FORTIFICATIONS OF SYRACUSE: DIONYSIUS I

405 TO 396 BCE

by

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It is clear that the fortifications of Syracuse were completed in several stages, the 3 most prominent phases occurring under Dionysius I, Agathokles and Archimedes, that is between 405 and 212 BCE. There are a few theories that provide a chronological sequence for the construction of these fortifications. This paper concentrates on the phase conducted under Dionysius from 405 to 396. The only fortifications that all scholars are able to agree were built between 405 and 396 are the fortifications at Ortygia and the northern part of the Epipolae circuit wall from the Euryalus fort to the sea (figure 1). For the rest of the fortifications along the Epipolae plateau, there is a general consensus as to when they were built, but not all scholars are in agreement. I hope to show that Dionysius also oversaw the first phase in the construction of the southern section of the Epipolae circuit wall, the Euryalus fort, the Epipolae gate and towers 2 through 5 between 405 and 396 (figure 1). The first section of this paper will introduce the more prominent sources in relation to the Syracusan fortifications. Then the following sections will show, in sequence, how geographically, historically and archaeologically the evidence points to a date for the construction of the southern section of the Epipolae circuit wall, towers 2 through 5, the Euryalus fort and the Epipolae gate between 405 and 396.

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Table of Contents

List of Figures

List of Tables

I. *Discussion of Sources*

Diodorus Siculus is our most important primary source. He was born in Sicily and would have had access to the local historical tradition. He also knew Sicily and would have recognized the places mentioned by earlier authors. His familiarity with Sicily is what makes his account so important. However, his history could be less accurate than scholars would hope for because it is not contemporaneous with the era of Dionysius (432-367). He published his account after 30 BCE during the reign of Augustus, which leaves a 300-year gap between him and Dionysius (Karlsson, p. 11).

Unlike Diodorus, Thucydides' (460-400 BCE) was contemporaneous with Dionysius. In his history, Thucydides provides a vivid description of the Athenian siege of Syracuse. His history ends after the conclusion of the Syracusan operation (6.63-7.8, 7.36-7.87, 8.109). Therefore, Thucydides is also an important primary source as his account provides the historical information necessary for addressing the Athenian siege of Syracuse from 415 to 413.

The most important secondary historical accounts are Paul Kern's *Ancient Siege Warfare* and Brian Caven's *Dionysius I Warlord of Sicily*. Kern describes the development of siege tactics during the reign of Dionysius (405-367), while Caven looks at every aspect of his reign. Kern and Caven both agree, as I do, that the Epipolae circuit wall was built by 396 (Caven, p.88). However, they rely on Diodorus' account almost verbatim in most instances and do not elaborate on what specific fortifications were built. They simply restate, "the added strength of the wall made it impregnable to assault, for there were lofty towers at frequent intervals and it was constructed of

stones," (Diodorus, 14.18). Moreover, neither Caven nor Kern makes significant use of archaeological evidence to support their argument.

Figure 1: excavated fortifications that will be discussed, *From Karlsson, p. 21*

Unlike the accounts of Caven and Kern, this paper incorporates archaeological evidence. Paolo Orsi conducted the original excavations and he did not provide much valuable information because he labeled most finds as 'insignificant things' (Karlsson, p. 36). Since these excavations, there have been two archaeological studies which look at the Euryalus fort and its surrounding fortifications, including towers 4 and 5, the Epipolae gate, and the circuit walls connected to the fort. Arnold Lawrence, who wrote the first study, *Archimedes and the Design of the Euryalus Fort,* in 1946, attributes most

of the fortifications to the time of Archimedes. Lawrence postpones the date because of how hastily some fortifications were built.

The more recent and more prominent study conducted by Frank Winter attributes much of the fortifications to Agathokles (316-289). Winter proposes this date due to the development of poliorcetics, or siege strategy, during the middle and end of the fourth century (*Chronology of the Euryalus Fortress at Syracuse*). Most scholars agree with Winter's argument, but also believe that later additions were made by Archimedes, as Lawrence suggests. The most recent study, Lars Karlsson's *Fortification Towers and Masonry Techniques in the Hegemony of Syracuse, 405-211 B.C.*, extends Winter's argument to include nearly all of the fortifications along the Epipolae plateau.

II. *Geographical Evidence*

Syracuse is located in the southeast corner of Sicily (figure 2). Geography dictates that certain positions were important to the safety of the city and required fortifications. The first and most important of these positions was The Epipolae plateau. It was located just north of Syracuse (figure 3), and was the highest point near the city. This was the ideal location from which to lay siege to Syracuse (Kern, p. 175). If the besieged army came out of the city to fight, the high ground provided the besiegers with a ready defense. Conversely, the high ground made it easier to trap the populace inside the city, and created additional protection against missile fire, as shooting uphill is much more difficult than shooting down.

Figure 2: map of cities mentioned, *From Thucydides map 2, Blank map from nasa.gov*

Rock cliffs made most of the Epipolae's edges hard to climb. However, the second position that needed fortifications, known as Euryalus, did not have these rock cliff edges. Instead, Euryalus provided a natural ramp on the plateau's far western edge, making it the best location to access the plateau (figure 3). Due to its gradual elevation, a single wall along Euryalus would likely not have been able to hold off an enemy advance. Therefore, Euryalus required extra fortifications.

Opposite the Epipolae plateau on the south side of the city is the third position, the island of Ortygia. This island provided access to the sea and the Syracusan coastline (Kern, p. 174). If a besieging army were able to take Ortygia, they could cut off Syracuse's connection to the sea, and launch amphibious-style naval attacks on the city from the sea. However, with the island fortified, it could act as a redoubt should the city ever be taken.

