

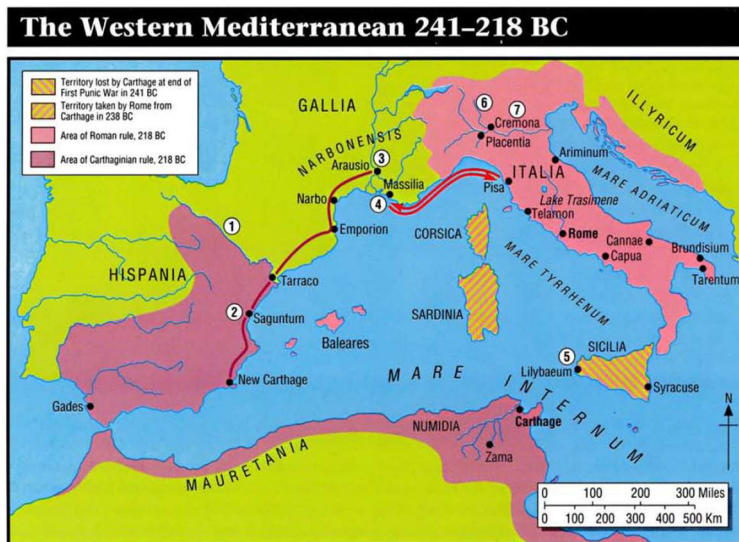
Cannas (216 a.c.) y Zama (202 a.c) A comparison of Victory and Defeat for Hannibal Barca

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Introduction

The second Punic war was fought between 218 a.c. and 202 a.c. The opponents were the Republic of Rome and the City State of Cartage. After the defeat of Cartago's forces by the romans about 30 years previously in 241 a.c, when the romans gained control of the Mediterranean sea from the Carthaginians by turning sea battles into land battles by the use of a boarding device called a corvus, which enabled the romans to benefit from their advantage in land warfare, while neutralizing the Carthaginian advantage of number of ships and experience in naval warfare.

After being defeated in Sicily and losing Sardinia and Corsica, one of the commanders, Hamilcar Barca lead Carthaginian efforts to invade Iberia, establish Carthaginian colonies and cites, and over 20 years turn this province into a source of manpower, supplies, mercenaries and money to sustain the war effort against Rome in the war to come. (figure 1)



Hannibal Barca, eldest son of Hamilcar would continue his father's work. Rome was at the time capable of fielding 700.000 men and 70.000 cavalry according to Polybius (1). This was due to the network of alliances in Italy that Rome commanded. Hannibal's aim was possibly political in the sense of destroying such alliances and therefore weakening Rome indirectly by removing such allies.(1)

Hannibal set out in 218 A.c. with an estimated 90.000 Infantry, 12.000 cavalry and 37 Elephants.(1) Over his campaign he received reinforcements from the Gul tribes as well as some Iberian reinforcements, but very few Libyan reinforcements (1).

Fig. 1 (1)

In 219 a.c. Hannibal started the war against Rome by besieging and conquering Saguntum, a Roman ally on the north east coast of Iberia. He then after resting for the winter of 219 led his army across Gaul where he avoided major battles with the Roman forces by going over the Alps and into Italy, this was not tried before, and the Romans did not expect this strategic maneuver. This was a very hard march thru the Alps in winter, Hannibal lost about three quarters of his army, at the time consisting of about 68.000 Infantry and 10.000 Cavalry and 37 elephants, it went down to maybe 26.000 infantry and 6.000 cavalry. (8) The elephants are not mentioned in the Italian battles.

Followed a series of Major battles, Trebbia, Trasimere and finally Canne in 216 a.c In each of these battles Hannibal defeated larger and larger Roman armies thru good generalship. The main tactics used was the ambush, flanking, hammer and anvil tactic and the double envelopment. These defeats led the Romans to raise a very large army which engages Hannibal at Cannae.

Cannae (216 a.c.)

