Mapping the *Via Hadrumetina* and its Roman Period Landscape

A thesis submitted by

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Abstract

This thesis investigates the *Via Hadrumetina*, an ancient road that served as the main travel and communication artery for the *regio Hadrumetina* connecting the important North African port city of *Hadrumetum* with the interior of *Africa Proconsularis*. It puts forth a possible re-identification of Pierre Salama's *Via Hadrumetina*, arguing that over time a different route became more important to the execution of the *procurator regionis Hadrumetinae*'s duties as well as the social, political, and economic interactions between sites and peoples in the interior and the coast. In order to demonstrate how this area was transformed over centuries of Roman rule, this thesis culls and combines site data from a number of modern archaeological sources to create a comprehensive gazetteer of sites as well as illustrative maps to facilitate analysis of settlement in an important region of the Mediterranean world.

Acknowledgements

This is my first opportunity to acknowledge—let alone mention—the people and institutions that made me who I am today, so here I will be unapologetically verbose.

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Table of Contents

Part I: Introduction 2
Part II: Pierre Salama's *Via Hadrumetina* 3
Part III: Did the Route of the *Via Hadrumetina* Change over Time? 8
The Regio Hadrumetina 8
Principal Sites that Constitute the Via Hadrumetina 10
Limiting and Determining the Scope of Investigation: The Road from Cillium *to* Hadrumetum 11
Surviving Milestones along the Via Hadrumetina 16
Physical Description of the Via Hadrumetina *and its Ancillary Roads* 19
Part IV: Habitation along the *Via Hadrumetina* 23
Modern Sources Used for the Collection of Site Data 23
Formulation of Site Typology 25
Site Typology 26
Analysis of Habitation along the Via Hadrumetina 30
Chronology of Sites along the Via Hadrumetina 59
Part V: Synthesis and Conclusions 70
Appendix 1: Reconstruction of the African Section of the *Antonine Itinerary* 78
Appendix 2: Number of Stops and Distances, and Minimum, Maximum, Range, Mode, and Average Distances of the African Section of the *Antonine Itinerary* 88
Appendix 3: Alphabetical Gazetteer of Sites 89
Appendix 4: Gazetteer of Sites by Site Types 94
Bibliography: 109

Mapping the *Via Hadrumetina* and its Roman Period Landscape

Part I: Introduction

This thesis lays the foundation for a multidisciplinary archaeological investigation of the *Via Hadrumetina* and the location, distribution, and organization of Roman period (*circa* 30 B.C.E. – 640 C.E.) habitation associated with it. The *Via Hadrumetina*, one of the most important trunk roads in the province of *Africa Proconsularis*, connected the prominent port city of *Hadrumetum* (modern Sousse) to *Theveste* (Tebessa), and ultimately to *Lambaesis*, the eventual headquarters of the *legio III Augusta*. In what follows I will establish a preliminary framework for identifying and mapping the *Via Hadrumetina* and all sites associated with it between *Hadrumetum* and *Cillium* to elucidate how the road and its environs transformed over centuries of Roman imperialism.

Figure 1: Major Roads and Sites in Africa Proconsularis

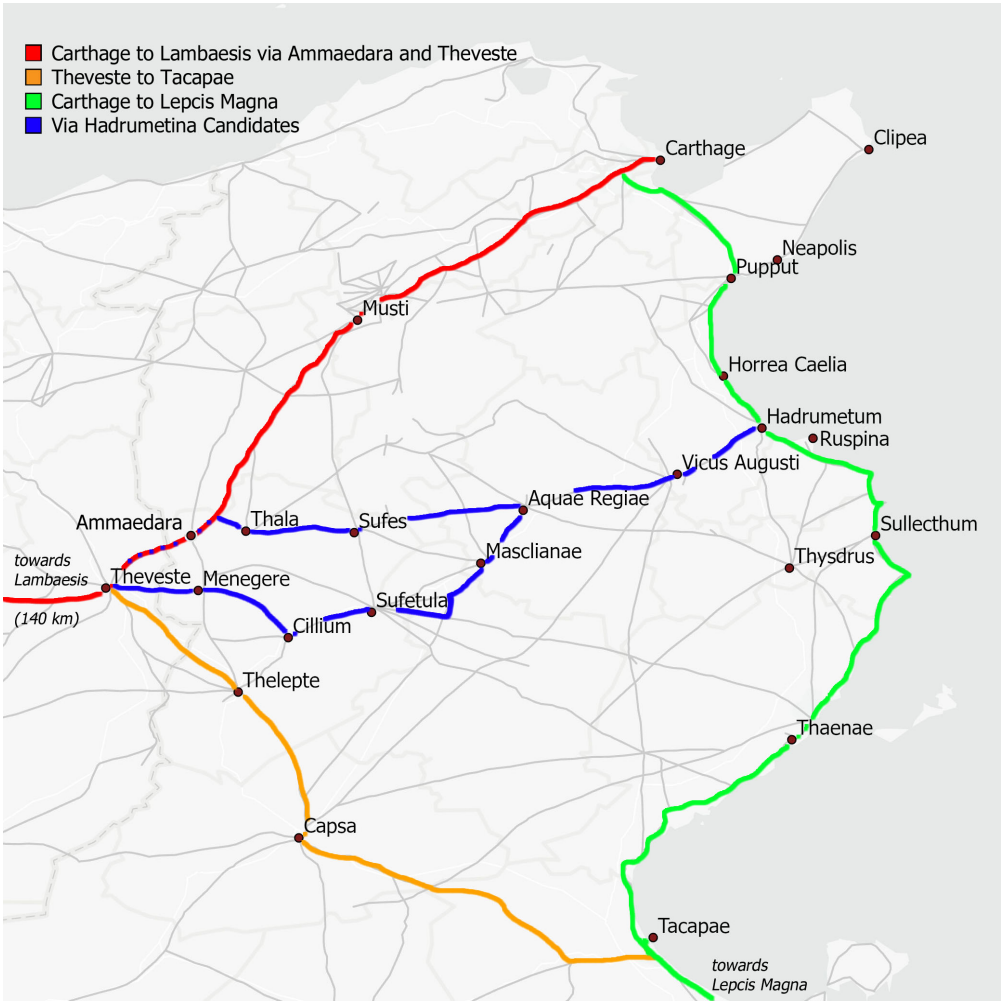
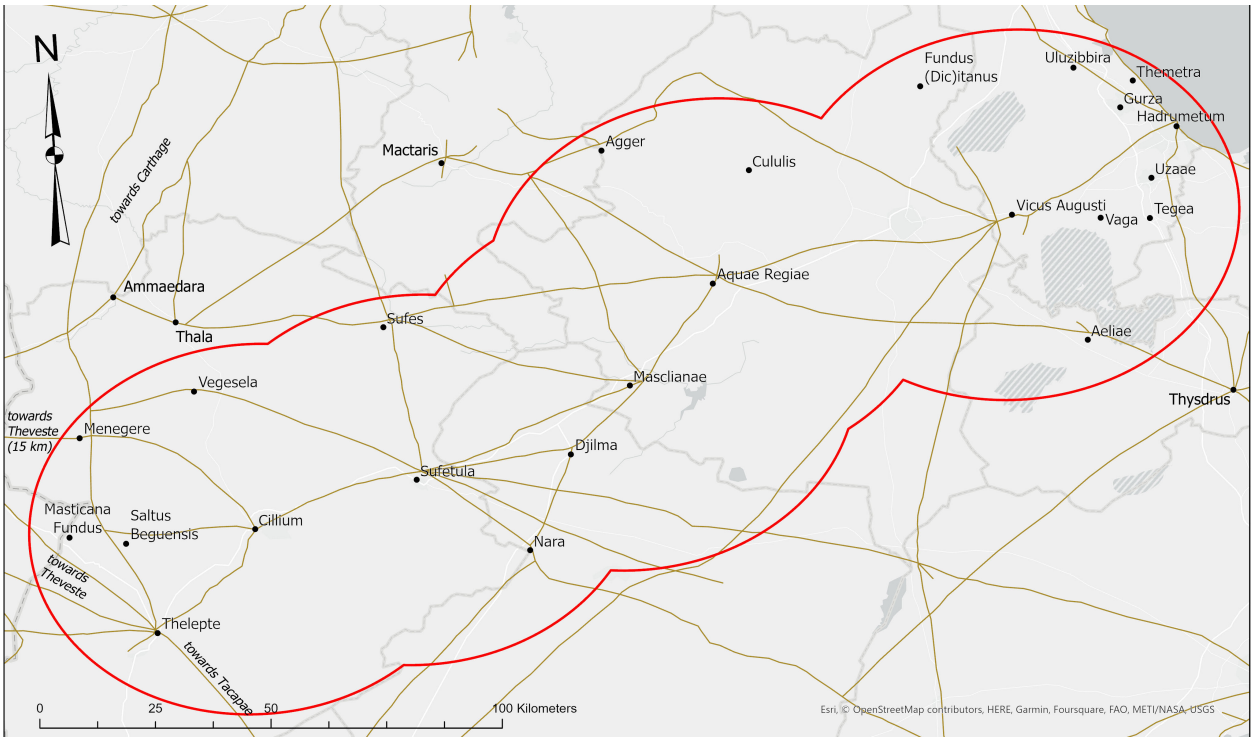


Figure 2: Sites with Ancient Names around my Investigatory Zone



Part II: Pierre Salama's *Via Hadrumetina*

The *Via Hadrumetina* is one of a handful of named roads in North Africa.[1] The phrase comes from a funeral epitaph from the city of *Ammaedara* (Haïdra) dating to the second or third century C.E.: *Dis Manibus sacrum, Lucius Magnius Satur, homo laboriosus non dignus loco, peregre defunctus in* ***via Hadrumetina****, vixit annos LV. Iulia Quinta coniunx carissima marito suo posuit; hic situs est*.[2] Relying on this inscription and his magisterial knowledge of Roman roads in North Africa, Pierre Salama was the first and has been the only scholar to suggest a possible path of the *Via*

[1] Salama 1964: 76-77. Besides the *Via Septimiana* (from an unknown military camp to *Lambaesis*), named roads in North Africa are typically identified by their origin and terminus (*e.g. Via ex castris hibernis Tacapas*), very few are, as Salama put it, 'personified' as in the case of major roads in Republican Italy and southern Gaul.

[2] *ILAfr* 159(d) = *CIL* 8.385 (the latter gives an incomplete inscription): D(is) M(anibus) s(acrum) / L(ucius) Magnius Satur / homo laboriosus / non dignus loco pe/regre defunctus in / via Hadrumetina v(ixit) / a(nnos) LV Iul(ia) Quin(t)a coniu(n)x // cari(ssima) mar(ito) suo posuit // h(ic) s(itus) e(st), "Something sacred to the *Manes*, Lucius Magnius Satur, a toiling man not worthy of this place [~ death], [who] died abroad on the *Via Hadrumetum*, lived fifty-five years. Iulia Quinta, a most beloved wife, erected [this monument] for her spouse. Here he lies".

Hadrumetina,[3] his hypothesis has not been disputed.[4] Salama's identification of the *Via Hadrumetina*, however, is based on a number of assumptions and an unfortunate oversight.

First, because the epitaph was found in *Ammaedara*, Salama assumed that the road started here and gained its 'geographic personification' because of its terminus at *Hadrumetum*. Salama therefore found the shortest path from this interior site to the coastal city and determined this path to be the *Via Hadrumetina*. He proposed that the *Via Hadrumetina* departed from *Ammaedara* and headed east, passing through *Thala*, *Sufes* (Sbiba), *Marazanae*, *Aquae Regiae* (Henchir-Khatera), and *Vicus Augusti* (Sidi-el-Hani) before reaching its ultimate destination of *Hadrumetum*.[5] If, however, we follow this terminus-based logic, any road that eventually arrives in *Hadrumetum* could be argued to be the *Via Hadrumetina*.

The biggest assumption of Salama's proposed road is that it originates in *Ammaedara* simply because the epitaph mentioning it was found there. People are most often buried where they lived, not where they died, but Salama supported his conclusion with the simple fact that the road runs through the cemetery where the epitaph was found. Assuming that *Ammaedara* must be a site stationed on the *Via Hadrumetina* because of this one epitaph is problematic, as the deceased could have departed from any road leaving *Ammaedara* (see Figure 1, above), eventually travelled on the *Via Hadrumetina*, and then died. By itself the epitaph does not definitively prove that the *Via Hadrumetina* even ran through *Ammaedara*. Additionally, this assumption is somewhat weakened by the use of *peregre* in the inscription, something Salama essentially omitted from his

[3] Salama 1964.
[4] Jean-Marie Lassère, for example, referenced it and Salama in his discussion of sources for the North African countryside, going so far as to state that the road drained the whole countryside of resources (1971: 51: "*drainait les production de tout de pays*"). Similarly, Pol Trousset described Salama's road in *Hadrumetum*'s entry of the *Encyclopédie berbère* as traversing a large and important administrative region and therefore providing access to varied and complementary production zones ("*cette vaste circonscription domaniale* [presumably the *regio Hadrumetina*] *disposait d'une infrastructure routière qui la traversait sur toute sa longueur en desservant des zones de productions variées et complémentaires*").
[5] Salama 1964: 80.

translation.[6] The adverb does not mean 'far along' so much as it means 'abroad' or 'far away', and this is a strange way to describe a road that runs directly through one's own city. We should perhaps alternatively understand the inscription as stating that the deceased died 'far away on the *Via Hadrumetina*' rather than 'far along on the *Via Hadrumetina*', a semantic but important difference that opens a range of possibilities for its identification.

Having no milestone evidence, save for a problematic stone at the far reaches of the road,[7] Salama relied primarily on the scant ancient literary evidence to identify the other principal sites that constituted his *Via Hadrumetina*. It is, however, this aspect of his argument that contains a blatant oversight. Salama's states that *Ammaedara* does not appear in any ancient itinerary,[8] but *Ammaedara* is mentioned in the *Antonine Itinerary* at I3.9 (*26.5*) as "*Admedera colonia*".[9] The *Antonine Itinerary* (hereafter the simply "*Itinerary*") was a document compiled in the third century C.E. containing 251 land itineraries from almost every region of the Roman world, the purpose of which is just as obscure as its origins.[10] While this is a seemingly innocuous mistake, it has important consequences for the determination of the *Via Hadrumetina*. The most significant is that

[6] Salama 1964: 74: "*Consacré aux dieux mánes. Lucius Magnius Satur, homme laborieux qui ne méritait pas de finir en cette place. Est mort en voyage sur la route d'Hadrmète, âgé de 55 ans. Julia Quinta, épouse très chère, a élevé ce tombeau à son mari. Il repose ici*".

[7] *CIL* 8.10028, which, given its find location far from Salama's (and my) proposed *Via Hadrumetina*, should certainly be associated with the road from *Hadrumetum* to *Thysdrus* and not the one from *Hadrumetum* to *Vicus Augusti*.

[8] Salama 1964: 80 n. 49: "*Malgré sa grande importance dans l'Antiquite, à en juger par ses vestiges, la cité d'Ammaedara n'est mentionnée par ces Itinéraries*".

[9] The *Itinerary* is primarily referenced by Wesseling (*Vetera Romanorum Itineraria*, Amsterdam 1735) numbers, given here in italics and decimal (rather than comma) form, but I developed my own system of labeling itineraries by their sequential order (I1 = *iter* 1, I2 = *iter* 2, and so forth), and have preferred to reference them as such for easy identification. See Appendix 1, which is a reconstruction of the African section (the first thirty-two routes) of the *Itinerary*.

[10] The authoritative text is the Teubner edition of Otto Cuntz (1929). Dennis Van Berchem (1937, 1973) was the first to postulated the theory that the eight 'main' routes are planned imperial journeys; Alfred Rivet (1970) concluded in general agreement with Van Berchem's imperial journey theory by closely investigating the British section; Nicholas Reed (1978) focused somewhat more on the minor routes, arguing that they were related to the *annona*, but still believed that the *Itinerary* as a whole was based on imperial journeys. Pascal Arnaud (1993) has been the only scholar to closely (and convincingly) scrutinize these prevailing beliefs, favoring an *annona*-related origin. Richard Talbert (2007), taking a different approach, has argued that there is no pattern and likely no discernable purpose to the *Itinerary* whatsoever.

this itinerary (I3: *a Cartagine Caesarea*) connects *Ammaedara* directly to *Theveste*, but, more importantly, relates these two sites to the famous north/south Carthage—*Theveste* road that this itinerary follows in its entirety (see Appendix 1). This important road has long been seen as the main artery for north/south movement of goods and people from the interior to the coast, or *vice-versa*.[11] *Ammaedara*'s critical importance as a station along this road, however, does not immediately preclude its existence on another major road, but we should examine other connections present or not present in the *Itinerary* to obtain a better understanding of North Africa roads. Salama did not do this, and he therefore decided to make *Thala* the second stop along his *Via Hadrumetina*, despite the fact that it does not appear on any ancient itinerary. This is not to argue that the *Itinerary* is the ultimate authority on roads and ancient sites along them (far from it), but that it contains an abundance of evidence for the extent of the North African road network, and that the failure of certain routes or sites to appear in it is undoubtedly meaningful, as it contains all of North Africa's major roads in their entirety except for Salama's *Via Hadrumetina*.[12]

To establish the rest of the *Via Hadrumetina*'s path, Salama closely followed the *Itinerary*, reckoning that the *Via Hadrumetina* passed through *Sufes*, *Marazanae*, *Aquae Regiae*, and *Vicus Augusti* to reach *Hadrumetum*. Sections of Salama's proposed road appear twice in the *Itinerary*, once (in reverse) in I19 and again in I26;[13] however, neither of these itineraries are connected to *Thala* or *Ammaedara*. If the *Via Hadrumetina* did indeed run from *Ammaedara* to *Hadrumetum*, we should expect some explicit connection between the two, even in a document as haphazard as the *Itinerary*.

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[11] The bibliography is voluminous, but see in particular Salama 1951 (esp. 22-29), 1964, and 1987 (which collected 52 Late Roman milestones for the Carthage—*Theveste* route in his Appendix 1 in Table B on pages 212-213, more than double any other route in North Africa); Chevallier 1972; Barbery 1985; M'Charek 1987; De Vos *et al*. 2015; and Mattingly and Hitchner 1995 for the most recent bibliography.

[12] The Carthage—*Theveste* road in I3, the coastal road from Carthage to *Lepcis Magna* in I29, and the *Theveste*—*Tacapae* road in I32, see Appendix 1 for the full itineraries.

[13] I19: *Aquae Regiae—Marazanae—Sufes*; I26: *Sufes—Marazanae—Aquae Regiae—Vicus Augusti—Hadrumetum*.

For Salama, a crucial factor in identifying the *Via Hadrumetina* was the historical and therefore regional importance of *Ammaedara* as the first camp of the *legio III Augusta*. What was not emphasized by Salama, however, was that by the time of the epitaph's composition sometime between the second and third century C.E., the third legion's base had already been moved to *Theveste* (likely around 75 C.E.), and again farther into the interior to *Lambaesis* by the end of the first third of the second century (circa 125 C.E.).[14] The funerary inscription dating roughly to the end of the second and beginning of the third century therefore postdates the pinnacle of *Ammaedara* political importance by nearly a century. Although *Ammaedara* was the earliest origin or terminus for the majority of North Africa's major roads,[15] *Theveste* certainly supplanted *Ammaedara* once the headquarters of the third legion was moved to there, and unequivocally after the move to *Lambaesis*, as *Theveste* became the convergence point of many major roads and served as the gateway for the 'highway' that led directly to the new legionary base (see Figure 1). It is reasonable to assume that over time *Ammaedara* became a stopping-point along these major roads, albeit an important one, rather than the ultimate destination.

Despite his problematic identification of the *Via Hadrumetina*, Salama's ultimate conclusions about the road are still valid and worthy to reiterate: first, that the *Via Hadrumetina* interconnected four very different climatic but equally important regions (the High Tell, High Steppe, Low Steppe, and Sahel), each producing varied but complementary products;[16] and

[14] Le Bohec 1989, 2000.
[15] The famous Carthage—*Theveste* road originally terminated in *Ammaedara*; construction of the earlier road probably began (at least informally) under Augustus (Salama 1951: 24). The *Theveste—Tacapae* road, initiated by Tiberius, first departed from *Ammaedara* (almost certainly the '*castris hibernis*') before *Theveste* superseded it (Naddari 2014), and perhaps was one of the causes of the War with Tacfarinas (*circa* 15-24 C.E., Tac. *Ann*. 2.52; 3.20-21, 73-75; 4.23-26), though some have recently disputed this (Faure 2022).
[16] Salama 1964: 82.

second, that goods (and people) moved both east/west and north/south depending on the circumstances of the moment.[17]

Part III: Did the Route of the *Via Hadrumetina* Change over Time?

A road by itself accomplishes nothing; or, as Salama put it, 'a road belongs to a context, we cannot isolate it'.[18] The purpose of a road is to transport something or someone from one specific point to another along a predetermined path, and identifying these specific points is crucial to establishing the actual path of a road. In this section, I shall attempt to explore the possibility that the trace of the *Via Hadrumetina* may have shifted over time, away from the route that Salama proposed. To this end, I will first, unlike Salama, establish the important connection between the *Via Hadrumetina* and the Roman administrative tax district known as the *regio Hadrumetina*, and, second, like Salama, I will determine 'principal sites' that served as stopping-points along this road and therefore formed the *Via Hadrumetina*. Then I will explain why and how I have limited the investigation that follows to a section of the *Via Hadrumetina* rather than its entirety. In the last part of this section I will provide a description of the surviving vestiges of the section of the *Via Hadrumetina* that I am investigating as well as reconstruct the few secondary roads in my investigatory zone that are no longer extant.

The Regio Hadrumetina

Since at least the reign of Trajan (98-117 C.E.) there existed a *procurator regionis Hadrumetinae* who was responsible for the fiscal administration of imperial domains in a region that extended from *Hadrumetum* up to *Theveste*.[19] The exact northern limits of his authority are unknown, but it

[17] Salama 1964: 85: "[*les produits o*]*rientés vers* Theveste *et Hippone ou vers Hadrumète selon les conditions du moment*".
[18] Salama 1964: 82: "*une route appartient à un contexte ; on ne peut l'en isoler*".
[19] Near the end of his reign, Trajan restructured the administration of imperial domains in North Africa, splitting duties of the formerly singular *procurator provinciae Africae* into three or four separate districts: the *tractus Karthaginiensis*,

certainly did not encroach up the *tractus* of Carthage, and Michel Christol has argued that it extended and encompassed the lands of *Segermes*.[20] As with the northern limits, the southern reaches of his jurisdiction are not precisely defined, but, since we know of no other imperial administrative district (that had authority equal to or greater than that of the *procurator regionis Hadrumetinae*) south of *Hadrumetum*, we can reasonably assume that it included any imperial domain in what would become the new Diocletianic and Late Roman province of *Byzacena*.[21] To the west, the *regio Hadrumetina* extended as far as—but did not encompass—*Theveste*, despite later evidence that these two *regiones* were under the control of a single *procurator*.[22] Between the reigns of Hadrian (117-138 C.E.) and Septimius Severus (193-211 C.E.) administration of imperial estates in the area between *Theveste* and *Hippo Regius* was definitively consolidated into a single position, the procurator of the *regio Thevestina*.[23] It was only after the death of Septimius that the *regiones Hadrumetina* and *Thevestina* came under the authority of one individual, based on the find of an inscription found at *Cirta* (though we do not know how long this arrangement lasted).[24] Furthermore, *Theveste*, and *Ammaedara* as well, eventually fall under the domain of the two *Numidiae*, not *Byzacena*. So, despite its strong connection with *Theveste*, we can plausibly say that the *regio Hadrumetina* was located primarily in *Byzacena* and did not encompass the immediate environs of *Theveste*.

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the *regio Thevestina* and the *regio Hipponiensis* (it is still debated whether these two were ever under the authority of separate procurators or were always administered by a single individual), and the *regio Hadrumetina*. For early arguments about the authority of imperial *procuratores* see Pflaum 1960, 1961; David 1977 for the appearance of a different tax district in *Numidia* that took lands away from the *procurator regio Thevestina* (*et Hipponiensis*); Christol 2006 for the emergence of the three (or four) districts under Hadrian and the best arguments for the scope of the *procurator regio Hadrumetina*'s authority; and Kłodziński 2020 for a good, brief summary of the same information.

[20] Christol 2006: 242. Jesper Carlsen has recently supported this norther limit (2022: 145).

[21] Michel Christol goes so far as to say that the *regio Hadrumetina* is what gave shape to the province of *Byzacena* (2006: 243).

[22] *CIL* 8.7039 = *ILS* 1437.

[23] *CIL* 8.5351 = *ILAlg* 1.285; *ILAlg* 1.3992.

[24] *CIL* 8.7039 = *ILS* 1437. Salama notes that this consolidation could have happened under Antoninus Pius (138-161 C.E.) (1964:84), but I think the later date is more appropriate given the previous inscriptions referencing only the *regio Thevestina*.

Principal Sites that Constitute the Via Hadrumetina

In addition to the other problems with the traditional identification of the *Via Hadrumetina* discussed above, by the early second century C.E. the road defined by Salama was no longer the most direct path to *Hadrumetum* from the legionary bases once they were transferred from *Ammaedara* to *Theveste* and then *Lambaesis*, which was a primary concern of Salama. I suggest that a plausible candidate for the most important road from the interior to *Hadrumetum*, and thus one that potentially served to realign the *Via Hadrumetina*, was the road that originated in *Theveste*, passed through *Menegere*, *Cillium* (Kasserine), *Sufetula* (Sbeitla), *Masclianae*, *Aquae Regiae*, and *Vicus Augusti*, before finally terminating in *Hadrumetum*.

I have made this determination through an investigation of the African section of the *Itinerary*. By looking closely at stages that reoccur in different itineraries we can reliably obtain the path of an ancient road; these consistent repetitions allow for the identification 'principal sites', sites that served as the major stopping points for travel along a road, and, in our case, sites that determine the path of the *Via Hadrumetina*.

Five sequential itineraries travel along my suggested *Via Hadrumetina*: the first travels from *Sufetula* to *Hadrumetum* (I23); the second from *Theveste* to *Vicus Augusti* (I24); the third from *Theveste* to *Aquae Regiae* (I25); the fourth from *Aquae Regiae* to *Hadrumetum* (I26); and the fifth from *Sufetula* to *Hadrumetum* (I27). All of these itineraries present the same order of stages and distances between each site, demonstrating that this is an established road, not different routes through the same sites. No segment of another major or even minor road is repeated to the same extent throughout the African section of the *Itinerary*, even the famous Carthage—*Theveste*

road; to quantify this, sections of my *Via Hadrumetina* appear in nearly one-fifth of all routes in the African section.[25]

Limiting and Determining the Scope of Investigation: The Road from Cillium *to* Hadrumetum

I have decided to begin my investigation with *Cillium* rather than *Theveste* (or *Menegere*),[26] as *Cillium* is the principal crossroad between *Theveste* and *Thelepte*,[27] the latter serving as first stop of the major *Theveste—Tacapae* road.[28] Goods from overseas arriving in *Hadrumetum* would likely increasingly travel along my proposed alternative route to that of the *Via Hadrumetina*, as proposed by Salama, as far as *Cillium*, where they would then have the decision to proceed north-west to *Theveste* via *Menegere* or directly south to *Thelepte*, and then be diffused throughout these sites' environs and along their respective major roads. Additionally, goods destined for export from sites in the High Steppe and Nemencha regions (essentially those within the *regio Thevestina*), like *Theveste*, would likely take the north-eastern road to *Hippo Regius* or Carthage, and those around *Thelepte* would presumably head south-east to *Tacapae*. Ending this investigation with *Cillium* rather than *Theveste*, therefore, terminates my road at an important crossroads of the interior and limits my analysis to the part of the *Via Hadrumetina* that was unquestionably located in the *regio Hadrumetina*, and not the neighboring *regio Thevestina*.

[25] I should mention that the Peutinger Table contains the sites *Theveste* (IV.5.u), *Aquae Regiae* (VI.1.u), and *Hadrumetum* (VI.2.u), but does not directly—or even closely—connect them (*Theveste* is an entire segment away from *Aquae Regiae*).

[26] *Menegere* was little more than a stopping point between *Theveste* and *Cillium* (we do even know if it should be spelled "*Meneggere*"); it is included in my investigatory area, but I do not considered it a site, like *Cillium*, *Theveste*, or *Thelepte*, that would be the plausible end of a journey.

[27] Alfred Merlin described *Cillium* as a normal elongation of the *Sufetula—Hadrumetum* road (*BTCH* 1907: CCLXXIV (274), "*était le prolongement normal du troçon* Sufetula—Hadrumetum"), emphasizing that *Cillium*, not *Theveste* of *Thelepte*, should be seen as the end of the *Via Hadrumetina* (though Merlin did not use this phrase), and therefore as a crossroad between the three important sites (but attached more to *Sufetula* then *Theveste* or *Thelepte*).

[28] See Alouani and Lapierre 2010 for the road between *Theveste* and *Thelepte*; Naddari 2014 for the identification of *Ammaedara* as the *castris Hibernis* that led to *Tacapae* (and thus passed through *Thelepte*) and 2016 for discussion of the road between *Cillium* and *Thelepte* (and the road between *Cillium* and *Sufetula*).

In order to determine the full scope of my investigation along this section of the *Via Hadrumetina* I created a buffer zone of 40 km (approximately 27 *m.p.*)[29] around five of my principal sites in *ArcGIS* and included only those 'secondary' sites that fell within this zone.[30] The 40 km distance is slightly arbitrary (rather than, say, 39.93 km, which is exactly 27 *m.p.*), but this determination is based on the African section's mode distance of 25 *m.p.* or 36.98 km,[31] which I am taking as the average distance a traveler could cover in one day, but there is no doubt that some would travel less and some would travel more than this distance.[32] Therefore, every site included in the scope of my investigation is essentially one day's journey from a principal site and, therefore, one day's journey from the *Via Hadrumetina*.

The stretch of the *Via Hadrumetina* that I am investigating is shown in Figure 3 below. The distances between each site given by the *Itinerary* are as follows:[33] from *Cillium* to *Sufetula*, 25 *m.p.* (36.98 km); from *Sufetula* to *Masclianae*, 36 *m.p.* (53.24 km); from *Masclianae* to *Aquae*

[29] I have used the more precise conversion of 1.479 km to equal one Roman mile (*milia passuum*, abbreviated *m.p.*), rather than the simpler 1.480, throughout.

[30] This is of course not without its drawbacks, principally the exclusion of important sites by a very small distance. For example: *Chusira* by a meager 2 km, *Maktar* by 15 km, and *Thugga Terebenthina* by approximately 25 km. It could be argued, however, that goods and people from these sites might travel north instead, and reach Carthage via *Musti* along the Carthage—*Theveste* road. Additionally, I did not include *Hadrumetum* in the creation of this buffer, as sites within 40 km of *Hadrumetum*, but not within 40 km of *Vicus Augusti* would likely not travel along the road I am investigating, and *Hadrumetum*'s inclusion would also encompass other major ports such as *Ruspina* (Monastir). However, I have included in my analysis sites that are close to *Hadrumetum* but would not take our road to reach *Hadrumetum*; even though they might take a different road to *Hadrumetum* in order to export to the wider Mediterranean, goods from these sites could travel along our road into the interior of *Africa Proconsularis* for the purpose of intraprovincial trade.

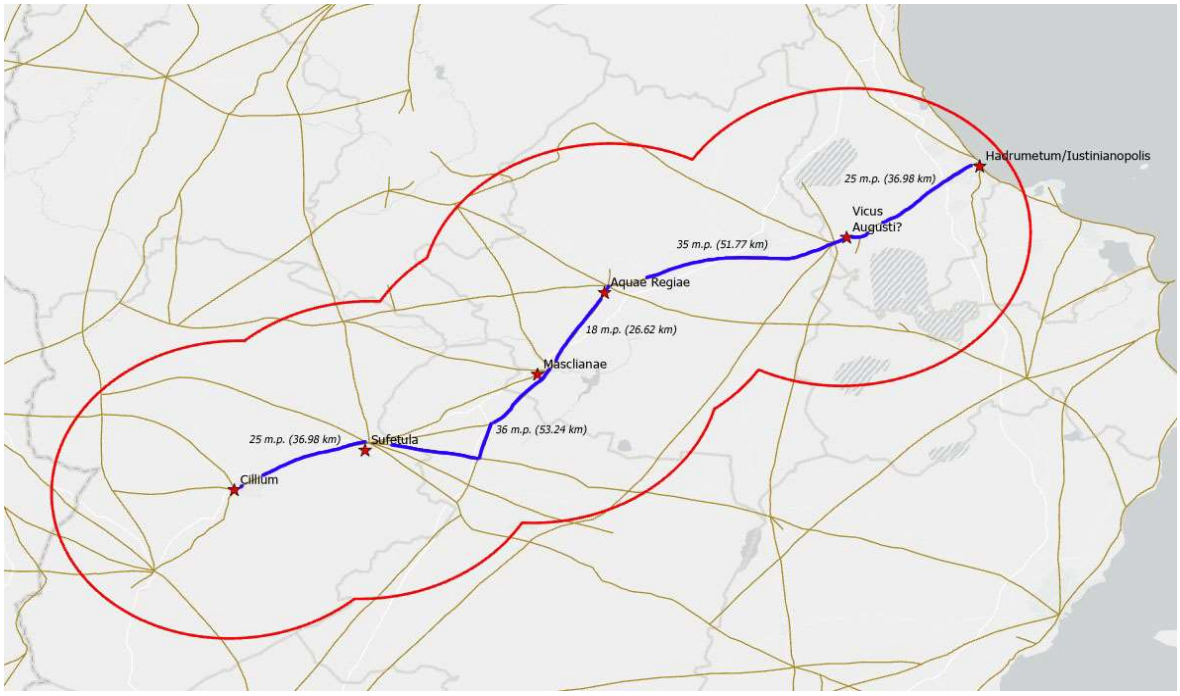
[31] See Appendix 2 for a summary of the African Section's distances.

[32] Salway 2001: n. 30: "Gaius, *ad edictum provinciale* 1 (*Dig*. 2.11.1), Ulpian, *ad edictum* 2 (*Dig*. 50.16.3 pr.)… (*Dig*. 38.15.2.3) and Modestinus (*Dig*. 27.1.13.2) equate twenty miles with one day's travel"; 20 Roman miles being 29.58 km.