Figure 3: view of ancient city, Epipolae plateau, Euryalus, Anapos, and Ortygia, *From Rorres, Secrets of Lost Empires (various Figures)*

Finally, towards the southwest of the city are marshes, as seen in figure 3. This is an area that should be avoided by besieging armies (Kern, p. 185). Land armies would be bogged down, especially with siege equipment, and marshes tend to be a vector for disease. However, just to the south of the marshes were some small hills. Due to its proximity to the island of Ortygia, the city, the Anapos River and the sea, this was a suitable location for a besieging army's naval base. From this location, a naval division could attack the island of Ortygia and the southern part of the city from the sea and hinder any aid or trade from coming up the Anapos River valley.

Geographically it made sense for the Syracusans to fortify the Epipolae plateau, Euryalus and the island of Ortygia. With these areas protected and the city fortified,

any army, especially when approaching from the south or west, would have little option but to set up an encampment south of the Anapos River.

III. *Historical Context and Evidence*

The two precursors to the poliorcetics of Dionysius are the Athenian siege of Syracuse from 415 to 413 and the Carthaginian invasions of 409 and 406. I will first establish the historical context of these invasions. Then I will show how each of these influenced Dionysius and his decision to build fortifications along the Epipolae plateau by 396.

Syracuse was one of many Greek city-states throughout the Mediterranean. Over the centuries, the Greek peoples spread out across the Mediterranean and established settlements from Turkey to the south of France. By the fifth century, a number of Greek city-states had developed on Sicily. Through the gradual accumulation of power, Syracuse became the most dominant Greek city-state on Sicily at this time (Caven, p. 6).

However, Syracuse could not lay claim to being the most powerful and influential Greek city-state in the Mediterranean. That status belonged to Athens who, in 415, laid siege to Syracuse. At this time, Athens had given its support to Segesta in their fight against Selinus, who Syracuse supported (Thucydides, 6.6). The Athenians decided to besiege Syracuse in order to stop the source of the problem.

When the Athenians besieged Syracuse, they set up for a siege investment (Thucydides, 6.99-6.103), a technique whereby a besieging army surrounded the city and cut off the supply lines. Its purpose was to cause starvation, turmoil and civil strife

in order to destroy the city from within, or lure the defenders out of the city into open battle. To do this the besieging army must quickly erect investment fortifications.

Although this was the most common Greek siege strategy, the Athenians were the best at it. Their ability to erect fortifications in only a couple of days amazed the Syracusans (Thucydides, 6.98). Scholars estimate that they were able to build 1.5 kilometers of wall in two weeks with 9,000 men (Kern, p. 129). The Athenians began building their investment fortifications on the Epipolae plateau, which they accessed via Euryalus (Thucydides, 6.97). Their walls stretched from the coast just south of Syracuse, up through most of the plateau and they were less than a mile away from completing their investment walls in two years, (figure 4).

The Athenians may have actually succeeded in conquering Syracuse had relief armies not arrived from Sparta and Corinth lead by Gylippus. As Thucydides explains:

> He [Gylippus] had arrived just at the time when the Athenians had completed nearly a mile of their two lines of wall to the Great Harbour, with only a short stretch left to the sea on which they were still working and their other wall to the north and the sea by Trogilus already had stones laid along most of its route, and part was completed, part left half-finished. This was how close Syracuse came to destruction. (7.2)

When Gylippus arrived with his men in the summer of 414, he came up behind the Athenian walls, via Euryalus, and was able to halt the Athenians' circumvallation of Syracuse. Gyllipus then helped the Syracusans build and defend cross-walls in order to stop any possible continuation of the Athenian investment, seen in figure 4 (Thucydides, 7.3-7.6). Over the next year, the Syracusans, Corinthians, and Spartans forced the Athenians off of the Epipolae plateau and into a withdrawal (Thucydides, 7.47-7.87), thereby ending the Athenian siege of Syracuse.

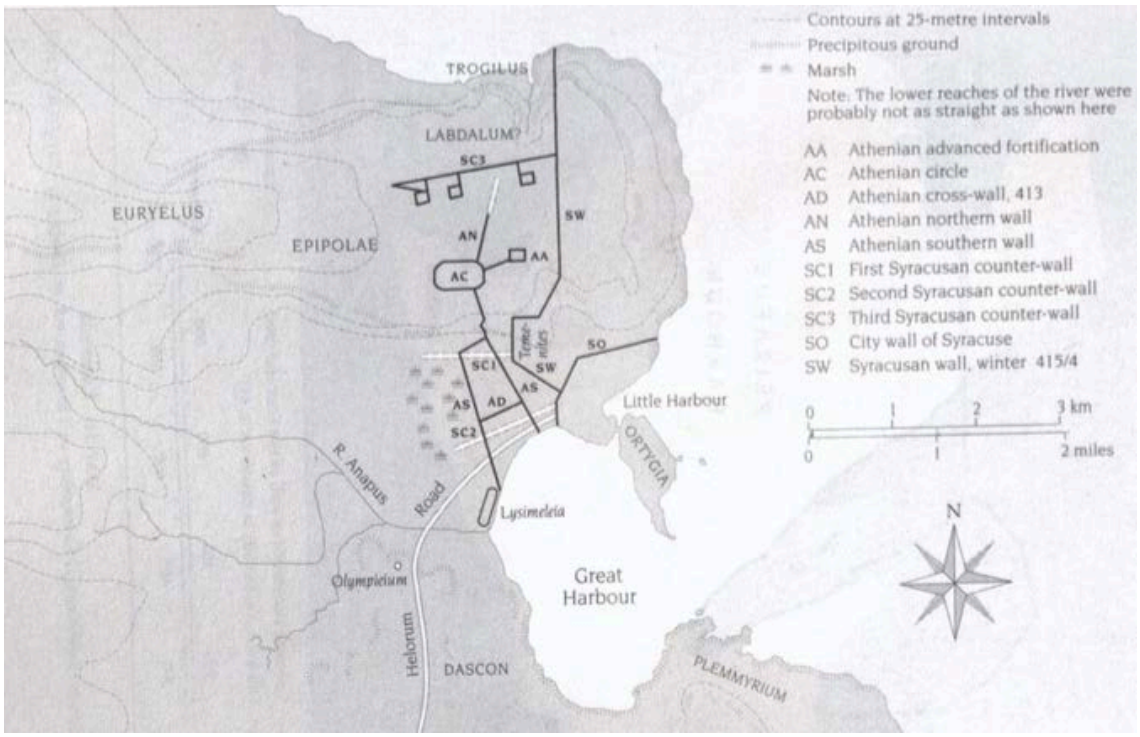

Figure 4: map of Athenian investment walls and Syracusan cross-walls, *From Thucydides map 9*