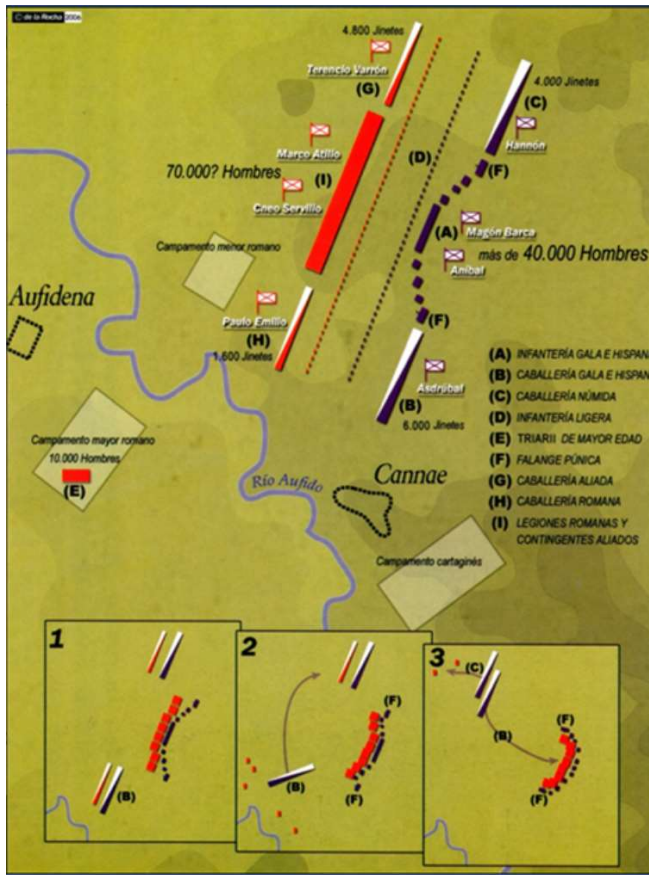


Fig. 2 (4)

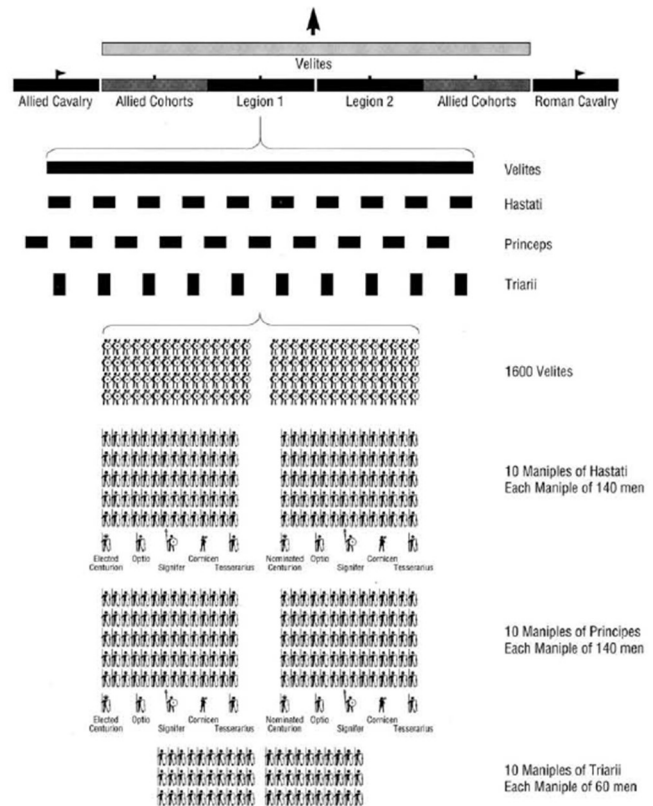


Fig. 3 (1)

The Roman army had been depleted by the previous battles, and for Cannae the Romans raised 8 legions, each of 5000 men, together with the allied troops that formed the other half of each legion. In total, the Romans fielded about 80,000 infantry and about 5,500 cavalry, including extra levies of cavalry from allies. It is thought that due to the heavy losses in previous battles, most of the army was not well trained or experienced. (1)

The standard Roman tactic was to place the army in 3 lines of heavy infantry, light infantry protecting the front and the cavalry on each side to protect the heavy infantry from the enemy flank attack. (figure 3) The first line of heavy infantry was composed of Hastatii, younger men who had proven themselves in battle as light troops, they usually were equipped with a helmet, a small chest armor, a large shield, short sword and a pilum throwing spear.

The Second line composed of more experienced and wealthy men, Principes was equipped similarly to the Hastatii, but with more armor in the form of a chain mail and possibly leg protection, according to what they could afford. (fig 4)



Fig. 4 (1)

The Third line was traditionally composed of the oldest and most experienced men, the Triarii, They were equipped Similarly to the younger cohorts, with the exception that instead of pila, they would bear longer spears to battle, similar to the greek phalanx. (6)

The light troops consisted of Velites, young men armed with daggers, small shields and javelins.

Finally the Roman cavalry numbered about 300 per legion, and was composed of the richest layer of society, they would be equipped with spears, round shields, helmets and chain mail or cuirass. They would fight with their spears as shock cavalry.

The Carthaginian army was not as homogeneous as the roman. It consisted of several troop types, from different tribes and cities. Hannibal disposed of about 40.000 infantry and 10.000 cavalry.

Lybian heavy infantry fought in typical Macedonian phalanx style with long pikes, they were the most experienced and heavily armored and armed men.