[33] These distances have been checked and confirmed by *ArcGIS* measurements, after converting the *Itinerary*'s distances to kilometers (1 *m.p.* = 1.479 km) and then measuring by this metric for better precision.

Regiae, 18 *m.p.* (26.62 km);[34] from *Aquae Regiae* to *Vicus Augusti*, 35 *m.p.* (51.77 km);[35] and finally from *Vicus Augusti* to *Hadrumetum*, 25 *m.p.* (36.98 km). The total distance for our road—at least the *Itinerary*'s version of it—is 139 *m.p.* (205.58 km).

Figure 3: My Proposed *Via Hadrumetina* from *Cillium* to *Hadrumetum*



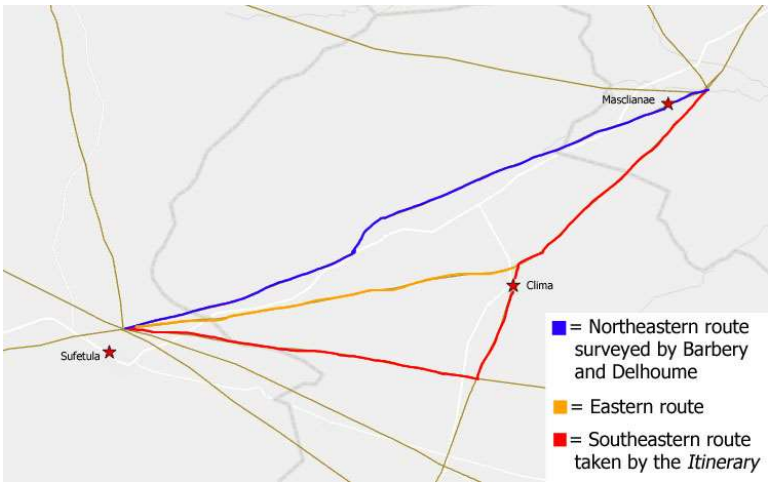
I qualify the total distance determined above as "the *Itinerary*'s version" for one particular reason: multiple roads exist between *Sufetula* and *Masclianae* (Figure 4, below). The *Itinerary* departs from *Sufetula* but does not take the most direct path to *Masclianae* (42 km), the northeast

[34] In one itinerary (I27 at *56.2*) the distance of the road between *Masclianae* and *Aquae Regiae* is given as being 17 *m.p.*, rather than the usual 18 miles as in I23 (*53.3*), I24 (*54.3*), and I25 (*55.2*). This is certainly due to the loss of an "I" from "XVIII" at some point in the document's transmission, which resulted in the "XVII" present in the surviving manuscripts.

[35] As was the case for the road between *Masclianae* and *Aquae Regiae*, there are also errors present in the *Itinerary* for the distances of the road between *Aquae Regiae* and *Vicus Augusti*, this time two. The first is in I23 (*53.2*), which states that the distance between the two sites is 25 *m.p.*, rather than the correct 35 miles as in I24 (*54.2*) and I26 (*55.9*). Obviously an "X" has slipped out of "XXXV" to result in the present "XXV". The second incorrect distance is in I27 (*56.3*), which states that there are 32 miles between *Aquae Regiae* and *Vicus Augusti*, a more peculiar error. However, if we follow Alfred Rivet's approach to correcting distances in the *Itinerary* (1970: 39), then it is easy to see that the "V" from the original "XXXV" was read and copied as "II" by some early scribe resulting in the incorrect "XXXII". (Rivet also notes that "V" could often be confused with "X" by copyists.)

road surveyed by Jean Barbery and Jean-Pierre Delhoume,[36] or even the next shortest, the eastern route which heads straight to *Cilma* (Djilma) and then turns north to continue on to *Masclianae* (46 km). Instead, the *Itinerary* takes the more southeasterly road and then turns north passing through *Cilma* before reaching *Masclianae*; this route totals approximately 53 km—36 Roman miles—the precise distance given by the *Itinerary*. This longer route is taken not just once, but all four times this stage occurs in the *Itinerary*,[37] indicating that it is not just a possible route but the established one. Barbery and Delhoume (following Salama) supposed that the eastern road—not the one going directly to *Masclianae* but the one which passes through *Cilma*—was older than their surveyed northeastern road, so it is possible for us to assume (*prima facie*) that the *Itinerary* reflects an earlier route.[38]

Figure 4: The Roads between *Sufetula* and *Masclianae*



The question is why the *Itinerary* makes this 'detour', purposefully neglecting the shortest route and instead passes through a site not listed in the *Itinerary* to take an overall longer path to

[36] Barbery and Delhoume 1982.
[37] Once transmission errors are corrected, the same distance is given between *Sufetula* and *Masclianae* in I23, I24, I25, and I27.
[38] Though this southeastern road is shown on their map on page 28, Barbery and Delhoume do not show the secondary road that branches off of this main road and goes directly to *Cilma*. This secondary connecting road is present in Salama 1951, the *Barrington Atlas*, and Desanges *et al*. 2010, and it is necessary to make the *Itinerary* distances match with the reality, so one can only wonder as to why they omitted it.

Masclianae. This is especially important when we consider the likely date of the *Itinerary*'s final composition (*circa* 286) and compare this date to the earliest repairs along Barbery and Delhoume's surveyed northeastern road (*circa* 245 C.E. under Philip the Arab). The shorter northeastern route undoubtedly existed in the time of the *Itinerary*'s formulation, and likely long before it, but the *Itinerary* clearly does not utilize it. This is presumably an instance of the *Itinerary* reflecting its source material, almost certainly *annona* routes,[39] but perhaps also sites where the governor or his staff conducted assizes or sites that were part of the *cursus publicus*. The *cursus publicus* was an infrastructural network of places that were required to help travelers on state sanctioned business (changing animals, nightly lodging, *et c*.), not the road network itself.[40] The 'detour' to *Cilma* is obviously not the most direct path from *Sufetula* to *Masclianae*, and therefore *Cilma* must have been either important to the collection of *annona* taxes or contained a *mansio* that could be utilized by state agents on official business, even though the *Itinerary*'s composer (or more likely his source) did not explicitly list *Cilma* as a stop.

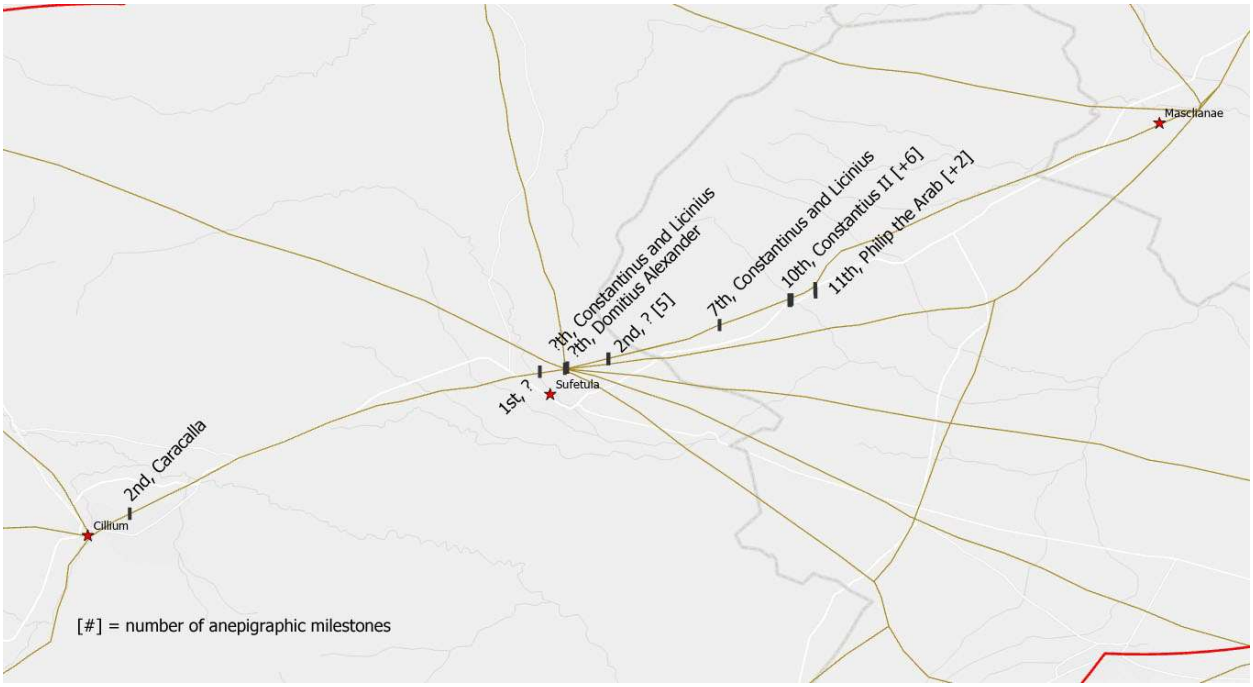
Regardless of the exact reason for the selection of this longer route, all three of these roads, as well as the two other more southern roads that depart from the east side of *Sufetula*, can be and are considered in this investigation. Goods from sites along the more southern roads could be conveyed north to *Sufetula* before traveling along our road to *Hadrumetum* or they, along with the more northerly roads, could skip this principal site altogether and proceed directly to *Masclianae* by utilizing the various know ancillary roads that connect to the major roads departing from *Sufetula*.

[39] See Van Berchem 1937, but especially Reed 1975 and Arnaud 1993 for the main arguments that the minor routes in the *Itinerary* reflect *annona* routes, and not the *cursus publicus*.
[40] Kolb 2000, 2001, 2002.

Surviving Milestones along the Via Hadrumetina

When compared to other major roads like the Carthage—*Theveste* route, milestones along the *Via Hadrumetina* are relatively few in number.[41] Fortunately, the road from *Cillium* to *Hadrumetum* does have some milestones (Figure 5, below), in contrast to the route Salama proposed, which had no surviving milestone except for one found tens of miles south of *Hadrumetum*, but its application to either of our roads is dubious.[42]

Figure 5: Milestones Present on the *Via Hadrumetina*



The earliest surviving milestone, dating to the reign of the emperor Caracalla (216 C.E.), marked the second mile from *Cillium* to *Sufetula*.[43] Although the stone itself uses the verb "*instituere*", it is hard to believe that this road was first created in the time of Caracalla, especially

[41] Salama 1987 cataloged 52 Roman milestones along the Carthage—*Theveste* route, more than double any other North African road (Table B of Appendix 1, pages 212-213).
[42] *CIL* 8.10028. This stone was found in Moureddine, far away from either proposed *Via Hadrumetina*, and, like Salama, I do not think it should be included in an analysis of the *Via Hadrumetina*, as it likely was a marker for the road between *Hadrumetum* and *Thysdrus*, and not the *Via Hadrumetina*.
[43] Naddari 2016 nº1.

considering the military origin of both sites. Instead, this is probably an instance of repairs to the road.

The next datable milestone belongs to the reign of Philip the Arab (*circa* 245 C.E.) and was found along with two other anepigraphic milestones at the eleventh mile departing from *Sufetula* towards *Masclianae*.[44] Philip (and his son) affected repairs to other North African roads, as we also have a milestone showing repairs for the road between *Cillium* and *Theveste*.[45]

The remainder of our datable milestones come from the fourth century. The first belongs to the usurper Domitius Alexander (*circa* 308-310 C.E.) and was found in the amphitheater of *Sufetula*, which Lofti Naddari reasoned to have been originally located on the road from *Sufetula* to *Cillium*.[46] The next two belong to the joint reign of Constantinus and Licinius (308-324 C.E.) and both occur on the road between *Sufetula* and *Cillium*: one from the seventh mile departing from *Sufetula* towards *Cillium*,[47] the other from some unknown mile.[48]

A group of milestones was also found at the tenth mile from *Sufetula* to *Masclianae* by Alfred Merlin.[49] Of the seven stones found, four were anepigraphic, one was simply inscribed with the mile ("X"), and another had a number of successive imperial dedications and re-inscriptions making precise dating impossible,[50] however, the last was dated to the reign of Constantius II (337-361 C.E.).[51]

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[44] *BTCH* 1907: CCLXXIII-CCLXXIV (273-274).
[45] *CIL* 8.21952.
[46] *CIL* 8.21959. Naddari 2016: 40 n.21, arguing against Salama's 'unjustified' placement of the stone on the road between *Sufetula* and *Masclianae* (1987: 223 n. 6).
[47] *CIL* 8.10038.
[48] *CIL* 8.21961.
[49] *BTCH* 1907: CCLXXII-CCLXXIII (272-273).
[50] *BTCH* 1907: CCLXXIII (273): "*où plusieurs dédicaces impériales semblent avoir été gravées successivement et se confondent en s'entemêlant*".
[51] *ILAf* 661.

There are also a number of milestones along the road from *Cillium* to *Hadrumetum* that remain unattributable.[52]

The Kasserine Survey discovered an inscribed limestone block at Henchir-Bou-Haya (KS093) that bore the name of Domitian (r. 81-96 C.E.).[53] If it is indeed a milestone, it would indicate that the road from *Thelepte* to *Theveste* was built or at least repaired under this emperor. The Flavians (69-96 C.E.) were responsible for the civic establishments of *Sufetula* and *Cillium*, so it is probable that they were active in road building as well, which would facilitate travel to and from their new foundations; however, we have had no epigraphical evidence for this latter aspect until the discovery of this inscription. The creation of the *regio Hadrumetina* under Trajan, which could only be properly administrated with the assistance of an established road network, may therefore be seen as the next phase in the development of the road network that began at least under the Flavians if not earlier.

To sum up, the milestones evidence provides very limited information on the origin and evolution of the *Via Hadrumetina*. Although it is likely to have existed in a rudimentary form from at least the first century C.E. connecting newly established Flavian settlements,[54] the surviving milestones only indicate that the road was subject to repair in the third and fourth centuries (after the creation of the *regio Hadrumetina*). These repairs are perhaps indicative of the high value attached to the road as an active route for communication and travel in the *regio Hadrumetina*.

[52] The first is located on the first mile from *Sufetula* to *Cillium* (*CIL* 8.21960), and another five were found around the second mile departing from *Sufetula* towards *Masclianae* (*CIL* 8.23220-23225).

[53] Text of the inscription reconstructed by Hitchner (forthcoming): "[IMP] CAESARI / DIVI VESPASIANI [F(?)] / DOMITIANO AUG / [P]ONTIF MAX / [T]RIB POT [I?]X IMP / [?]COS VIII DESIG / VIII PP".

[54] The fundamental communication pathway between *Hadrumetum* and *Theveste* certainly existed in pre-Roman times, as *Hadrumetum* was founded by Phoenician settlers perhaps as early as the twelfth century B.C.E. (Foucher 1964) and Theveste has been identified as the Numidian "*Hekatompyle*" referenced by Polybios (1.73.1) and Diodoros (24.10.2). The two sites were doubtlessly in contact before the Roman occupation of North Africa .

Physical Description of the Via Hadrumetina *and its Ancillary Roads*

Vestiges of the *Via Hadrumetina* as well as the majority of ancillary roads are known from ground survey and recognizance. The main road 'exists' insofar as we can accurately and reliably discern its traces and direction with a combination of literary evidence and physical survey. However, we lack a detailed description of the *Via Hadrumetina* in its entirety and, for the most part, its stages as well,[55] except for the road between *Sufetula* and *Masclianae*.

Alfred Merlin described the road from *Sufetula* to *Masclianae* as being approximately six to seven meters wide, bordered and demarcated on both sides by contiguous stones.[56] The same road was surveyed much later by Barbery and Delhoume in its entirety, whose more comprehensive description largely matched Merlin's.[57] They were able to find approximately half of the road's vestiges with certainty, primarily the section between *Sufetula* and *Masclianae*; whereas the stretches of the road located closest to the two sites were almost completely lost and thus subject to conjecture by the scholars. By their calculations, the road had an average overall width of 5.5 and 6 meters (but regularly increased when approaching sites), and an average depth of 20 to 30 centimeters, being only one layer of paving material (although they caution that other components were perhaps lost by erosion).[58] The primary material was locally quarried limestone (likely from the mine a couple of kilometers north-east of *Sufetula*) and it was used for both the surface and side stones, with pebbles and smaller rocks being used for the gravel. The remains of

[55] The *AAT*, for instance, only mentions that an entry is a Roman road without describing any of its important qualities (construction materials, width, level of preservation, orientation, *et c*.), *e.g*. "*tronçon de voie romaine*" *AAT*[2] Sbeitla f. 48.31. A few remnants of the road were observed by the editors of the second series of the *AAT*, primarily around *Cillium*: (Kasserine) 2.47.30, 32, 41, 77, 114, and 145; (Sbeitla) 2.48.31.
[56] *BTCH* 1907: CCLXXIII (273).
[57] See Barbery and Delhoume 29-30 for what follows.
[58] These dimensions align well with Chevallier's generalization of the measurements of North African roads: they are inconsistent in their width, varying between 7 and 2.5 meters, and in their depth, even more variable but almost certainly always less than one meter (the great Carthage—*Theveste* road was never more than 67 centimeters in depth) (1972: 154-155).

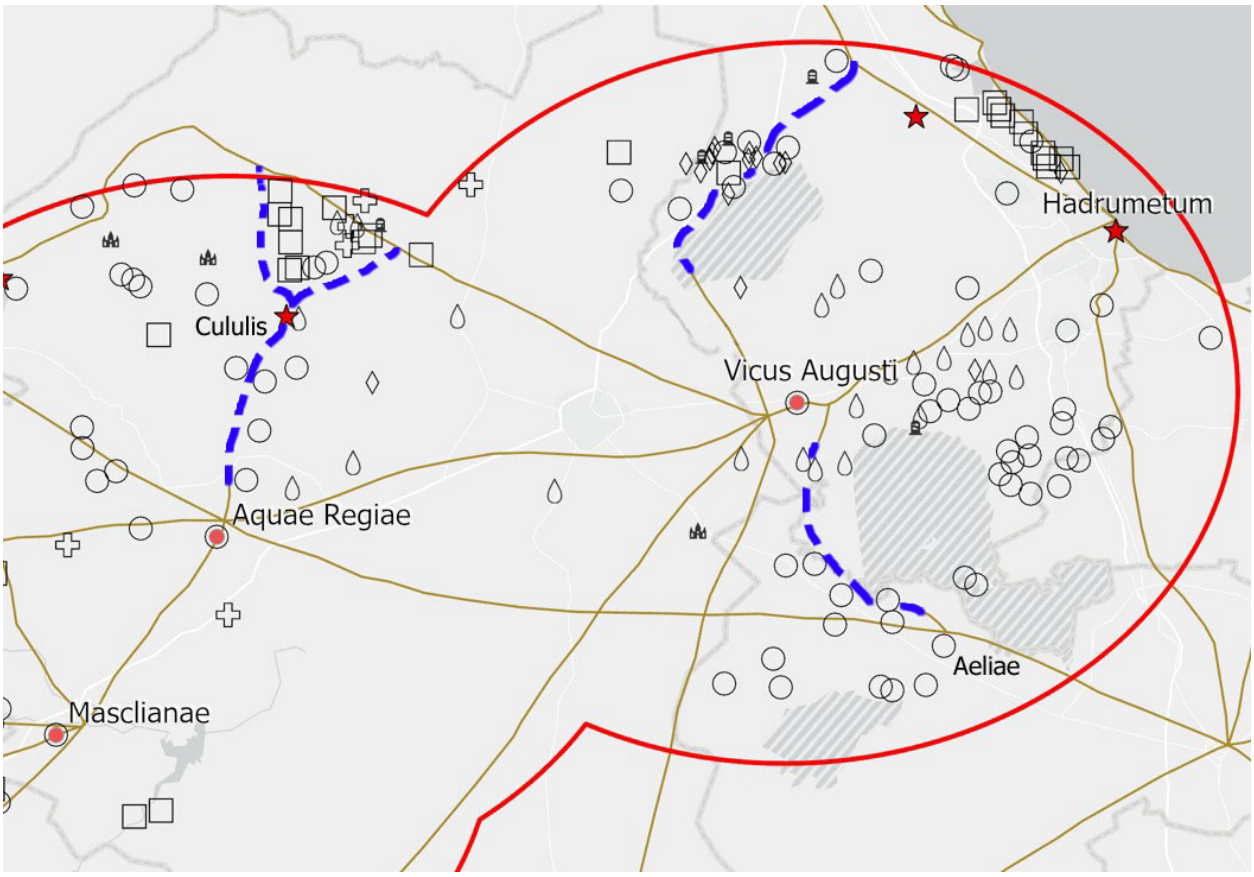
bridges were completely absent, despite the road crossing numerous *wadis* (seasonally dry riverbeds). These non-extant bridges and their remains were almost certainly destroyed through seasonal flooding, but the possibility that the *wadis* were crossed by a simple fording cannot be ruled out; Barbery and Delhoume were attracted to the latter explanation, but did not reach a definitive conclusion.[59]

Although the descriptions of Merlin and Barbery and Delhoume are not, technically, applicable to the *Via Hadrumetina*'s as established by the *Itinerary* (as it took a different road from *Sufetula* to *Masclianae*), I think that comparable levels of construction can reasonably be ascribed to at least some of the other roads departing from *Sufetula*, and likely to the *Via Hadrumetina* as a whole.[60]

The overall alignment and physical construction of the *Via Hadrumetina* and its secondary roads follows many of the principles of orientation ascribed to North African roads by Raymond Chevallier.[61] They are largely straight, only becoming sinuous in order to circumvent an insurmountable geographical obstacle (*e.g.* the Sebkhet Al Kelbia salt flat north of *Vicus Augusti*)[62] or to better arrive at a site that is located near the eventual path of the road.

[59] Barbery and Delhoume 1982: 30. The two preferred the latter theory because they suggested that in antiquity the valleys were higher and therefore the *wadis* could be crossed relatively easily.
[60] The roads around *Hadrumetum* and other urban centers are perhaps the biggest exception, as they would almost certainly be larger in scale and more elaborate in construction; the continuous habitation of the site since antiquity, however, makes this only a hypothesis.
[61] Chevallier 1972: 154-155.
[62] Changing the course of a road required truly extreme geological impediments such as lakes and salt flats, not simply the presence of mountains, valleys, or hard-to-cut-through materials. For instance, an approximately two kilometer stretch of a road south of *Theveste*, in the Wadi Refana gorge area, is cut out of solid rock, showing that difficult and laborious changes to the environment were commonplace in the construction of Roman roads in North Africa, as was the case throughout the Roman world (Chevallier 1972: 154).

Figure 6: Reconstructed Ancient Roman Roads



The *Via Hadrumetina*, as a trunk road, was served by a number of secondary roads that branched out of it and thereby created a true road network. There are, however, three important secondary roads whose full course is not entirely clear (Figure 6, above). The first departs north from *Aquae Regiae* traveling into the Haffouz region of modern Tunisia. Though not definitively mapped, we may assume this road traveled in a northern direction, likely passing through *Cululis*, before branching out and encircling a number of sites. As can be seen above, these sites north of *Aquae Regiae* seem to be aligned in a way to suggest that they were connected by road that is either no longer visible or has gone unrecorded.

The second road that has to be reconstructed departs to the north of the crossroads west of *Vicus Augusti*, but its course is preserved to a slightly better degree than the previous road, as the

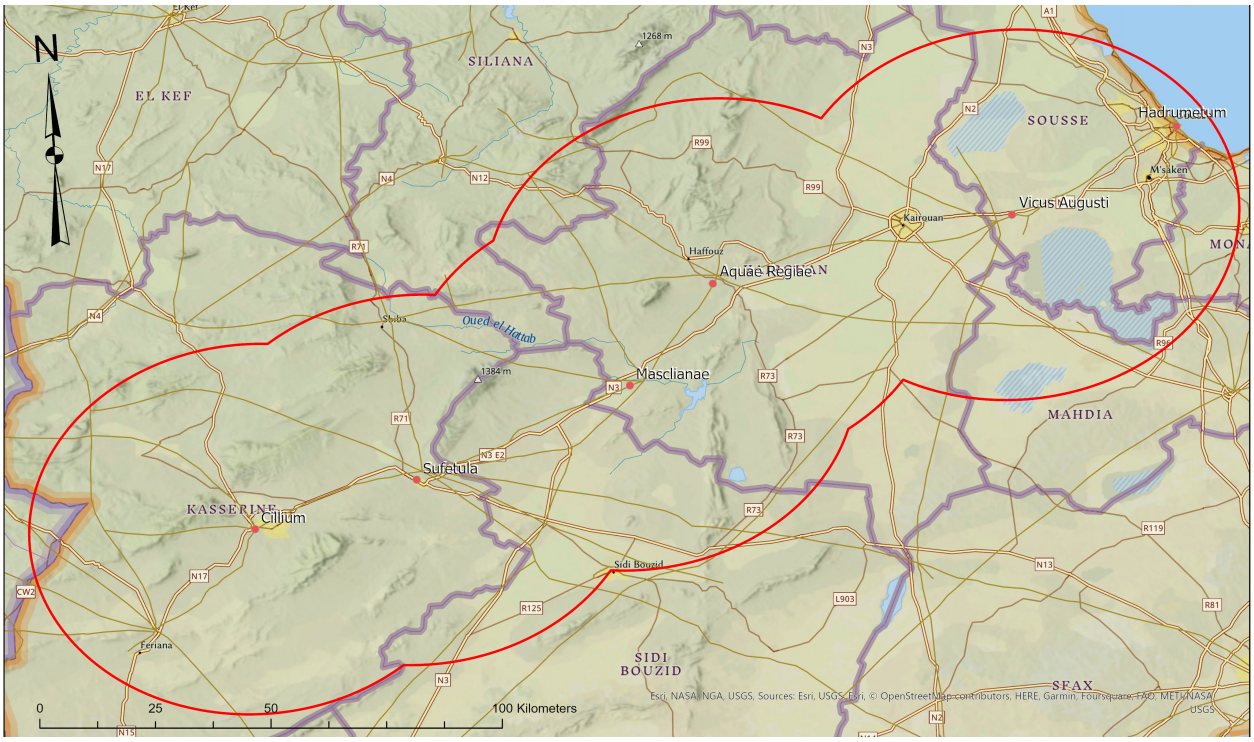
existing trace of it goes through the territory of the people known as the *Byzakioi*[63] who resided north of *Vicus Augusti*, but the remaining traces eventually disappear around the Sebkhet Al Kelbia. Given the section of it that is extant, this road almost certainly continued on, skirting the salt flat, to intersect with or at least pass by the sites north of the *Byzakioi*; it then likely turned east to connect with the roads close to the coast.

A short distance east from *Vicus Augusti* is the third and final of our non-extant roads. It definitively runs south to intersect with the road from *Aquae Regiae* to *Thysdrus* (El Djem), as we have traces of both its beginning as well as its terminus directly north of *Aeliae*. Importantly, this road allows for sites south of *Vicus Augusti* stationed along it to more easily 'plug in' to our major road and move goods to *Hadrumetum* or to *Vicus Augusti* and thence into the interior.

A brief word should be said on the modern road that links Kasserine (ancient *Cillium*) to Sousse (*Hadrumetum*) in order to underscore the importance of our road. The modern road parallels (and at times overlaps) the ancient road from *Cillium* to *Hadrumetum* in the *Itinerary*, except that the modern road follows the north-eastern route from *Sufetula* to *Masclianae*, a fact that might point to this road eventually eclipsing the older eastern and southeastern roads that pass through *Cilma*. Therefore, our road was not only a vital corridor for the movement of goods and people in Roman times, but from its very inception, throughout antiquity and down to the present.

[63] A 'Libyan' people described by Strabo (2.5.33) whose territory bordered that of Carthage; their further history is obscure, see Jehan Desanges' brief entry in the *Encyclopédie berbère*.

Figure 7: The Modern Major Road in My Investigatory Area



Part IV: Habitation along the *Via Hadrumetina*

Modern Sources Used for the Collection of Site Data[64]

The first source of data that I utilized for this investigation was *Pleiades*,[65] an open-source gazetteer of sites in the ancient world that can easily be imported into *ArcGIS*. The site data for *Africa Proconsularis* that is native in the *Pleiades* dataset comes from maps 32 and 33 of the *Barrington Atlas* compiled by R. Bruce Hitchner,[66] and it provided the vast majority of sites (243).

[64] Two important modern sources are not used here: the excavations around *Sufetula* carried out by the Brathey group and the more recent survey conducted by the *Institut National du Patrimoine Tunisi* that continues the work of the *AAT*. The former's site data was utilized in the creation of the *Barrington Atlas* and is therefore present in *Pleiades*. I have been unable to obtain access the latter because of the exclusivity of the few print editions and because there is no online edition available (beyond a rudimentary Google map that provides only coordinate data).
[65] Reference to *Pleiades* can be found in the abbreviations section of the bibliography. I utilized the V.2 dataset, as this was the only one available when I started my investigation; a few sites were added to North Africa in the V.3 dataset (the current release), but none of these fell into my investigatory area.
[66] Talbert 2001.

Additional site information is derived from the *Atlas archéologique de la Tunisie* (*AAT*),[67] two extensive surveys and commentaries of ancient sites, monuments, and constructions in north-east and central Tunisia carried out in the late 19th and early 20th centuries. This commentary data, though crucial, varies both in the quality and detail of the description of sites as well as the completeness of the commentary of the sites numbered on the respective maps. For instance, cursory descriptions such as "*ruines romaines*", "*installation agricole*", and "*petit bourg*" abound, but there is no precise explanation of these classifications. There is also a problem of consistent application of the same classifications from one map sheet to the next, and between series as well.[68] As for the completeness of the commentary, often more than half of the sites numbered on the maps are not discussed in the commentary that follows; for instance, the Kasserine map contains 180 sites, but the commentary discusses only 52. The reason for these exclusions is not given.

In an effort to make this information more useful I have established a common classification system for all the sites included in this study (see below). Unfortunately, the *Via Hadrumetina* traverses a few regions not surveyed by either series of the *AAT*, namely the sections of the road between *Sufetula*, *Masclianae*, and *Aquae Regiae*,[69] so these areas lacking *AAT* data had to be supplemented by newer, more focused surveys and *Pleiades*.

The first, carried out by Barbery and Delhoume in the early 1980s, focused on the northernmost road between *Sufetula* and *Masclianae* discussed above.[70]

At the same time Barbery and Delhoume were carrying out their survey, the Kasserine Archaeological Survey began under the direction of Bruce Hitchner and continued throughout

[67] The abbreviation *AAT*[1] will be used for the 1/50,000 scale, and *AAT*[2] for the 1/100,000.
[68] For instance, the vague "*ruines romaines*" and "*ruines de maisons*" classifications appear only in the first series.
[69] These sections of the road run through the modern Dj. Mrhila, Hajeb-el-Aioun, Dj. Trozza, and Pichon regions.
[70] Barbery and Delhoume 1982.

much of the 1980s.[71] Unlike Barbery and Delhoume, who concentrated on the road itself and sites along it, the Kasserine Survey focused primarily on five sectors in the environs of *Cillium* to better understand the nature of agricultural production and settlement in the region.[72]

The last was a survey of pottery producing workshops in the interior of Tunisia by David P.S. Peacock, Fathi Bejaoui, and Nejib Ben Lazreg.[73] The authors not only surveyed and provided detailed descriptions about these workshops (only two of which had been extensively surveyed before),[74] but also collected and coordinated pottery types in order to create a basic chronology of each workshop where possible.

I then inserted every site into *ArcGIS* and created a site typology for the purpose of integrating all sites recorded in the various sources into a uniform database for the purpose of analysis. The end result is a gazetteer of 436 sites within 40 km of the *Via Hadrumetina* (Appendices 3 and 4).

Formulation of Site Typology

The formulation of my typology began with *Pleiades*, as native in the database is a classification for each site taken from the *Barrington Atlas* ("TYPE"): "settlement", "villa", "station", "temple", "aqueduct", "quarry", "mine", "cemetery", and "unknown". Although this typology was a valuable starting point for the development my own, some of these classifications had to be elaborated or revised, and some sites necessitated completely different classifications. Rather than focusing on political terminology, my classifications are principally based upon the archaeological identity of

[71] Hitchner 1988, 1989, (*et al*.) 1990, 1992, and a final report with a full gazetteer still forthcoming.
[72] The sixth sector was only briefly surveyed by automobile and therefore its data is omitted here, as it was in Hitchner's reports.
[73] Peacock *et al*. 1990.
[74] Henchir-es-Srira (Stern 1968) and El-Mahrine (Mackensen 1985).

the sites, taking into account the size, layouts, and evidence of settlement and production at each site.[75]

I established nine total site classifications: Urban Center, Rural Agglomeration, Large Farm, Farm, Milestone, Hydraulic Feature, Quarry/Mine, Cult Site, and Funerary Structure.[76]

As is always the case in large compilations of data, there is danger of oversimplification inherent in this method of classification and investigation, but I have attempted to walk a fine line between this hazard and the other pitfall of overly elaborate and excessive categories, which can often be even more unhelpful to the reader. Some sites likely fit into more than one category, while others are probably best represented by a distinction not used here, but I hope that limiting myself to these somewhat vague but still qualified and consistent categories will result in a few novel insights about the patterns of settlement and land use in this important region of *Africa Proconsularis*.

Site Typology

Urban Center:

These are sites (originally labeled as "settlement" in *Pleiades*) that show clear textual, epigraphic, or archaeological evidence of functioning as large population centers with monumental civic, religious, and residential structures.[77]

[75] As mentioned above, perhaps the most difficult part was translating the more-than-often cursory description of sites from the *AAT*s into English, and then determining which of my classifications the site should belong to, but I have kept my determinations consistent with their classifications, and taken into account any extra features at each site that might argue for a different interpretation.

[76] The first four site-types can be primarily described as 'habitational' and the latter five as—for lack of a better word—'miscellaneous'. These sub-distinctions are helpful in the production of maps (*e.g.* "Farms with Miscellany" or "Hydraulic Features with Habitational Sites") and their discussion.