Then in 409 Carthage began their invasion of Sicily. Unlike the Athenians, the Carthaginians took a quick and direct approach to siege warfare. Instead of investing a city, they picked the most strategic points where the wall was weakest and attacked them immediately with rams and siege towers. They often tore down monuments and graves in order to access the city's weaker defenses and as a way to intimidate the besieged populace. The material salvaged from these graves and monuments provided useful supplies to build more siege equipment, such as the head of a siege ram. The Carthaginians also employed amphibious battle-strategies. They would often sail foot soldiers to different parts of a battle to outflank an enemy, or attack the harbor at the same time as they were attacking the walls. They even used peltasts on both land and sea to harass enemies along a city wall (Kern, p. 163-173).

During the Carthaginian campaign of Sicily in 409, the first city they attacked was Selinus, which they took in only ten days. Sicilian Greeks had never experienced such a quick loss in a siege. The Carthaginians then went on to conquer Himera (figure 2) (Diodorus, 13.56-13.62). They slaughtered and enslaved most of the population, and destroyed the city, thus taking two cities in one season. This was unheard of in Greek Sicily, and the utter destruction of Himera was astonishing. In 406, the Carthaginians invaded again. This time, they took three cities, Akragas, Gela, and Camarina (figure 2).

The Carthaginians attacked Akragas first. Syracuse sent an army to aid in the defense of the city, but to no avail (Diodorus, 13.81-13.87). Dionysius was one of the commanders in the Syracusan army sent to reinforce Akragas, and he was noted for his bravery during the siege. After this siege is when Dionysius began to build his reputation. He attacked and ruined the reputation of the other Syracusan generals who were at Akragas for abandoning the city. These other generals also happened to be his greatest political opponents. Eventually, he had them executed and replaced with men loyal to him. Then, he began to play upon the Syracusans' fear of the Carthaginians, and because they feared the Carthaginians more than Dionysius, the Syracusans allowed him to become tyrant (Diodorus, 13.92-13.96).

In the following sieges of Gela and Camarina, Dionysius led the Syracusan reinforcement armies. Dionysius now knew the ferocity and ability of the Carthaginian poliorcetics having fought at Akragas. Therefore, in order to save the people of Gela and Camarina, Dionysius arranged a mass evacuation of their populations to the Syracusan countryside (Diodorus, 13.93-13.112).

Then, in 405, Dionysius decided to sign a peace treaty with the Carthaginians in order to buy more time to prepare for the eventual continuation of war (Diodorus, 13.114). He knew the Syracusans in their present state could not contend with the Carthaginians, but with enough preparation they might. The goal of these preparations was to destroy Motya. The Carthaginians had established Motya as their main base of operation on Sicily and Dionysius wanted to destroy it as retribution for all the Greek city-states the Carthaginians had recently conquered. Between 405 and 396, Dionysius put his plan in motion. (Kern, p. 179).

During this period, Dionysius hired many mercenaries and craftsmen from all around the Mediterranean and divided them up by skill set. One of these unknown craftsmen invented the first catapult, the gastraphetes (Diodorus, 14.41, 14.42). The gastraphetes was an early form of the ballista. It had a curve at the butt end so a soldier could rest it on his belly (figure 5). It used heavier bolts, and could launch them further, up to 250 yards, with more accuracy and force than any projectile before (Pauly, Vol. 3, p. 9, p. 10). He also took the common warship of the time, the trireme, and improved and expanded upon it creating the quinquereme, a boat with five benches that could carry more men and equipment (Diodorus, 14.42). With these new inventions, 80,000 infantry and many more siege rams and towers Dionysius was ready. In 396, he destroyed Motya and burnt the city to the ground (Diodorus, 14.49-14.52).

Once he destroyed Motya, Dionysius must have known that the Carthaginians would retaliate, and lay siege to Syracuse. Therefore, in the nine years between the treaty in 405 and the destruction of Motya in 396, Dionysius would have begun to

prepare defensive works as well to protect against the coming siege. And it stands to reason that, like the rest of his preparations, they would be extensive.

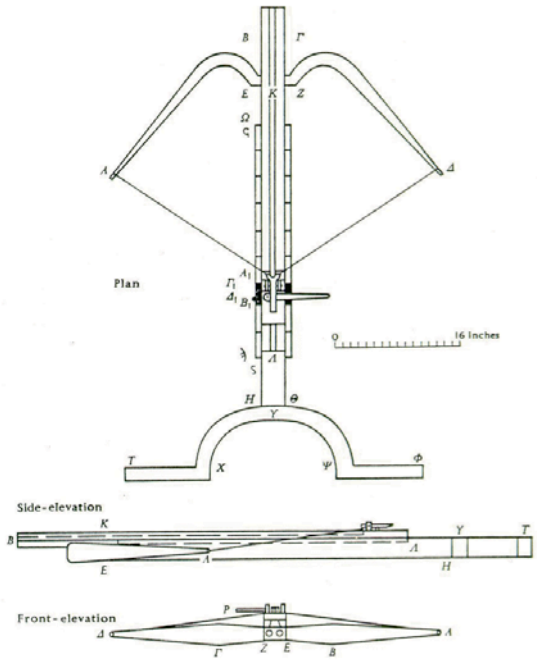

Figure 5: plan of gastraphetes, *From Kern p. 176*

Following the destruction of Motya, Carthage retaliated in 396 and laid siege to Syracuse. This was the only major siege of Syracuse during the reign of Dionysius. However, unlike their normal strategy of attacking the city head on, the Carthaginians set up to invest the city. They set up camp near the marshes, just south of the Anapos River. Eventually, a disease spread through the army, and the Carthaginians were forced to give up their siege due to their depleting ranks (Diodorus, 14.70-14.75).