Iberians provided light troops armed with javelins, including the deadly solid iron soliferum, main line infantry armed with a pectoral protection, gladius, spear and shield. As well as and shock cavalry armed with helmet, chainmail or pectoral, falcata swords and spears (fig 5).



Fig.5(1)

Gauls provided a large part of the combat forces, mainly combat infantry, armed with shields and long swords, as well as helmets. Gaul nobles were armored with helmet shield and chain mail as well as long sword and spears and fought as shock cavalry. (fig 6)

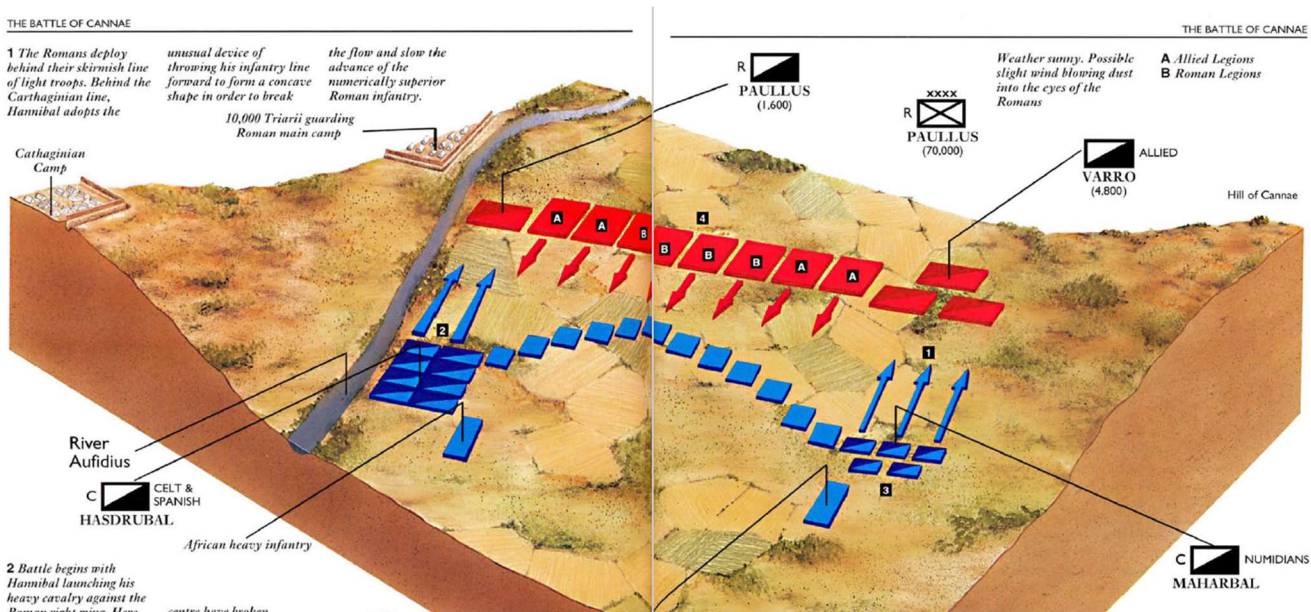


Fig. 6(1)

Balearic Slingers were very light infantry armed with slings and short swords.

Numidian cavalry was armed with javelins and fought mostly as skirmishers. They were very effective cavalry and provided the decisive blow in Hannibal's army on many occasions.

Fig 7 (1)



At the battle of Cannae, the numerically superior Romans deployed in a single long and deep line formation of infantry, with light infantry to the front and cavalry on the flanks. On the left, Varro commanded, with about 4800 cavalry. On the

right Paulus commanded with 1600 cavalry. (fig7). The army was protected on the flanks by a river on the right and a hill on the left.

Hannibal deployed his Iberian and Gaul cavalry on the left, about 6000 cavalry against Paulus 1600 Roman cavalry. On the Right he deployed 4000 Numidian cavalry against 4800 Italian allied cavalry commanded by Varro. In the center Hannibal placed Iberian and Gaul infantry in a convex formation, supported by the light infantry in the front. On his flanks as a reserve he put his Libyan heavy infantry as a reserve.

