is known, though, is that other North Africans were likely transported to Britain to build the Antonine Wall, which was north of Hadrian's Wall. This is supported by North African epigraphic evidence found there and discussed by Vivien Swan in "The Twentieth Legion and the Antonine Wall Reconsidered."¹⁴

According to Swan, Emperor Pius had to deal with an uprising among the Mauritians of North Africa in the war of 146-149 A. D. So he took troops from Britain to support the war. Then, after the war, as was the practice of Pius and other emperors, troops had to be returned to those provinces from which they had been taken. Some believe that Mauritanian allies of Rome and, possibly, slaves, were carried back to the northern area where the Antonine Wall was constructed. Recruitment would not only have included Moorish tribesmen, but possibly also men from Legion III Augusta and other North African units.¹⁵

Epigraphic evidence for the presence of North Africans in Britain has also been found at Chester and Holt, places where Legion XX served.¹⁶ Such evidence suggests that North Africans were not just a unit here and there, but scattered throughout many legions. Some of those legions and units having a mixture of North Africans were I Afrorum, ala Augusta, II Augusta, III Augusta, First Vangiones, XIII Gemina, and a host of others. We know this because of the North Africans whose names have come down to us (See Birley's book, The People of Roman Britain), but also from the *record* of one Petronius Fortunatus, a North African centurion from Cillium (modern Kasserine in Tunisia) who labored for 50 years in the Roman army. During his tenure he served in

the following units: I Italica, VI Ferrata, I Minervia, X Gemina, II Adiutrix, III Augusta, III Gallica, XXX Ulpica Victrix, VI Victrix, III Cyrenaica, XV Apollinaris, and II Parthica.¹⁷

Britain's contingent of North Africans was established early with Legion VI Victrix, which was formed under Pompey, the Great.¹⁸ This legion came under the control of Octavian by 42 B. C. Afterwards, it served in Spain from 29 B. C. during the Cantabrian Wars on the northern coast of Spain and continued to operate in Nearer Spain (meaning as far south as modern-day Valencia) until 70 A. D. While in Spain, the legion surely recruited there, likely taking in some of the Mauritians who had crossed over.

We know about the makeup of Nearer Spain and Legion VI Victrix because in 218 B. C. Hannibal, in his preparation for war with Rome, exchanged troops between Spain and Africa, sending Africans to Spain and bringing Spaniards to Africa.¹⁹ But that was just the beginning. Under Augustus about 37 B. C., western Mauritania, called Mauritania Tingitana, was added to the Province of Spain.²⁰ And while it is true that provincial boundaries changed from time to time, any unit from Spain probably had Africans in its mixture unless there is evidence to the contrary. Incidentally, the 9th Hispana Legion, which had also recruited in Spain, served in Eboracum around 108 A. D. right before it disappeared in the war against the Caledonians in Scotland.²¹

In assessing the North Africanization of Spain, it is quite revealing that Roman legions, which were comprised of thousands of men, were often stationed in Spain, leaving open the possibility that North Africans who had crossed over were likely taken into the legions' ranks. Of the 12 legions that were stationed there according to Stephen Dando-Collins, author of Legions of Rome, some did, indeed, spend enough time in Nearer Spain and Further Spain (an area adjacent to Gibraltar) to enlist North African recruits.²²

In 122 A. D. Legion VI Victrix, which had served in Spain, was transferred to Eboracum (York) where the legion would serve for the next 300 years.²³ They would create a military community, which is what Eboracum was at first, and even work along Hadrian's Wall. Their presence, that of Numerus Maurorum Aureliorum, and II Augusta, which had originally recruited in northern Italy but also spent time in Nearer Spain, could very well help to account for the number of African skeletons excavated from ancient cemeteries in York and other places around Britain in later centuries.