Now I will explain how these invasions influenced Dionsyius. Diodorus Siculus claims that Dionysius only built the northern part of the Epipolae circuit wall from the sea near the hexapylon gate to Euryalus (figure 1) between the years of 405 and 396, "He [Dionysius] decided that he must fortify Epipolae at the point where there stands now the wall with the six gates… It was thirty stades in length," (14.18). Thirty stades

is about three and a half miles (Diodorus, p. 59), and that is approximately the length of the walls from the hexapylon gate to Euryalus (figure 1). Additionally, Diodorus claims that Dionysius then proceeded to finish the Epipolae circuit wall in 385, presumably the southern section, (15.13).

Due to a lack of datable evidence, some scholars agree with Diodorus. However, strategically this makes no sense. As stated before, the Epipolae plateau was geographically the best place from which to lay siege to Syracuse due to its elevation. Constructing only the northern part of the Epipolae circuit wall would have allowed the Carthaginians to set up camp on the Epipolae plateau between the northern wall and the city of Syracuse, and would have left the northern section vulnerable to outflanking maneuvers (Kern p. 175). Moreover, Dionysius had lived through the Athenian invasion, in which the Athenians nearly conquered Syracuse, due in part to the strategic advantage of the Epipolae plateau. If the Athenians were almost able to conquer Syracuse with their slow investment strategy, then the Carthaginians likely would have been able to conquer Syracuse with their much quicker and more direct approach.

Knowing the strategic advantage of the Epipolae plateau and that Carthage would likely retaliate for the destruction of Motya by laying siege to Syracuse, constructing the south circuit wall in 385 would have been illogical. Moreover, the mass migration of refugees provided a sizeable workforce to complete the entirety of the Epipolae circuit wall and additional fortifications within nine years. If the Athenians were able to build as fast as scholars believe (Kern, p. 129), then it is entirely possible that Dionysius was able to build the whole circuit wall by 396, especially if one believes Diodorus, who claims that Dionysius hired 60,000 workers and bought 6,000

pairs of oxen (14.18). On a separate note, this was the only siege of Syracuse during Dionysius' reign, and most likely the only one that he was certain would happen. This being the case, there would have been almost no reason to complete the circuit walls later in his reign.

Diodorus states that at one point the Carthaginians did make an assault on Syracuse and were able to break through into the city, specifically into the suburb of Achradinê (figure 1). Here, Diodorus claims that they ravaged temples of Demeter and Korê, "Himilcon seized the suburb of Achradinê; and he also plundered the temple of both Demeter and Korê, for which acts of impiety against the divinity he quickly suffered a fitting penalty," (14.63). Even if the Carthaginians were able to break through the Syracusan fortifications, their assault was obviously not as detrimental to the Syracusan defenses as they were to other city-states such as Himera. If this was the only damage done to the city, then this further supports the idea that the fortifications along Epipolae had been built.

However, it is possible that Diodorus made the whole situation up in order to explain the plague that struck the Carthaginian army. By claiming that the Carthaginians had destroyed the temple, Diodorus was able to blame the plague that spread through the Carthaginian camp on divine intervention. Diodorus states, "After the Carthaginians had seized the suburb [Achradinê] and pillaged the temple of Demeter and Korê, a plague struck the army," (14.70). However, even Diodorus is forced to note that:

> Over and above the disaster sent by the influence of the deity there were contributing causes; that myriads of people were gathered together, that it was the time of year which is most productive of plagues, and that the particular summer had brought unusually hot weather. It also seems likely that the place itself was responsible for the excessive extent of the disaster… the terrain was marshy and in a hollow. (14.70)

Therefore, it is possible that the entirety of the Carthaginian siege was purely a siege investment, and that Diodorus incorporated the assault in order to find a divine explanation for the plague. Even if the Carthaginians did make an assault, they had little to no success. Eventually, the prolonged encampment in close quarters near the marshes probably caused the plague to spread through the Carthaginian army, not divine revenge as Diodorus suggests.

Again, as stated previously, the Carthaginians set up camp just south of the Anapos River and chose to invest the city, rather than to devise a direct attack on it. And, as has been indicated, they would only do this if the entire Epipolae plateau was fortified by 396, especially since the Carthaginians would likely approach from the south or west. As stated before, based on geography, when an army approaches from the south or west, Ortygia, the Epipolae plateau, and its western edge where the Euryalus fort is, become the most strategic points in the defense of the city.

Constructing only the northern section of the Epipolae circuit wall would have been futile and left both the city and the northern wall vulnerable to attack. Dionysius also had a massive workforce following the migration of refugees. These newly built fortifications, along with the intimidating quinqueremes and the gastraphetes, could have caused the Carthaginians to hesitate and invest the city rather than directly attack it. In addition, they would have had to trudge through the marshes in order to attack. Eventually, a disease spread through the Carthaginian army, likely caused by the

marshes. In turn, this disease depleted their ranks forcing them to break the siege of Syracuse. Thus, the historical evidence suggests that the entire Epipolae plateau had been fortified by 396 or else there would have been a quite different chain of events.

IV. *Archaeological Evidence*

There has been no concrete archaeological evidence for the destruction of a temple to support Diodorus' claim that the Carthaginians ravaged a temple to Demeter and Korê. One such temple has been found in downtown Syracuse at Piazza Vittoria, and it seems to have stopped being used somewhere in the early fourth century (Frederikson, p. 66). However, Diodorus seems to place the temple in Achradinê, which is further north (figure 1). Also, the votive offerings that have been discovered in the excavations were found still neatly stacked, which is not usually a symptom of a ravaged temple (figure 6). This suggests that this temple has no relation to the one described by Diodorus. Although there could be a ravaged temple in Achradinê that has yet to be found, it would seem that either the Carthaginian siege was purely an investment or that any assault made by Carthage was ineffective, based on the archaeological evidence we have.

