# Pottery from the Kasserine Archaeological Survey

A thesis submitted by

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in partial fulfillment of the

requirements for the degree of

Master of Arts

in

**Classical Archaeology** 

# Tufts University

May 2016

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#### Abstract

The Kasserine Archaeological Survey was conducted by R. Bruce Hitchner under the auspices of l'Institut National d'Archéologie et d'Art de Tunisie (INAA) in central Tunisia from 1982-1989. At the time, the methodology of archaeological survey, especially in North Africa, was in its infancy. The Kasserine Survey aided the development of Roman North African studies and represented an advancement in the field as it focused on the rural landscapes of Tunisia instead of exclusively urban areas. Preliminary reports have since been published concerning the sites and the numismatic evidence, however, there has yet to be any comprehensive study of the ceramic material recovered by the survey. This report not only catalogs the pottery sherds from Kasserine and contextualizes them in terms of the sites at which they were found, but also compares these results with those from other surveys in North Africa. While this evidence strongly indicates an overall chronology ranging from the first – seventh centuries C.E. in the region of *Cillium*, there is evidence at many sites for some type of change in the settlement pattern between the third and fourth/fifth centuries. Overall, the distribution of ceramic in Kasserine follows the general trend found in more urban areas such as in the ULVS. Ultimately, this information is useful as it provides further insight into the role Kasserine played in the larger macrocosm that was the Roman province of Africa proconsularis.

### Acknowledgments

In writing this thesis I have been helped in innumerable ways by Professor R. Bruce Hitchner. He not only allowed me access to the archive records for the survey, including pottery reports, drawings, and unpublished notes, but also original site plans all of which proved to be of immense value. He also aided the development of this thesis by providing me with direction in times of uncertainty and ultimately, with helpful comments throughout the process. As I did not have access to the physical pottery sherds themselves, I am deeply indebted to Lucinda Neuru as well, who produced the majority of the original identifications and categorizations of important forms. I must also thank Professor J. Matthew Harrington and Professor Lauren Sullivan both of whom, as part of my thesis committee, provided helpful comments and suggestions for further refinements to the present report. Finally, I am thankful to 'the Czech couple upstairs' with their 'radio units disguised as tiny watermelons' whom I encountered in the archives, as they provided comic relief during the long hours of poring over pottery notes and creating the present catalogs.

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### **Chapter 1: Introduction**

### Importance of North African Survey

Archaeological survey in North Africa was in its infancy in the 1980's, as archaeological methodology had yet to be firmly established. A study of sites around Caesarea, led by Philippe Leveau in the 1960's - 1970's, was one of the first which facilitated the development of more modern forms of systematic survey. Joseph Greene's survey around Carthage also aided the development of survey methodology, only fully coming to fruition in the 1980's. Leveau's study was focused not only on recording sites in that region but also on investigating the possible economic output of these areas, due to the discovery of olive presses in specific oilery buildings. A survey in the Sebou basin in southern Mauretania Tingitana, begun in 1982, further developed the methodology of survey in the region.<sup>1</sup> The Kasserine and Libyan Valleys Surveys developed concurrently at this time as two of the first in the region which truly established the practice of survey archaeology in North Africa. The fundamental objectives were to further understand the impact of Roman imperial occupation on the indigenous populations of the region, specifically the changes that may have occurred in local economies, social structures, and institutions.

The Kasserine Survey specifically sought to explain the impact of the Roman Empire in a tribal zone, beyond the area which had been under direct Punic control. At the same time, the prime objective of the Libyan Valleys Survey was also more complex, seeking to better understand the remains of Roman farms in the Libyan pre-desert while also placing them in the larger context of North African studies. Over time, the individual surveys developed their own methodologies and further specified their overall goals. For

<sup>&</sup>lt;sup>1</sup> Mattingly and Hitchner 1995: 189-196.

instance, the methodology of the Kasserine Survey specifically was greatly influenced by the previous work done by Leveau around Caesarea, as well as surveys conducted in Mexico and the American southwest.

The next objective, in what is still today an ongoing discussion, was the need to develop a method of comparing the results from one survey to those of another. In many cases, this type of comparison relies heavily on a close analysis of the pottery assemblages present in each area. Ultimately, pottery is an integral part in understanding the results of individual surveys, as it provides chronological information for the areas within specific surveys. However, this information also allows a deeper understanding of the way in which that survey functioned in relation to all others within the general area due, in large part, to the potential of pottery in determining economic and trade patterns.