[77] The non-principal sites that I defined as Urban Centers are *Sufes*, *Thelepte*, *Agger*, *Cululis*, and *Uluzibbira*. Absent from this classification are the principal sites of *Masclianae*, *Aquae Regiae*, and *Vicus Augusti*, primarily because of their obscure history and site features (the existence of a *forum*, orthogonal streets, municipal status, *et c.*). Also absent from this category is Ksar-el-Guellal, even with the vehement (and certainly correct) protestations of my advisor, Professor Hitchner; despite the ample evidence that Ksar-el-Guellal was urbanized and had a long history of occupation likely from the first century C.E. (see Hitchner's forthcoming article and previous discussion of the site in

Rural Agglomeration:

This is primarily a reclassification of sites that were described by *Pleiades* as a "settlement" (*e.g. Aquae Regiae*, *Vicus Augusti*, *Nara*, *Vaga*, *Vegesela*, *et c.*), but ones that clearly fell below the definition of an Urban Center such as *Hadrumetum*, *Sufetula*, and *Cillium*. This classification does not imply (or preclude) intensive agricultural production nor the presence of urban features, and that is why I have chosen to use this neutral-sounding and admittedly vague phrase, as it also serves as somewhat of a 'catchall' category for a few *Pleiades* entries,[78] but more so for *AAT* sites that lacked detailed descriptions. Sites from the *AAT*, therefore, described as "*village*" (especially those with the adjectives "*grand*" or "*gros*"), "*grand ruines*", "*ruines étendues*", "*ruines assez étendues*", "*ruines d'un boug*", "*petit bourg*", or "*petite bourgade*" were reclassified as Rural Agglomerations.

Large Farm:

These are sites originally listed as "villa" in *Pleiades*, but I have relabeled them with this archaeological categorization.[79] Essentially, I am treating this classification as a multi-unit site geared toward intensive and large scale agricultural production. I included in this classification sites described in the *AAT* as "*établissement agricole*", "*exploitation agricole*", "*village agricole*",

Hitchner 1988), it did not feel appropriate to class this site as a Urban Center but other principal sites as Rural Agglomerations. This is wholly because of my provisional typology, as Ksar-el-Guellal is perhaps best described as an urbanized agroville (as Hitchner did, 1988 and forthcoming), and therefore between a Rural Agglomeration and an Urban Center. That said, Ksar-el-Guellal, along with *Masclianae*, *Aquae Regiae*, and *Vicus Augusti* are certainly situated at the uppermost echelon of Rural Agglomerations, teetering between this classification and that of an Urban Center but, here, falling along the former.

[78] For instance, *Meneg*(*g*)*ere* is a "station" in *Pleiades*, but I have chosen to classify it as a Rural Agglomeration as it was the only site from *Pleiades* labeled as such that fell within the scope of my investigation. Additionally, sites whose function could not be determined, usually because they were labelled as "unknown" in *Pleiades*, the *AAT*, or another archaeological survey, were included in this category. In the end, two sites' function was indeterminable: Henchir-El-Hammam and an unnamed *Pleiades* site (PID 327675).

[79] David Mattingly took the same archaeological approach of reclassifying villas as large farms (1988b).

"*ruines d'un centre agricole important*", or "*ruines d'une grand propriéte rurale*", albeit somewhat arbitrarily, as Large Farms, especially when there was evidence of multiple presses.

Additionally, I put sites described by the *AAT* primarily as a fort ("*fortin*") into this category as there was, without exception, also evidence of at least one press at these sites. Increasingly throughout the third and fourth centuries C.E., and again after the Byzantine reconquest, many rural sites were fortified by their landowners for a variety of reasons.[80] All sites described as Byzantine forts ("*fortin byzantin*") by the *AAT* were put into this category, as all similarly had more than one press on site, again arguing that these 'forts' probably originated as farm buildings that were later fortified.[81] Moreover, *AAT* entries that were simply described as being the remains of multiple presses ("*pressoirs*, *huileries*") were also put into this classification.[82]

Farm:

These were sites listed in the *AAT* as "*ferme*", "*ruines de ferme*", or "*ruines d'un ferme romaine*" and typically contained a press, but they are otherwise lacking a description of other extant features, in particular the remains of buildings and site dimensions. I expanded this site-type to incorporate all single presses noted in the *AAT* simply as "*pressoir*" or "*huilerie*", reasoning that remnants of a single press without other significant remains indicates the existence of what was probably a single unit farm (perhaps connected to a neighboring Large Farm or Rural Agglomeration). Also included in this category are sites described by the *AAT* (exclusively by the

[80] Sadok Ben Baaziz first advanced this understanding of fortified farms ("*fermes fortifies*") rather than forts proper (2003b), and Samira Sehili more recently (2009). See also Pringle 1981 and 2002 for the creation of Byzantine fortifications on pre-existing sites and not *ex nihilo*.

[81] A few of these sites' modern names contain *ksar*, Arabic for "fort" (*AAT* 1.46.36; 2.48.54), which likely influenced their classification by early scholars.

[82] The best discussion of theoretical press yields, and therefore the notion that multiple presses are indicative of a Large Farms, is Mattingly's appendix to Hitchner *et al*. 1990, which looks at two site from the Kasserine survey (KS223 and KS225). For dimensions of presses and their other technical aspects see Amouretti *et al*. 1984; Ben Baaziz 1985, 1991, and 2003a; Mattingly 1988b, 1993; Mattingly and Hitchner 1993.

second series) as "*ruines de maisons*" or "*restes de maisons*", which sometimes contained remains of small columns or cut stones (and sometimes "*auges*"),[83] but are likewise lacking description.

Milestone:[84]

This is a monument, typically cylindrical, that was erected along a road in order to mark the distance in Roman miles (occasionally noted on the stone itself) between two sites, which also sometimes bears the name of an emperor.[85]

Hydraulic Feature (Aqueducts, Water Conduits, Cisterns, and Wells):

These are archaeologically visible methods of water transportation, storage, and acquisition. Few traces of aqueducts remain, predominately around *Cillium* and *Sufetula*, but they as well as water conduits (chiefly in the area between the *Sufetula* to *Masclianae* surveyed by Barbery and Delhoume) are much more archaeologically visible than indigenous irrigation techniques (*foggaras*, *wadi* dams, *et c*.),[86] which were not the interest of either *Pleiades*/*The Barrington Atlas* or the *AAT*. Cisterns are underground water storage receptacles that vary widely in size, shape, and construction technique, but are typically monumentally built and, therefore, preserve well. Wells, simply, are holes deeply dug in order to tap into groundwater reserves, their above-ground component usually being monumentalized with stone works.

Quarry/Mine:

[83] Whether we should understand these "*auges*" to be trenches used for feeding farm animals, as is traditionally done, or for the collection of various in-kind rents or taxes (a new theory put forward most visually by Glovin 2022), cannot be determined at this time.

[84] Since they have already been discussed in detail above, Milestones will be left out of my analyses of individual site-types below.

[85] Ray Laurence (2004) has relatively recently re-kindled the argument that throughout the empire many milestones were put up by locals in a show of support for a particular emperor during times of usurpation, especially in the third century C.E., and thus we should be careful when attributing repairs to emperors exclusively through milestones; we do, however, have ample evidence of imperial driven repairs to North African roads, so this different understanding is likely the minority in North Africa. Salama investigated this aspect of North African milestones decades beforehand, and largely rejected it (1986).

[86] For North African irrigation techniques see Shaw 1982, 1984, 1991; Leveau 2022: 33-35.

These are sites used for harvesting stone or metal for the construction of buildings or the manufacture of goods. I have combined these two *Pleiades* classifications into one for the sake of concision as only two sites are described as such.

Cult Site:

These are sites of worship of various sizes, configurations, and construction techniques, and in vastly different states of preservation; unfortunately to which god or goddess they were dedicated to is almost always unknown (when they are outside of a well-documented site that is).

Funerary Structures:

Much like quarries and mines, I have grouped together all types of funeral monuments into a single classification for the sake of concision, as they are not necessarily the focus of this investigation. This category therefore includes *Pleiades*' "cemetery", the *AAT*'s "*mausolée*" and "*necropole*", and the monumental tombs and cairn graves of the Kasserine Survey.

Analysis of Habitation along the Via Hadrumetina

I have created three types of maps to aid in my analysis of the *Via Hadrumetina*:[87]

1) A comprehensive map showing all classifications (and one with topography);

2) Singular maps showing the location of particular site classifications; and

3) Combined maps that incorporate two or more site classifications.

Before analyzing each classification separately, I will discuss my observations on the comprehensive map in order to demonstrate it elucidates general trends that echo throughout our discussion of individual and combined classifications.

[87] I have included the six principal sites of the section of the *Via Hadrumetina* that I am investigating on every map (symbolized as a red dot) in an effort to provide the reader with some small sense of continuity between the numerous maps. In the same vein, I have treated Urban Centers as a 'miscellaneous' type for the three other habitational types (Farm, Large Farm, Rural Agglomeration), as this helps illuminate the general pattern of settlements clustering around Urban Centers without having to produce a new set of maps.

Figure 8: Comprehensive Map of Sites

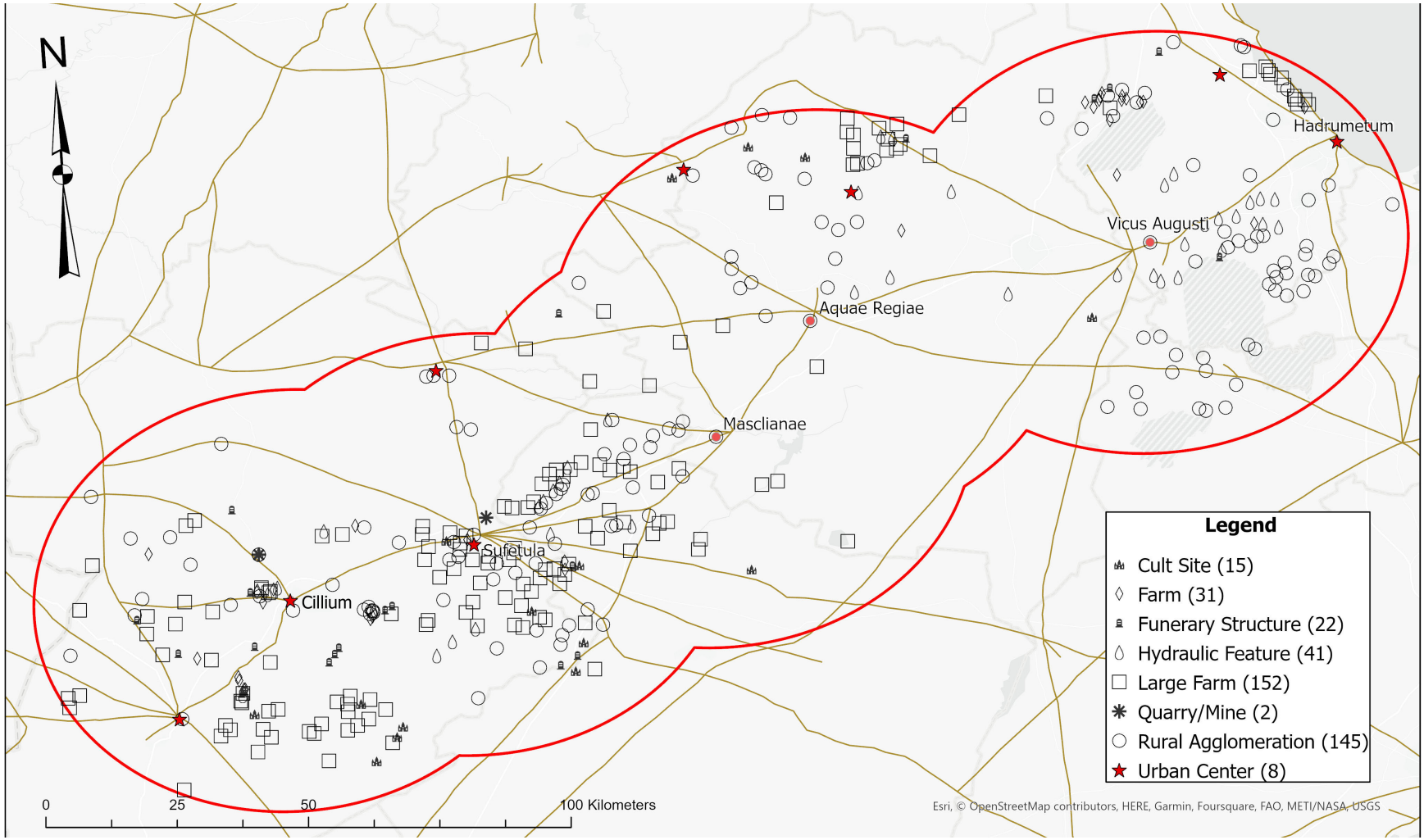
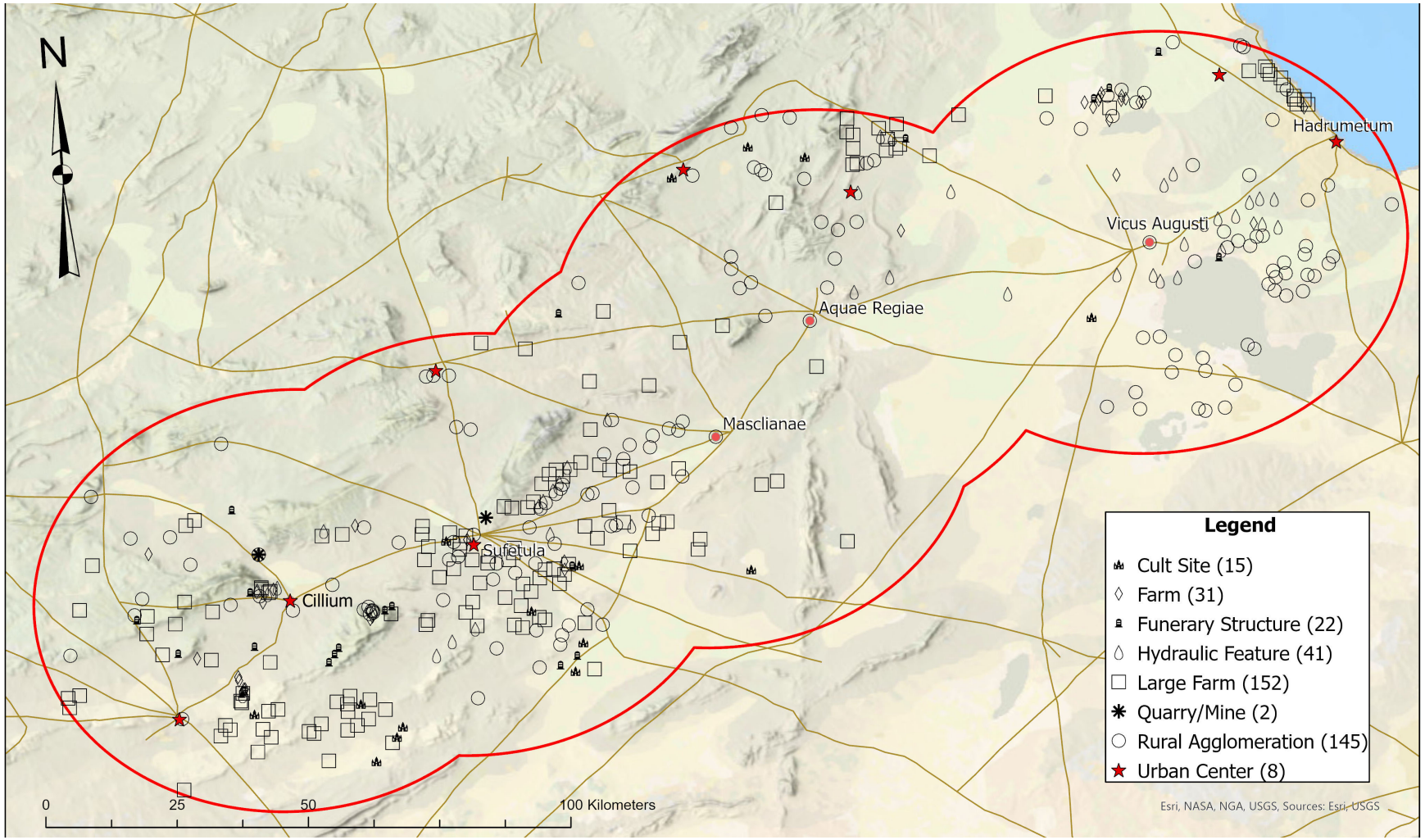


Figure 9: Comprehensive Map of Sites with Topography



Perhaps the most notable observation is the few places where we have a dearth of sites, principally east of *Masclianae* and south of *Aquae Regiae*, and northwest of *Sufetula*. I think there are two main reasons for these blank spaces. The first is simply a lack of modern survey and excavation. Neither area was surveyed by the editors of the *AAT*,[88] nor has a more recent investigation comparable to those of Barbery and Delhoume or Hitchner been carried out for either area. The second reason is that perhaps that they were mostly inhabited by peoples who practiced different type of agriculture and built less monumental structures, in particular the *Musunii* who resided in the 'blank space' north of *Cillium* and *Sufetula*. These areas are hospitable but not inhabitable (as can be said for much of North Africa in general), so to assume that both areas were completely lacking human settlement is not appropriate. Therefore, these two regions should not be seen simply as empty spaces, but as areas that have yet to be rigorously archaeologically surveyed or areas inhabited by peoples who practiced different (less monumental) domestic architecture and settlement patterns as well as less archaeologically visible (and less-Roman) forms of agriculture.[89]

A second noticeable pattern is the concentration of settlement near roads and Urban Centers. The majority of sites are within 10 kilometers of the *Via Hadrumetina* or the secondary roads branching out of it. A few pockets of settlements exist farther in the countryside and away from major roads, primarily those south of *Cillium* and *Sufetula*. There are two possible explanations for these areas. The first is that we simply have not found traces of secondary roads that connected these sites to the larger road network. This is almost certainly the case for those

[88] These would be the modern regions of Dj. Semmama, Sbiba (*Sufes*), Dj. Mrhila, Pavillier, Nasr Allah, Oued Cherfita, and Chorbane.

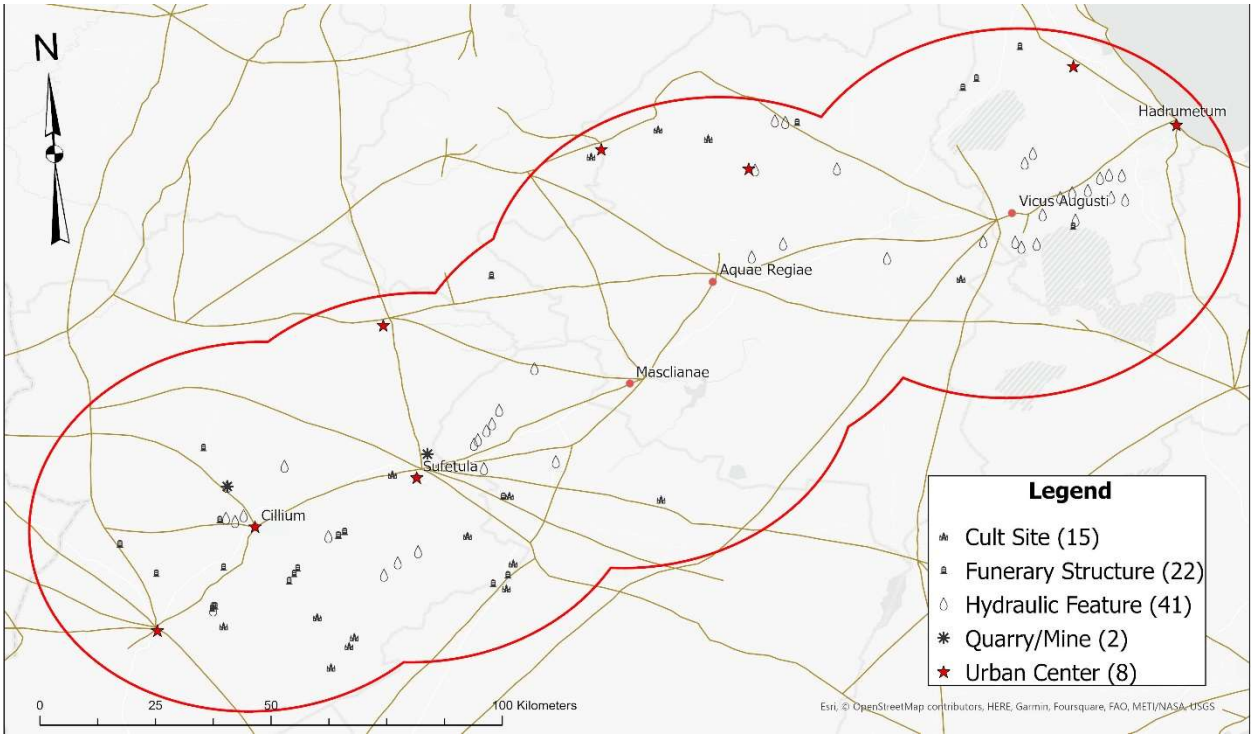
[89] This is a conclusion that I have reached mainly to explain these site-scarce areas, but it is not completely without grounds. Obviously the whole of these areas was not exclusively inhabited by pastoralists, nor were pastoralists confined to these area. Only diligent modern survey of these largely unstudied areas would confirm or deny this generalized conclusion—modern survey that we will likely have to wait a long time (but hopefully not forever) for.

sites south of *Cillium* and east of *Thelepte*, and those sites north of *Aquae Regiae* but west of my proposed reconstructed road (see Figure 6, above), as relatively short connecting roads would tie these sites located in agriculturally important areas into the road network. The second is that these sites were interconnected by tertiary roads, that is to say dirt paths established naturally over time that are nearly impossible to distinguish from modern tracks. The scale and connections of these tertiary roads are hard to recover, but we should assume (with sensible caution) their ubiquity in the countryside because of their importance to the local movement of goods and people.

Looking closely at relationship between settlement pattern and terrain (Figure 9, above), we can see that there is a general preference for settling in higher elevations, especially when sites are located away from roads and Urban Centers. This pattern likely reflects the continued practice of (or perhaps better the Roman exploitation of) indigenous farming techniques that relied on the seasonal flooding of dry riverbeds (*wadis*) to irrigate their crops, in addition to sloping terrain being conducive to the cultivation of the olive.[90]

[90] De Vos 2022.

Figure 10: Map of Urban Centers and Miscellanies



Urban Centers (Figure 10) are, in general, between 25 and 40 kilometers from another Urban Center, essentially one day's journey from each other. This close proximity to one another allows for relatively quick travel between Urban Centers, facilitating the movements of good and people as well as economic and political interactions. They are, however, far enough apart from one another to permit each Urban Center to be in control of its immediate environs as well as other sites that are dependent on the Urban Center or ones that have a strong relationship with it. The sparse but relatively equidistant settlement pattern of Urban Centers allows each site to flourish in its own right without encroaching upon the territory of another. The section of the *Via Hadrumetina* between *Masclianae* and *Vicus Augusti* is, however, lacking Urban Centers. We can perhaps theorize that this deficit is due to the fact that this area was not as conducive to large-scale human habitation as the areas where our other Urban Centers are located, and this conclusion can be supported by the overall lack of settlement in this region in general. The other explanation is

that this area is among the least archaeologically surveyed and excavated within my investigatory zone as well as the area that contains the sites whose history we know very little about.

Two Urban Centers have Libyo-Phoenician origins: *Hadrumetum*, founded by Phoenician settlers as early as the twelfth century B.C.E. (before Carthage),[91] and *Uluzibbira* (or *Ulisippira*). *Hadrumetum* has always played an important role as a port city of the east coast of North Africa. Pliny the Elder described the site as an *oppidum liberum* (*HN* 5.25), but it was perhaps made a *municipium* under Augustus before being promoted to the status of colony by Trajan, whence it received the title *colonia Concordia Ulpia Traiana Augusta Frugifera Hadrumetina*.[92] *Uluzibbira* was also described by Pliny as a free city (*HN* 5.30) and was eventually promoted to the status of *municipium*, likely under Hadrian but certainly by the time of Antoninus Pius.[93] Both sites are located on or near the coast, but while *Hadrumetum* served as a port city in its own right, *Uluzibbira* grew in importance and population largely because of its location along the road between *Hadrumetum* and *Horrea Caelia* (eventually leading to Carthage). *Hadrumetum* has been continuously occupied throughout antiquity and into the present (complicating modern archaeology), but we lose trace of *Uluzibbira* during the sixth century C.E. when its bishopric ceases to be referenced.

The six other Urban Centers are all Roman foundations, although their establishment directly on top of or at least near important pre-Roman sites must not be ruled out. Four of the six sites were definitively established as military outposts, either *castella* or *castra,* during the Flavian period but perhaps earlier during the War with Tacfarinas. *Sufes* was established before *Sufetula*, as the latter is understood as being a diminutive form of the former, but beyond this an exact

[91] Foucher 1964.
[92] Foucher 1964; Gascou 1972:67-75; Desanges *et al*. 2010: 156-157.
[93] Gascou 1972: 136-137; Lepelley 1981: 261-264; Desanges *et al*. 2010: 291-292.

chronology of their foundation is difficult to determine. It is unknown when (or if) *Sufes* became a *municipium*, but it reached the status of *colonia* (*colonia Aurelia Augusta Sufetana*) under the Antonines (either Marcus Aurelius or Commodus);[94] *Sufes* was fortified by the Byzantines, and continued to be referenced by Medieval texts after the Arab conquest.[95] The time frame during which *Sufetula* was a *municipium* is uncertain, but by the third century C.E. it reached the status of a colony (though it is unclear which emperor bestowed this status), and the site continued to be inhabited through the Islamic period.[96] *Cillium* was likely promoted to the status of a *municipium* under Trajan and later to that of a colony during the Severan period; the site continued to be occupied after the Arab conquest and beyond, until its position at a crucial interior crossroads was assumed by the newly founded Kasserine.[97] As with the three previous sites, it is unknown when or if *Thelepte* held the status of *municipium*, but by the second century C.E. it became a colony, likely under Trajan; fortified by the Byzantines, *Thelepte* continued to be occupied into the nineteenth century but was displaced with the establishment of Feriana.[98] All four of these sites began as military establishments, but, over time, largely due to their locations at significant crossroads, each site evolved into Urban Centers that provided markets, people, and security for other settlements to be founded.

The last two Urban Centers are of likely of Roman origin, but their histories are less well-known,[99] and they are not military in origin. *Agger* was at one point a *municipium*, probably by the reign of Severus Alexander, and later was promoted to a *colonia* at some point during the fourth century C.E.; its further history is unknown, but it probably survived well into the Islamic period

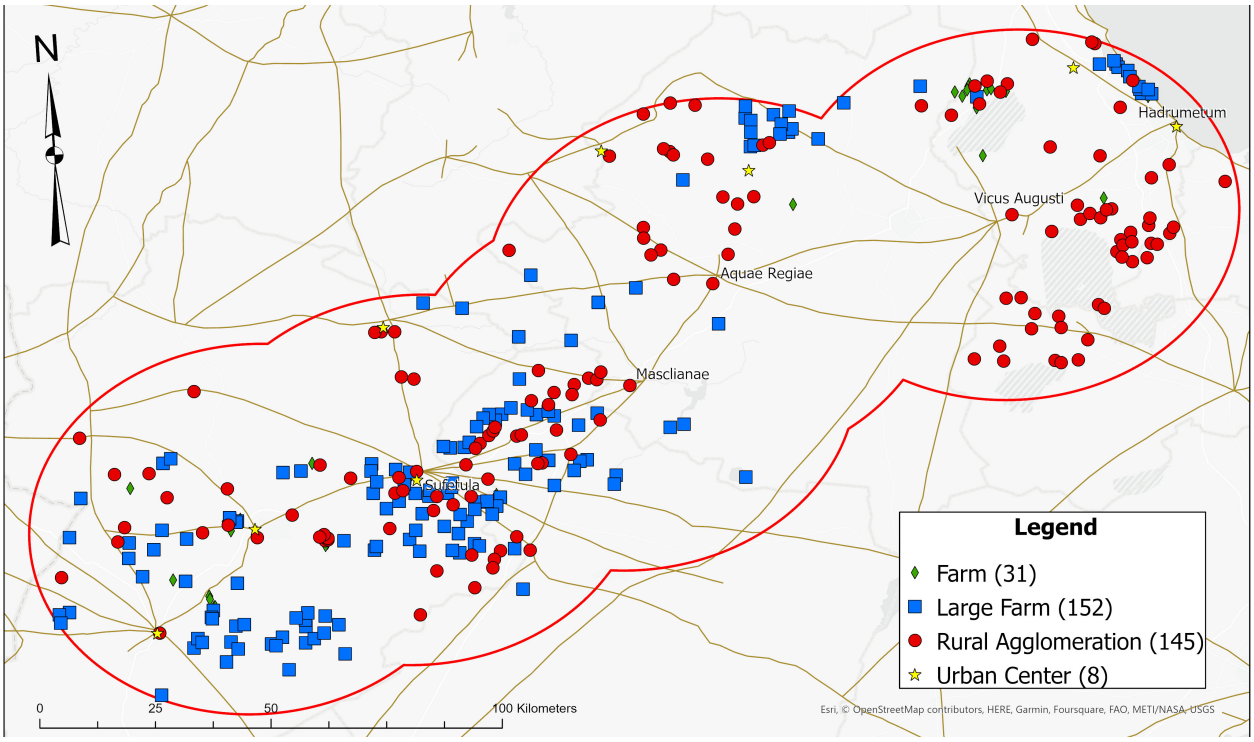
[94] Gascou 1972: 146.
[95] Pringle 1981; Desanges *et al*. 2010: 216-217.
[96] Gascou 1972: 30-31; Lepelley 1981: 308-312; Desanges *et al*. 2010: 217-220; Ben Akacha 2015.
[97] Gascou 1972: 31-32, 86-89; Lepelley 1981: 287-288; Desanges *et al*. 2010: 134-135.
[98] Gascou 1972:83-86; Pringle 1981; Desanges *et al*. 2010: 238:240.
[99] Moreover, *Cululis* was neglected by both Jacques Gascou and Claude Lepelley, while *Agger* was only briefly described by the latter.

given that is was referenced by the historian Al-Bakri.[100] *Cululis* was probably a Hadrianic *municipium*, but under the Byzantines it received massive fortifications as well as a new name, *Theodoriana* or *Theodorianapolis*, after Justinian's wife, Theodora.[101] Urban Centers are perhaps the most important site-type, as when they are interlinked with roads they facilitate the movement of goods and people between important locations, but, moreover, they provide security and large markets conducive to the establishment of other sites, whether these site be agriculturally focused sites or simply sites dedicated to assisting travelers (*i.e. mansiones*).

We can highlight the settlement pattern around Urban Centers of the other habitational site-types by looking at a combined map of all habitational site-types (Figure 11, below). We can see a general trend of settling around Urban Centers, which is what one would suspect given that they are frequently the earliest established sites, and sites that increase in population and importance naturally over time. Early in—but continuing throughout—their development, these Urban Centers undoubtedly produced some of the very people who eventually moved to the countryside in order to establish or at least provide labor for new sites (principally farms), which formed mutually reciprocal relationships with each other, farms providing food and population centers providing markets and labor. In the case of new arrivals to North Africa, these Urban Centers, already situated in prime locations, would have attracted prospective inhabitants, both because of the their positions in fertile regions and because of the support and resources available to those who live in or near them.

[100] Lepelley 1981: 278; Desanges *et al*. 101-102.
[101] Pringle 1981, 2002; Desanges *et al*. 2010: 139-140.

Figure 11: Map of Habitational Site Types (Distinguished)



Moreover, by looking at this combined habitational site-type map (Figure 11), we see that Farms are almost always in close proximity to other sites. We can theorize that some (perhaps even the majority) of these Farms are smaller units of a larger domain, whether private or imperial, or at the very least that they had a dependent relation on neighboring, larger sites. Two sites from the Kasserine Survey, KS223 and KS225, help illustrate these relationships. These two Large Farms (each with four large presses) are located near the cluster of Farms situated halfway between the road from *Cillium* to *Thelepte*, and are less than a kilometer apart from one another, but they are surrounded by a number of smaller 'satellite' Farms. Hitchner argued that we should understand the two sites as "probably form[ing] the center of a large domain" with the numerous smaller neighboring sites being dependent or at least strongly related to them,[102] and we can reasonably assume a similar relationship between a number of Farms and Large Farms as well as Rural

[102] Hitchner *et al.* 1990: 246, and see especially the detailed foldout map of Sector 1 (also available in Hitchner 1989).

Agglomerations throughout North Africa. Close proximity to other sites, therefore, was essential for the survival of Farms, and naturally mandatory of those that were part of another person's estate.