In the first stage of the battle, both cavalry wings engaged each other, while the roman line engaged with Hannibal's convex line formation. (fig 2)

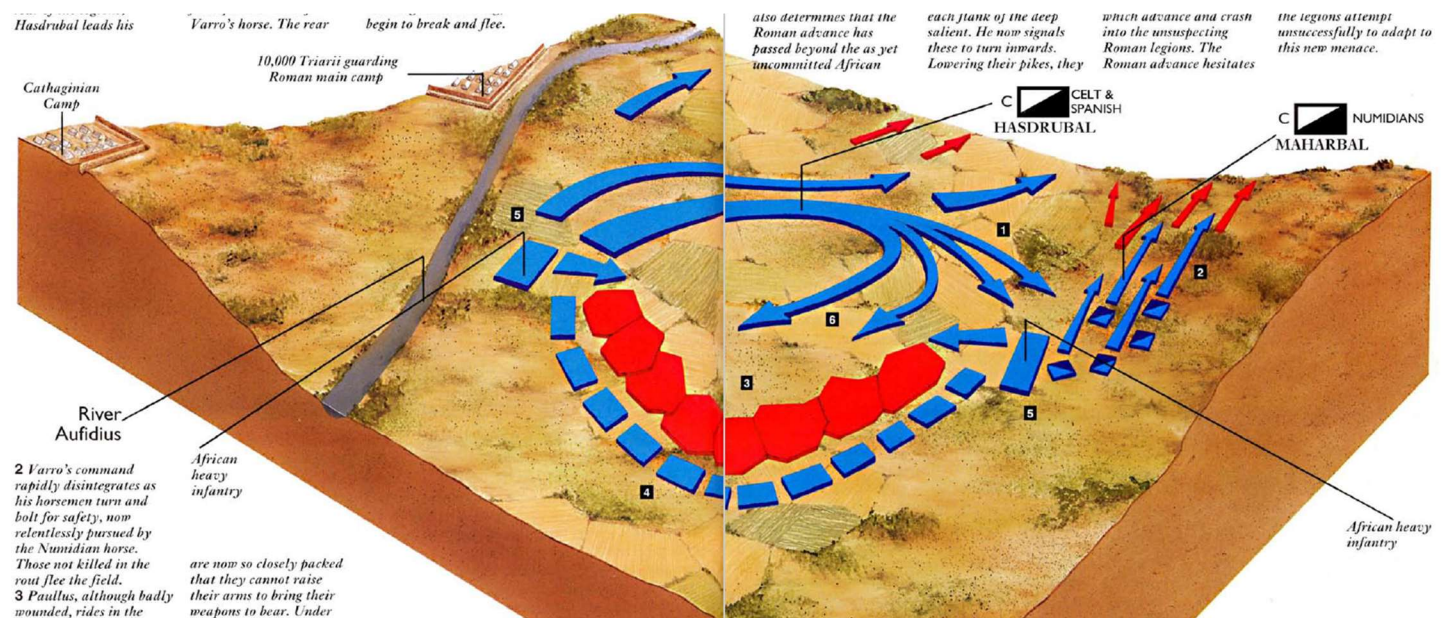


Fig 8 (1)

In the second stage the roman line became disorganized, as it pushed the opponents back, until they had inverted Hannibal's formation. On the Carthaginian left flank, Paulus was defeated, his cavalry scattered. The Iberian and Gaul cavalry then rode behind the roman lines to the aid of the Numidian cavalry on the right flank which it defeated. (fig 8)

During the third stage of the battle, the Libyan infantry on the flank of the Carthaginian line attacked the flanks of the Roman line. While at the same time the Carthaginian cavalry attacked the romans from behind. (fig 8)

The result was the destruction of the roman army. Casualties are estimated to have been 47.000 infantry killed, 2700 cavalry killed and 19.300 taken prisoner. On Hannibal's side, it was estimated 8.000 casualties. It was the worst defeat of the Roman army in it's history.

Cannae analysis

Hannibal won this battle against an enemy almost twice as large. The first key factor in the battle was the cavalry battle on the flanks. Specifically, Hannibal used the less numerous (4.000) but more agile skirmish light cavalry of the Numidian to occupy the Italian allied shock cavalry (4800), thus preventing it to have an effect on the battle until the roman cavalry on the right flank was defeated by overwhelming Iberian and Gaul shock cavalry of 6.000 riders against 1.600 roman riders.

The second key to the battle was the poor roman deployment. Usually in this period the roman army would deploy in independent sections called maniples, composed of 140 men for the Hastati and the Princeps, and 60 men for the Triarii (fig. 3). This did not take place at the battle of Cannae, according to the sources, the romans and italian allies deployed in a long deep line, more similar to the phalanx formation. The second deployment error was the asymmetrical deployment of the cavalry, this gave Hannibal, due to his superior numbers, the possibility to overwhelm one flank of the roman army, while keeping the other occupied with lighter skirmishing cavalry that was more difficult to pin down and defeat. Finally, the sources relate that the roman army was not fully deployed on the field, 10.000 Triarii, the most experienced and reliable troops, did not participate in the battle at all. This lack of reserves enabled the Cartaginians to exploit their advantage on the flanks.