#### Introduction to North African Pottery

The study and understanding of North African ceramics emerged with the work of J.W. Hayes in 1972 and 1980, along with that of A. Carandini in 1981. These works are of crucial importance to the study of African Red Slip wares (hereafter ARS) in particular, as they were among the first comprehensive classifications of the various ARS ceramic forms, and are still referenced today. While the dating for some forms has changed as new evidence has been found since the time they were written, these works represent the beginning of the development of ceramic studies in the North African context. Fundamentally, ARS wares are forms of the earlier *terra sigillata* (hereafter TS) which was known and produced throughout Italy, Gaul, Spain, and the eastern Mediterranean as early as the first century B.C.E. These TS wares were produced in relief-decorated forms as well as simple tablewares. Those with a high-quality red gloss

finish began being produced in Arretium (mod. Arezzo) in the last half of the first century B.C.E.<sup>2</sup> These TS forms had a profound impact on the development of later ARS wares.

When ARS ceramic first began being produced in the middle first century C.E., it was generally manufactured in workshops in northern *Africa proconsularis* (mod. Tunisia), and later Byzacena and Numidia. These forms came to replace the Arretine TS and differed from this precedent in two significant ways. First, ARS wares included smoothed red slip surfaces whereas the TS wares had been produced with a glossy red slip exterior. ARS wares were also made of clays with characteristically simpler compositions, namely consisting solely of iron compounds and quartz sand.<sup>3</sup> The forms which are later termed 'Northern' were some of the first such ARS wares produced and spread throughout the Mediterranean.

Once the demand for ARS products increased beyond the capacity of the original *ateliers* production spread to the Sahelian coast of Tunisia and the Carthaginian hinterland. The first known workshop was at Oudhna near Carthage (refer to figure 1), which produced ceramics in ARS A, and later in ARS D fabric, which were primarily intended for export.<sup>4</sup> Wares in ARS A fabric present a continuously slipped, somewhat sandy exterior and occasional red or yellow inclusions. These consist, generally, of forms produced from c. 75-300 C.E. In contrast, the wares in ARS D fabric only have an orange-red slip covering on the interior of the vessel and the exterior of the rim.<sup>5</sup> The practice of exporting ARS wares was common as Hayes ARS forms 3 (dish), 4 (dish), 5

<sup>&</sup>lt;sup>2</sup> Hayes 1972: 9; Hayes 1997: 41-59.

<sup>&</sup>lt;sup>3</sup> Hayes 1997: 59-64; Bonifay 2004; Bonifay, Capelli, Brun 2012.

<sup>&</sup>lt;sup>4</sup> Barraud, Bonifay, Dridi, Pichonneau 1998: 139; Bonifay et al. 2012: 44-46, 48-50; Mackensen and Schneider 2002: 123, 128.

<sup>&</sup>lt;sup>5</sup> Hayes 1997: 59; Bonifay et al. 2012: 44-45; Hayes 1972: 287-292. Mackensen and Schneider 2006: 168 and Bonifay 2004: 48 state that applique decorated wares in A fabric (including Hayes forms 24, 35, and 38) may have been produced here in the third century.

(dish), 6 (dish), and 8 (carinated bowl) are among the earliest such forms present in Italy and throughout the Mediterranean. Thus, it can be inferred that these were produced specifically for the purpose of export outside North Africa. Alternatively, forms such as Hayes 181 and 182 are generally found within African contexts, thus it is not as certain that these forms were destined for Mediterranean distribution.<sup>6</sup>

However, once these wares became even more common and the demand for ARS increased further, the workshops in which they were produced spread throughout the rest of what is today modern Tunisia. Among these other workshops, two of the most prominent were Sidi Marzouk Tounsi and Henchir es Srira, which began producing ARS wares in C fabric in the third century C.E. The ARS C forms, generally recognized by a smooth thin slip made of a purer clay,<sup>7</sup> were produced at these sites and primarily consisted of Hayes forms 31 (large dish), 32 (dish), 45 B (large bowl), 48 A and B (plates), 49 (plate), 50 A (large dish), 51 A/B (dish/bowl), 52 B (small bowl), 53 A (bowl), 54 (dish), and 55 (large dish), as well as the mould-made relief decorated wares such as Hayes form 56 (decorated dish), 82 B (large plate, though rare), and 89 A (large plate). These wares were produced at Sidi Marzouk Tounsi between the third and sixth centuries and were also primarily exported.<sup>8</sup>