Figure 12: Map of Rural Agglomerations

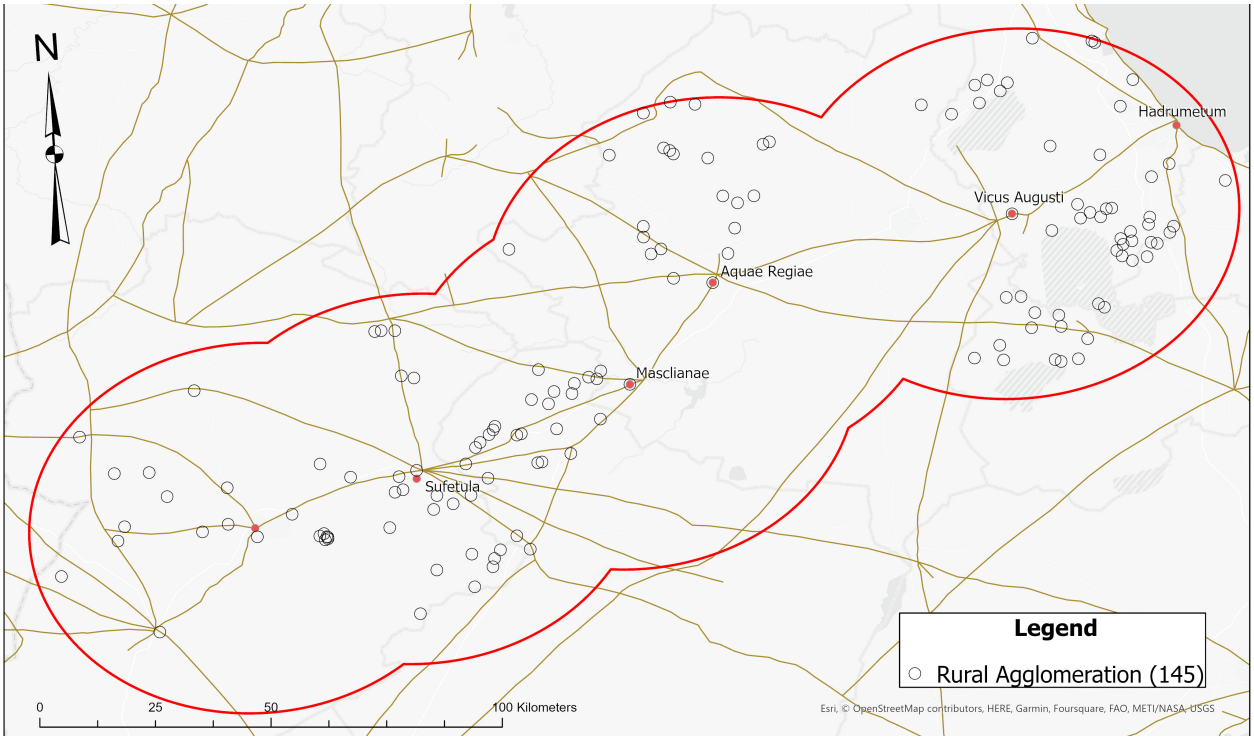
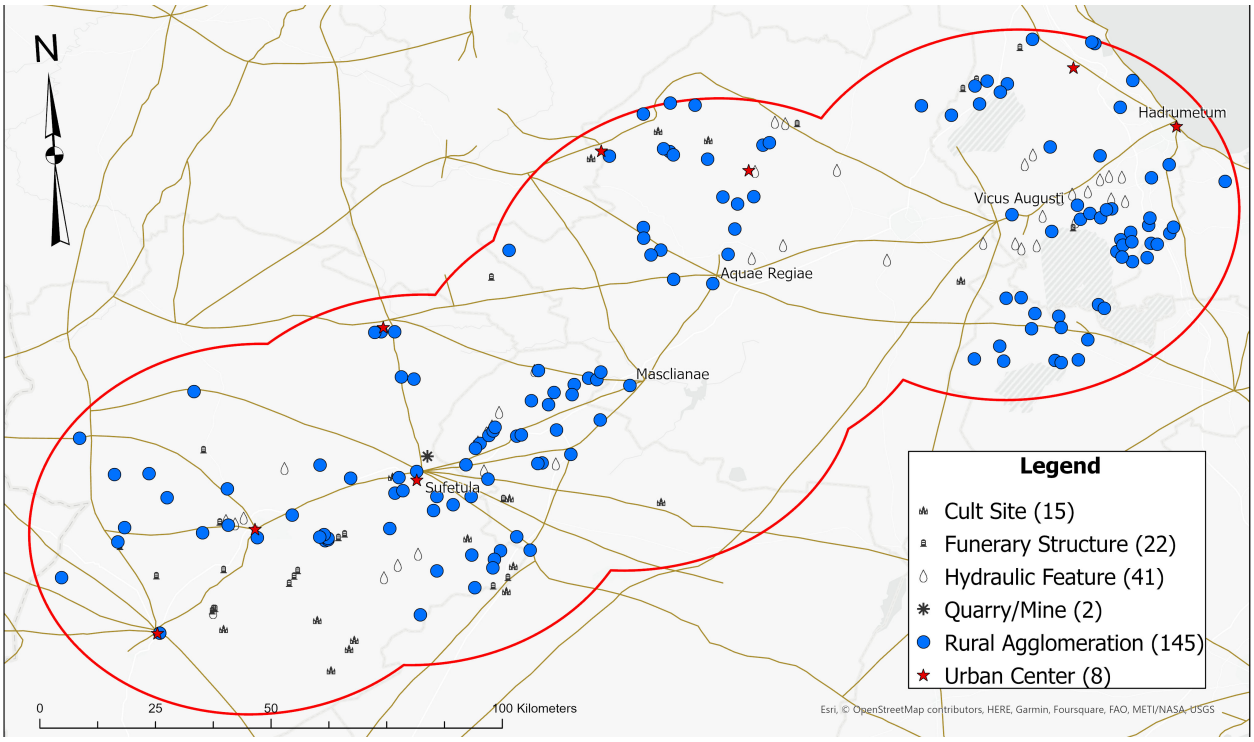


Figure 13: Map of Rural Agglomerations with Miscellanies and Urban Centers



Rural Agglomerations (Figures 12 and 13) show especially well both general trends I have discussed above. They are regularly along or in close proximity to the *Via Hadrumetina* and its secondary roads; and when they are not, it is likely that they were established along non-extant secondary roads or tertiary ones, *e.g.* the group of Rural Agglomerations south of *Sufetula* or those west of the road from *Hadrumetum* to *Thysdrus*. The spatial distribution of Rural Agglomerations also demonstrates the settlement pattern of clustering around Urban Centers.

Looking back at the combined map of all habitational site-types provides for further analysis (Figure 11). Of the 145 Rural Agglomerations, 75 are in the east (slightly more than half), so their spatial distribution is relatively balanced; but, when we look at the distribution of Rural Agglomerations in relation to Large Farms, we see that Large Farms dominate the interior, their number dropping off as one travels towards the coast (and plummeting after *Aquae Regiae*). To quantify this observation, there are 70 Rural Agglomerations on the west side of our road, but 124

Large Farms in the same area, nearly double the amount of Rural Agglomerations; while in the east there are 75 Rural Agglomerations and only 28 Large Farms.

Furthermore, Large Farms are found much more often farther into the countryside than Rural Agglomerations. For instance, Rural Agglomerations are completely absent from the region east of the road from *Cillium* to *Thelepte* that we discussed above, it is instead laden with Farms and Large Farms.[103] Although I am in no way saying that the two habitational site types create mutually exclusive settlement zones (*i.e*. 'only Rural Agglomerations/(Large) Farms can be founded here'), we can see that there are a few loose patterns that differentiate each site-type. Moreover, like Large Farms, the relationship between Rural Agglomerations and smaller farms complicates the pictures, as a number of sites that I have identified as Rural Agglomerations might have actually been the estate centers of nearby small farms, or even Large Farms themselves.

[103] I should mention that this conclusion might be due more to the advancements in the standards of modern archaeology than the true nature of the sites themselves. The interior of *Byzacena* has been studied by modern scholars in more scientific archaeologic detail than the coastal regions, data for which I am largely dependent on the *AAT*. The *AAT*, though vitally important, is far below the standards of modern archaeology, and the summary descriptions likely obscure or even mislead one concerning the site's past. A site whose *AAT* commentary led me to classify it as a Rural Agglomerations might be classified as a Large Farm if it was detailed today with the application of modern archaeological conventions and techniques. This is especially the case in places where we have only Rural Agglomerations and no farm-type site whatsoever, such as the sites south of *Hadrumetum* and *Vicus Augusti*.

Figure 14: Map of Large Farms

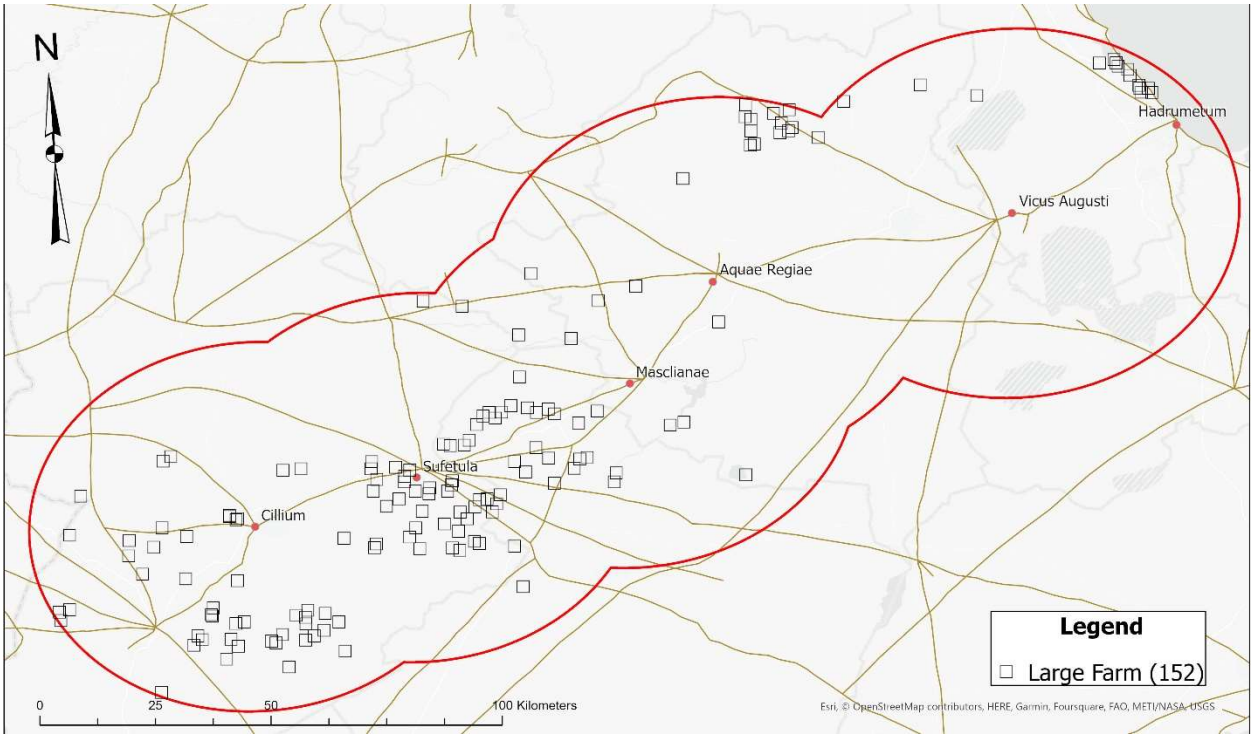
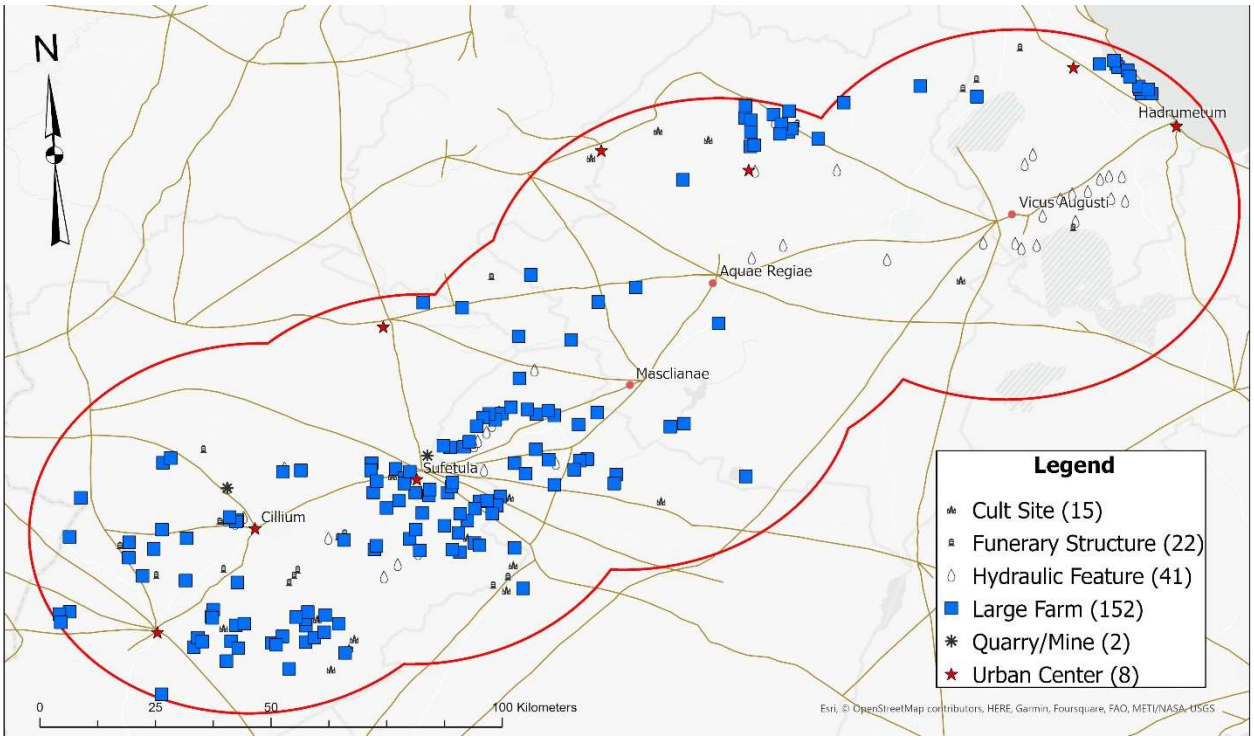


Figure 15: Map of Large Farms with Miscellanies and Urban Centers



Turing to Large Farms (Figures 14 and 15) we see a demonstrable shift towards the west, that is, to the interior of *Africa Proconsularis*. More than 80% (124/152) of Large Farms appear in the west half of our road, while only a meager 28 Large Farms occur east of *Aquae Regiae*. The predomination of Large Farms in the west is no surprise, it is the area where the most intensive efforts to maximize agricultural production was undertaken, especially related to the olive and its manufactured product.

In the east, Large Farms are concentrated in two areas: the Haffouz region north of *Aquae Regiae* (where we had to reconstruct the secondary road that encircled them) and northwest of *Hadrumetum*. The first area is an agricultural and manufacturing zone, as there are also Rural Agglomerations, Hydraulic Features, and Funerary Sites in the same area (see Figure 8, above). This region perhaps had better soil and irrigation than other neighboring areas in antiquity (*e.g.* south of *Aquae Regiae*) leading to settlements clustering in this specific area, and the nearby Urban Center *Cululis* likely provided a helpful market as well as protection, as it was heavily fortified by the Byzantines.[104] Those Large Farms northwest of *Hadrumetum*, much like the Farms near the Sebkhet Al Kelbia, were potentially geared more towards the production of cereals rather than olives,[105] perhaps even the felling of trees.[106]

[104] Pringle 2002.
[105] Foucher 1964; Younes 2001; Sehili 2008.
[106] This suggestion is because there is a site labeled "*Villa de Pins*" by the *AAT* (Sousse f.48 site 4), but it makes no mention of trees, unless the name is meant to be ironic because of the few remaining "*colonettes avec reliefs*". Regardless, North African timber production and its utilization in a plethora of agricultural related goods (press levers, tool handles, barrels, *et c*.) is often ignored. See especially McCarty 2022a for new arguments on the scale and scope of timber cultivation and harvest in North Africa.

Figure 16: Map of Farms

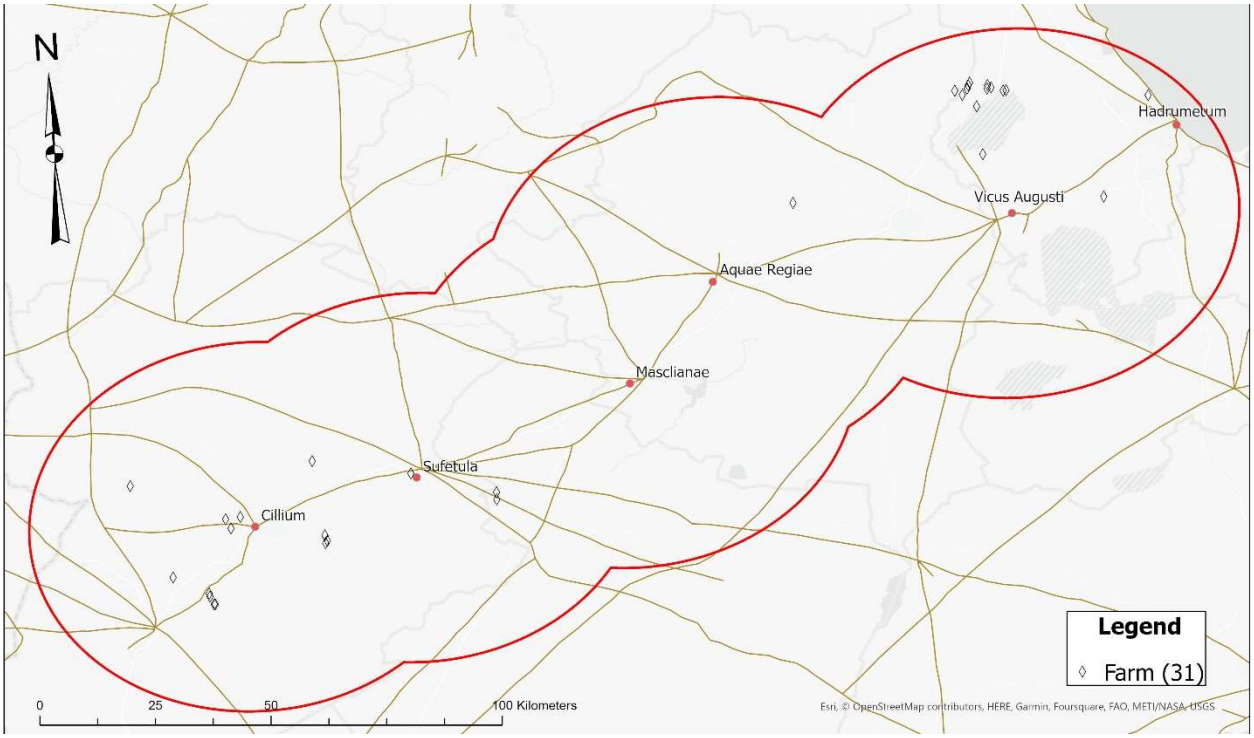
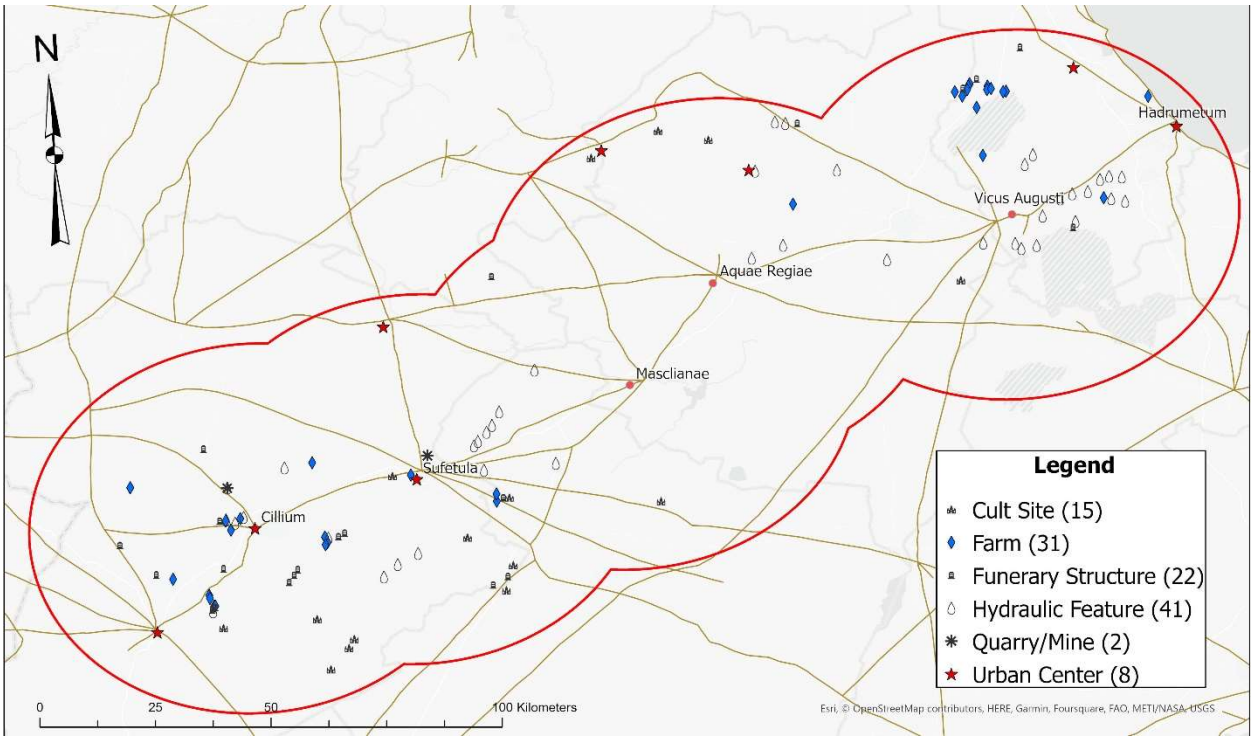


Figure 17: Map of Farms with Miscellanies and Urban Centers



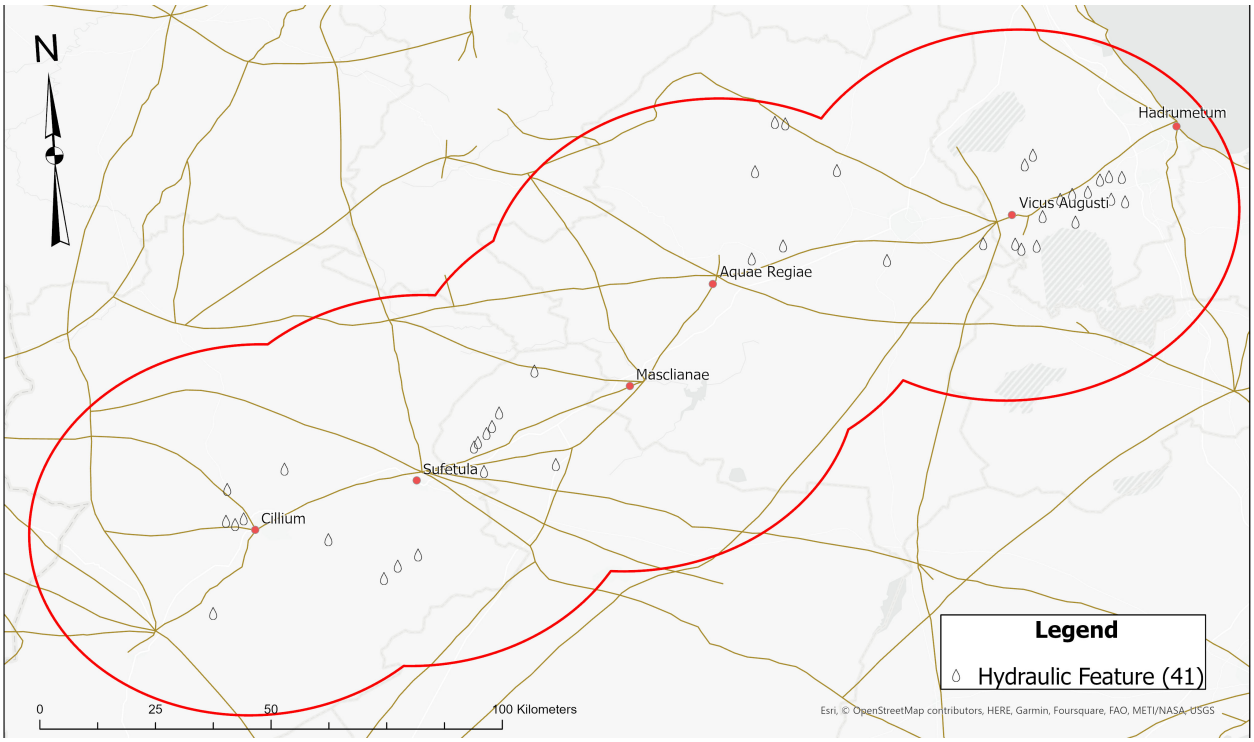
First noticeable is that relatively few sites were classified as Farms (Figures 16 and 17). There are a few reasons for this. First is my avoidance of a medium farm category, which likely disadvantaged the identification of sites as (smaller) Farms and advantaged their identification as Rural Agglomerations or Large Farms, primarily when it came to identifying sites base on the remains of presses. There is certainly a very big difference between a Large Farm that has two presses and one that has eight, but this quantitative rather than qualitative determination was necessary precisely because of the lack of detailed descriptions and measurements of presses in the *AAT* (where the majority of sites that included presses were found). A second reason is related to the nature of this type of site itself. Smaller farms are far less likely to be found by either aerial survey or ground recognizance precisely because they are smaller and less monumentally constructed, meaning that they are more easily missed by surveyors and that they vanish more quickly over time. The relative paucity of this type of site from this investigation, therefore, should not be taken as evidence of their low numbers in antiquity, but rather that these site rarely survive in a way where we are able to securely identify them.

Those Farms found around *Cillium* (and *Sufetula*) were primarily identified by the remains of a single press and are all almost certainly small farms on larger estates primarily focused towards to cultivation of olives and the production of olive oil.[107] Those to the east, however, are a different matter. They were largely identified as Farms based on the *AAT*'s cursory descriptions of the remains of "*maisons*". Lands more near the eastern coast were often geared towards the production of cereals rather than olive or vine, a characteristic supported by the fewer numbers of presses found as one proceeds out of the interior.[108] On the one hand coastal lands in general provide for

[107] Data for these western Farms comes almost completely from the Kasserine survey, and these were the conclusions Hitchner reached about many sites' interrelations.
[108] Sehili 2009.

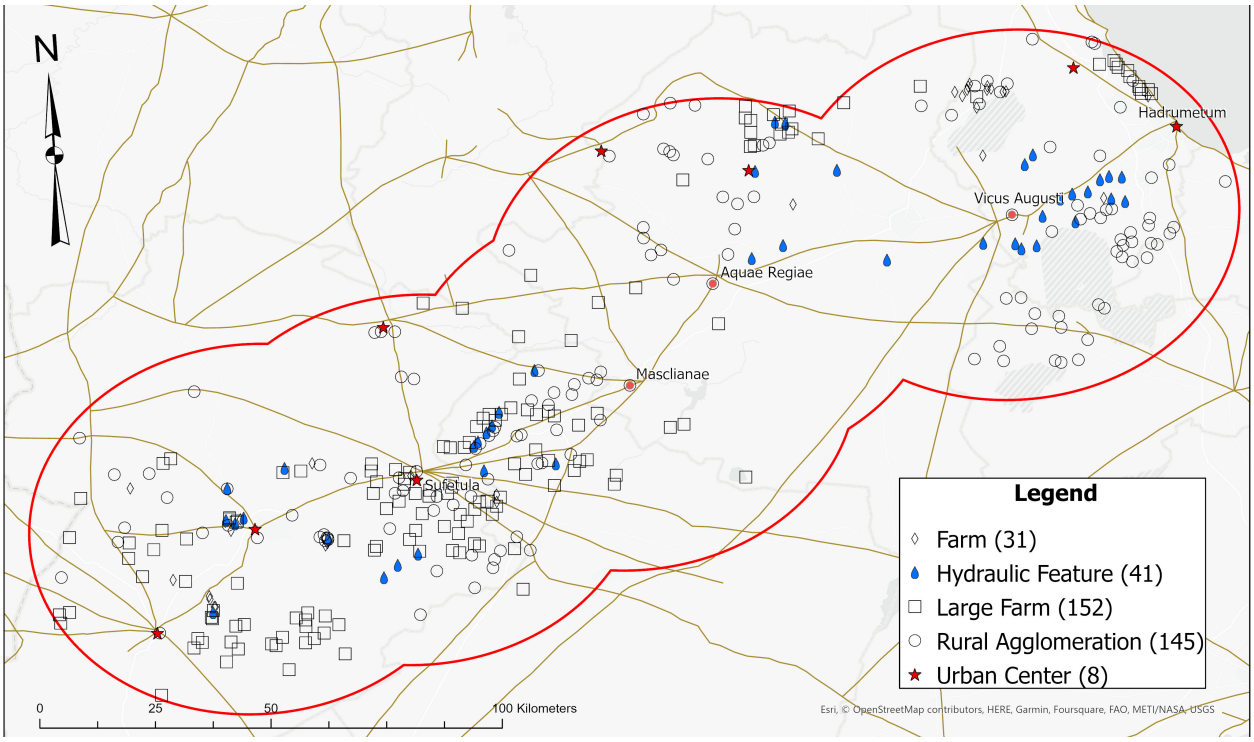
a wider diversity of crop or manufactured goods production, and the environs of *Hadrumetum* were known to be particularly focused on growing grain, both for the populous port city and for the *annona*.[109] On the other hand, these sites are mostly centered north of the Sebkhet Al Kelbia salt flat, land not entirely suitable for agriculture. In order to supplement (or perhaps even augment) their revenues, inhabitants of these Farms could have collected salt from this dried lake and conveyed it along with their crops to *Hadrumetum* for its use in the production of *salsamenta*,[110] a commodity whose importance in North African trade has often been ignored.[111]

Figure 18: Map of Hydraulic Features



[109] Foucher 1964; Younes 2001.
[110] See Slim *et al*. 2007 for the utilization of nearby salt flats and coastal lagoons as the primary source of salt for the manufacture of *salsamenta*.
[111] Mattingly and Hitchner 1995; Wilson 2002; Slim *et al*. 2007; Stone 2014; Bonifay 2017a; McCarty 2022a.

Figure 19: Map of Hydraulic Features (Distinguished) and Habitational Sites



For the 'miscellaneous' (non-habitational) site-types I will begin with Hydraulic Features (Figures 18 and 19). As mentioned above, remains of aqueducts are found in only a few places. The first two are near *Cillium* and *Sufetula*, as one would expect for two important Urban Centers. There is, however, a more than two kilometers long extant section of an aqueduct east of *Aquae Regiae* (*AAT*[1] 49.49), which likely supplied water to this Rural Agglomeration or a neighboring site (although its full path remains unknown). Water conduits (less monumental irrigation channels) were primarily found near the Rural Agglomerations and Large Farms north of the road between *Sufetula* and *Masclianae* surveyed by Barbery and Delhoume, but we should assume that their few modern remnants belie their prevalence in antiquity, along with indigenous irrigation techniques.

Much the same is true for wells and cisterns, as they are regularly in close proximity to habitational site-types; what is more significant, however, is when they appear in isolation relatively far away from other sites. There are two (other) Hydraulic Features on the road between

Aquae Regiae and *Vicus Augusti* that appear separated from areas of known settlements. The first (proceeding from west to east) is a 15 meter wide square cistern (*AAT*[1] 49.67), the second a vast open air reservoir measuring 100 meters by 180 (*AAT*[1] 49.87). The sites, however, that would utilize this stored water are completely gone from the archaeological record or, more likely, still unexcavated. Alternatively, these lone Hydraulic Features could have been used to collect and store water which would be available to those traveling along this stretch of the *Via Hadrumetina* that is largely devoid of settlements. The same observations hold true for another group of isolated cisterns, those north and south of the road between *Vicus Augusti* and *Hadrumetum*. Although there are a number of Rural Agglomerations near the southern cisterns, they are at least a kilometer away from the nearest habitational site, and the majority much farther. These are not small cisterns for domestic use, but relatively large and monumentally built ones: the smallest is a circular one, six meters in diameter, but most are 10 meters by 15 if rectangular and 15 to 20 meters in diameter if circular (their depths are not mentioned by the *AAT*).

I would argue that despite the absence of habitational settlements in these areas, the remains of these isolated Hydraulic Features can be used as evidence that there was likely human settlement in the vicinity; these sites, however, are as of yet unexcavated. Whether the water transported by these aqueducts and collected by these cisterns was utilized by a Rural Agglomeration to provide its inhabitant with potable water or by (Large) Farms to irrigate their crops is difficult to ascertain at this point, but they are indicative of human activity in the immediate area regardless.