Incidentally, II Augusta, which included some North Africans whom Birley named in his book, was one of the first legions in Britain. Once it joined three other legions in Britain for the invasion in 43 A. D., it did not leave for the next 250 years. It served in places in Britain that are known today as Exeter, Gloucester, Caerleon, Carpow, and Richborough.²⁴

One unit mentioned earlier in passing, but one that is equally important in accounting for traffic between North Africa and Britain is the Equitata unit of I (Flaviae) Afrorum Civium Romanorum. This was a unit involving both infantry and cavalry, amounting to

perhaps 500 men or more. Formed in Africa before 70 A. D., it remained there, perhaps serving in Egypt at one time, until it was moved to Britain in the 100s.²⁵ The speculation is that it may have been called on as a vexillation took place, which is to say they may have been needed in Britain and transferred to restore fighting numbers.

Using Birley's book and other more recent works as sources about North Africans in Britain, we find that there were at least two North African-born Roman emperors, one being Severus, who was born in Libya, and who headquartered in Eboracum.²⁶ Another, a Mauritanian named Oppilius Macrinus, served from 217-218, but apparently did not enter Britain.²⁷ Additionally, Lollius Urbicus, a Numidian, served as the governor of Britain during the building of the Antonine Wall in Scotland.²⁸

The evidence for North African footprints in Britain has been present for 2,000 years. Kajanto, a specialist in epigraphy, noted in the 1960s that of the 714 epigraphic examples he found in England at that time, 650 were African.²⁹ And the evidence continues to grow. Today, in addition to books detailing new information about Rome's legions, there is also considerable published details about the auxiliary units Rome instituted, such as that provided by Michael DuBois who authored Auxillae. For certain, the Mauritanians (Moors), Numidians, and others from North Africa had a presence in Britain, but from data that we are now seeing, they also were sent to far-off places like Hungary and Romania.³⁰

Following the movements of Rome, we must also consider activity on the island of Sardinia, which from excavated archaeological data shows Sardinians involved in the Roman auxiliaries that were established. Two examples (and I found several more) are *II Sardorum Equitata* and *I Corsorum Civium Romanorum*, which were both raised in Sardinia, though a century apart, and stationed in Mauritania Caesarensis.³¹ While there is no evidence so far (at least none I have found) that shows Sardinians moving to Britain for military service, other than, perhaps, a transplanted governor whom I shall mention, some of them may have become part of Britain-bound units, either by choice or by vexillation.

In The People of Roman Britain, Birley mentions *two* Sardinians, bringing to life two residents of Britain from 1700-1800 years ago. The first was Lucius Papius Pacatianus, a man said to be of humble birth, who was the head of Britain's provinces starting in 319 A. D. Previously, a decade earlier, in 308 and 309 he had served in Sardinia as its governor, likely as a transplanted official from Rome.³² But there is even an unofficial and earlier footprint as well. It is in the person of Julia Fortunata, a Sardinian woman whom we know about because of two stone coffins that her husband had made and had inscribed for the two of them in old Eboracum during her lifetime.

According to the Bradford Antiquary published in 1900, Julia's husband's coffin was the first one found. It was discovered just outside the city walls in York in 1579/1580. Sometime in the next century it was taken to Hull where it was used as a horse trough at an inn called Coach and Horses. There, in 1699, someone informed a Dr. Gale of the coffin, who then made a drawing of it and read the name on it. It had belonged to

Marcus Verecundus Diogenes, a shipper and citizen of Gaul who had made, or ordered, two coffins, one for himself and another for his wife. Afterwards, his coffin was removed to another location, broken into many pieces, and lost.

The coffin belonging to Julia Fortunata, the wife of Diogenes, was not discovered until 1877 when a new rail station was being excavated in York. (See the picture of the coffin at the end of this paper). The skeleton inside was that of a tall person, one writer reported. It was *then* that it was learned that Julia was from Sardinia. The inscription on the coffin read: "To the memory of Julia Fortunata from Sardinia; (she was) a loyal wife to her husband, Verecundus Diogenes."³³

According to Birley, Julia Fortunata and her husband were part of the merchant class that serviced the Romans. Eager to profit, those with something to sell made their way to all parts of the empire, going wherever the army went. In addition to merchants, there were prostitutes, family members, and even peddlers of slaves. Today, Julia's coffin can be seen in the York Museum. The museum has dated it as sometime between the years 43-410 A. D. Birley narrowed it down to the 200s.