In order to continue with the Archaeological evidence, we must first backtrack from the siege of Syracuse in 396 to the destruction of Selinus in 409. It is believed that the walls around Selinus were started by Hermokrates, a predecessor of Dionysius, who was a Syracusan general and started the reconstruction of Selinus after its destruction by Carthage in 409 (Diodorus, 13.63). There are similarities between the walls at Selinus

and the Epipolae plateau, which suggest that Dionysius copied Hermokrates' building technique.

Figure 6: votive offerings found at Piazza Vittoria, downtown Syracuse, *From Frederikson, p. 65*

Both the Epipolae circuit walls and the Selinuntian walls were built in the so-called "chain" technique, typical of the late fifth and early fourth centuries. The chain technique consists of ashlar blocks, which alternate between headers and stretchers. Headers, blocks whose short face is exposed, alternate with stretchers, which have their long face exposed. The chain technique uses the alternating headers to penetrate the fill, connecting both sides of the wall and creating anchors (Karlsson, p. 67). The correlation between the Epipolae and Selinuntian walls can be seen in figures 7 and 8. The headers and stretchers can be noted in these figures, and as the walls progressed, the alternation between headers and stretchers would have continued.

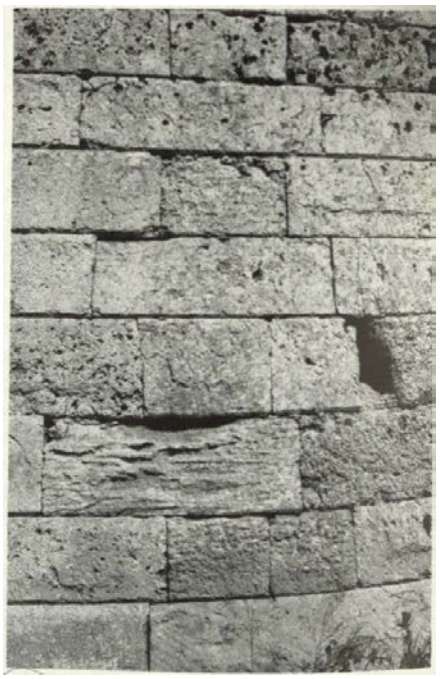

Figure 7: wall at Selinus, *From Karlsson, p. 70*

Figure 8: wall on Epipolae, *From Karlsson, p. 85*

Moreover, both the walls around the Epipolae plateau and Selinus have some blocks with beveled edges, that is, they have cut and smoothed edges, and rough faces or "rustication" in the middle (Karlsson, p. 70, p. 71, p. 85). These features can also be noted in figures 7 and 8, as the middle is not smooth, and the edges are cut and smoothed out much more so than the middle. Therefore, it is likely that Dionysius built the Epipolae circuit walls between 405 and 396, soon after Hermokrates built walls around Selinus using the same technique.

In association with the Epipolae circuit walls, I would also attribute the first phase in the construction of towers 2 through 5 to the period between 405 and 396. Connections can be drawn between towers 2 through 5's construction techniques and other towers widely thought to have been built by Dionysius, namely towers 1a and 1b on Ortygia (figure 1). Both towers 1a and 1b, have a three-step base with similar measurements; the lowest planes of their three-step bases are approximately 8.4 x 8.4 m

and they flank an old gate (Karlsson, p. 22, p. 23). Towers 2 and 3 on the Epipolae also have a three-step base and similar measurements, the tower proper and base level measurements for both are within 30 cm of each other, (table 1).

Towers 2 and 3 flank an old gate on the southern part of the Epipolae circuit wall, which is just to the east of the Euryalus fort (figure 1). This construction of two towers flanking a dipylon gate was a fairly common fortification technique during the time of Dionysius, and similar gates were found at Motya (Trendall, *1961-1963*, p. 40, p. 41). Tower 3 is also attached to the wall and has a doorway through the wall to the tower (Karlsson, p. 29). This suggests that tower 3 was first built when the wall was built.

Tower 2 is not attached to the wall at a lower level. However, there is a block in position between the tower's south wall and the circuit wall suggesting that at a higher level they were attached (Karlsson, p. 22, p. 29), and it is very unlikely that Dionysius would have built a gate with just a single tower next to it. I would suggest that originally tower 2 was built by Dionysius around the time he constructed the circuit walls.

Towers	**Tower proper**	**Base level Measurement**
	width x length, in meters	width x length, in meters
2	10.2 x 10.8	12.8 x 11.8
3	10.4 x 11.1	12.5 x 12.1

Table 1: *Measurements from Karlsson, p. 23, p. 29*

Towers 4 and 5 flank the Epipolae gate. The original construction of this gate, seen in figure 9, contained three entrances set back into the wall, two towers flanking it,

posterns along its flanking walls that acted as sally ports, and possibly a proteichisma (a defensive outwork) stretching out parallel to the gate. A sally port is any opening in the defensive works that allows defending soldiers to fight the enemy without fully leaving the protection of the fortifications (Pauly, Vol. 5, p. 500). The Epipolae gate has a large forecourt, which, according to Winter, was common during earlier times (p. 365). As fortification techniques progressed, the size of forecourts gradually decreased. Therefore, if this gate were from a later time we would not expect the forecourt to be quite so big.

Winter believes that Dionysius constructed the Epipolae gate. However, he argues that he constructed it more towards the end of his reign, noting that "if it dates from the period of Dionysius I, it is a very early example of this type of gate plan on such a monumental scale, though it is only a development of an earlier and simpler concept," (p. 365). Dionysius always built to excess and there would have been no reason to construct it so late in his reign. Also, he would have wanted a way to control access to the Epipolae plateau, and Euryalus was the most geographically suitable location to do so. It would have been logical for him to construct a gate right along Euryalus, at the same time as he fortified it between 405 and 396. That way he could allow certain people onto the Epipolae, such as the refugees from the countryside, and also repel any advancing army.