Figure 20: Map of Quarries and Mines

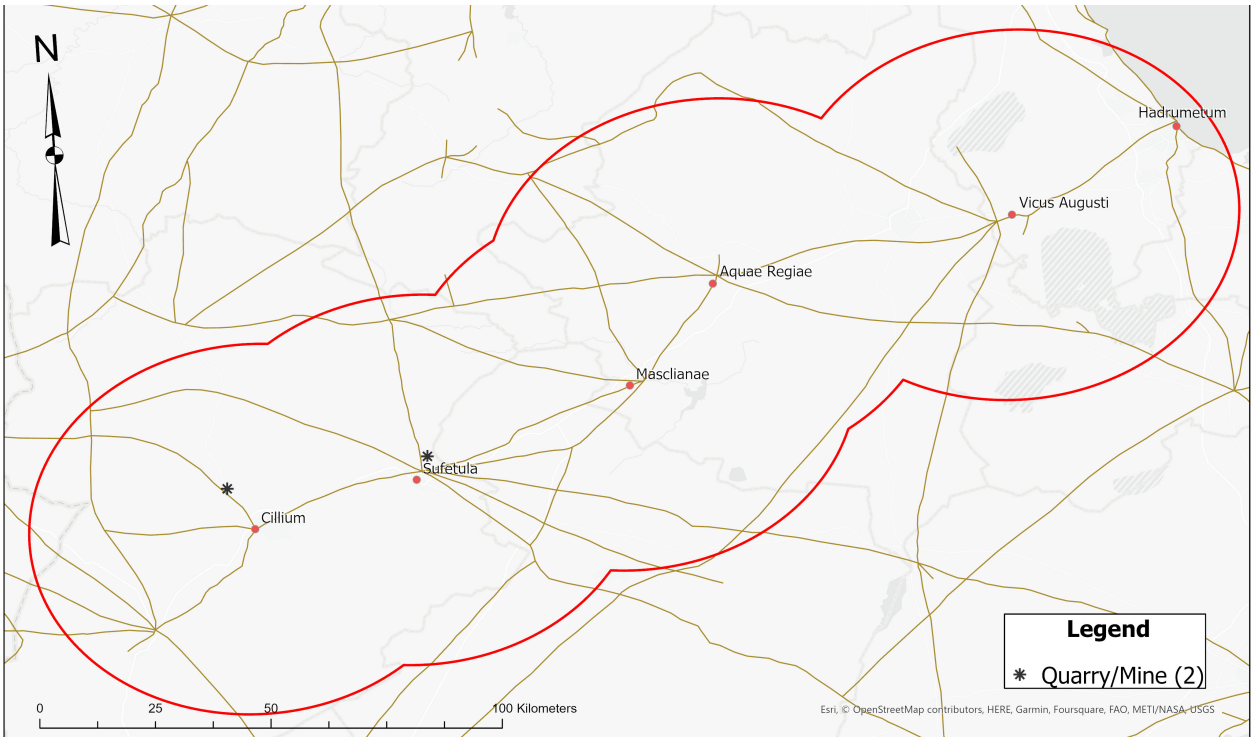
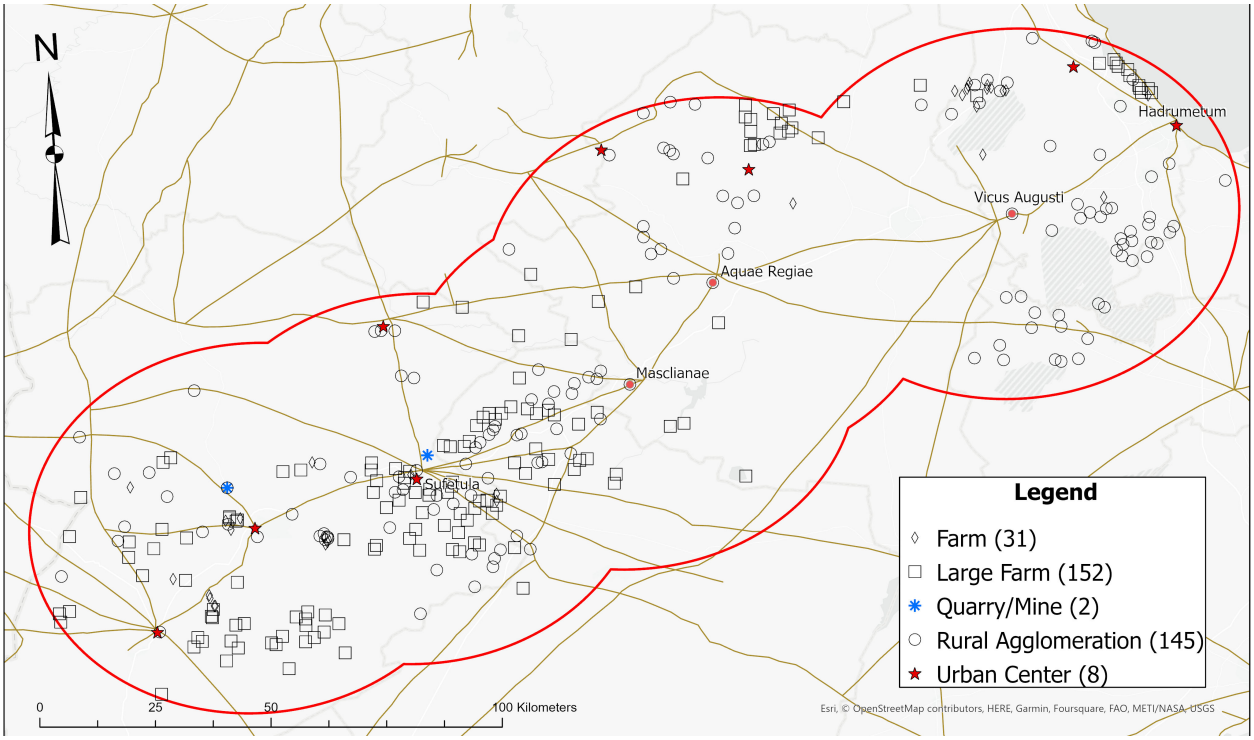
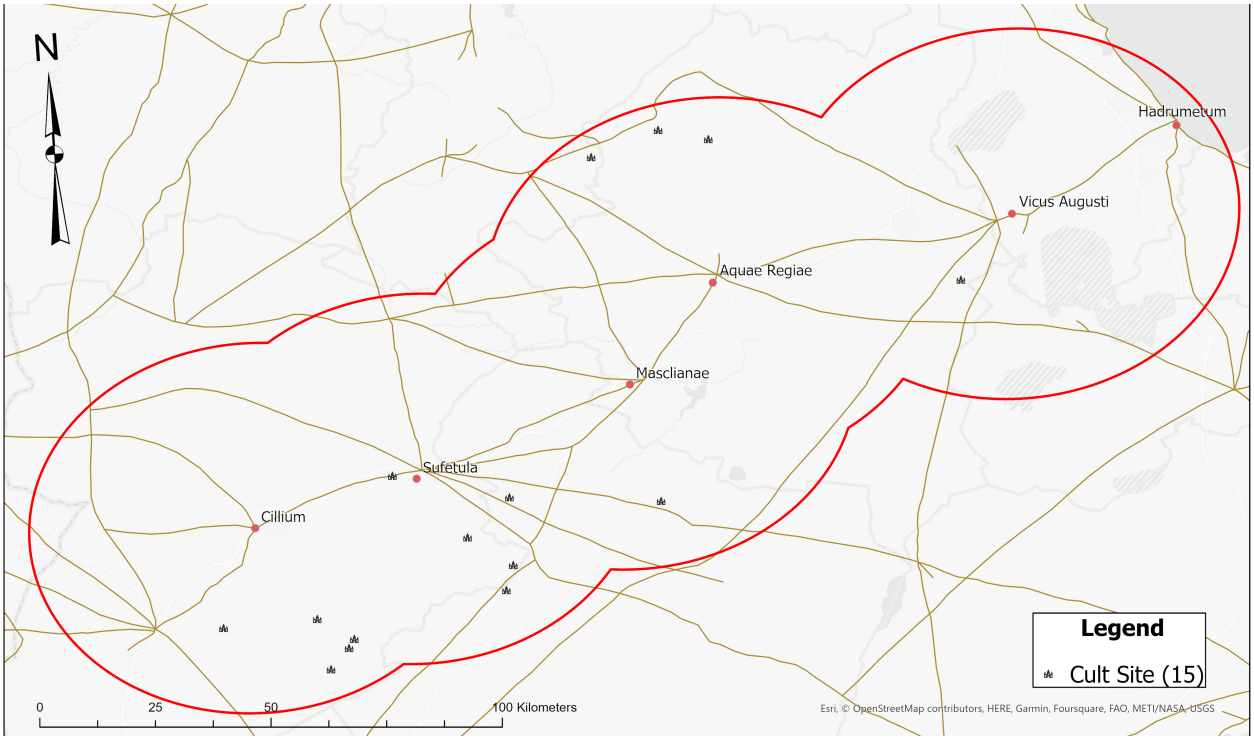


Figure 21: Map of Quarries and Mines (Distinguished) and Habitational Sites



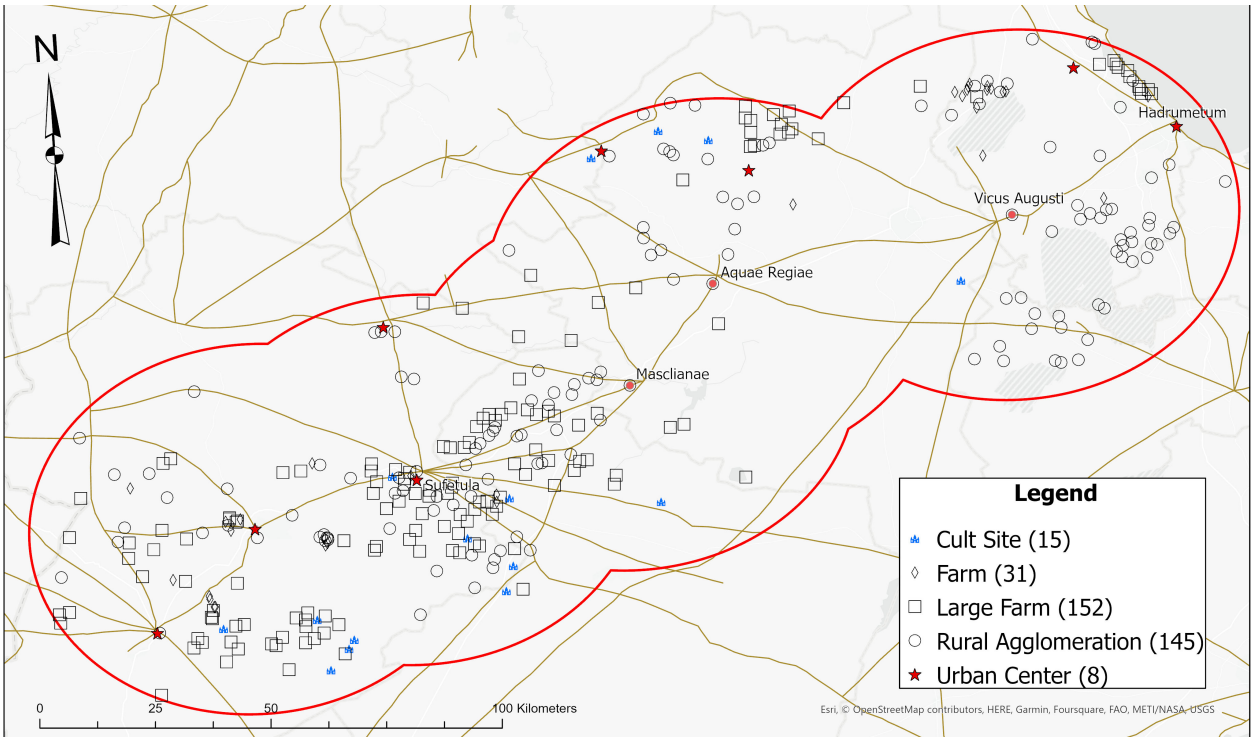
There are only two sites identified as mines or quarries (Figures 20 and 21). The first is a limestone quarry north of *Cillium* and the second is a mine north of *Sufetula*,[112] both of which primarily supplied extracted materials to their respective Urban Centers but perhaps to other sites in their immediate vicinity as well. As with the aqueducts, this is no real surprise, as Urban Centers required nearby mines and quarries to provide them with the stone and metals necessary for monumental architecture and elaborate decoration.

Figure 22: Map of Cult Sites



[112] The site north of *Sufetula* was labelled as a "mine" by *Pleiades*, but it was also likely a stone quarry (perhaps the source for the limestone used to build the road surveyed by Barbery and Delhoume). Out of caution I have kept this distinction (rather than combining the two terms and calling both sites quarries) because I do not know with certainty that other materials were not extract from this site.

Figure 23: Map of Cult Sites (Distinguished) and Habitational Sites



Cult Sites (Figures 22 and 23) have a slightly different distribution in comparison to our previous miscellaneous categories. They are predominately found near habitational site-types, but not in as close proximity as, say, Hydraulic Features; Cult Sites are regularly at least a kilometer from other sites. This, however, makes sense as Cult Sites that do not belong to the immediate site (*e.g.* a temple in the town's *forum*) would be founded in the nearby vicinity of a site but usually not on the site itself (and likely on a pre-Roman place of worship). Moreover, certain North African Cult Sites are regularly found far away from habitational sites in somewhat isolated locations, often in caves or other mountainous areas.[113] Alternatively, Cult Sites that are found in isolation but relatively close to roads might have been set up by travelers in order to seek divine assistance and protection for their journey, this is perhaps the case for Cult Sites like the one south of

[113] Shaw 2013; McCarty 2022a, 2022b.

Masclianae and the one southwest of *Vicus Augusti*. Therefore Cult Sites that are in almost complete isolation are not immediately to be considered as evidence of unexcavated sites.

The majority of Cult Sites are found near roads or in clusters of Rural Agglomerations and Large Farms but relatively far away from Urban Centers. Although Urban Centers, especially those with *fora* proper and wealthy élite, would have their own monumentalized places of worship in the city itself, they are for the most part lacking Cult Sites in their immediate environs, which would be used, hypothetically, by the inhabitants of the site itself as well as neighboring Rural Agglomerations and (Large) Farms. Furthermore, Cult Sites that are located within these clusters could have been set up by the landlords of large estates (or perhaps even the *coloni* themselves) so that those living and working within the domain had a local place to perform cult. The more isolated Cult Sites likely served as the destinations of pilgrimages and processions, in particular for the worship of indigenous Libyo-Phoenician deities that had established but remote sacred spaces,[114] or as roadside places to offer worship while one was traveling past them.

[114] See Shaw 2013 in particular. There is also the possibility that these more rural Cult Sites, particularly when close to a Hydraulic Feature, were set up as "extra-urban water sanctuaries" (Mugnai 2022: 254).

Figure 24: Map of Funerary Structures

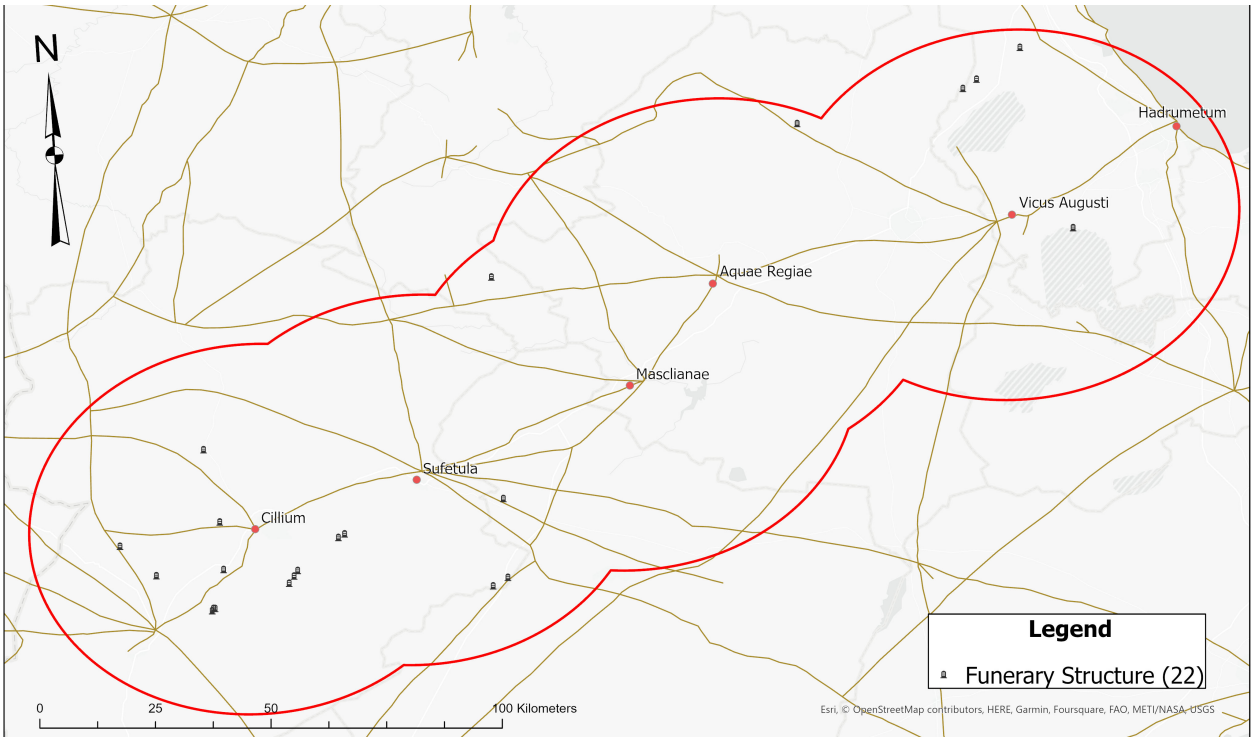
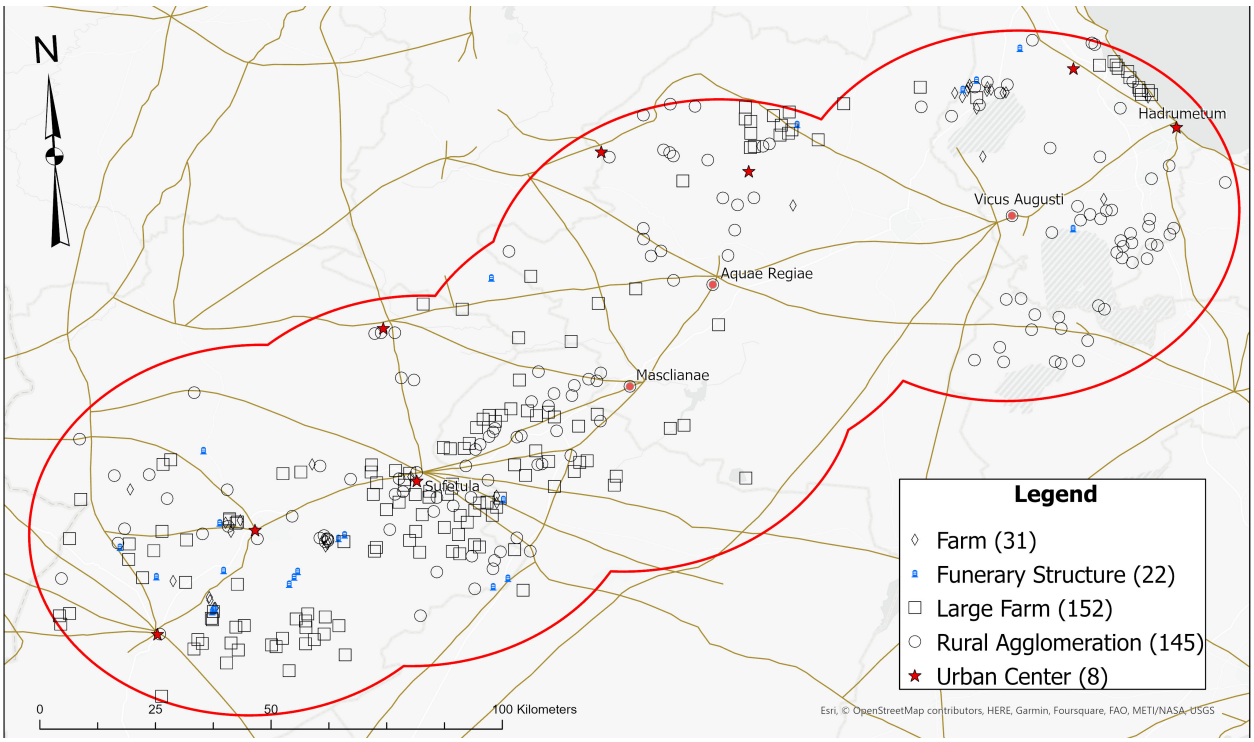


Figure 25: Map of Funerary Structures (Distinguished) and Habitational Sites

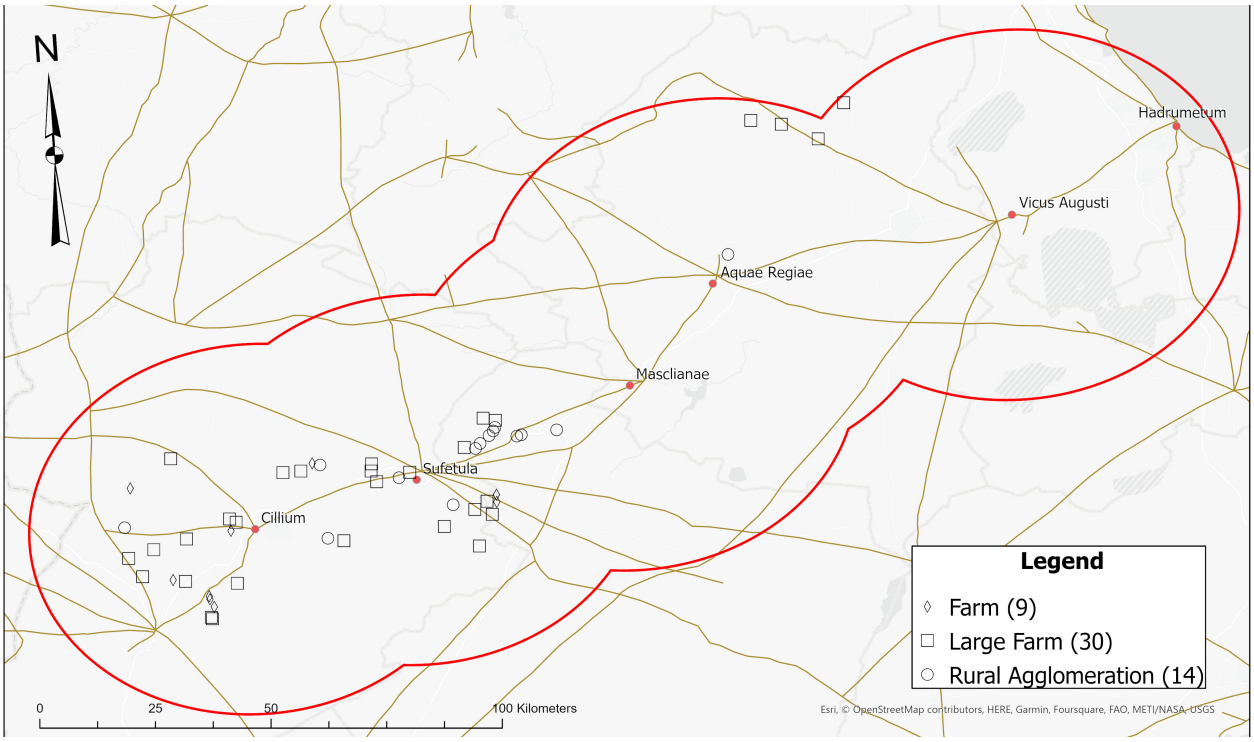


Funerary Structures (Figures 24 and 25) are found in the vicinity of habitational sites; there is, however, a stronger preference for their establishment in very close proximity to roads, a characteristic common for burials throughout North Africa.[115] On the one hand, Funerary Structures farther away from roads, like those southeast of *Cillium*, might point to the existence of a tertiary road in antiquity that is now lost. On the other hand, isolated burials in cairn graves (a type of burial that places stones over an inhumed corpse), are common among nomadic, transhumant, and pastoral peoples (indicating the perseverance of pre-Roman traditions), and perhaps served as reminders of "negative space", *i.e*. places to be avoided.[116] Conversely, Funerary Structures near habitational sites could also affirm "positive space", that is to say the borders of two different agricultural domains.[117] When found in relative isolation, then, Funerary Structures can be indicators of possible nearby unexcavated settlement just as often as they can be delineators of space and, therefore, not immediately evidence of human habitation in the vicinity.

Before moving on to a chronological discussion, there are two aspects of sites that I must discuss: the presence of presses and the production of pottery. These two aspects, however, do not fall neatly in line with the typology I have established, and must therefore be discussed independently.

[115] Chevallier 1972. Burials along roads are common in the ancient world (naturally for the purpose of increased visibility), but in close proximity to an Urban Center, typically just outside the city proper; in North Africa this is much the same, but roadside burials relatively far away from Urban Centers are just as common.
[116] Hitchner 1990: 244.
[117] Hitchner has suggested that Funerary Structures, especially those in between two habitational sites, were used as physical dividers of space, some establishing property lines, others reflecting natural divisions of the landscape (1990: 244).

Figure 26: Map of Sites that Contained Evidence of Presses

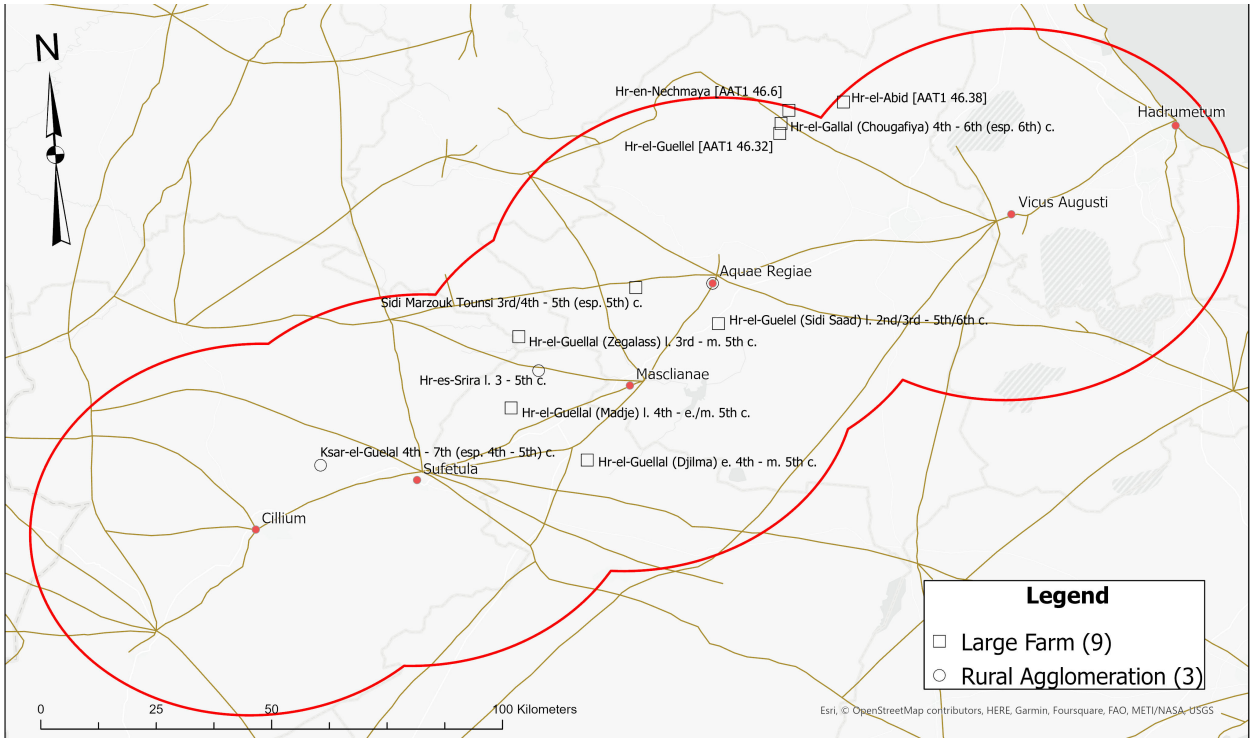


The first aspect is the remains of presses at sites, and therefore the sites relation to the production of olive oil (or wine). As demonstrated above (Figure 26), sites with presses are predominately located in the interior, typically along roads and near Urban Centers (*Cillium* and *Sufetula* in particular). Farms and Large Farms make up the majority of sites with press remnants, but a noteworthy number of Rural Agglomerations also contained presses, though these Rural Agglomerations are almost always also in close proximity to (Large) Farms (a fact which might point to close relationships between these sites).

The scale of intensive olive production and oil manufacture in the region can be highlighted by discussing two important and well documented sites from the Kasserine survey: KS223 and KS225, both sites containing four purpose-built presses. David Mattingly estimated that the presses at the two sites could produce between 40,000-80,000 liters of oil in peak years, necessitating some 4,000-8,000 mature olive trees in the surrounding area, far out supplying simple subsistence needs of the region and certainly showing evidence of landowners' capital investment

in order to yield larger returns.[118] If we consider the average press as half as big as these (some larger and others smaller of course), then one press could yield between 2,500 and 5,000 liters of oil per year and therefore a single Large Farm (regularly containing at least two presses) could perhaps produce somewhere between 5,000 and 10,000 liters, a figure I will return to in my concluding discussion.

Figure 27: Map of Sites that Produced Pottery (Dated)



Pottery Workshops are regularly found near habitational site-types (Figure 27), as the workshops at Djilma, Madje, and Chougafiya demonstrate. In particular, they appear most often at Large Farms, but a few were established in Rural Agglomerations as well (and the numbers given above are certainly the bare minimum). Pottery Workshops can be an indication of nearby sites' growing population, as a Pottery Workshop regularly appear to meet the needs of local people, eventually meeting and surpassing local demand to produce a surplus that could be traded

[118] Hitchner *et al.* 1990. For references to press specifications and technicalities see n. 83 above.

in other markets. This is perhaps most true of the workshop at Chougafiya and the other two in close proximity. The relatively high number of Pottery Workshops shows that multiple production centers were needed to meet local demand, regardless of whether the pottery would be for the inhabitants' personal use or for the storage of their produce to transfer to market (or more likely to the coast for export).

Pottery Workshops are, however, found just as often in isolation (*e.g.* Zegalass, Sidi Marzouk, and Sidi Saad). Like Hydraulic Features, isolated Pottery Workshops can be used as evidence for possible unexcavated sites in close proximity because they cannot properly exist in total isolation. When found in relative isolation a Pottery Workshop might indicate that the immediate area, although now devoid of other sites, was highly involved in both agricultural production as well as the manufacture of ceramics, and perhaps even moving towards urbanization given that its inhabitants required the production of a large amount of pottery, whether it be for personal use or for storage or transport.[119] Furthermore, Pottery Workshops in close proximity to (Large) Farms and Rural Agglomerations can potentially be seen as a "vertical linkage",[120] supplying the sites with the storage vessels and transport *amphorae* they required, or import substitutions for overseas fineware.[121]

The settlement pattern of Pottery Workshops is largely confined to the middle section of our road, which is to say between *Sufetula* and *Vicus Augusti*, although we know that a number of sites produced pottery further into the interior, especially Urban Centers.[122] Sites closer to the

[119] As Hitchner (1988: 36) described Ksar-el-Guelal (KS031). See also a detailed report by Hitchner specifically concerning Ksar-el-Guelal that is forthcoming in a volume of collected essays dedicated to David Mattingly.
[120] Hitchner 1993 [2002].
[121] Hitchner 1993 [2002]; Bonifay2017b.
[122] There were undoubtedly small- to medium-sized workshops in both *Cillium* and *Sufetula* (local pottery production would be all but necessary for the sustained growth of an Urban Center), but also in 'smaller' sites such as the Large Farm Ksar-el-Guelal (KS031) which produced pottery (Peacock *et al*. 1990) as well as high quantities of oil from its ten presses (Hitchner 1988).

coast, and *Hadrumetum* in particular,[123] are also known for their large scale production of pottery, particularly transport *amphorae*.[124] Pottery Workshops located in the interior, on the other hand, were almost entirely devoted to the production of fineware and lamps (certainly coarseware as well), rarely do they have evidence of *amphora* manufacture or even the potsherds themselves.[125] The relatively late appearance of Pottery Workshops in the interior of *Africa Proconsularis* perhaps precipitated from the Crises of the Third Century and the internal disruptions they caused to interconnectivity. The collapse of centralized production centers in northern *Africa Proconsularis* gave way to smaller-scale, more localized workshops that provided sites in the interior with more access to fineware as well as perhaps incentive to establish their own workshops when they realized the extent of local demand and, moreover, with the introduction of new tax systems that favored maximization of individual revenue.[126]

Chronology of Sites along the Via Hadrumetina

For the chronology of the sites along the *Via Hadrumetina*, I am largely confined to an analysis of *Pleiades* sites. The editors of the *AAT* made no real attempt to date sites beyond the basic descriptions of certain features being 'Roman' or 'Byzantine', and the latter almost exclusively for fortifications. The more recent surveys (the work of Barbery and Delhoume, the Kasserine Survey, and the survey of Peacock *et al*.) do make a worthy attempt at dating sites, and this data will be integrated where they were able to reliably pinpoint a site's chronology.

[123] Foucher 1964; Younes 2001; Bonifay 2004; Torres Costa 2007.
[124] Bonfay 2004 (esp. his map on p. 46).
[125] Peacock *et al*. 1990; Bonifay 2004, 2022.
[126] Dossey 2010.

Just as there is data native in *Pleiades* for the typology of sites, so too do the majority of sites have chronological data.[127] This data, however, has been greatly simplified into three date ranges:

"H", (presumably) "Historic", meaning Libyo-Phoenician: from 330 to 30 B.C.E.;

"R", "Roman": from 30 B.C.E. to 300 C.E.; and

"L", "Late Roman" (including the Vandal and Byzantine rule): from 300 to 640 C.E.[128]

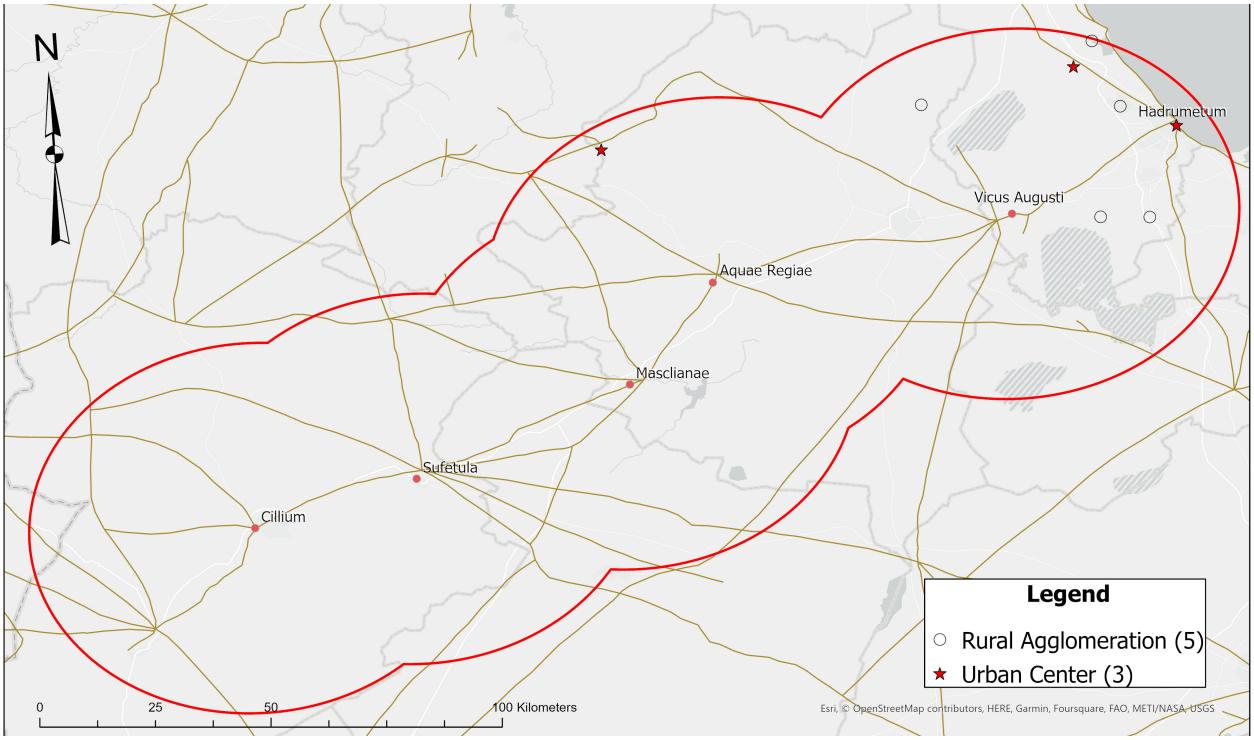
Although these date ranges are useful, they are generalized to a degree that somewhat disadvantages our analysis if we do not address them beforehand. We do not, for instance, know at what point in particular range a site became or ceased to be active. The only chronological information we can glean from a site that *Pleiades* labels as "HRL" is that it became archaeologically visible at some point between 330 and 30 B.C.E., remained active between 30 B.C.E. and 300 C.E., and then disappeared at some point between 300 and 640 C.E. (or continued after this date).[129] Even the ranges themselves are troublesome because of their relatively long timespans, as there is a vast difference between a site that was active until 301 C.E. and one that was active until 640 C.E., or between sites that were founded at these respective times; both of these sites, however, fall into the same chronological period here, and are thus treated equally in an analysis. The unfortunate reality is that pottery was not collected from a majority of these sites, and that the few coins and other artifacts that were recovered only provide a very limited sense of sites' chronologies. These chronological periods covering nearly a millennium, although

[127] 28 of the 243 *Pleiades* sites do not have chronological data. These could likely have been assumed to be of the Roman period, but out of caution I have not made that assumption and therefore not included them in this analysis.
[128] These letters were assigned to the periods by *Pleiades*, and I have retained them for convenience, but I do not know if my suggested elaborations (if that is the correct word) are correct, hence I am assuming "H" to be an abbreviation of "Historic".
[129] 640 C.E. seems to be the endpoint of *Pleiades*' interest in chronology (at least in North Africa), therefore we unfortunately do not know how long after this date sites continued to be occupied, and some sites, like *Hadrumetum* (an "HRL"), certainly were.

admittedly somewhat troublesome, will remain the three generalized date ranges I will use for my discussion. It should be qualified, however, that they are by no means rigid and immutable chronologies of the various sites, as is the case for periodization in general.