The third key to the battle was the performance of the line infantry. It is unclear and very debated whether the Cartaginian line formation in a convex in the middle was on purpose or a result of placing impulsive Gaul infantry. Instead of the usual deployment of each contingent in it's own section of the line, Hannibal placed the Gaul and Iberian infantry intermixed, so it might be that the Gauls advanced eager for battle, and the Iberians maintained their formation for fear of opening the line. In any case, once the infantry was engaged, the Carthaginian line withdrew, forcing the roman infantry into a "pocket" where it became more vulnerable to flanking by the more experienced and heavily armed Libyan infantry that Hannibal placed on the flanks of his infantry line, in reserve. As the romans pushed the Iberians and Gauls back, their flanks became exposed to the Libyan Phalanx, which prevented the romans from disengaging, and subsequently being attacked in the rear and surrounded by the victorious cavalry.

Zama (202 a.c.)



Fig 9 (7)

The battle of Zama took place in 202 a.c. so about 15 years after Cannas. While Hannibal had waged a long campaign in Italy, the roman commander Scipio, who survived Cannas, was given control of the roman legions sent to Iberia in 210 a.c. He spent many years fighting in Gaul and Iberia against Carthaginian forces led by Hasdrubal Barca, Hannibal's younger brother, with the aim of destroying the logistic and political support for Hanibal who was still campaigning in Italy, undefeated. In 204 a.c. Scipio invaded north Africa and conducted a campaign against Carthago. Following the battles of Uttica (203 a.c.) and Bagrahdas (203 a.c.) the ruling council of Cathago called Hannibal to return and lead the city's defense against Scipio.

Hannibal returned to Africa with most of his infantry veterans, however, most of the cavalry was left behind. Together with citizen troops and mercenaries and allies of Carthage, Hannibal counted with about 40.000 infantry, 4.000 cavalry and 80 elephants.

Scipio counted with two strengthened legions with 25.000 infantry and 1500 cavalry. Allied Numidians counted with 6.000 light infantry and 4.000 cavalry. Additionally, 1.600 Numidian cavalry joins the Romans. In total 31.000 Infantry and 7.100 cavalry.

The Roman consular army of the time would deploy in bodies of men called cohorts, of 60 men each, two cohorts would form a maniple of 120 men. (7) Each legion was composed of 10 maniples of each of Hastati and Princeps. The Triarii formed 10 cohorts of 60 men each in one legion. Also composing each legion were 1200 Velites and 300 cavalymen.

The deployment of the legion would be cavalry on the sides, velites in the front, and the line infantry in 3 lines, with the Hastati in the front line, the Princeps in the second and Triarii in the third. The lines would in regular circumstances be offset from each other, allowing the movement of men between lines. The exact details of this capability are still to this day very debated.

(fig 3) One example given in Bahmanyar 2016 (fig. 8) is that the maniples would maneuver in close order, and deploy into open order for combat. This would allow the soldiers enough space to fight when engaged, and allow quick movement when not engaged. In any case, the romans were able to reinforce as well as replace maniples in the line during combat according to the sources. (7).

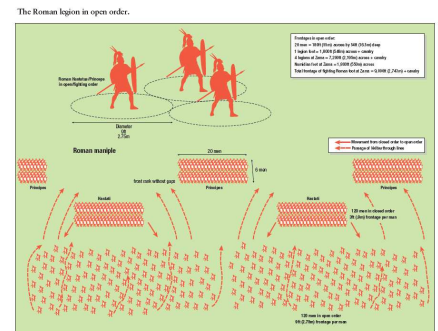


Fig 8 (7)