This is no surprise due to the fact that ARS wares were primarily intended for export and thus finding them on sites in North Africa generally indicates some type of

<sup>&</sup>lt;sup>6</sup> Neuru in Hitchner et al. 1990: 255-259; Hayes 1972: 21-31, 33-35, 45-51, 200-203; Hayes 1980: 490-491, 493.

<sup>&</sup>lt;sup>7</sup> Bonifay et al. 2012: 47; Hayes 1997: 59-60, further indicates that wares in ARS C fabric were produced between c. 220 to 500 C.E.

<sup>&</sup>lt;sup>8</sup> Mackensen 2009: 18-21; Mackensen 2006: 112-113; Bonifay et al. 2012: 47; Mackensen and Schneider 2006: 166-167. Mackensen and Schneider 2002: 131-132 discusses the possibility that Sidi Marzouk Tounsi also produced forms which were only regionally important in the mid fourth to mid fifth centuries. Peacock, Bejaoui, and Ben Lazreg 1990: 70 attest to Sidi Marzouk Tounsi being an important producer of ARS lamps in this period as well.

connection between that site and the production of the individual forms.<sup>9</sup> Furthermore, Henchir el Guellal, located within the area of the Kasserine Survey (KS 031), was known to have produced wares in ARS A/D fabric primarily including Hayes forms 28 (bowl), 31, 32, 44 (small bowl), 45 A, B, and C, 46 (large bowl), 48, and 50 A,<sup>10</sup> many of the same forms which were made at Sidi Marzouk Tounsi. The workshop at KS 031 may have actually been even more important due to the lamp forms which were here, namely those of *Atlante* IV B, *Atlante* VI B, and *Atlante* VIII C, as well as *Atlante* VII A<sup>1</sup> and A<sup>2</sup>, primarily produced between the middle third and middle fourth centuries.<sup>11</sup> The workshops which produced in ARS A/D fabric were noted for producing very large quantities of ARS wares but only some of these were believed to have exported their products throughout the Mediterranean.<sup>12</sup>

A by-product of the growth and popularity of ARS wares was the inevitable development of locally produced variants, which allowed easier access for those in more remote regions to different types of fineware. These local versions developed differently depending upon the region's proximity to previously established ARS production centers.<sup>13</sup> However, in many cases it seems as though local production of finewares

<sup>&</sup>lt;sup>9</sup> Fentress, Fontana, Hitchner, and Perkins 2004: 155, discuss that more ARS is found on sites outside North Africa, therefore, the areas in which ARS is found within North Africa were likely linked, in one way or another, to the production centers.

<sup>&</sup>lt;sup>10</sup> Mackensen 2006: 111-113; Peacock et al. 1990: 74-75; Hitchner 1993a: 78. Bonifay further supports the presence of ARS production at this site stating that, "les analyses géochimiques pratiquées sur le materiel de Henchir-el-Guellal/Djilma, seul atelier reconnu pour cette catégorie" (Bonifay et al. 2012: 46). See Chapter 5 for further discussion. Mackensen and Schneider 2006: 173-174 describe wares produced in A/D fabric as having a very granular texture, a flaky fracture, and a smooth, thick slip which covers both sides of the vessel, thus, easily distinguishable from wares in A fabric.

<sup>&</sup>lt;sup>11</sup> Mackensen 2002. For discussion of the distribution of certain ARS wares in the Mediterranean, Hobson 2012: 214-215. See Chapter 5 for further discussion.

<sup>&</sup>lt;sup>12</sup> Bonifay et. al 2012: 47; Mackensen and Schneider 2002; 2006.

<sup>&</sup>lt;sup>13</sup> Cook et al. discusses the idea that the decentralization of the economic system along with production capabilities in the empire, meant that now peripheral areas, originally only marginally relevant in the economic system, "worked up and finished the raw materials, thus developing special capabilities of their own" (Cook, Adcock, Charlesworth, Baynes 1989: 236). Thus, the areas in which goods were produced

began shortly after the introduction of ARS in the area. In the region of the Kasserine survey, these ARS wares began being locally produced and imitated as early as the second century and grew in popularity in later periods and are thus categorized as Red Slip wares (hereafter RS).