There are, in total, 215 datable sites from *Pleiades*, and when combined with the 35 sites from other surveys that have reliable chronological data,[130] our total number of datable sites is 250, more than half of our 436 total sites.

Figure 28: Sites (Containing "H") Active in the Historic Period (330 B.C.E. – 30 B.C.E.)



[130] The editors of the *AAT* did not attempt to date sites to centuries but instead noted the presence of either Christian or Byzantine features at the site. I have decided to date these *AAT* sites to the Late Roman period exclusively out of caution because it is the only concrete chronological description of them available, although they almost certainly originated in the Roman period.

Figure 29: Sites (Containing “R”) Active in the Roman Period (30 B.C.E. – 300 C.E.)

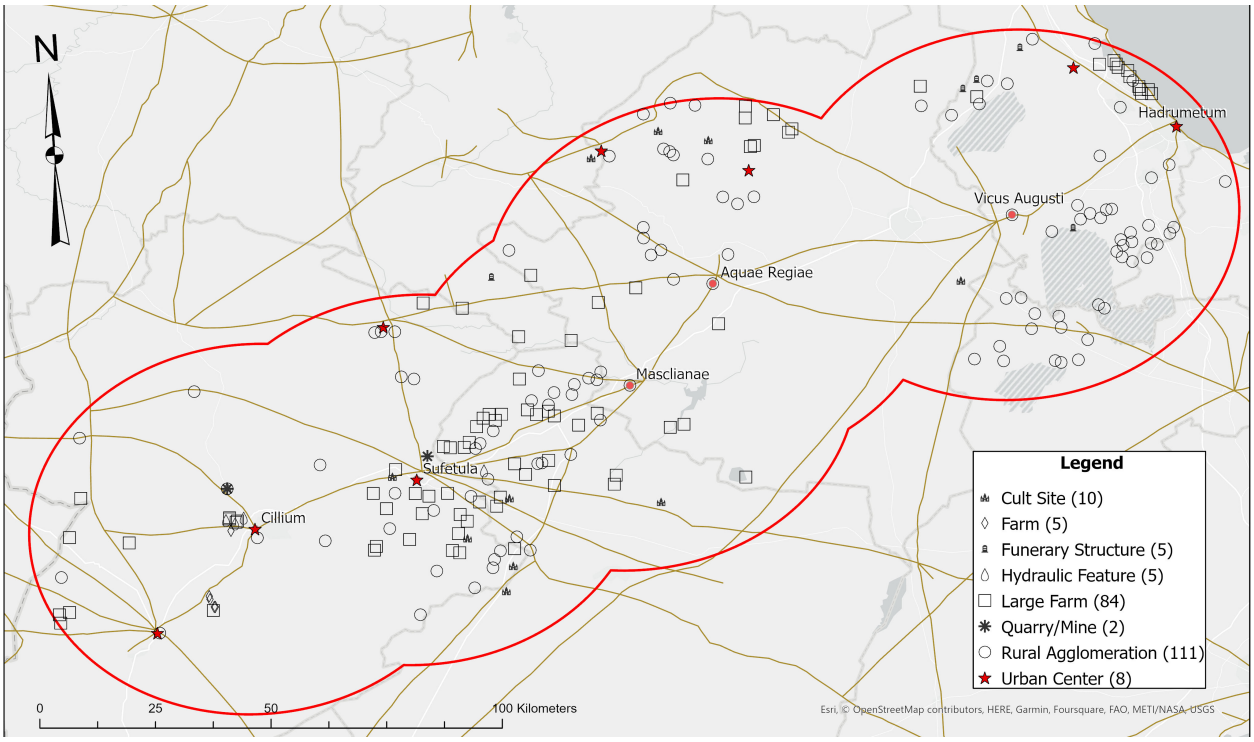
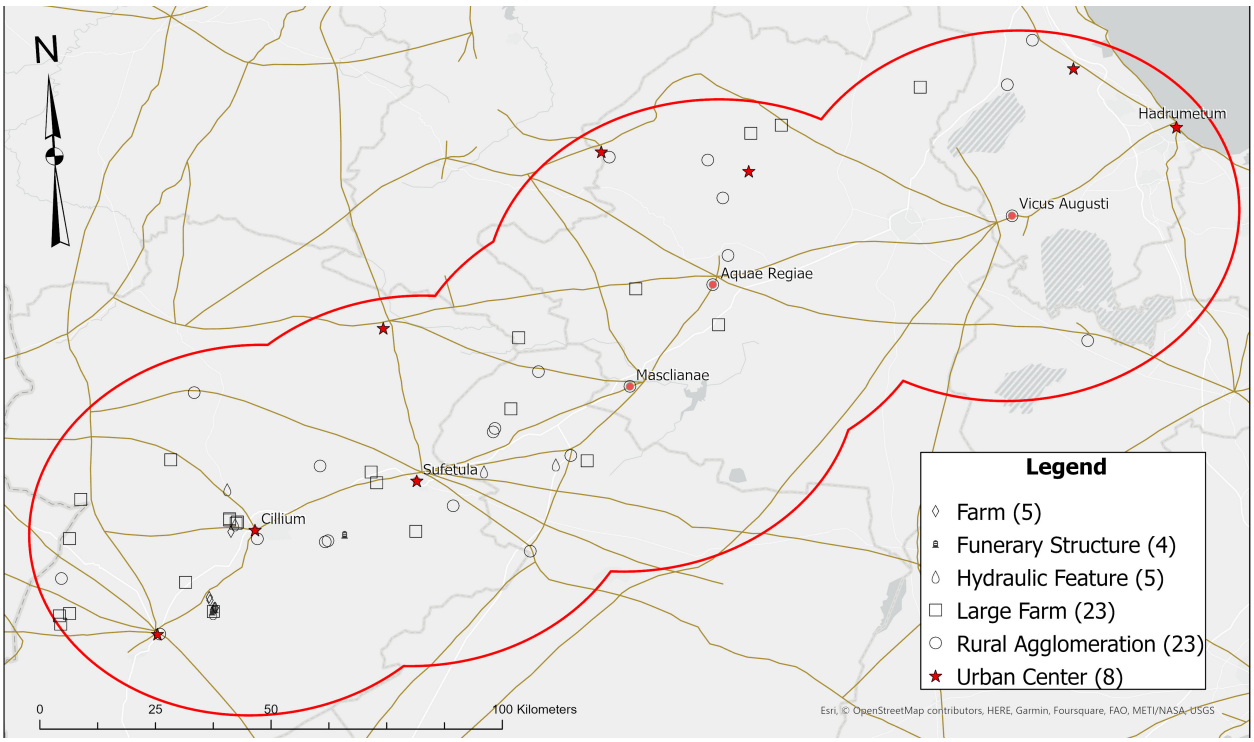


Figure 30: Sites (Containing “L”) Active in the Late Roman Period (300 C.E. – 640 C.E.)



The first three site groupings and maps that I will discuss are those that show any sort of activity in the three periods. To quantify these maps: 8 sites were active in the Historic period (Figure 28), 230 in the Roman period (Figure 29), and 68 in the Late Roman period (Figure 30).[131] The increase in discernable sites from the Historic to the Roman period is exponential, quite literally. The decrease in sites in the Late Roman period is equally as drastic, as their number plummets by approximately 70% (162/230 sites lost).

Looking at the Historic period first (Figure 28), we see that there is a strong (nearly complete) predisposition for settling near the coast and immediate hinterland around *Hadrumetum*. The interior is so far lacking in archaeologically discernable habitation and exploitation, although it certainly existed.[132]

As one would expect, settlement (and colonization) explodes in the Roman period (Figure 29). We see the foundation of our five other principal sites and the vast majority of our other sites. In particular, there is an increase in settlements in previously seemingly 'uninhabited' zones (essentially the entirety of the interior) as well as in areas that were settled but largely empty in the Historic period (the Haffouz region north of *Aquae Regiae* and the area southwest of *Hadrumetum*). Not only is there an increase in the number of settlements, but also in the type of settlement itself. There were, for instance, only Rural Agglomerations and Urban Centers active in the Historic period, no Large Farms; all 84 Large Farms present in the Roman period only became discernably active in the Roman period.

[131] If I occasionally leave out qualifying phrases like "archaeologically" or "discernably" in the chronological discussion that follows it is simply for convenience and to not sound repetitive; the problematic nature of dating these sites, especially their foundations, should be assumed throughout.
[132] See especially Dossey 2010: 35-38.

Figure 31: Sites (“HRL”) Active from the Historic to Late Roman Period (330 B.C.E. – 640 C.E.)

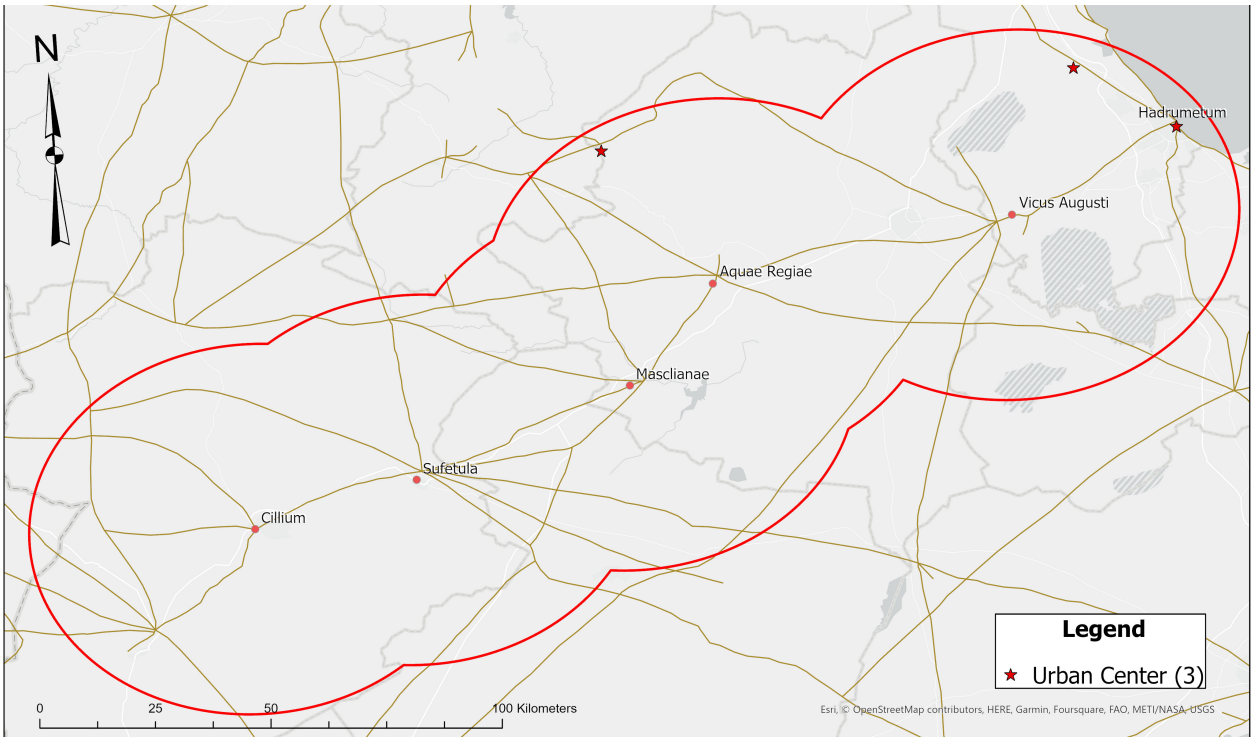


Figure 32: Sites (“H”) Active Only in the Historic Period (330 B.C.E. – 30 B.C.E.)

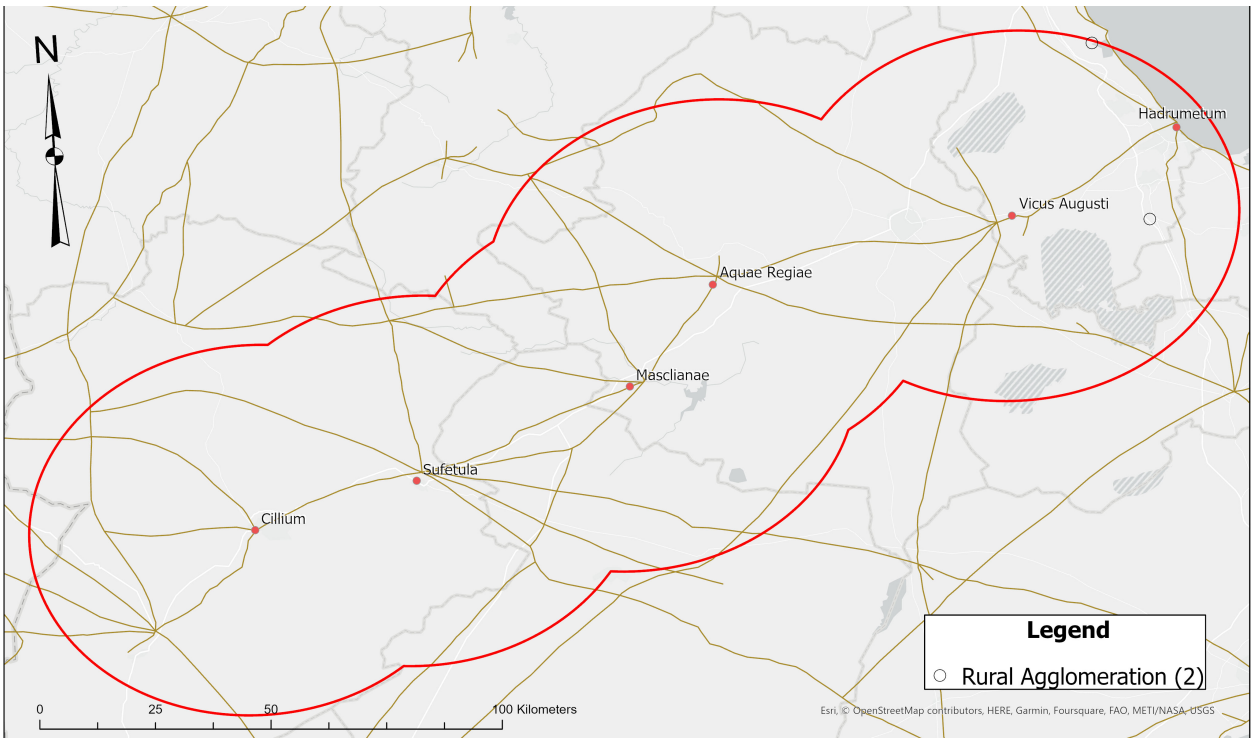
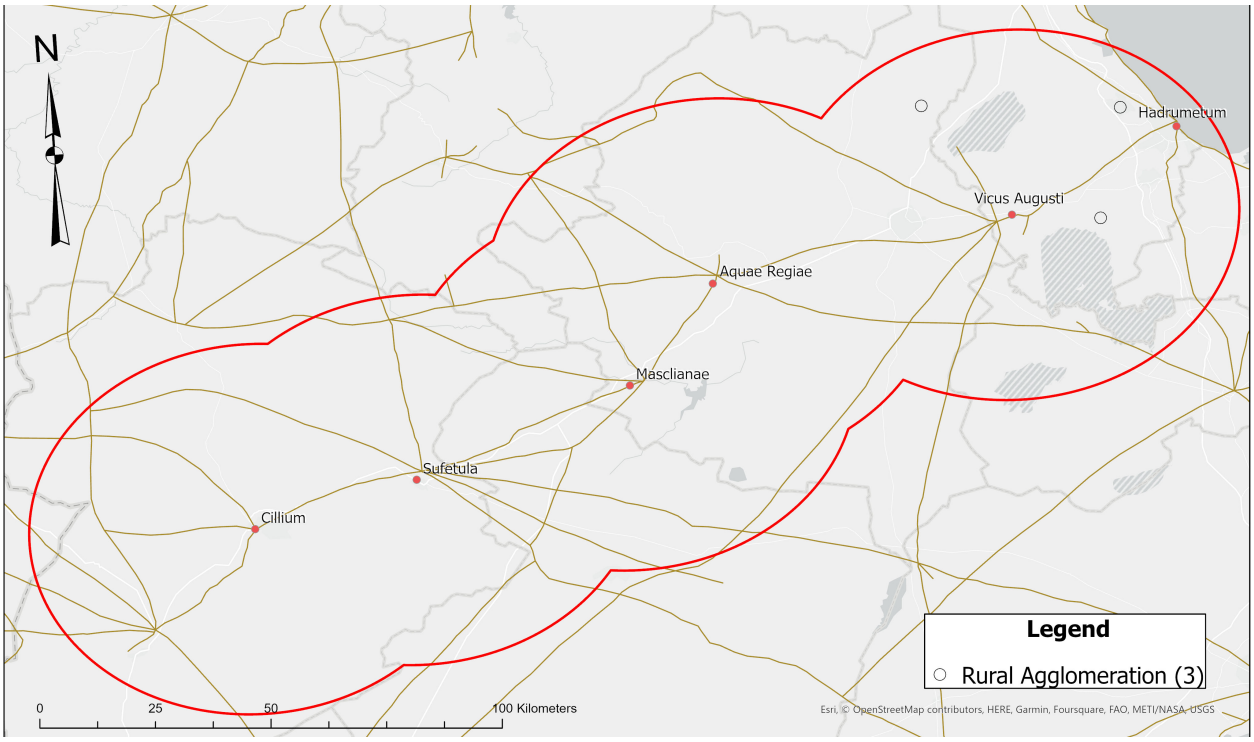


Figure 33: Sites ("HR") Active Only from the Historic to Roman Period (330 B.C.E. – 300 C.E.)



Only a few sites are active throughout all three time periods (Figure 31), and all three are Urban Centers: *Hadrumetum*, *Agger*, and *Uluzibbira*. Also significant are the two Rural Agglomerations which show activity in the Historic period but disappear at some point before the Roman period (Figure 32). Additionally, 3 other Rural Agglomerations existed in the Historic and Roman periods, but do not survive into the Late Roman (Figure 33). There are clusters of Roman and Late Roman settlements not far from these eventually abandoned sites (see Figure 8, above), so it is also possible that their population migrated to places that were more attractive than or came to outperform these sites with Libyo-Phoenician origins.

Figure 34: Sites (“R” or “RL”) that Emerge in the Roman Period (between 30 B.C.E. and 300 C.E.)

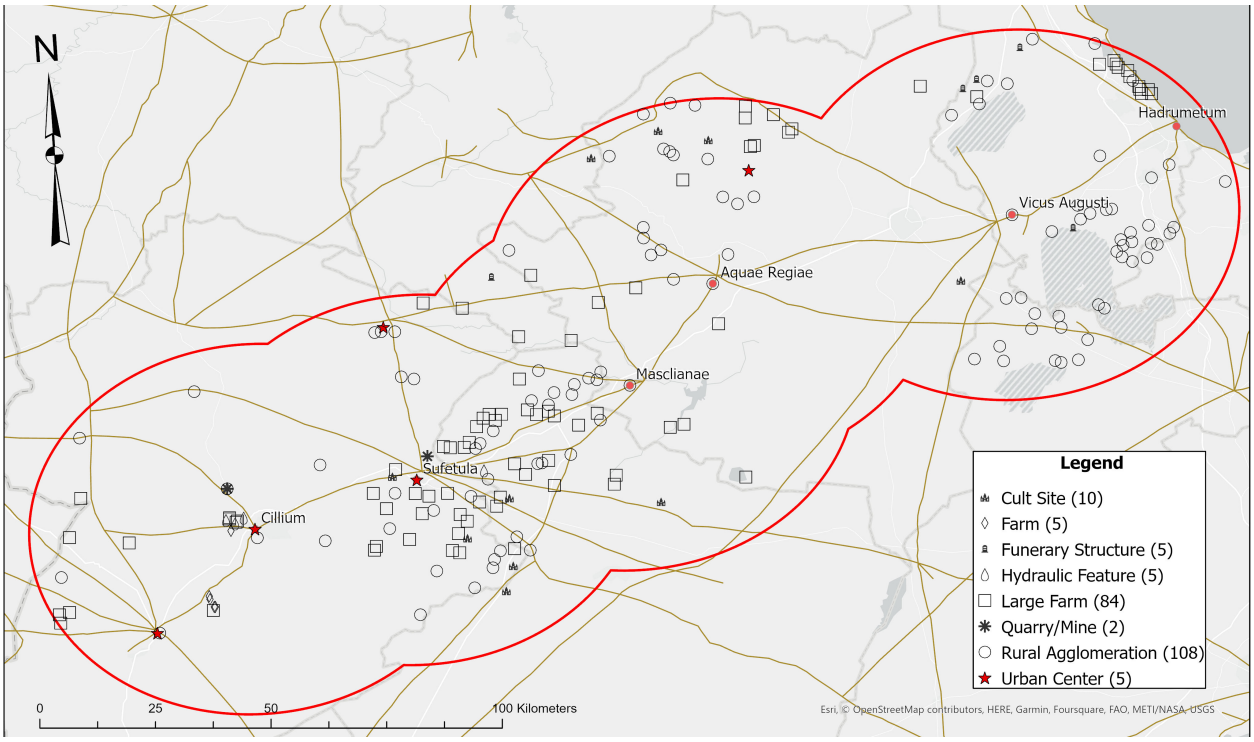


Figure 35: Sites (“RL”) Active from the Roman to Late Roman Period (30 B.C.E. – 640 C.E.)

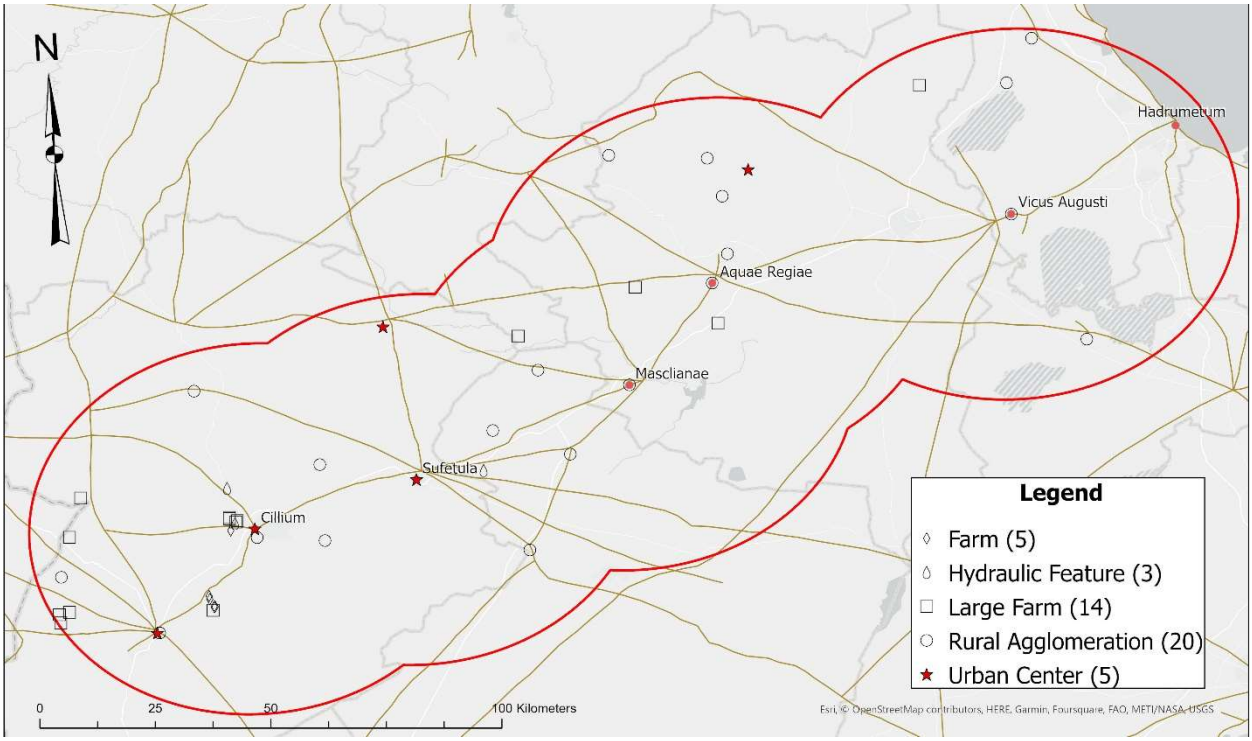


Figure 36: Sites (“R”) Active Only in the Roman Period (30 B.C.E. – 300 C.E.)

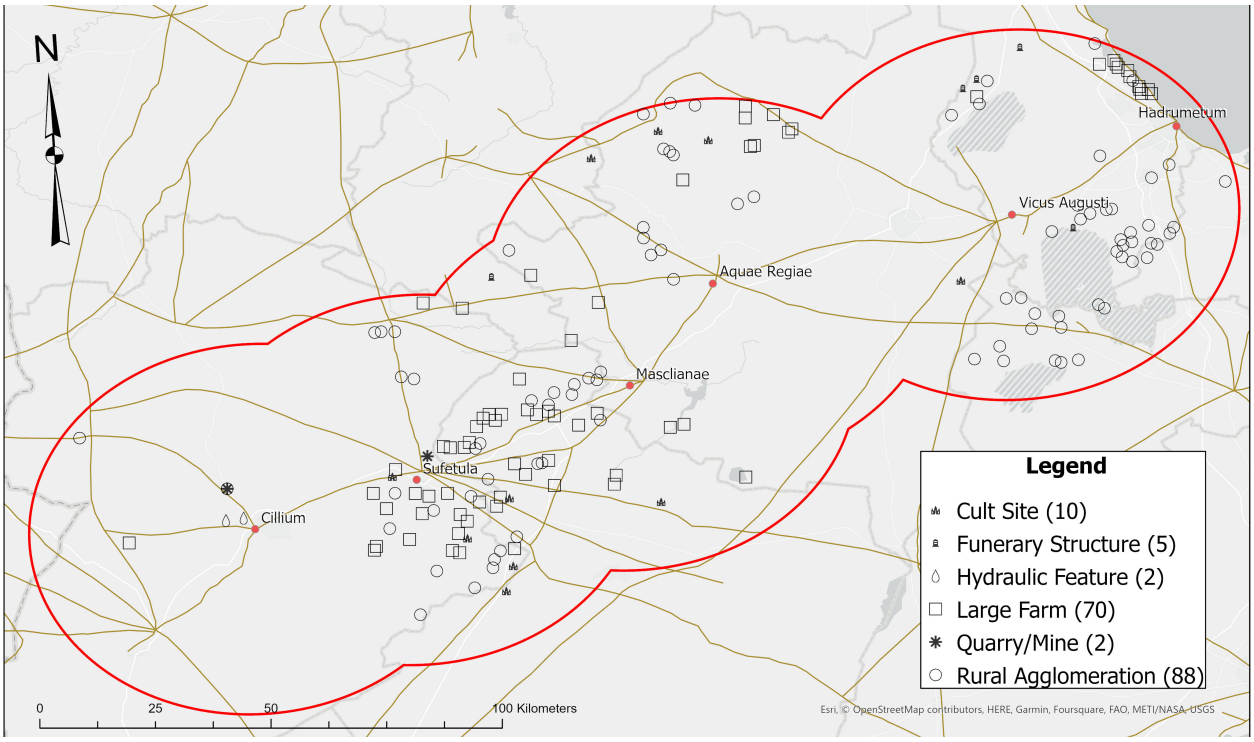
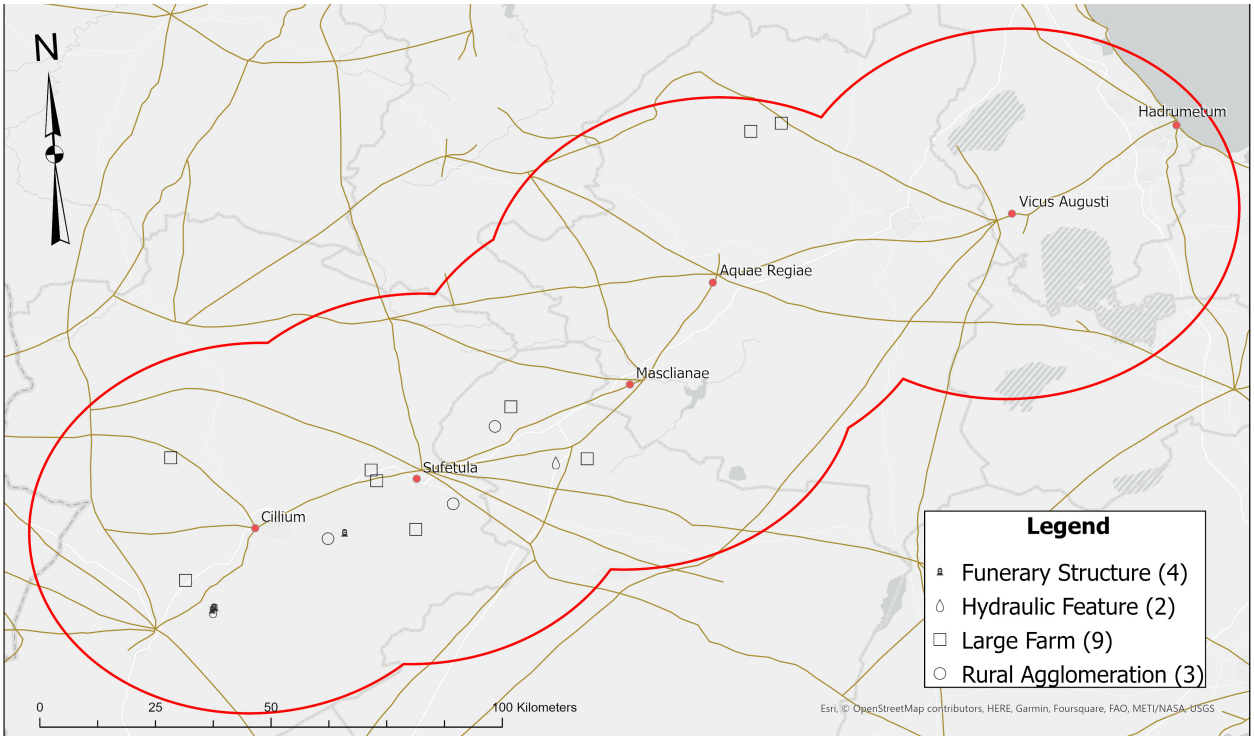


Figure 37: Sites (“L”) Active Only in the Late Roman Period (300 C.E. – 640 C.E.)



Of the 230 sites that are active during the Roman period (see Figure 29, above), 224 emerged archaeologically during it (Figure 34). Of these 224, only 47 endured into the Late Roman period (Figure 35). 177 sites, therefore, show activity exclusively during the Roman period (Figure 36). Furthermore, only 18 sites become archaeologically discernable in the Late Roman period (Figure 37).

Those that were active only in the Roman period (Figure 36), naturally by their far larger number, are well representative of the general patterns of settlement that I have highlighted throughout this investigation: increased habitation of the interior; the foundation of sites along roads, near Urban Centers, and in other areas viable for agriculture or the production of manufactured goods (primarily pottery and *salsamenta*); and different pattern of settlement type in the east and west stretches of the road (here we see the almost compete absences of Large Farms east of *Vicus Augusti* except for the clusters north of the Sebkhet Al Kelbia and northwest of *Hadrumetum*).

Also significant are the sites that continued into the Late Roman period (Figure 35), with respect to both their location and site type. All of the Urban Centers established in the Roman period remain active into the Late Roman period. 20 Rural Agglomerations likewise remain active, slightly more than the number of Large Farms (14). Despite what the above data shows visually and quantitatively, we know that the countryside continued to flourish (or at the very least persevere) past the fourth and fifth centuries, and in places well into the seventh century.[133] This discordance, however, is likely due to both the difficulty in reliably dating sites (especially rural ones) and the problems with *Pleiades*' chronological periods I discussed above.

[133] Dossey 2010; Bonifau 2022; De Vos 2022; Merrills 2022; Fenwick 2022.

As for their location, 47 surviving sites are all in very close proximity to known roads or roads whose path we can reliably reconstruct. Sites that were founded along roads continued to be frequented by travelers precisely because they laid on established pathways.

These sites that persisted from the Roman to Late Roman period are incredibly important, especially because they allow us to see the connections that are still present after a majority of our sites have disappeared archaeologically. We can definitively say that our road remained in use throughout this time, as did those that connected to *Theveste*, *Thelepte*, *Sufes*, and *Thysdrus*, and all three of the roads I reconstructed, as is evidenced by the survival of sites along or in the immediate vicinity of these roads. Despite the disappearance of many sites from the archaeological record, the continued activity of these sites indicates that the road network continued to be used throughout the Late Roman period.

Lastly, Urban Centers survive quite well into the Late Roman period as all eight are still active during this time; Rural Agglomerations and Large Farms do not fare as well. Both site-types see a drastic drop off in the Late Roman period with a little more than 20% of Rural Agglomerations (23/111) and slightly less than 30% of Large Farms (23/84) remaining after the Roman period efflorescence (comparison of Figures 29 and 30, above). This is not to say that large scale agricultural activity ceased during or even after the Late Roman period, but that there was a clear window when discernable settlement (and therefore economic) activity in this region of North Africa reach its apex, and after which gradually leveled off and eventually declined.