With the sarcophagus of Julia Fortunata, we are made aware that somehow two people from different areas of the Roman Empire were able to get together and marry, even though there were wars and dangers all around. We realize that people were not as constrained and limited in antiquity as we might have thought, but rather had considerable freedom of movement. And if Julia Fortunata was selling goods in Britain, surely there were others from Sardinia in Britain marketing their wares and participating in its culture.

To summarize this paper, it is important to note the following:

1. We have two main divisions of E1a1 and this paper reflects an in-depth look at Z17467, particularly for those of us who might have an English background;
2. North Africa was home to division Z17467 2,000-3,000 years ago;
3. Just as Sardinia was a part of North Africa, so was Spain and Sicily, which means that, for research purposes, they should not be separated; and
4. Britain was populated by enough North Africans to transplant some of its y-dna clades and sub-clades there, some of which came directly from North Africa, some from Spain, some from Sardinia, some from Sicily, and maybe other islands around the Mediterranean as well.

If the criterion for tracing an ancestral y-dna line is based on looking for the group from which your ancestor likely came, then those of us with an English background do not have to look very far. Two thousand years ago, soldiers and their families (men of high and low rank), workers and even slaves, left North Africa, Sardinia and Spain and journeyed to the Province of Britain. There they left their imprint and y-dna legacy. Despite two millennia of changes, there is still considerable trace of their lives. Consequently, there is no giant leap to take, but a mere step of acknowledgement that some of us who are English E1a1 were likely Englishmen when the word was born.

^According to YFull's Tree there is an E-M44*, but with only one individual listed, it is not a main division. Maybe it will be one day!

@The original location of E1a1, which could have been in the Middle East, is not addressed.

*Some of our Z17467 division members are not listed because they have not tested sufficiently to identify with a particular sub-clade. When they do test, they may be able to find their places.

#The same thing that happened to E1a1 in North Africa likely happened to E1a1 in England. The population changed through disruptions. The Jobling/King surname study estimated that in England during the years 1300-1510 the population declined from 5.15 million to 2.3 million because of the country's disease epidemic.