Excavations have established that the outermost proteichisma, pictured in figure 9, was a later addition (Trendall, *1958-1960*, p. 49). Also, an inscription was found near it, which talks of a king (Basileus), and Dionysius never referred to himself as king, whereas Agathokles (316-289) did (Karlsson, p. 36, p. 37). This proteichisma

also helped to lessen the size of the massive forecourt, in an attempt to make the gate more appropriate for the poliorcetics of a later time. Thus, the outer proteichisma was a later addition, likely during the time of Agathokles, to the original gate built by Dionysius.

In addition, Winter argues that the innermost proteichisma should not be considered contemporaneous with any of the other proteichismas in front of the gate (figure 9). He associates the first proteichisma either with the original construction of the gate or to its own phase (Winter, p. 365, p. 387). In 1958, Gino Gentili excavated the third proteichisma pictured in figure 9, and he suggests that the three innermost proteichismas were built contemporaneously in the fourth century (Winter, p. 387), and that at least the very outermost proteichisma was added during the third century, as established above. However, he does not specify further (Trendall, *1958-1960*, p. 49).

Combining Gentili's dating to the fourth century, and Winter's separation of the first proteichisma from the rest, it is possible that the first proteichisma was included in the original construction of the gate. If Winter is right in separating the first proteichisma from the rest, then it must have been built before the other two inner proteichismas were added in the fourth century. Thereby, the innermost proteichisma's construction period would fit well between 405 and 396.

At the very least, it would seem that the Epipolae gate without any proteichismas was finished by 396. If all the proteichismas were later additions in order to shorten the size of the forecourt in the fourth century, then the Epipolae gate must have been built before these later additions were made. Therefore, the original gate

would likely have been built when the Epipolae circuit walls were originally built, as Dionysius would have needed an access point near Euryalus by 396.

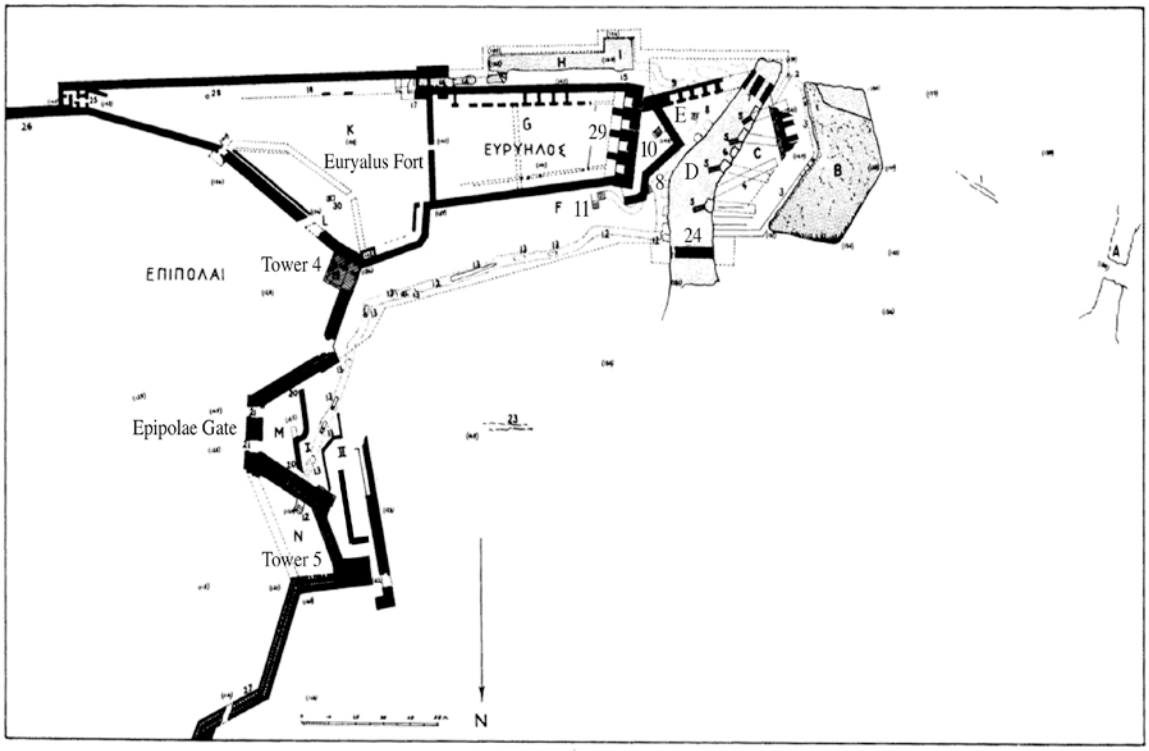

Figure 9: schematic plan of Euryalus fort and surrounding fortifications, *From Winter, plate 85*

Towers 4 and 5 flank the Epipolae gate, are attached to the wall and they follow the three-step base pattern we see on Ortygia. Tower 5 is attached to the north end of the Epipolae gate. There is little doubt that the gate and tower 5 were built at the same time (Karlsson, p. 29). Tower 4 flanks the other side of the gate (figure 9). These towers also have similar measurements, just as the Ortygia towers and towers 2 and 3 do (table 2). I would suggest, therefore, that towers 4 and 5 along with the Epipolae gate, and possibly its innermost proteichisma, were also built around the same time as the Epipolae circuit walls between 405 and 396.

Towers	Tower proper	Base level Measurement
	width x length, in meters	width x length, in meters
4	11.1 x 9.2	11.4 width
5	10.1 x 9.2	11.4 x 10

Table 2: *Measurements from Karlsson, p. 29, p. 36*

Karlsson believes that towers 2 through 5 are from the time of Agathokles, noting that they all likely had interior cross-walls, which were meant to help support larger catapults on top of the towers (Karlsson, p. 109). The interior cross-walls of towers 2 through 5 are in the shape of a T, but Karlsson also notes that the most common interior cross-walls during the time of Agathokles are in the shape of a Greek cross (Karlsson, p. 36). One tower has been excavated at Syracuse with interior cross-walls in the shape of a Greek cross, that is tower B (figure 1). This tower, unlike the rest, does not have a three-step base, and is slightly smaller than towers 2 through 5, measuring approximately 8.8 x 8.8 m at base level.