This conclusion, however, does not exactly align with what we know about the interior of North Africa between the fourth and sixth centuries C.E., a period when there is a definitive increase in datable sites, rural activity, and perhaps even a 'consumer revolution'.[134] It is perhaps

[134] Dossey 2010.

here that the *Pleiades* dating system, and my reliance on it for the chronology of the majority of sites, most glaringly obscures the reality and comes into conflict with our knowledge. The dramatic drop off in sites from the Roman to Late Roman period is likely because it was difficult if not impossible to securely date many of these rural sites to the Late Roman period. Settlement did decease throughout these centuries but gradually,[135] and almost certainly not as pronounced as the maps depict.

Part V: Synthesis and Conclusions

The route for the *Via Hadrumetina* that Salama first proposed more than half a century ago was undoubtedly an important road early on in the Roman occupation of North Africa, when *Ammaedara* was the principal military and administrative center of the interior. However, I have argued above that it is problematic to connect the *Via Hadrumetina* with *Ammaedara* by relying chiefly on the find location of a second to third century C.E. funerary epitaph and the first century C.E. historical importance of *Ammaedara*. Even if Salama's identification of the *Via Hadrumetina* is correct, I argue that over time a different route came to be used as the main communication pathway for the *regio Hadrumetina*, an administrative tax district that did not exist during *Ammaedara*'s apogee, and that the identification of this new route as the *Via Hadrumetina* is much more reasonable.

The epitaph, dating to more than a century after the pinnacle of *Ammaedara* regional importance, only proves the existence of a *Via Hadrumetina*; it cannot be used to unequivocally identify its path or principal sites. Moreover, *Ammaedara*'s role as the ultimate origin or terminus of the *Via Hadrumetina* as well as the other major roads was certainly taken over by *Theveste* once the *legio III Augusta* moved their headquarters (*circa* 75 C.E.). Although two major routes without

[135] Dossey 2010; Magalhães de Oliveira 2022.

question originally focused on *Ammaedara*, one connected to Carthage and the other to *Tacapae*, it is reasonable to assume that after *Ammaedara* was supplanted by *Theveste* the latter came to be seen as the ultimate terminus of these roads, that is to say the point after which a new major road began. This interpretation is only strengthened after the third legion moved farther west, to *Lambaesis* (*circa* 125 C.E.), as after this *Theveste* can undoubtedly be seen the convergence point for these two well-established major roads and therefore a crucial crossroads of the interior. From *Theveste* goods and people could proceed north to Carthage, south to *Tacapae*, east to *Hadrumetum*, or west to *Lambaesis*.

The *Via Hadrumetina*, therefore, should likely be understood as ultimately converging upon *Theveste*, even if *Ammaedara* first served as its terminus, not only because of *Theveste*'s eventual role as a pivotal crossroads but also because of the site's later connection with the *reg*io *Hadrumetina*, its *procurator*, and thus the *Via Hadrumetina*. Rather than being identified as the shortest route from the find-spot of the funerary inscription to *Hadrumetum*, the *Via Hadrumetina* should primarily be understood as the road that best served as the main artery for the *regio Hadrumetina* and that facilitated the movement of goods and people. The route I have proposed just does just that, as it departs from *Hadrumetum* and passes through important agricultural areas and sites in the interior, interconnecting the *regio Hadrumetina* to a far greater degree than Salama's proposed road. This re-identification also terminates the *Via Hadrumetina* at *Cillium*, a juncture point located more centrally in the *regio Hadrumetina* that serves as a better departure point towards the other major North African roads than *Ammaedara* does, despite the latter site's position on one of these very roads. *Cillium*, like, *Theveste*, is a crossroads, from whence one can gain easy access to the *Tacapae* road as well as those that head towards Carthage and *Lambaesis* via *Theveste*. Furthermore, *Cillium* and its environs likely served as the western limit of the

procurator regionis Hadrumetinae's authority, as we know it did not extend to *Theveste*. Thus, my proposed route better centers the *Via Hadrumetina* within the *regio Hadrumetina*, and also reflects the increasing significance of the high steppe during the Roman period with the growth of massive olive cultivation.

To further support this new identification and demonstrate the importance of my road to the Roman colonization of *Africa Proconsularis* (and later *Byzacena*) I have attempted to provide a new way of investigating settlement along the *Via Hadrumetina* and its secondary roads. My provisional typology and the maps I have created from it are designed to demarcate general patterns of settlement along the road, patterns that largely conform to our current understanding of settlement habits across the Roman world, and North Africa in particular.

The *Via Hadrumetina* and its secondary road network facilitated the *procurator regionis Hadrumetina*e and his staffs' administrative duties, but also provided the opportunity for sites to develop along it and its ancillary roads as the Romans gradually increased their involvement in the interior. Sites that were originally military in nature (like *Cillium* and *Sufetula*) were transformed over time into important urban centers, allowing for the creation of smaller settlements located at opportunistic positions between major sites as well as agricultural sites that could exploit the land for the benefit of the Roman state and the local inhabitants. The roads, furthermore, allowed for higher levels of short- and long-distance interconnectivity, fostering trade, commerce, migration, and movement between previously existing and newly established settlements.

These two patterns, settling along roads and near Urban Centers, are applicable to every one of the site-types that I established, though each also has some of its own idiosyncrasies. Farms are rarely found in isolation, and their regular discovery around Large Farms and Rural Agglomerations is likely indicative of their dependent nature. A number (likely the majority) of

them are almost certainly parts of larger estates or satellite sites that had a close relationship with neighboring sites. Large Farms and Rural Agglomerations are relatively balanced numerically, and both site-types are found along roads but also similarly deeper in the countryside (although likely connected to the road network through non-extant secondary or tertiary roads); there is, however, a disparity in their spatial distribution, as Large Farms are primarily located in the high steppe, precisely where the high levels of intensive agriculture occurred.

The 'miscellaneous' site-types also have many characteristics in common with one another, primarily their establishment near habitational sites.[136] Hydraulic Features (when not the remnants of an aqueduct) and Quarries/Mines must be near settlements, the former so that the transported, collected, and stored water can actually be utilized and the latter so that its extracted material can be used in the construction of a site's buildings and monuments. When these two site-types are found in isolation, they are perhaps indicative of yet undiscovered settlements in relatively close proximity (though this is somewhat less true for Quarries/Mines). The other two site-types, Cult Sites and Funerary Structures, are not always as reliable indicators of nearby habitation as the previous two types. Both site-types are regularly near and far from habitational sites precisely because they serve multiple purposes beyond their most basic functions of places of worship and places to store the dead. Regardless, their existence is indication of nearby habitation nonetheless, and, therefore, when found in isolation, they are evidence of human settlement, although more extensive survey would likely be required to locate the sites that utilized them.

By far the majority of presses are located in the interior, principally at Large Farms. What is significant is the number of Farms and Rural Agglomerations that also contained evidence of the production of olive oil, typically the remains of a single (regularly smaller) press, and

[136] As above, Milestones are left out of this discussion because they require no real analysis.

especially so when these sites are in close proximity to Large Farms that also contained presses. The dispersion of presses and their wide range of press capacity and theoretical output is evidence for the maximization of production that began in the second century C.E. Large and small presses located on a diversity of agricultural sites could exist simultaneously because they formed interconnected (and frequently dependent) relationships with one another, small farms often existing as satellite sites reliant on larger estate centers.[137] Even when Mediterranean interconnectivity was depressed, North African presses found available local markets that sustained (and likely improved) their provincial economy.

A total of 43 sites contained evidence of at least one press, and the total number of presses found in my investigatory zone is 123. If we estimate an average press yield of somewhere between 2,500 and 5,000 liters of oil per year, then this region could alone produce 307,500 to 615,000 liters of oil per year, far surpassing subsistence needs and certainly reaching the level of 'oil for export', a phrase Mattingly coined many years ago that is still applicable.[138]

The appearance and continually increasing levels of production of Pottery Workshops in the interior is indicative of continued growth throughout the fourth, fifth, and perhaps even sixth centuries C.E., as necessary for these workshops' existence is a viable market. Pottery Workshops near the coast continued to produce transport *amphorae*, but they also manufactured various ARS wares, although production of ARS was predominately carried out in the interior.[139] A significant quantity of ARS produced at interior sites never reached overseas markets, it was only traded locally or on the provincial level, demonstrating the people in these regions were able to afford

[137] At least on imperial estates, *coloni* (sharecroppers) of the smaller farms on larger estates owed their landlords annual labor in addition to in-kind rent. See Kehoe 1984 and 1985.
[138] Mattingly 1988b.
[139] Peacock *et al*. 1990; Bonifay 2004; Fentress *et al*. 2004. Sites in the interior likely relied on less archaeologically visible methods of transportation and storage like barrels and skins (Marlière and Torres Costa 2007; McCarty 2022a).

finer pottery and therefore at the very least some small level of economic growth during these centuries.

The chronological analysis of sites along the *Via Hadrumetina*, though somewhat problematic, can help illustrate the Roman period efflorescence of the region. Although there was certainly agricultural production taking place before the Roman occupation, it is the Roman period exploitation of indigenous farming techniques, more monumental construction methods, and introduction of (and changes to) the *annona* tax system that allow us to archaeologically discern high levels of intensive agricultural activity, and occasionally compute its theoretical output. The Romans were by no means the first to exploit this land, but the levels of intensive production this agricultural heartland reached during Roman occupation were unquestionably higher than previous centuries.

Do the results of this investigation align with or challenge the current orthodoxy on settlement patterns in North Africa, and the role played by the road network with respect to the latter?

In general the answer is yes. Settlement near roads and Urban Centers are characteristic of settlement habits across the Roman world, and North Africa in particular. The Romans did not introduce urbanism to North Africa, but rather incentivized it.[140] Roads not only allowed for quick travel and communication between sites, but also fostered dispersed settlement in the interior.[141] The relationships between Farms and Large Farms (or Rural Agglomerations) has been well documented and is only becoming clearer,[142] and the same is true for the relationship between these site-types and Urban Centers.[143] Presses continue to be a focused area of study in North

[140] Dufton and Fentress 2022.
[141] Hitchner 2012; De Vos 2022.
[142] Hitchner *et al*. 1990; Leveau 2003a, 2003b, 2019; de Vos 2013, 2022.
[143] De Vos 2022; Dufton and Fentress 2022.

Africa, particularly related to the olive, but the possibility of the production of other goods (in particular wine) is continually advanced.[144] Pottery Workshops and their products continue to be one of the best pieces of evidence not only for dating sites, but for speculation on the economics of *Africa Proconsularis*.[145] The Roman period efflorescence is undeniable, but so too is the continued agricultural and economic success of sites in the countryside from the fourth through the sixth century (and likely well into the Islamic period, at least for a number of sites).[146]

I would also like suggest a few avenues of future investigation as well as methodological refinements, the application of which would greatly enhance any future investigations of the *regio Hadrumetina*, *Via Hadrumetina*, or the application of a similar method to another road. The first follows from the chronological discussion above. While the date ranges established and used above are helpful, they are problematic because they do not allow for the most precise or even relatively-precise dating. Dating each site to an exact century would be the best method of chronological refinement, instead of the wide ranges used here. Although it would not entirely solve the problem of sites likely being active in previous or subsequent centuries, it would allow for more a nuanced timeline of habitation that better shows the ebb and flow of human occupation in the region.

The second pertains to the apparent dearth of settlement in the area south of the road between *Masclianae*, *Aquae Regiae*, and *Vicus Augusti* as well as the area northwest of *Sufetula*. We cannot definitively know if these seemingly uninhabited areas are truly empty until modern archaeological survey and excavation is applied to them. The few habitational sites and isolated Hydraulic Works that are present suggest that there might be more activity than we currently suspect in the areas that are apparently lacking sites on the maps I have produced. Moreover, as

[144] Mattingly 1988a, 1988b, 1993; Hobson 2015.
[145] Fentress and Perkins 1988; Peacock *et al*. 1990; Bonifay 2004, 2013, 2017a, 2017b, 2022; Dossey 2010.
[146] Dossey 2010; Conant 2022; Fenwick 2022; Magalhães de Oliveira 2022; Merrills 2022.

the study of Barbery and Delhoume demonstrated, when one actually surveys roads and their immediate environs, there is a high probability that new sites will be discovered or that new interpretations will be made of sites that were only described briefly by our predecessors. The latter point was demonstrated by the Kasserine Survey too, which reshaped our understanding of a number of sites cursory described by the *AAT*.

Following from this, an investigation that seeks to uncover the true paths of the three secondary roads that I had to reconstruct would be of significant aid to our body of knowledge as well, not only because it would confirm or reject my hypothesized routes but also because it would likely lead to the discovery of unknown sites as well.

The last and perhaps most important refinement to my methodology is a more critical and exhaustive treatment when classifying sites. My typology was geared towards making final analysis as simple as possible, and therefore I could not convey each site's nuances. It also (almost certainly) obscured the true nature of at least a handful of sites. Autopsy of the sites themselves would naturally be the best solution, but a number of sites (primarily those from the *AAT*) have certainly eroded or been disturbed since their first unearthing. *Pleiades* sites, too, could use more scrutiny, chiefly in order to develop a more accurate chronology but also to make better determinations of whether a certain site was an Urban Center, Rural Agglomeration, or Large Farm. Perhaps a fifth habitational site-type should be created to better describe sites that are smaller than an Urban Center, but ones that the label of Rural Agglomeration feels somewhat inappropriate to apply to given their regional importance (*e.g*. *Masclianae* or *Cilma*). There will never be a perfect typology, but I hope that any glaring mistakes or improprieties made above will entice readers to formulate their own improvements, and therefore advance all of our understanding.

Appendix 1: Reconstruction of the African Section of the *Antonine Itinerary*

W#	I#.#	Text	Numeral	Arabic	km
1.1-3.2		Incipit itenerarium provinciarum antoni augusti. Provinciae Africae a Tingi Mauretania, id est ubi Bacuates et Macenites barbari morantur, per maritima loca Cartaginem usque: ab exploratione, quod Mercurios dicitur,		1659	
4.1		Tingi usque	CLXXIIII	174	
4.2		Rusadder	CCCXVIII	318	
5.1		Cesarea Mauretanie	CCCCXXIII	423	
5.2		Saldis	CCXVIII	218	
5.3		Rusiccade	CCXVIII	218	
6.1		Hippone Regio	CXV	115	
6.2		Cartagine	CXCIII	193	
6.3		(mansionibus his):			
6.4	**1.1**	A Mercurios [Cartagine]	CLXXIIII	174	257.35
6.5?	1.2	Sala colonia	XVI	16	23.66
7.1	1.3	Thamusida	XXXII	32	47.33
7.2	1.4	Banasa	XXXII	32	47.33
7.3	1.5	Frigidis	XXIIII	24	35.50
7.4	1.6	Lix colonia	XVI	16	23.66
8.1	1.7	Tabernis	XVI	16	23.66
8.2	1.8	Zili	XIIII	14	20.71
8.3	1.9	Ad Mercurios	VI	6	8.87
8.4	1.10	Tingi colonia	XVIII	18	26.62
9.1-2		(A Tingi litoribus navigatur usque ad Portus Divinos:)			
9.3	1.11	Ad Septem Fratres	LX	60	88.74
9.4	1.12	Ad Abilem	XIIII	14	20.71
9.5	1.13	Ad Aquilam Minorem	XIIII	14	20.71
10.1	1.14	Ad Aquilam Maiorem	XIIII	14	20.71
10.2	1.15	Ad promunturium Barbiti	XII	12	17.75
10.3	1.16	Tenia Longa	XXIIII	24	35.50
10.4	1.17	Cubucla [Cubicula*]	XXIIII	24	35.50
10.5	1.18	Parietina	XXIIII	24	35.50
10.6	1.19	Promunturium	XXV	25	36.98
11.1	1.20	Ad Sex Insulas	XII	12	17.75
11.2	1.21	Promunturio Cannarum	XXX	30	44.37
11.3	1.22	Promunturio Rusaddi	L	50	73.95
11.4	1.23	Rusadder colonia	XV	15	22.19
11.5	1.24	Ad Tres Insulas	LXV	65	96.14
11.6	1.25	Flumen Malva	XII	12	17.75
12.1-2		(Flumen Malva dirimit Mauretanias duas, incipit Caesariensis:)			
12.3	1.26	Lemnis	XXII	22	32.54
12.4	1.27	Popleto flumen	XXX	30	44.37
12.5	1.28	Ad Fratres	VI	6	8.87
12.6	1.29	Artisiga	XXV	25	36.98
12.7	1.30	Portu Caecili	XII	12	17.75
12.8	1.31	Siga municipium	XV	15	22.19
13.1	1.32	Portu Sigensi	III	3	4.44

13.2	1.33	Camarata	XII	12	17.75
13.3	1.34	Ad Salsum flumen	XII	12	17.75
13.4	1.35	Ad Crispas	XXV	25	36.98
13.5	1.36	Silva colonia [Gilva?*]	VI	6	8.87
13.6	1.37	Castra Puerorum	VI	6	8.87
13.7	1.38	Portus Divinos	XVIII	18	26.62
13.8	1.39	Portus Magnos	XXXVI	36	53.24
13.9	1.40	Quiza municipium	XL	40	59.16
14.1	1.41	Arsenaria	XL	40	59.16
14.2	1.42	Cartenna colonia	XVIII	18	26.62
14.3	1.43	Iar castellum	XIIII	14	20.71
14.4	1.44	Cartili	XII	12	17.75
15.1	1.45	Gunugus	XII	12	17.75
15.2	1.46	Caesarea colonia	XII	12	17.75
15.3	1.47	Tipasa colonia	XVI	16	23.66
15.4	1.48	Casae Calventi	XV	15	22.19
15.5	1.49	Icosium colonia	XXXII	32	47.33
16.1	1.50	Rusguniae colonia	XV	15	22.19
16.2	1.51	Rusubbicari	XXIIII	24	35.50
16.3	1.52	Cisi municipium [Cissi*]	XII	12	17.75
16.4	1.53	Rusuccuru colonia	XII	12	17.75
17.1	1.54	Iomnio municipio	XVIII	18	26.62
17.2	1.55	Rusazis municipium	XXXVIII	38	56.20
17.3	1.56	Saldis colonia	XXXV	35	51.77
18.1	1.57	Musulubio	XXVII	27	39.93
18.2	1.58	Coba municipium	XXVIII	28	41.41
18.3	1.59	Igilgili colonia	XXXVIIII	39	57.68
18.4	1.60	Paccianis Matidie	XXIIII	24	35.50
19.1	1.61	Chulli municipium	LX	60	88.74
19.2	1.62	Rusiccade	L	50	73.95
19.3	1.63	Paratianis	XXV	25	36.98
19.4	1.64	Culucitanis	XVIII	18	26.62
20.1	1.65	Tacatua	XXII	22	32.54
20.2	1.66	Sullucu	XVIII	18	26.62
20.3	1.67	Hippone Regio colonia	XXXII	32	47.33
21.1	1.68	Ad Dianam	XXXII	32	47.33
21.2	1.69	Tuniza	XV	15	22.19
21.3	1.70	Thabraca	XXIIII	24	35.50
21.4	1.71	Hippone Zarito [Diarrhyto*]	LX	60	88.74
22.1	1.72	Tuneiza [Tinisa*]	XX	20	29.58
22.2	1.73	Membrone	X	10	14.79
22.3	1.74	Utica	VI	6	8.87
22.4	1.75	Ad Gallum Gallinacium	XII	12	17.75
22.5	1.76	Cartagine	XV	15	22.19
23.1	**2.1**	Item ab Tocolosida Tingi	CXLVIII	148	218.89
23.2	2.2	Volubilis colonia	IIII	4	5.92
23.3	2.3	Aquis Dacicis	XVI	16	23.66
23.4	2.4	Gilda	XII	12	17.75
23.5	2.5	Vopiscianis	XXIII	23	34.02

24.1	2.6	Tremulis	XVIIII	19	28.10
24.2	2.7	Oppido Novo	XII	12	17.75
24.3	2.8	Ad Novas	XXXII	32	47.33
24.4	2.9	Ad Mercurios	XII	12	17.75
24.5	2.10	Tingi colonia	XVIII	18	26.62
24.6-25.1	**3.1**	A Cartagine Cirta CCCXXI (321), Sitifi C (100), Caesarea m. p.? [318], sic:			
25.2	3.2	<A Carthagine> Unuca	XXII	22	32.54
25.3	3.3	Sicilibra	VII	7	10.35
25.4	3.4	Vallis	XV	15	22.19
26.1	3.5	Coreba	XX	20	29.58
26.2	3.6	Musti	XXVIII	28	41.41
26.3	3.7	Laribus colonia	XXX	30	44.37
26.4	3.8	Altieuros [Altiburos*]	XVI	16	23.66
26.5	3.9	Admedera colonia	XXXII	32	47.33
27.1	3.10	Thebeste colonia	XXV	25	36.98
27.2	3.11	Altaba	XVIII	18	26.62
27.3	3.12	Iusti	XVIII	18	26.62
27.4	3.13	Marcimeni	XXIIII	24	35.50
27.5	3.14	Macomadibus	XXIIII	24	35.50
28.1	3.15	Sigus	XXVIII	28	41.41
28.2	3.16	Cirta colonia	XXV	25	36.98
28.3	3.17	Mileum	XXV	25	36.98
28.4	3.18	Idicra	XXV	25	36.98
29.1	3.19	Cuiculi	XXV	25	36.98
29.2	3.20	Sitifi	XXV	25	36.98
29.3	3.21	Perdices	XXV	25	36.98
30.1	3.22	Cellas	XXVIII	28	41.41
30.2	3.23	Macri	XXV	25	36.98
30.3	3.24	Zabi	XXV	25	36.98
30.4	3.25	Aras	XXX	30	44.37
30.5	3.26	Tatilti	XVIII	18	26.62
30.6	3.27	Auza [Auzia*]	XLIIII	44	65.08
30.7	3.28	Rapidi	XVI	16	23.66
31.1	3.29	Tirinadi	XXV	25	36.98
31.2	3.30	Caput Cilani	XXV	25	36.98
31.3	3.31	Sufasar	XVI	16	23.66
31.4	3.32	Aquis	XVI	16	23.66
31.5	3.33	Caesarea	XXV	25	36.98
31.6	**4.1**	Item a Sitifi Saldas	LXXVIIIIS	79.5	117.58
31.7	4.2	Orrea [Horrea*]	XVIII	18	26.62
32.1	4.3	Lesbi	XVIII	18	26.62
32.2	4.4	Tubusuptus	XXV	25	36.98
32.3	4.5	Saldis	XVIII	18	26.62
32.4	**5.1**	Item a Lambese Sitifi	CIIS	102.5	151.60
32.5	5.2	Tadutti	XVIII	18	26.62
32.6	5.3	Nova Sparsa	XXXII	32	47.33
32.7	5.4	Gemellas	XXVIIS	27	39.93

33.1	5.5	Sitifi	XXV	25	36.98
33.2-3	**6.1**	Item a Theveste per Lambesem Sitifi	CCXII	212	313.55
33.4	6.2	Tinfadi	XXII	22	32.54
33.5	6.3	Vegesela	XX	20	29.58
33.6	6.4	Mascula	XVIIII	19	28.10
33.7	6.5	Claudi	XXII	22	32.54
34.1	6.6	Tamugadi	XXII	22	32.54
34.2	6.7	Lambese	XIIII	14	20.71
34.3	6.8	Diana	XXXII	32	47.33
34.4	6.9	Nova Petra	XIIII	14	20.71
34.5	6.10	Gemellas	XXII	22	32.54
34.6	6.11	Sitifi	XXV	25	36.98
34.7	**7.1**	Item a Turres Caesaris Cirta	XL	40	59.16
34.8	7.2	Sigus	XV	15	22.19
35.1	7.3	Cirta	XXV	25	36.98
35.2	**8.1**	Item a Tamugadi Lamasba	LXII	62	91.70
35.3	8.2	Tadutti	XXVIII	28	41.41
35.4	8.3	Diana Veteranorum	XVI	16	23.66
35.5	8.4	Lamasba	XVIII	18	26.62
35.6	**9.1**	Item a Lamasba Sitifi	LXII	62	91.70
35.7	9.2	Zarai	XXV	25	36.98
36.1	9.3	Perdicibus	XII	12	17.75
36.2	9.4	Sitifi	XXV	25	36.98
36.3	**10.1**	Item a Calama Rusuccurru	CCCXCIIII	394	582.73
36.4	10.2	Ad Rubras	XX	20	29.58
36.5	10.3	Ad Albulas	XXX	30	44.37
36.6	10.4	Ad Dracones	XIIII	14	20.71
36.7	10.5	Ad Regias	XXIIII	24	35.50
37.1	10.6	Tasaccora	XXV	25	36.98
37.2	10.7	Castra Nova	XVIII	18	26.62
37.3	10.8	Ballene praesidio	XX	20	29.58
37.4	10.9	Mina	XVI	16	23.66
37.5	10.10	Gadaum castra	XXV	25	36.98
37.6	10.11	Vaga	XVIII	18	26.62
37.7	10.12	castellum Tingitanum	XVIII	18	26.62
38.1	10.13	Tigaua municipio	XXII	22	32.54
38.2	10.14	Oppido Novo colonia	XXXII	32	47.33
38.3	10.15	Tigaua castra	II	2	2.96
38.4	10.16	Maliana	XVI	16	23.66
38.5	10.17	Sufasar	XVIIII	19	28.10
38.6	10.18	Velisci	XV	15	22.19
38.7	10.19	Tanaramusa castra	XVI	16	23.66
38.8	10.20	Tamariceto praesidio	XVI	16	23.66
38.9	10.21	Rapido castra	XVI	16	23.66
39.1	10.22	Rusuccurru colonia	XII	12	17.75

39.2	**11.1**	Item Rusuccuro Saldis	XCVII	97	143.46
39.3	11.2	Tigisi	XII	12	17.75
39.4	11.3	Bida municipium	XXVII	27	39.93
39.5	11.4	Tubusuptus	XL	40	59.16
39.6	11.5	Saldis colonia	XVIII	18	26.62
39.7	**12.1**	Item a Saldis Igilgili	CLVIIII	159	235.16
39.8	12.2	Ad Olivam	XXX	30	44.37
39.9	12.3	Ad Sava municipium	XXV	25	36.98
40.1	12.4	Sitifi colonia	XXIIII	24	35.50
40.2	12.5	Satafi	XVI	16	23.66
40.3	12.6	Ad Basilicam	XVI	16	23.66
40.4	12.7	Ad Ficum	XV	15	22.19
40.5	12.8	Igilgili	XXXIII	33	48.81
40.6	**13.1**	Item a Lambese Cirta	LXXXIIIS	84	124.24
40.7	13.2	Tamugadi	XIIII	14	20.71
40.8	13.3	Ad Rotam	XXX	30	44.37
41.1	13.4	Ad lacum Regium	XX	20	29.58
41.2	13.5	Cirta colonia	XX	20	29.58
41.3	**14.1**	Item a Musti Cirta	CXCVIIIIS	199.5	295.06
41.4	14.2	Sicca	XXXII	32	47.33
41.5	14.3	Naraggara	XXX	30	44.37
41.6	14.4	Tagora	XX	20	29.58
41.7	14.5	Tipasa	XXIIII	24	35.50
42.1	14.6	Gazaufula	XXXV	35	51.77
42.2	14.7	Sigus	XXXIII	33	48.81
42.3	14.8	Cirta	XXV	25	36.98
42.4	**15.1**	Item a Cirta Hippone Regio	XCIIII	94	139.03
42.5	15.2	Aquis Tibilitanis	LIIII	54	79.87
42.6	15.3	Ad villam Servilianam	XV	15	22.19
42.7	15.4	Hippone Regio	XXV	25	36.98
42.8-9	**16.1**	Item ab Hippone Regio Cartagine	CCXVIII	218	322.42
43.1	16.2	Onellaba	L	50	73.95
43.2	16.3	Ad Aquas	XXV	25	36.98
43.3	16.4	Simittu colonia	V	5	7.40
43.4	16.5	Bulla Regia	VII	7	10.35
43.5	16.6	Novis Aquilianis	XXIIII	24	35.50
43.6	16.7	Vico Augusti	XVI	16	23.66
43.7	16.8	Cluacaria	XXX	30	44.37
44.1	16.9	Tuburbo Minus	XV	15	22.19
44.2	16.10	Cigisa	XXVIII	28	41.41
44.3	16.11	Cartagine	XVIII	18	26.62
44.4-5	**17.1**	Item alio itinere ab Hippone Regio Cartagine	CCXXVIII	228	337.21
44.6	17.2	Tagaste	LIII	53	78.39

44.7	17.3	Naraggara	XXV	25	36.98
45.1	17.4	Sicca Veneria	XXXII	32	47.33
45.2	17.5	Musti	XXXIIII	34	50.29
45.3	17.6	Membressa	XXXV	35	51.77
45.4	17.7	Sicilibra	XVII	17	25.14
45.5	17.8	Unuca	XIII	13	19.23
45.6	17.9	Pertusa	VII	7	10.35
46.1	17.10	Cartagine	XIIII	14	20.71
46.2	**18.1**	Item a Thenis Teveste	CLXXV	175	258.83
46.3	18.2	Oviscae	XXV	25	36.98
46.4	18.3	Amudarsa	XXV	25	36.98
46.5	18.4	Autenti	XXV	25	36.98
46.6	18.5	Sufetula	XXX	30	44.37
46.7	18.6	Vegesela	XXX	30	44.37
47.1	18.7	Menegesem	XX	20	29.58
47.2	18.8	Teveste	XX	20	29.58
47.3	**19.1**	Item ab Aquis Regis Sufibus	XLIII	43	63.60
47.4	19.2	Marazania	XV	15	22.19
47.5	19.3	Sufibus	XXVIII	28	41.41
47.6	**20.1**	Item ab Assuras Thenas	CXCII	192	283.97
47.7	20.2	Tucca Terebentina	XV	15	22.19
48.1	20.3	Sufibus	XXV	25	36.98
48.2	20.4	Sufetula	XXV	25	36.98
48.3	20.5	Nara	XV	15	22.19
48.4	20.6	Madasuma	XXV	25	36.98
48.5	20.7	Septiminicia	XXV	25	36.98
48.6	20.8	Tabalta	XX	20	29.58
48.7	20.9	Macomadibus	XV	15	22.19
48.8	20.10	Thenis	XVII	17	25.14
48.9-10	**21.1**	Item a Tuburbo per Valos Tacapas	CCCVIII	308	455.53
49.1	21.2	Vallis	XVIII	18	26.62
49.2	21.3	Coreva	XX	20	29.58
49.3	21.4	Musti	XXVI	26	38.45
49.4	21.5	Assuras	XXX	30	44.37
49.5	21.6	Tucca Terebentina	XII	12	17.75
49.6	21.7	Sufibus	XXV	25	36.98
49.7	21.8	Sufetula	XXV	25	36.98
49.8	21.9	Nara	XV	15	22.19
49.9	21.10	Madassuma	XXXII	32	47.33
50.1	21.11	Septiminicia	XXV	25	36.98
50.2	21.12	Tabalta	XX	20	29.58
50.3	21.13	Cellis Picentinis	XXX	30	44.37
50.4	21.14	Tacapis	XXX	30	44.37
50.5-6	**22.1**	Item a Cartagine in Bizancio [Byzacio*] Sufetula usque	CLXXII	172	254.39

50.7	22.2	Unuca	XXII	22	32.54
51.1	22.3	Vallis	XXII	22	32.54
51.2	22.4	Coreva	XX	20	29.58
51.3	22.5	Musti	XXVI	26	38.45
51.4	22.6	Assuras	XX	20	29.58
51.5	22.7	Tucca Terebentina	XII	12	17.75
51.6	22.8	Sufibus	XXV	25	36.98
51.7	22.9	Sufetula	XXV	25	36.98
52.1-2	**23.1**	Item a Cartagine per Adrumetum Sufetula usque	CCX	210	310.59
52.3	23.2	Vina	XXXIII	33	48.81
52.4	23.3	Pupput	X	10	14.79
52.5	23.4	Horrea Caelia	XXXIII	33	48.81
52.6	23.5	Adrumeto	X	10	14.79
53.1	23.6	Vico Augusti	XXV	25	36.98
53.2	23.7	Aquis Regis	XXV	25	36.98
53.3	23.8	Masclianis	XVIII	18	26.62
53.4	23.9	Sufetula	XXXVI	36	53.24
53.5	**24.1**	Item a Thusdro Teveste	CXCV	195	288.41
54.1	24.2	Vico Augusti	XXXI	31	45.85
54.2	24.3	Aquis Regis	XXXV	35	51.77
54.3	24.4	Masclianis	XVIII	18	26.62
54.4	24.5	Sufetula	XXXVI	36	53.24
54.5	24.6	Cilio	XXV	25	36.98
54.6	24.7	Menegere	XXV	25	36.98
54.7	24.8	Teveste	XXV	25	36.98
54.8-9	**25.1**	Item alio itinere a Theveste Thusdro	CLXXXV	185	273.62
54.10	25.2	Meneggere	XXV	25	36.98
54.11	25.3	Cilio	XXV	25	36.98
54.12	25.4	Sufetula	XXV	25	36.98
55.1	25.5	Masclianis	XXXVI	36	53.24
55.2	25.6	Aquis Regis	XVIII	18	26.62
55.3	25.7	Germaniciana	XXII	22	32.54
55.4	25.8	Aeliae	XVI	16	23.66
55.5	25.9	Tusdro	XVIII	18	26.62
55.6	**26.1**	Item a Sufibus Adrumetu	CVIII	108	159.73
55.7	26.2	Marazanis	XXVIII	28	41.41
55.8	26.3	Aquis Regis	XX	20	29.58
55.9	26.4	Vico Augusti	XXXV	35	51.77
55.10	26.5	Adrumeto	XXV	25	36.98
55.11	**27.1**	Item a Sufetula Clipea	CCXVI	216	319.46
56.1	27.2	Masclianis	XXXVI	36	53.24
56.2	27.3	Aquis Regis	XVII	17	25.14
56.3	27.4	Vico Augusti	XXXII	32	47.33
56.4	27.5	Adrumetu	XXV	25	36.98
56.5	27.6	Horrea	XVIII	18	26.62