Map of the Roman Empire

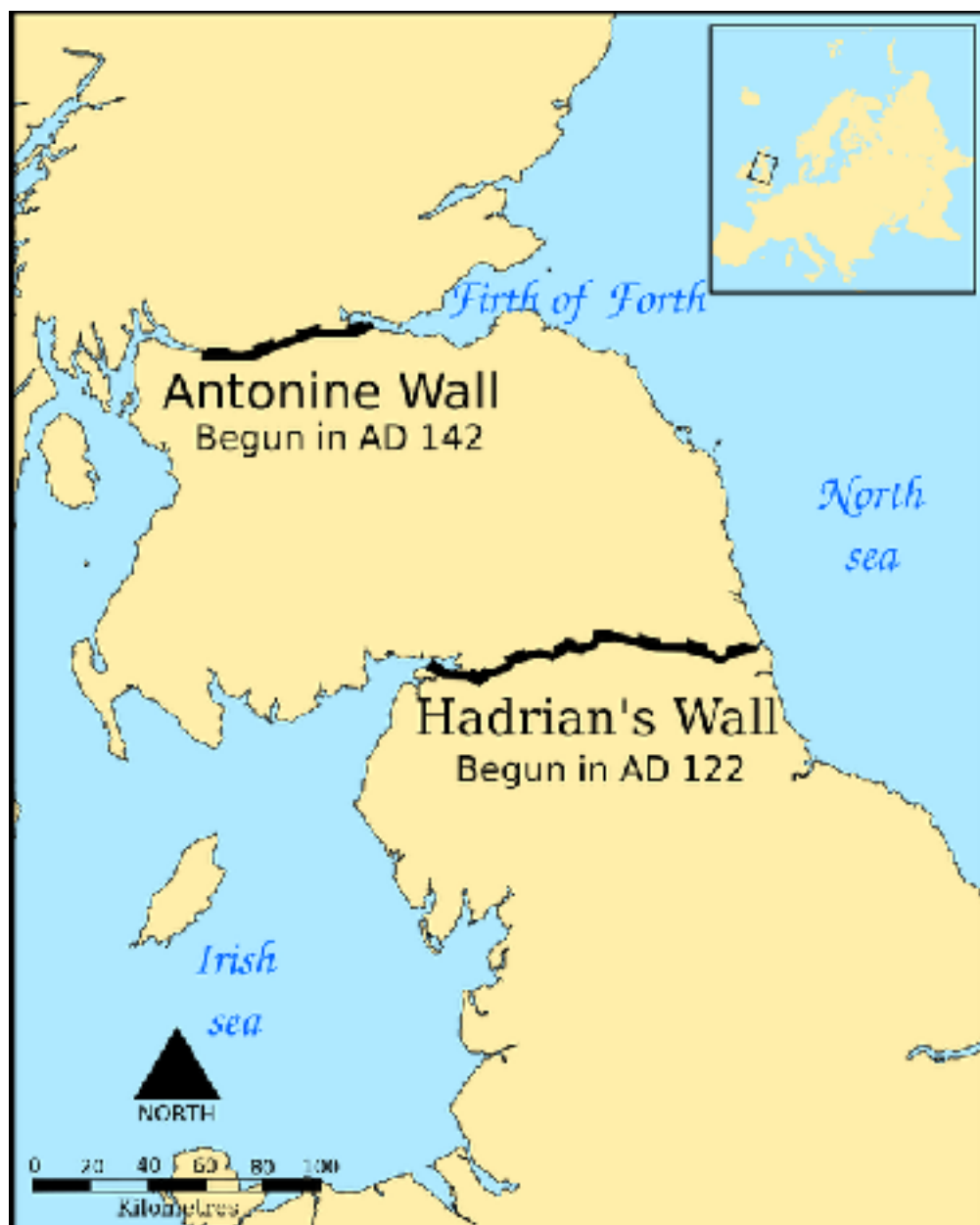


Sarcophagus Belonging to Sardinian, Julia Fortunata



Map of Carthaginian Area of Influence





Created by Norman Einstein, September 20, 2005

Ptolemy of Mauritania, King

Born 13-9 B. C.; Died 40 A. D.



Oppilius Macrinus, Mauritanian Emperor of Rome 217-218



YFull's Present Divisions of our E1a1 Men

- E-M44
1. E-M44*
E-Y15944
E-Y15944*
E-Z17699
E-Z17699*
E-A7710
E-A7710*
E-Y30945
E-Z17697
E-Z17697*
E-Y80883
E-Y32594
E-Y32594*
E-Y35994
2. E-Z17467
E-Z17467* Sardinian and Sicilian Sources
E-Z20646
E-Y20219
E-Y20219* Sardinian Source
E-Z20769 Sardinian Source
E-Y24438
E-Y24438*
E-Y33591
E-Z31503
E-Z31503*
E-BY4136
E-BY4136*
E-BY4135
E-A6108
E-FGC67854
E-FGC67854*
E-A10162

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“Low-Pass DNA Sequencing of 1200 Sardinians Reconstructs European Y-Chromosome Phylogeny,” by P. Francalacci et al., 2013

“The Genetic Structure and History of Africans and African-Americans,” by Sarah Tishkoff et al., 2009

Endnotes

¹ YFull’s E-M44 Tree is shown on page 16, the focus of which is after the number 2. E-Z17467 has Sardinian representatives whose ancestors likely migrated from North Africa.

² In an analysis of the Dogon’s movements in the paper, “E1a1, Its Jewish, Genetic, and Paternal Ties,” page 4, found at <http://exploringe1a1.wordpress.com/>, 7 of the 13 tribal groups to which the Dogon are connected are located in northeast Africa.

³ See page 2 of the paper, “E1a1 Haplotypes of Fulani Pastoralists, Revised,” at <http://exploringe1a1.wordpress.com/>

⁴ On page 2 of “E1a1, A Very Small Haplogroup, Revised,” at <http://exploringe1a1.wordpress.com/>, note the reference to Gallia Celtica found in the Early Period of European history in the Jewish Encyclopedia.

⁵ Z17467* is noted by YFull as a terminal snp for individuals in Sardinia and Sicily. This can be seen on page 16.

⁶ Pausanias wrote of Sardinia’s mythical history in 10.17.2.

⁷ See Wikipedia’s article on Masinissa, a reference for which is found in [The Cambridge History of Africa](#) as well as other places.