These differences between towers 2 through 5 and tower B point to a date for the construction of towers 2 through 5 outside the timeframe of Agathokles. Following the three-step base pattern established on Ortygia, it seems more likely that Dionysius originally constructed these towers when he constructed the circuit walls, and just as he built everything else to excess, these towers were also fairly large. In addition, the Epipolae gate is attached to tower 5, and would have incorporated tower 4 in its defense as well. Therefore, it is likely that towers 2 through 5 were built between 405 and 396. At a later date, the interior cross-walls could have been added to towers 2 through 5, and possibly other additions made as well.

The last fortification I will discuss is the Euryalus fort, located on the far western tip of the Epipolae plateau. This is a very strategic position because it is the first place an imposing army would have an opportunity to advance on the Epipolae plateau coming from the west, just as the Athenians did. Most archaeologists argue that much of the Euryalus fort was built after the reign of Dionysius. I would argue that some of its features were constructed during the time of Dionysius between the years of 405 and 396. Tower 4, as has already been suggested, was most likely built around the time the circuit wall was built between 405 and 396. Tower 4 is attached to the northeastern corner of the Euryalus fort, as seen in figure 9, suggesting that the main walls of the Euryalus fort were built around the time tower 4 was built.

The only datable material that came from the original excavations of the Epipolae fortifications, conducted by Paolo Orsi, was a hoard of Mamertine coins at the bottom of ditch D, underneath wall 24, dating to the third century (Winter, p. 370). Agathokles hired Mamertine mercenaries and brought them to Syracuse during his reign, and this is the only time that the Mamertines are known to have entered Syracuse (Diodorus, 21.18). Therefore, it is likely that these coins were brought over by these mercenaries. The area of ditch D that includes wall 24, where the coins were found, and the area to the north of it were dug at a later date (Winter, p. 366, p. 367). Thus, the inner part of ditch D had to have been dug before these coins were buried, suggesting a date before the time of Agathokles (figure 9).

Ditch D would most likely have been made to go with the construction of bastion E (a bastion is pentagon-like fortification that extends out from a main wall). Bastion E, located just to the east of ditch D, would have allowed defending soldiers to

harass enemy soldiers with missiles as they were struggling to overcome ditch D (Winter, p. 363-375). Therefore, both ditch D and bastion E were built before the time of Agathokles. Ditches had been a common strategy for a long time before Dionysius, and the earlier date that can be proposed with the Mamertine coins goes well with the period between 405 and 396, as the western tip would have needed to be fortified before the Carthaginian approach on the city.

It is also likely that along with ditch D and bastion E, Dionysius oversaw the construction of gallery 8, and passages 10 and 11. Gallery 8 is underground and attached to ditch D (figure 9). It was a way to remove debris and other materials that would have fallen into the ditch during the course of a siege (Winter, p. 371, p. 372). Gallery 8 is connected to passages 10 and 11, which were also underground, though they did have above ground entrances as seen in figure 9. Through passage 10, the soldiers would have been able to move back and forth between ditch D and the protection of bastion E (Winter, p. 366). Bastion E also provided a protected area where the defending soldiers could drop off the material building up in ditch D, if gallery 8 should start to fill up.

Passage 11 would have acted as a sally port (Winter, p. 373). From passage 11 defending soldiers could have sallied forth from gallery 8 and attacked soldiers approaching the side of the ditch and bastion. Thereby, allowing the defenders to outflank the enemy. It is also possible that originally passage 11 connected gallery 8 to the inner part of the fort (Winter, p. 372). If this is true, ditch D, bastion E and the inner parts of the fort were all connected by passages 10 and 11, and gallery 8. At the very least, ditch D and bastion E would have been connected by the passages.

Therefore, I believe that Dionysius constructed gallery 8, and passages 10 and 11 between 405 and 396, in connection with ditch D and bastion E.

Behind ditch D and bastion E is complex 29. Recent excavations have attempted to date complex 29 (figure 9). These excavations found that Agathokles constructed much of the phase in which complex 29 is now in (Wilson, p. 68). Winter argues that there were likely three phases in the construction of complex 29, with the first phase preceding the construction of bastion E (Winter, p. 382). Therefore, it is possible that what has been found in the recent excavations is part of the third and final phase suggested by Winter. The five towers that currently make up complex 29 do not follow the three-step base pattern and are all connected to one another, unlike the other towers mentioned. Also, they are fairly small and rectangular, suggesting each one in its current state was meant to hold artillery (Karlsson, p. 23).

It is hard to tell what complex 29 was in its original form, and whether or not the towers were connected like they are in their present state. Complex 29 could have originally included more square-like defensive towers that were not attached, or simply smaller versions of the complex's present form. It is possible that the original construction of complex 29 was built in order to support bastion E (Winter, p. 382). From complex 29 defending soldiers could have harassed any soldiers that may have made it passed bastion E. If we take Winter's separation of complex 29 into three phases, then it is feasible that Dionysius constructed the first phase of complex 29 along with ditch D and bastion E by 396.

Again it would seem that Dionysius copied Hermokrates' techniques as the Euryalus fortress shares many features with a fortress that protects the north gate at

Selinus (figure 10). The Selinuntian fort has defensive towers that could have held artillery similar to Euryalus' complex 29. The fort at Selinus also has a ditch, which is connected to an underground corridor similar to ditch D and gallery 8 at Euryalus. Ross Holloway, in his book *The Archaeology of Ancient Sicily*, states, "the fortress at the north end of the acropolis [at Selinus] originated with Syracusan Hermokrates who attempted to revive Selinus after the Carthaginian sack of 409. Clearly the Selinunte fortress and the defenses of the Euryalus are closely related, the Syracusan castle representing only a more elaborate version of the other," (p. 147). As has been established, Dionysius often built things more elaborate and bigger than had been previously done.