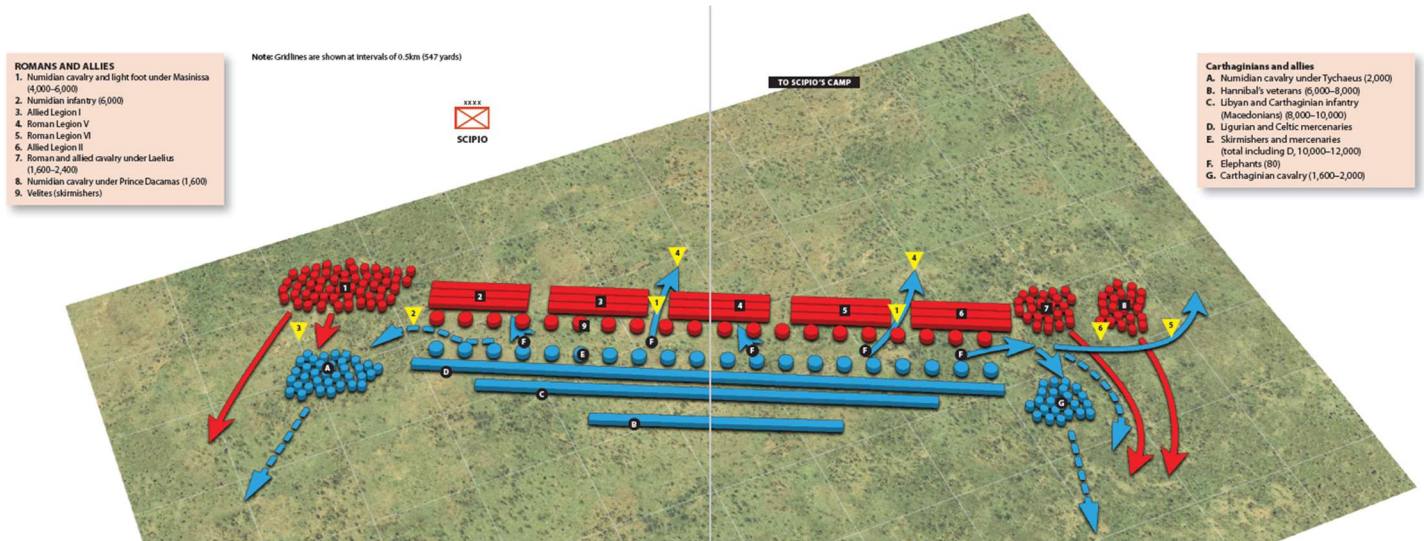


Fig 9 (7)

For this battle Scipio deployed his legions in the standard 3 lines, however, the second line maniples instead of being offset as in fig 3, were placed directly behind the front maniples of Hastatii, with the Triarii behind them. Scipio had velites fill the gap between the maniples so that it looked like a solid line to the Carthaginians. The remaining Velites and light troops deployed in the front, about 2.400 Italian and Numidian cavalry on the roman left and 4.000 Numidian cavalry on their right flank. (fig 9) (7) Finally, Scipio keeps the roman cavalry in reserve with him behind the army, about 600 riders.

Hannibal deploys about 2.000 cavalry on each flank and 80 elephants and light troops on his front rank. (fig 9) Further, Hannibal deployed his infantry in 3 lines these were solid lines, the sources relate that there were no gaps unlike the roman lines.

The first line of infantry consisted of 12.000 Carthaginian mercenaries from africa, mostly Gauls and Ligurians and Iberians. The second line consisted of 10.000 unexperienced and newly trained Carthaginian citizens as well as Libyan allies and Macedonian allies. (7) The third line is placed 180m behind the second and consisted of about 8.000 veteran warriors from Hannibal's campaign in Italy, Iberians, Gauls, Lybian and Italian allies very well equipped after defeating numerous roman armies over the years.

The first phase of the battle (fig 9) starts with the elephants charging Scipio's lines. To counter this, the romans make space between the maniples of Hastati by withdrawing the Velites, this creates space for the elephants to charge thru instead of into the roman lines. The roman allied Numidian cavalry, used to work with elephants also moves forward to engage with javelins. Also the roman Velites harass the elephants with javelins, while the romans sound loud trumpets to scare away the elephants. The result is that the elephants do not have the desired effect. On the let side of the Carthaginian line some elephants charge their own cavalry, causing great alarm. The roman cavalry takes advantage of this and pursues the Carthaginian cavalry on the roman right (4.000 Numidians). On the left, similarly, the Italian and Numidian cavalry defeat the Carthaginian cavalry and start pursuing.