⁸ Anthony Birley mentions the unit, Numerus Maurorum, on page 28 of his book, [The People of Roman Britain](#). He says they were a unit of Moors “stationed at Burgh-by-Sands at the western end of Hadrian’s Wall.”

⁹ A Wikipedia article on the Berbers quotes the historian, Sallust, as he spoke about the Mauritians and Numidians.

¹⁰ The Romans not only employed Mauritians in ancient Britain, but also as fighters in mainland European locales. There is even a sculpted picture of them on Trajan’s Column in Rome. See page 3 of “E1a1, A Very Small Haplogroup, Revised,” found at <http://exploringe1a1.wordpress.com/>.

¹¹ According to the Wikipedia article on Vandal Sardinia, which referenced the 1994 work of [La Storia di Sardegna](#) by Francesco Cesare Casula, the Vandals sent Mauri to Sardinia where they lived in the mountains and raided the cities.

¹² See an example of this assertion on page 25 of The Berbers: The Peoples of North Africa by Michael Brett and Elizabeth Fentress who speak about the surrender of Mauritania to the Romans.

¹³ An article by David Derbyshire from June 11, 2004 in The Telegraph at telegraph.co.uk suggests that the Roman unit, Numerus Maurorum Aurelianorum, may have been brought to Britain by the North African emperor, Septimus Severus.

¹⁴ Vivien G. Swan's paper was included in volume 129 of the Proceedings of the Society of Antiquaries of Scotland, published in 1999. Her findings are mentioned in the abstract found on page 399.

¹⁵ Swan, 1999, p. 424.

¹⁶ Swan, 1999, p. 399.

¹⁷ Birley, 1980, p. 79.

¹⁸ Stephen Dando-Collins, author of Legions of Rome, mentions the origin of Legion VI Victrix in association with the 6th Ferrata on p. 141. Both were founded by Pompey.

¹⁹ On page 133 of A History of all Nations, Volume 4, the author speaks of Hannibal's preparations for war with Rome in which he posted 15,000 Spanish troops in Africa and an equal number of African troops in Spain.

²⁰ On page 691 of Arrowsmith's A Compendium of Ancient and Modern Geography..., the story unfolds of how Mauritania Tingitana became part of Rome and the Province of Spain. It occurred because of the power struggle between Antony and Augustus, with Augustus winning and placing Bocchus as the King of Mauritania. Then, in order to facilitate communication and military discipline across the continent, Mauritania Tingitana (western Mauritania) was made a part of the Province of Spain.

²¹ Dando-Collins, 2010, p. 150-1.

²² The 5th Alaudae Legion recruited from Further Spain, while the 2nd Augusta Legion and 7th Gemina Legion posted and recruited, respectively, in Nearer Spain. See Dando-Collins, 2010, pp. 109, 133, and 146.

²³ Dando-Collins, 2010, p. 142.

²⁴ Dando-Collins, 2010, p. 110.

²⁵ I (Flaviae) Afrorum Civium Romanorum is an African Equitata unit whose history provides a direction connection between North Africa and Britain. See p. 15 in Auxillae by Michael DuBois.

²⁶ Birley, 1980, p. 29.

²⁷ Donald L. Watson from Lincoln College in Normal, Illinois provides a synopsis of Macrinus who was born into a poor family in Caesarea in Mauritania. An ambitious Praetorian Guard commander under Caracalla, he killed the emperor in 217 A. D. and assumed power.

²⁸ Birley, 1980, p. 40.

²⁹ Birley, 1980, p. 18.

³⁰ Auxillae, 2015, pp. 268 and 388.

³¹ Both these auxillae were found in Auxillae: Cohortes Peditatae and Equitata, Kindle Edition. II Sardorum Equitata is located at 2111. I Corsorum Civium Romanorum is located at 14072.

³² Birley, 1980, p. 53; p. 66 of Michael T. W. Arnheim's book, The Senatorial Aristocracy in the Later Roman Empire.

³³ J. Norton Dickons, 1898, p. 377, "Roman Yorkshire," Bradford Antiquary: The Journal of the Bradford Historical and Antiquarian Society..., 1900.

By Robert E. Hall, July 12, 2018