56.6	27.7	Pupput	XXX	30	44.37
56.7	27.8	Curubi	XXVI	26	38.45
56.8	27.9	vel Neapoli	XII	12	17.75
57.1	27.10	Clipeis	XX	20	29.58
57.2	**28.1**	Item a Cartagine Clipeis	LXXXV	85	125.72
57.3	28.2	Maxula Prates	X	10	14.79
57.4	28.3	Casula	XX	20	29.58
57.5	28.4	Curubi	XXV	25	36.98
57.6	28.5	Clipeis	XXX	30	44.37
57.7-9	**29.1**	Item a Cartagine Thenis CCXVII (217), inde Lepti Magna CCCCXXII (422), in Alexandria DCCCCII (902):			
58.1	29.2	<A Cartagine> Maxula civitate	XVIII	18	26.62
58.2	29.3	Vina civitate	XXVIII	28	41.41
58.3	29.4	Pupput vicus	XII	12	17.75
58.4	29.5	Horrea Caelia vicus	XXX	30	44.37
58.5	29.6	Adrumetum colonia	XVIII	18	26.62
58.6	29.7	Lepti Minus civitas	XVIII	18	26.62
59.1	29.8	Thusdro colonia	XXXIII	33	48.81
59.2	29.9	Usula civitas [Usilla*]	XXXII	32	47.33
59.3	29.10	Thenis colonia	XXVIII	28	41.41
59.4	29.11	Macomadibus municipium	XXVIII	28	41.41
59.5	29.12	Cellas vicus	XXVI	26	38.45
59.6	29.13	Tacapas colonia	XXX	30	44.37
59.7	29.14	Agma sive Fulgurita villa	XXV	25	36.98
60.1	29.15	Giti municipium	XXV	25	36.98
60.2	29.16	Ponte Zita municipium	XXXV	35	51.77
60.3	29.17	Villa Magna, villa Privata	XXX	30	44.37
61.1	29.18	Fisida vicus [Pisida*]	XXXI	31	45.85
61.2	29.19	Casas villa Aniciorum	XXVI	26	38.45
61.3	29.20	Sabrata colonia	XXVIII	28	41.41
62.1	29.21	Vax villa Repentina	XXVII	27	39.93
62.2	29.22	Ocea colonia [Oea*]	XXVIII	28	41.41
62.3	29.23	Megradi villa Aniciorum	XXV	25	36.98
63.1	29.24	Minna villa Marsi [Amarei?*]	XXVIIII	29	42.89
63.2	29.25	Lepti Magna colonia	XXVIIII	29	42.89
63.3	29.26	Seggera	XX	20	29.58
64.1	29.27	Berge	XXIIII	24	35.50
64.2	29.28	Base	XXV	25	36.98
64.3	29.29	Thebunte	XXX	30	44.37
64.4	29.30	Auxiqua	XXX	30	44.37
64.5	29.31	Annesel	XXX	30	44.37
64.6	29.32	Auxiu	XVIII	18	26.62
64.7	29.33	Stixgi	XXV	25	36.98
64.8	29.34	Macomadibus Sirtis	XX	20	29.58
65.1	29.35	Iscina	XXX	30	44.37
65.2	29.36	Tramaricio	XXXI	31	45.85
65.3	29.37	Aubereo	XXV	25	36.98
65.4	29.38	Digdica	XXIIII	24	35.50
65.5	29.39	Tugulus	XXIIII	24	35.50

65.6	29.40	Banadedari	XXV	25	36.98
65.7	29.41	Anabucis	XXV	25	36.98
65.8	29.42	Tiniodiri	XXV	25	36.98
66.1	29.43	Boreo	XII	12	17.75
66.2	29.44	Tincausari	XXIII	23	34.02
66.3	29.45	Attici	XXV	25	36.98
66.4	29.46	Chorotus	XXV	25	36.98
66.5	29.47	Chaminos	XXII	22	32.54
67.1	29.48	Beronice	XXX	30	44.37
67.2	29.49	Adriane	XXVIII	28	41.41
67.3	29.50	Theucira	XVIII	18	26.62
67.4	29.51	Ptholemais	XXVI	26	38.45
67.5	29.52	Semeros	XXXII	32	47.33
67.6	29.53	Lasamices	XXVI	26	38.45
68.1	29.54	Cyrene	XXV	25	36.98
68.2	29.55	Limniade	XXI	21	31.06
68.3	29.56	Darnis	XXIIII	24	35.50
68.4	29.57	Hippon	XXVIII	28	41.41
69.1	29.58	Michera sive Elene	XXX	30	44.37
69.2	29.59	Badrin	XXV	25	36.98
69.3	29.60	Ausufal	XX	20	29.58
69.4	29.61	Catabathmon	XXV	25	36.98
70.1	29.62	Alexandria	VIIII	9	13.31
70.2-3	**30.1**	Item alio itinere ab Ptholomaida in Alexandria:			
70.4	30.2	Semeros	XXXII	32	47.33
70.5	30.3	Lasamices	XXVI	26	38.45
70.6	30.4	Cyrene	XXV	25	36.98
70.7		(fines Marmariae)			0.00
70.8	30.5	Limniade	XXI	21	31.06
70.9	30.6	Darnis	XXIIII	24	35.50
71.1	30.7	Hippon	XXVIII	28	41.41
71.2	30.8	Papi	XIIII	14	20.71
71.3	30.9	Paniuros [Paliuros*]	XXX	30	44.37
71.4	30.10	Micera	XX	20	29.58
71.5	30.11	Iucundiu	XL	40	59.16
71.6	30.12	Gereatis	XXXII	32	47.33
71.7	30.13	Catabathmos	XXXV	35	51.77
71.8		(fines Alexandriae)			0.00
71.9	30.14	Geras	XVIII	18	26.62
72.1	30.15	Zagilis	XXXII	32	47.33
72.2	30.16	Aristeu	XX	20	29.58
72.3	30.17	Thabrasta	XXXII	32	47.33
72.4	30.18	Parecomo [Paraetonio*]	XXVI	26	38.45
73.1	30.19	Euticu	XL	40	59.16
73.2	30.20	Pedone	XXVI	26	38.45
73.3	30.21	Caportis	XVI	16	23.66
73.4-6	**31.1**	Item iter quod limitem Tripolitanum per Turrem Tamalleni a Tacapas Lepti Magna ducit DCV (605):			
74.1	31.2	<A Tacapis> ad Aquas	XVIII	18	26.62

74.2	31.3	Agariabas	XXX	30	44.37
74.3	31.4	Turre Tamalleni	XXX	30	44.37
74.4	31.5	Ad Templum	XII	12	17.75
74.5	31.6	Bezereos	XXX	30	44.37
74.6	31.7	Ausilimdi	XXXII	32	47.33
75.1	31.8	Agma	XXX	30	44.37
75.2	31.9	Auzemmi	XXX	30	44.37
75.3	31.10	Tabalati	XXX	30	44.37
75.4	31.11	Thebelami	XXV	25	36.98
75.5	31.12	Tillabari	XX	20	29.58
75.6	31.13	Ad Amadum	XXX	30	44.37
76.1	31.14	Tabuinati	XXV	25	36.98
76.2	31.15	Thramusdusim	XXV	25	36.98
76.3	31.16	Thamascaltin	XXX	30	44.37
76.4	31.17	Thenteos	XXX	30	44.37
76.5	31.18	Auru	XXX	30	44.37
76.6	31.19	Vinaza	XXXV	35	51.77
76.7	31.20	Thalatati	XVI	16	23.66
77.1	31.21	Thenadassa	XXVI	26	38.45
77.2	31.22	Mesphe	XXX	30	44.37
77.3	31.23	Lepti Magna	XL	40	59.16
77.4	**32.1**	Item a Thelepte Tacapas	CLII	152	224.81
77.5	32.2	Gemellas	XXII	22	32.54
77.6	32.3	Gremellas	XXV	25	36.98
77.7	32.4	Capsae	XXIIII	24	35.50
78.1	32.5	Thasarte	XXXV	35	51.77
78.2	32.6	Aquas Tacapitanas	XXVIII	28	41.41
78.3	32.7	Tacapas	XVIII	18	26.62

Appendix 2: Number of Stops and Distances, and Minimum, Maximum, Range, Mode, and Average Distances of the African Section of the *Antonine Itinerary*

I#	Route		Numeral	Arabic	Stops	Dist.s	Min	Max	Range	Mode	Avg. Dist.
1	Mercurios	Carthagine	CLXXIIII	174	76	75	3	65	62	12	22.65
2	Tocolosida	Tingi	CXLVIII	148	10	9	4	32	28	12	16.44
3	Cartagine	Caesarea		[750]	33	32	7	44	37	25	23.44
4	Sitifi	Saldas	LXXVIIIIS	79.5	5	4	18	25	7	18	19.75
5	Lambese	Sitifi	CIIS	102.5	5	4	18	32	14	n/a	25.50
6	Theveste	Sitifi	CCXII	212	11	10	14	32	18	22	21.20
7	Turres Caesaris	Cirta	XL	40	3	2	15	25	10	n/a	20.00
8	Tamugadi	Lamasba	LXII	62	4	3	16	28	12	n/a	20.67
9	Lamasba	Sitifi	LXII	62	4	3	12	25	13	25	20.67
10	Calama	Rusuccurru	CCCXCIIII	394	22	21	2	32	30	16	18.76
11	Rusuccuro	Saldis	XCVII	97	5	4	12	40	28	n/a	24.25
12	Saldis	Igilgili	CLVIIII	159	8	7	15	33	18	16	22.71
13	Lambese	Cirta	LXXXIIIIS (*L*)	84.5	5	4	14	30	16	20	21.00
14	Musti	Cirta	CXCVIIIIS	199.5	8	7	20	35	15	n/a	28.43
15	Cirta	Hippone Regio	XCIIII	94	4	3	15	54	39	n/a	31.33
16	Hippone Regio	Cartagine	CCXVIII	218	11	10	5	50	45	n/a	21.80
17	Hippone Regio	Cartagine	CCXXVIII	228	10	9	7	53	46	n/a	25.56
18	Thenis	Teveste	CLXXV	175	8	7	20	30	10	25	25.00
19	Aquis Regis	Sufibus	XLIII	43	3	2	15	28	13	n/a	21.50
20	Assuras	Thenas	CXCII	192	10	9	15	25	10	25	20.22
21	Tuburbo	Tacapas	CCCVIII	308	14	13	12	32	20	25, 30	23.69
22	Cartagine	Sufetula	CLXXII	172	9	8	12	26	14	20, 22, 25	21.50
23	Cartagine	Sufetula	CCX	210	9	8	10	36	26	10, 25	23.75
24	Thusdro	Teveste	CXCV	195	8	7	18	36	18	25	27.86
25	Theveste	Thusdro	CLXXXV	185	9	8	16	36	20	25	23.13
26	Sufibus	Adrumetu	CVIII	108	5	4	20	35	15	n/a	27.00
27	Sufetula	Clipea	CCXVI	216	10	9	12	36	24	n/a	24.00
28	Cartagine	Clipeis	LXXXV	85	5	4	10	30	20	n/a	21.50
29	Cartagine	Alexandria		[1541]	62	61	9	35	26	25	25.31
30	Ptholomaida	Alexandria		[537]	21	20	14	40	26	32	26.85
31	Tacapas	Lepti Magna	DCV	605	23	22	12	40	28	30	27.45
32	Thelepte	Tacapas	CLII	152	7	6	18	35	17	n/a	25.33
					427 Tot.	395 Tot.	12.8 Avg.	35.5 Avg.	22.66 Avg.	25 Mode	23.38 Avg.
					13.3 Avg.	12.3 Avg.					

Appendix 3: Alphabetical Gazetteer of Sites[147]

Site Name	Site Type	Reference	Time Per.	Press	Pott. Work.
Aeliae	Rural Agglomeration	324657	RL		
Agger	Urban Center	324659	HRL		
Ain-Bou-Drias	Large Farm	324660	RL		
Aïne-Gassa	Farm	AAT.1.47.67			
Aquae Regiae	Rural Agglomeration	324667	RL		PW
Bordj-El-Menzel	Rural Agglomeration	324680	RL		
Cillium	Urban Center	324694	RL		
Cilma	Rural Agglomeration	324700	RL		
Cululis	Urban Center	324697	RL		
Dechra-Bou-Dabbouss	Large Farm	AAT.1.46.26	L		
El-Knissia	Rural Agglomeration	324762	R		
Fundus (Dic)itanus	Large Farm	324706	RL		
Gurza	Rural Agglomeration	324714	HR		
Hadrumetum	Urban Center	324716	HRL		PW
Hammajet-El-Mezira	Large Farm	AAT.2.48.63	L		
Henchir-Abd-El-Djabar	Rural Agglomeration	BD 1982: #14	RL	5	
Henchir-Ain-Hameima	Large Farm	AAT.2.48.57			
Henchir-Alib-Djeballa	Rural Agglomeration	BD 1982: #25		1	
Henchir-Ali-Bou-Cif	Large Farm	AAT.2.48.81		2	
Henchir-Bou-Haya	Large Farm	AAT.2.47.61		2	
Henchir-Bou-Jdaria	Funerary Structure	AAT.1.46.11			
Henchir-Bou-Okkaz	Rural Agglomeration	324718	R		
Henchir-Bou-Okkaz	Farm	AAT.1.47.31			
Henchir-Bou-Sofa	Large Farm	AAT.2.47.158		6	
Henchir-Breeh-El-Ksour	Farm	AAT.2.47.43		7	
Henchir-Bretil	Rural Agglomeration	AAT.2.47.79			

[147] 307 sites were unnamed. Six- or nine-digit numbers in the "Reference" column are the *Pleiades* ID numbers of sites.

Henchir-Brick	Rural Agglomeration	BD 1982: #10		1	
Henchir-Brika	Large Farm	AAT.2.47.18	L	2	
Henchir-Cheraga	Large Farm	AAT.2.47.131	L	3	
Henchir-Dalia	Farm	AAT.2.47.9		2	
Henchir-Dernaïa	Large Farm	AAT.2.47.59		2	
Henchir-Draa-Ech-Chii	Large Farm	324720	R		
Henchir-Draa-Ech-Chii	Rural Agglomeration	AAT.1.47.13			
Henchir-El-Abid	Large Farm	AAT.1.46.38		1	PW
Henchir-El-Abiod	Rural Agglomeration	314989	RL		
Henchir-El-Ahmed	Farm	AAT.1.47.16			
Henchir-El-Aïoun-Fekarin	Farm	AAT.1.47.3			
Henchir-El-Alaïmia	Farm	AAT.2.47.126		2	
Henchir-El-Amar	Large Farm	208943499	R	7	
Henchir-El-Aoun	Farm	AAT.1.47.20			
Henchir-El-Aoura	Large Farm	AAT.2.47.39		4	
Henchir-El-Arbia	Large Farm	AAT.2.47.17			
Henchir-El-Assel	Rural Agglomeration	208943547	R	3	
Henchir-El-Ferdjani	Farm	AAT.1.47.30			
Henchir-El-Fouaïdj	Rural Agglomeration	AAT.2.47.1			
Henchir-El-Gallal (Chougafiya)	Large Farm	Peacock et al. 1990	L	2	PW
Henchir-El-Garaa	Large Farm	AAT.2.47.114		2	
Henchir-El-Gaussa	Rural Agglomeration	AAT.2.47.51		6	
Henchir-El-Gousset	Rural Agglomeration	324722	RL		
Henchir-El-Guellal	Rural Agglomeration	AAT.2.47.5			
Henchir-El-Guellal	Large Farm	AAT.1.46.32			PW
Henchir-El-Guellal (Djilma)	Large Farm	Peacock et al. 1990	L		PW
Henchir-El-Guellal (Madje)	Large Farm	Peacock et al. 1990	L		PW
Henchir-El-Guellal (Sidi Saad)	Large Farm	Peacock et al. 1990	RL		PW

Henchir-El-Guellal (Zegalass)	Large Farm	Peacock et al. 1990	RL		PW
Henchir-El-Guellali	Rural Agglomeration	324724	RL		
Henchir-El-Guenafid	Rural Agglomeration	324725	HR		
Henchir-El-Guessda	Large Farm	AAT.2.47.42		2	
Henchir-El-Hammam	Rural Agglomeration	324729	RL		
Henchir-El-Hammir	Rural Agglomeration	AAT.2.47.96			
Henchir-El-Hassiane	Rural Agglomeration	AAT.1.46.76			
Henchir-El-Kebir	Rural Agglomeration	324731	R		
Henchir-El-Kouskoussi	Rural Agglomeration	324732	R		
Henchir-El-Kranguet	Large Farm	AAT.1.46.25		2	
Henchir-El-Ogla	Rural Agglomeration	AAT.1.46.77			
Henchir-El-Oust	Rural Agglomeration	AAT.2.48.16			
Henchir-En-Nechmaya	Large Farm	AAT.1.46.6			PW
Henchir-Es-Snob	Rural Agglomeration	324737	RL		
Henchir-Es-Souk	Large Farm	AAT.2.48.34		2	
Henchir-Es-Srira	Rural Agglomeration	324738	RL		PW
Henchir-Et-Touil	Large Farm	324740	RL		
Henchir-Et-Touil	Large Farm	KS225		4	
Henchir-Fesguia	Large Farm	AAT.2.47.66			
Henchir-Foundouk	Rural Agglomeration	327679	R		
Henchir-Fquirine	Farm	AAT.1.49.79			
Henchir-Garat-Es-Zaâouche	Large Farm	AAT.2.48.159			
Henchir-Garet-El-Youdia	Rural Agglomeration	AAT.2.48.137			
Henchir-Garet-En-Naam	Large Farm	AAT.2.47.117		2	
Henchir-Gouia	Rural Agglomeration	BD 1982: #11		3	
Henchir-Hallouf	Large Farm	AAT.2.48.133			
Henchir-Hammilt-El-Hallouf	Large Farm	208943507	R	6	
Henchir-Koudes-Er-Romad	Large Farm	AAT.2.47.46		1	

Henchir-Kreima-El-Chabou	Large Farm	AAT.2.47.47	L	2	
Henchir-Kreima-El-Mosra	Large Farm	AAT.2.47.48	L	1	
Henchir-Lahassane	Rural Agglomeration	208943536	R	4	
Henchir-Mannsoura	Rural Agglomeration	324744	RL		
Henchir-Mazrouai	Rural Agglomeration	324745	R		
Henchir-Mazrouaï	Rural Agglomeration	AAT.1.49.19			
Henchir-Medeina	Large Farm	AAT.2.48.121			
Henchir-Moussa	Large Farm	208943544	R	5	
Henchir-Ouadouda	Rural Agglomeration	AAT.2.48.1		2	
Henchir-Oued-El-Ahmeur	Large Farm	AAT.2.48.76		2	
Henchir-Oued-Laya	Rural Agglomeration	324746	R		
Henchir-Oued-Laya	Rural Agglomeration	AAT.1.47.197			
Henchir-Ouennas	Rural Agglomeration	AAT.2.48.67	L	2	
Henchir-Rebta	Farm	KS060	RL	1	
Henchir-Rechig	Farm	KS001	RL	1	
Henchir-Rechig	Farm	KS010	RL	1	
Henchir-Rezgui	Large Farm	AAT.2.48.15		2	
Henchir-Rohbani	Large Farm	AAT.2.48.135		2	
Henchir-Routitila	Rural Agglomeration	AAT.2.47.45			
Henchir-Sbéa	Large Farm	AAT.2.48.7			
Henchir-Tamesmida	Rural Agglomeration	324752	RL		
Henchir-Tsemade	Rural Agglomeration	324753	RL	2	
Henchir-Ziaet	Farm	AAT.1.50.31			
Henchir-Ziba	Rural Agglomeration	324755	R		
Henchir-Zourzour	Large Farm	AAT.2.48.41			
Ksar-Brichou	Rural Agglomeration	AAT.2.48.6			
Ksar-El-Ahmeur	Large Farm	AAT.1.46.36		2	
Ksar-El-Guellal	Rural Agglomeration	324763	RL	10	PW
Ksar-El-Hadouch	Large Farm	AAT.2.48.54			
Masclianae	Rural Agglomeration	324777	RL		

Masticana Fundus	Large Farm	324778	RL		
Meneg(g)ere	Rural Agglomeration	324780	R		
Nara	Rural Agglomeration	324792	RL		
Saltus Beguensis	Large Farm	324805	R		
Sidi-Ahmed-Ben-Nasseur	Large Farm	AAT.2.48.66		2	
Sidi-Marzouk	Large Farm	Peacock et al. 1990	RL		PW
Sufes	Urban Center	324815	RL		
Sufetula	Urban Center	324816	RL		
Tegea	Rural Agglomeration	324824	H		
Thelepte	Urban Center	324828	RL		
Themetra	Rural Agglomeration	324829	R		
Uluzibbira	Urban Center	324839	HRL		
Uzaae	Rural Agglomeration	324842	R		
Vaga	Rural Agglomeration	324846	HR		
Vegesela	Rural Agglomeration	324849	RL		
Vicus Augusti	Rural Agglomeration	324850	RL		
Villa de Pins	Large Farm	208942994	R		

Appendix 4: Gazetteer of Sites by Site Types[148]

Site Name	Site Type	Reference	Time Per.	Press	Pott. Work.
Untitled	Cult Site	208943101	R		
Untitled	Cult Site	208943519	R		
Untitled	Cult Site	208943521	R		
Untitled	Cult Site	208943437			
Untitled	Cult Site	208943121	R		
Untitled	Cult Site	208943518	R		
Untitled	Cult Site	208943439			
Untitled	Cult Site	208943424			
Untitled	Cult Site	208943520	R		
Untitled	Cult Site	208943438			
Untitled	Cult Site	208943103	R		
Untitled	Cult Site	208943436			
Untitled	Cult Site	208943045	R		
Untitled	Cult Site	208943102	R		
Untitled	Cult Site	208943540	R		
Aïne-Gassa	Farm	AAT.1.47.67			
Henchir-Bou-Okkaz	Farm	AAT.1.47.31			
Henchir-Breeh-El-Ksour	Farm	AAT.2.47.43		7	
Henchir-Dalia	Farm	AAT.2.47.9		2	
Henchir-El-Ahmed	Farm	AAT.1.47.16			
Henchir-El-Aïoun-Fekarin	Farm	AAT.1.47.3			
Henchir-El-Alaïmia	Farm	AAT.2.47.126		2	
Henchir-El-Aoun	Farm	AAT.1.47.20			
Henchir-El-Ferdjani	Farm	AAT.1.47.30			
Henchir-Fquirine	Farm	AAT.1.49.79			
Henchir-Rebta	Farm	KS060	RL	1	

[148] Six- or nine-digit numbers in the "Reference" column are the *Pleiades* ID numbers of sites.

Henchir-Rechig	Farm	KS001	RL	1	
Henchir-Rechig	Farm	KS010	RL	1	
Henchir-Ziaet	Farm	AAT.1.50.31			
Untitled	Farm	KS002	RL	1	
Untitled	Farm	KS014	RL		
Untitled	Farm	KS045			
Untitled	Farm	KS051			
Untitled	Farm	KS080			
Untitled	Farm	KS029			
Untitled	Farm	KS030			
Untitled	Farm	AAT.2.48.14			
Untitled	Farm	AAT.2.48.87		2	
Untitled	Farm	AAT.2.48.88		2	
Untitled	Farm	AAT.1.47.9			
Untitled	Farm	AAT.1.47.10			
Untitled	Farm	AAT.1.47.11			
Untitled	Farm	AAT.1.47.12			
Untitled	Farm	AAT.1.47.18			
Untitled	Farm	AAT.1.47.19			
Untitled	Farm	AAT.1.48.12			
Henchir-Bou-Jdaria	Funerary Structure	AAT.1.46.11			
Untitled	Funerary Structure	208943118	R		
Untitled	Funerary Structure	208943125	R		
Untitled	Funerary Structure	208943124	R		
Untitled	Funerary Structure	208943563	R		
Untitled	Funerary Structure	208943123	R		
Untitled	Funerary Structure	KS005	L		
Untitled	Funerary Structure	KS011	L		
Untitled	Funerary Structure	KS012	L		
Untitled	Funerary Structure	AAT.2.47.25			

Untitled	Funerary Structure	AAT.2.47.55			
Untitled	Funerary Structure	AAT.2.47.76			
Untitled	Funerary Structure	AAT.2.47.100			
Untitled	Funerary Structure	AAT.2.47.102			
Untitled	Funerary Structure	AAT.2.47.104			
Untitled	Funerary Structure	AAT.2.47.108	L		
Untitled	Funerary Structure	AAT.2.47.110			
Untitled	Funerary Structure	AAT.2.47.121			
Untitled	Funerary Structure	AAT.2.47.147			
Untitled	Funerary Structure	AAT.2.48.89			
Untitled	Funerary Structure	AAT.2.48.145			
Untitled	Funerary Structure	AAT.2.48.153			
Untitled	Hydraulic Feature	325409	RL		
Untitled	Hydraulic Feature	325407	RL		
Untitled	Hydraulic Feature	KS013	L		
Untitled	Hydraulic Feature	KS042	RL		
Untitled	Hydraulic Feature	KS064	R		
Untitled	Hydraulic Feature	KS078	R		
Untitled	Hydraulic Feature	KS086			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	BD 1982			
Untitled	Hydraulic Feature	AAT.2.47.39			
Untitled	Hydraulic Feature	AAT.2.47.172			
Untitled	Hydraulic Feature	AAT.2.47.173			
Untitled	Hydraulic Feature	AAT.2.48.49	L		
Untitled	Hydraulic Feature	AAT.2.48.121			

Untitled	Hydraulic Feature	AAT.1.46.14			
Untitled	Hydraulic Feature	AAT.1.46.15			
Untitled	Hydraulic Feature	AAT.1.46.125			
Untitled	Hydraulic Feature	AAT.1.46.144			
Untitled	Hydraulic Feature	AAT.1.47.202			
Untitled	Hydraulic Feature	AAT.1.47.204			
Untitled	Hydraulic Feature	AAT.1.49.49			
Untitled	Hydraulic Feature	AAT.1.49.67			
Untitled	Hydraulic Feature	AAT.1.49.87			
Untitled	Hydraulic Feature	AAT.1.50.15			
Untitled	Hydraulic Feature	AAT.1.50.18			
Untitled	Hydraulic Feature	AAT.1.50.20			
Untitled	Hydraulic Feature	AAT.1.50.25			
Untitled	Hydraulic Feature	AAT.1.50.26			
Untitled	Hydraulic Feature	AAT.1.50.29			
Untitled	Hydraulic Feature	AAT.1.50.34			
Untitled	Hydraulic Feature	AAT.1.50.39			
Untitled	Hydraulic Feature	AAT.1.50.51			
Untitled	Hydraulic Feature	AAT.1.50.62			
Untitled	Hydraulic Feature	AAT.1.50.67			
Untitled	Hydraulic Feature	AAT.1.50.77			
Untitled	Hydraulic Feature	AAT.1.50.78			
Untitled	Hydraulic Feature	AAT.1.50.81			
Ain-Bou-Drias	Large Farm	324660	RL		
Dechra-Bou-Dabbouss	Large Farm	AAT.1.46.26	L		
Fundus (Dic)itanus	Large Farm	324706	RL		
Hammajet-El-Mezira	Large Farm	AAT.2.48.63	L		
Henchir-Ain-Hameima	Large Farm	AAT.2.48.57			
Henchir-Ali-Bou-Cif	Large Farm	AAT.2.48.81		2	
Henchir-Bou-Haya	Large Farm	AAT.2.47.61		2	

Henchir-Bou-Sofa	Large Farm	AAT.2.47.158		6	
Henchir-Brika	Large Farm	AAT.2.47.18	L	2	
Henchir-Cheraga	Large Farm	AAT.2.47.131	L	3	
Henchir-Dernaïa	Large Farm	AAT.2.47.59		2	
Henchir-Draa-Ech-Chii	Large Farm	324720	R		
Henchir-El-Abid	Large Farm	AAT.1.46.38		1	PW
Henchir-El-Amar	Large Farm	208943499	R	7	
Henchir-El-Aoura	Large Farm	AAT.2.47.39		4	
Henchir-El-Arbia	Large Farm	AAT.2.47.17			
Henchir-El-Gallal (Chougafiya)	Large Farm	Peacock et al. 1990	L	2	PW
Henchir-El-Garaa	Large Farm	AAT.2.47.114		2	
Henchir-El-Guellal	Large Farm	AAT.1.46.32			PW
Henchir-El-Guellal (Djilma)	Large Farm	Peacock et al. 1990	L		PW
Henchir-El-Guellal (Madje)	Large Farm	Peacock et al. 1990	L		PW
Henchir-El-Guellal (Sidi Saad)	Large Farm	Peacock et al. 1990	RL		PW
Henchir-El-Guellal (Zegalass)	Large Farm	Peacock et al. 1990	RL		PW
Henchir-El-Guessda	Large Farm	AAT.2.47.42		2	
Henchir-El-Kranguet	Large Farm	AAT.1.46.25		2	
Henchir-En-Nechmaya	Large Farm	AAT.1.46.6			PW
Henchir-Es-Souk	Large Farm	AAT.2.48.34		2	
Henchir-Et-Touil	Large Farm	324740	RL		
Henchir-Et-Touil	Large Farm	KS225		4	
Henchir-Fesguia	Large Farm	AAT.2.47.66			
Henchir-Garat-Es-Zaâouche	Large Farm	AAT.2.48.159			
Henchir-Garet-En-Naam	Large Farm	AAT.2.47.117		2	
Henchir-Hallouf	Large Farm	AAT.2.48.133			

Henchir-Hammilt-El-Hallouf	Large Farm	208943507	R	6	
Henchir-Koudes-Er-Romad	Large Farm	AAT.2.47.46		1	
Henchir-Kreima-El-Chabou	Large Farm	AAT.2.47.47	L	2	
Henchir-Kreima-El-Mosra	Large Farm	AAT.2.47.48	L	1	
Henchir-Medeina	Large Farm	AAT.2.48.121			
Henchir-Moussa	Large Farm	208943544	R	5	
Henchir-Oued-El-Ahmeur	Large Farm	AAT.2.48.76		2	
Henchir-Rezgui	Large Farm	AAT.2.48.15		2	
Henchir-Rohbani	Large Farm	AAT.2.48.135		2	
Henchir-Sbéa	Large Farm	AAT.2.48.7			
Henchir-Zourzour	Large Farm	AAT.2.48.41			
Ksar-El-Ahmeur	Large Farm	AAT.1.46.36		2	
Ksar-El-Hadouch	Large Farm	AAT.2.48.54			
Masticana Fundus	Large Farm	324778	RL		
Saltus Beguensis	Large Farm	324805	R		
Sidi-Ahmed-Ben-Nasseur	Large Farm	AAT.2.48.66		2	
Sidi-Marzouk	Large Farm	Peacock et al. 1990	RL		PW
Untitled	Large Farm	208942992	R		
Untitled	Large Farm	208943079	R		
Untitled	Large Farm	208943502	R		
Untitled	Large Farm	208942687	RL		
Untitled	Large Farm	208942991	R		
Untitled	Large Farm	208943080	R		
Untitled	Large Farm	208943433			
Untitled	Large Farm	208943442			
Untitled	Large Farm	327678	R		
Untitled	Large Farm	208943434			
Untitled	Large Farm	208943492	R		
Untitled	Large Farm	208943528	R		

Untitled	Large Farm	208942993	R		
Untitled	Large Farm	208943530	R		
Untitled	Large Farm	208942990	R		
Untitled	Large Farm	208943105	R		
Untitled	Large Farm	327682	R		
Untitled	Large Farm	208943408			
Untitled	Large Farm	208943543	R		
Untitled	Large Farm	208943107	R		
Untitled	Large Farm	208943513	R		
Untitled	Large Farm	208943522	R		
Untitled	Large Farm	208943541	R		
Untitled	Large Farm	208943508	R		
Untitled	Large Farm	327676			
Untitled	Large Farm	208943416			
Untitled	Large Farm	208943496	R		
Untitled	Large Farm	208943527	R		
Untitled	Large Farm	208943545	R		
Untitled	Large Farm	208943546	R		
Untitled	Large Farm	208943428			
Untitled	Large Farm	208942691	RL		
Untitled	Large Farm	208942714	RL		
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Henchir-Routitila	Rural Agglomeration	AAT.2.47.45			
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Ksar-El-Guellal	Rural Agglomeration	324763	RL	10	PW
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Meneg(g)ere	Rural Agglomeration	324780	R		
Nara	Rural Agglomeration	324792	RL		
Tegea	Rural Agglomeration	324824	H		
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Vaga	Rural Agglomeration	324846	HR		
Vegesela	Rural Agglomeration	324849	RL		
Vicus Augusti	Rural Agglomeration	324850	RL		
Agger	Urban Center	324659	HRL		
Cillium	Urban Center	324694	RL		
Cululis	Urban Center	324697	RL		
Hadrumetum	Urban Center	324716	HRL		PW
Sufes	Urban Center	324815	RL		
Sufetula	Urban Center	324816	RL		
Thelepte	Urban Center	324828	RL		
Uluzibbira	Urban Center	324839	HRL		

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Abbreviations:

AAT[1] : *Atlas archéologique de la Tunisie au 1/50,000* = Babelon, E., Cagnat, R., and Reinach, S. 1892-1913. *Atlas archéologique de la Tunisie au 1/50,000*. Paris. [Available online with excellent resolution thanks to the Institut National du Patrimoine Tunisi: https://www.inp2020.tn/atlas/atlas.html]

AAT[2] : *Atlas archéologique de la Tunisie au 1/100,000* = Cagnat, R. and Merlin, A. 1914-1932. *Atlas archéologique de la Tunisie au 1/100,000*. Paris. [Available online with excellent resolution thanks to the Institut National du Patrimoine Tunisi: https://www.inp2020.tn/atlas/atlas.html]

BCTH : *Bulletin archéologique du Comité de travaux historiques et scientifiques*.

CIL 8 : *Corpus Inscriptionum Latinarum VIII*: *Inscriptiones Africae Latinae*, *collegit* G. Wilmanns. Ed. Th. Mommsen. 1881 (reprinted 1960). Five Supplements. [All but the most recent supplement are available online through the Deutsches Archäologisches Institut's *Arachne* service: https://cil.bbaw.de/en/homenavigation/the-cil/volumes]

ILAf : *Inscriptions latines d'Afrique* = Cagnat, R., Merlin, A., and Châtelain, L. 1923. *Inscriptions latines d'Afrique. Tripolitaine, Tunisia, Maroc*. Paris.

ILAlg : Inscriptions latines de l'Algérie = Gsell, St. 1957. Inscriptions latines de l'Algérie t. 1 Inscriptions de la Proconsulaire. Paris.

ILS : Inscriptiones latinae selectae = Dessau, H. 1982-1916. Inscriptiones latinae selectae. Berlin.

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