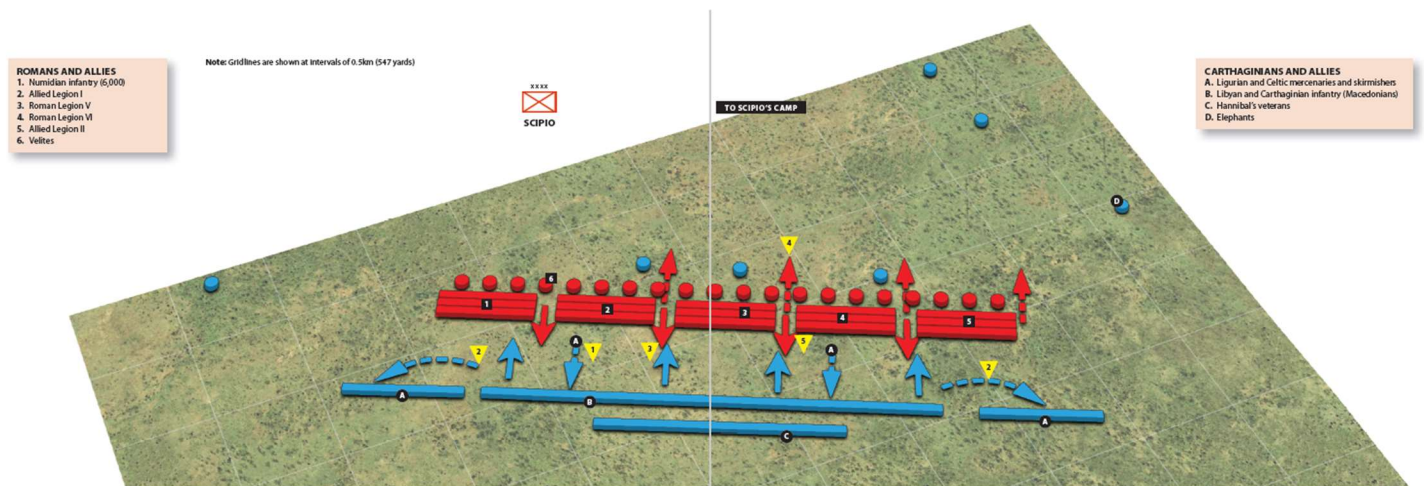


Fig 10 (7)

The second phase of the battle starts after the roman light infantry and cavalry defeats the opposing elephants, cavalry and light infantry. The Velites and Numidian light infantry retreat behind the battle line.

The Hastatii move forward to engage the Carthaginian first line of mercenaries. These they defeat, and they flee to the cartaginian flanks. However, sources recount that many tried to retreat thru Hannibal's second line and were killed by their own side.

The romans keep pressing forward against the second line of Carthaginian citizens, Libyan and Macedonian allies. The Hastatii reinforced with Princeps along the line also succeed, and the Carthaginian second line suffers the same fate as the first, retreating and being cut down by it's own side.

At this point Scipio withdraws his battle line and reforms it, extending his battle line to match the Carthaginian, which has become wider due to the retreating first and second lines being rallied and formed on the flanks of Hannibal's veteran warriors. He places the Hastatii in the center, against Hannibal's veteran fresh troops, the Princeps on each flank of the Hastatii and the Triarii

The larger distance between the second and third line as well as Scipio's pause to reform his troop gave Hannibal enough time to rally some of the fleeing soldiers from the first two lines in an attempt to outflank the roman formation.

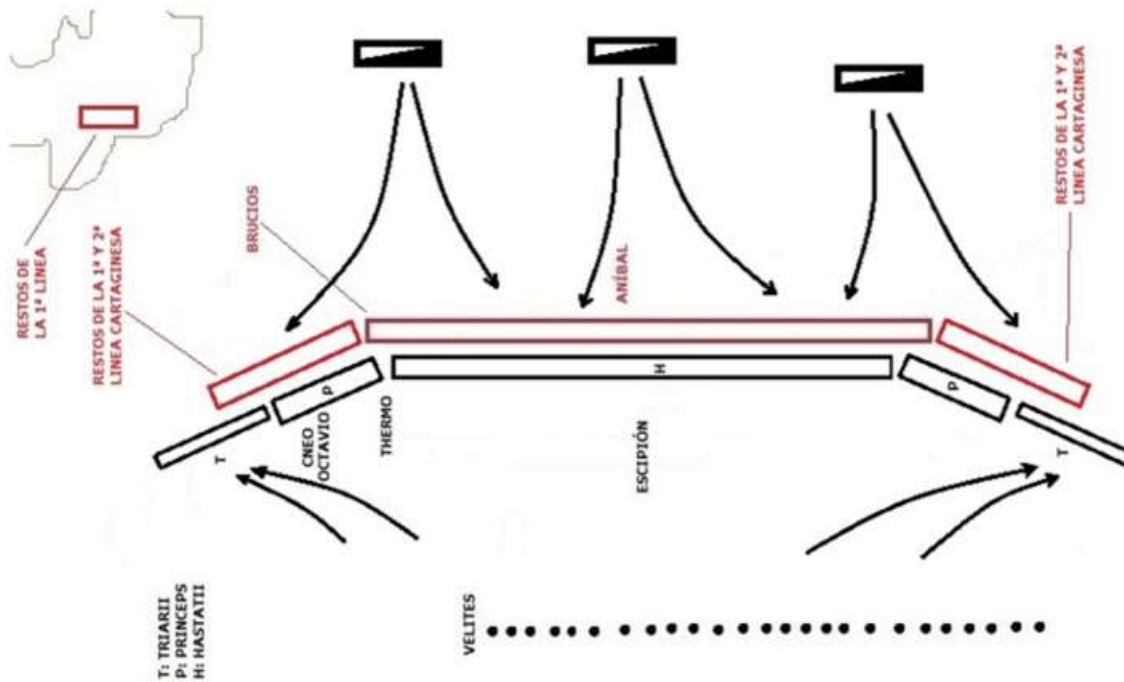


Fig 11 (5)