Holloway also notes that the main goal of both these forts was to stop siege towers and rams (p. 147). As has been established, the Carthaginians employed a range of siege engines in order to assault a city directly. Constructing the Euryalus fort would have been necessary in order to stop the siege engines of the Carthaginians, as Euryalus was the best place to move siege engines onto the plateau. Again, similarities between Selinus and Syracuse suggest a completion date of 396. The Euryalus fort in its original construction with ditch D, bastion E, passages 10 and 11, gallery 8 and possibly complex 29, was likely based on a design from Hermokrates, just as the Epipolae circuit walls were. This suggests that soon after Hermokrates worked on the fort at Selinus, Dionysius built a fort at Euryalus between 405 and 396.

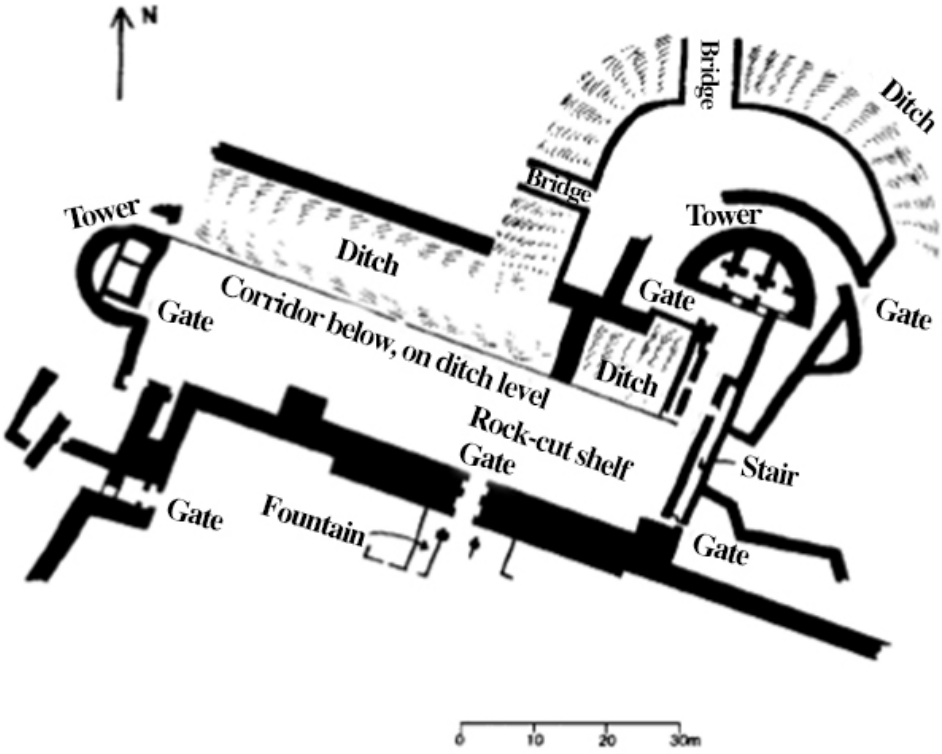

Figure 10: schematic plan of fort at Selinus, *From Holloway, p. 146*

The archaeological evidence suggests a date for the construction of many Syracusan fortifications between 405 and 396. Drawing connections with the circuit walls at Selinus, it would seem that the Epipolae circuit wall was completed by 396 after Hermokrates fortified Selinus in 409. Based on the similarities with towers at Ortygia, towers 2 through 5 were likely completed by Dionysius. All follow the three-step base pattern, flank a gate, and have similar measurements. The Epipolae gate's connection with towers 5 and 4 and the combination of Winter's and Gentili's dates also propose a completion date by 396. Lastly, based on the numismatic evidence, the logistics of the fortifications and its connection with the fort at Selinus, Euryalus as well was likely built by 396. The rest of the fortifications are mostly from the time of Agathokles and Archimedes.

V. *Conclusion*

The chronological sequence of the Syracusan fortifications is still debated, mostly due to a lack of physical evidence. Geographically it made sense for Dionysius to fortify the Epipolae plateau and the island of Ortygia. Fortifying these 2 places would have left a besieging army little option but to set up camp south of the Anapos River.

Historical considerations suggest that Dionsyius, having lived through the Athenian invasion, would have known the importance of the Epipolae plateau and after he destroyed Motya he would have predicted that the Carthaginians would retaliate. Therefore, it would have been unwise for him to leave the Epipolae plateau unprotected. The intimidation of these newly built fortifications along with the gastraphetes and quinquereme could have caused the Carthaginians to invest the city rather than to directly attack it. Even if an assault did occur, it was highly unsuccessful. Then, due to the prolonged encampment near the marshes, the Carthaginians suffered a plague that spread through their army and forced them to withdraw from the siege.

From the archaeological evidence, connections can be drawn between the Epipolae circuit wall and the Selinuntian walls that suggest a construction date between 405 and 396. Towers 2 through 5 share commonalities with the Ortygia towers, indicating a construction date by 396. The Epipolae gate, based on its connection with towers 5 and 4 and the dates proposed by Winter and Gentili, also point to a construction period between 405 and 396. Then Euryalus, using numismatic evidence, and connections once again with Selinus, would also likely have been built by 396.

In conclusion, based on the geographical, historical and archaeological evidence, I believe that Dionysius I oversaw the first phase in the construction of towers 2 through 5, the Epipolae Gate, the main walls of the Euryalus fort, ditch D, bastion E, gallery 8, passages 10/11, and possibly complex 29, as well as the southern section of Epipolae circuit wall at around the same time he fortified Ortygia and the northern section of the Epipolae plateau between 405 and 396 BCE. If this is true, it could also imply more varied and advanced defensive poliorcetics during the time of Dionysius than previously thought, perhaps requiring a reevaluation of how extensive defensive works could have been near the end of the fifth century.

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