In the third and final phase of the battle (fig 11), Scipio advances his line across the battlefield, it is difficult going due to the remains of battle. While the infantry clashes, the roman cavalry returns from pursuing the Carthaginian cavalry and attacks Hannibal's army in the rear. With this development, Hannibal orders his army to retreat from the hopeless position.(8)

The losses for the romans are reported between 2.000 and 2.500 dead, and 1.500 Numidian allies dead, so perhaps as many as 4.000 dead, unknown but probably at least as many wounded. For the Carthaginians reports are between 20 and 25.000 dead and 20.000 prisoner.

Hannibal manages to retreat from the battle, and continues as a mercenary general in the near east until his death around 183 a.c.

Zama Analysis

Hannibal lost this battle against a less numerous enemy who did not have elephants. However, he was outmatched in cavalry.

The first factor to consider is the use of elephants by Hannibal. According to some sources, many of the animals were barely trained for war, having been recently been captured. (7) Combined with the roman's knowledge of how to defeat elephants, probably gained from their Numidian allies, the use of elephants proved to be a in my opinion neutral for the Carthaginians. I believe this because the negative effect they had, to disrupt the Carthaginian cavalry would have in my opinion happened in any case due to the large advantage in cavalry that the romans had. I agree that it is likely that Hannibal's plan was to draw away the roman cavalry from the battlefield and thus remove their advantage. He almost succeeded in this stratagem, and its failure caused the destruction of his army.

The second factor to consider is the advantage of cavalry that the romans possessed. It was due to Scipio's long efforts in attracting former Carthaginian cavalry commander Massinisa, which brought to the roman side 4.000 cavalry and 6.000 infantry. This also resulted in other Numidian lord Dacamas to join the romans with 1.600 Numidian cavalry. This advantage prevented Hannibal from having his usual advantage in cavalry, which proved to be decisive given he had left behind his own cavalry in Italy. It is possible and there are many examples of pursuing cavalry not returning to the battlefield. I believe that it was the experience of Scipio's cavalry both Italian and Numidian meant that did return to the battle and proved to be crucial. I believe that this factor was important, but it would not have resulted in the defeat of the roman army if the cavalry had not returned.

The third and I believe most important factor in the battle was the employment of the infantry. The differences between the Roman and Carthaginian infantry quality seem to me to be decisive. The roman Hastatii did not panic and flee when faced with elephant charges. Also, the Hastatii particularly maintained fighting effectiveness when engaged with Hannibal's veteran warriors in the third line, even after facing two lines of combat during the several hours of the first two phases of the battle. I believe that it is this performance of the Hastatii combined with the use of fresh Princeps and Triarii troops facing Hanibal's previously defeated troops of the second and first lines that made the final outcome a roman victory very likely. Two reasons for this are, first the historical precedent of heavy infantry being defeated when engaged in the flank or rear, whether at Marathon 490 a.c. or at Cannae 216 a.c., secondly I see the possible development of the battle in a manner mirroring Cannae, where the Hastatii would be pushed back by Hannibal's veterans, while the Triarii and Princeps defeated and pushed back the remnants of the first and second lines resulting in enveloping the Carthaginian army, even if the cavalry had not returned.

Conclusion

In a way, the battles of Zama and Cannae are mirrors of each other. At Cannae, Hannibal flanked the roman army with his heaviest and most experienced Libyan infantry which he had held in reserve. After having defeated the less numerous roman cavalry, Hannibal's riders struck the roman army in the rear and cut off escape, resulting in a full envelopment of the roman army. This I believe was the result of the romans losing their tactical maneuverability on the battlefield by forming up in a long and deep line. This was likely due to both the inexperience of the roman troops, having been newly raised and trained, as well as challenges in the command of the army, it seems from the sources that the consuls did not agree with each other on the plan of battle, they placed themselves on the flanks with the cavalry, and one of them, Paulus died as a result.

At Zama, the romans had learned some lessons from Hannibal, as well as having improvements of their own. First roman infantry was deployed in an articulated fashion, this means that each maniple was able to maneuver and fight and come to the aid of sections of the line that were weaker, without compromising the integrity of the battle line if any individual maniple weakened or even failed. This was strongly contrasted when in the second phase of the battle, Princeps maniples were able to support or replace Hastatii maniples that were weakened from the fighting, while the Carthaginian first and second lines failed, were pushed back against their own back line and could not escape, even being killed by their own side in order not to disrupt the formation of the rear lines.

Finally, both battles resulted in envelopment of the infantry by their opponent, and a devastating rear charge by cavalry and subsequent envelopment.

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