However, the 'local' production of fineware forms did not occur at the same time everywhere. In the region of the Libyan Valleys Survey, Tripolitanian Red Slip wares (hereafter TRS) began being produced in the third century and lasted into at least the sixth, and likely, seventh centuries. These wares are often made of fine-grained clay and are generally an orange or orange-red color with a thin slip all over, and this slip, unlike typical ARS wares, has a slight metallic hint.<sup>14</sup>

Code	Pottery Type
ARS	African Red Slip
RS	Red Slip
TRS	Tripolitanian Red Slip
TS	Terra Sigillata
SB	Sbeitla Red Slip
AM	Amphorae
TA	Transport Amphorae
BT	Black Top
ERC	Early Roman Coarseware
HM	Hand Made
RC	Red Cookware
SC	Small Coarseware

## Table 1: Abbreviations of common pottery forms

<sup>14</sup> Hayes 1972: 304-305; Bonifay et al. 2012: 55.

moved ever closer to the areas in which the goods were consumed or purchased: clearly evident in terms of the production of ARS wares.

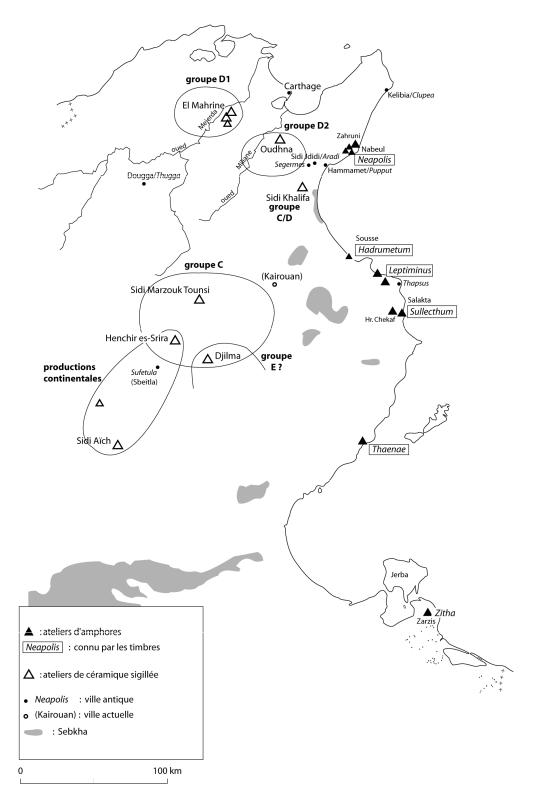


Figure 1: Primary ARS production centers in Tunisia (after Bonifay 2011: 26).

#### Introduction to the Kasserine Survey

The primary objective of the Kasserine Archaeological Survey, conducted between 1982-1989 in central Tunisia, was to reconstruct the patterns of ancient settlement in the Tunisian high steppe, specifically around *Cillium* (modern Kasserine) and *Thelepte* (modern Feriana) prior to, but primarily during, the Roman period. The specific objective was to offer an explanation of the ways in which Roman incorporation of the area may have affected the indigenous population in terms of their settlement and economic patterns.<sup>15</sup> The survey recorded surface remains and collected pottery and other material artifacts (pre-Roman through modern in date). 164 sites were identified throughout the course of the project of which the majority dated to the Roman period, 84 of these sites presented some type of ceramic evidence.<sup>16</sup> There were also 23 pre-Roman and 12 modern sites, which are not discussed in this report.<sup>17</sup>

The ceramic evidence indicates that while not the initial impetus for agriculture in the area, Roman occupation caused an unmistakable rise in settlement density, complexity, and agricultural practice in the first and second centuries C.E. around *Cillium*.<sup>18</sup> There is

<sup>&</sup>lt;sup>15</sup> Mattingly and Hitchner 1995: 192; Hitchner 1988: 12-13; Hitchner 1989; Hitchner 1995: 127.

<sup>&</sup>lt;sup>16</sup> The Roman sites presented in this report cover the range of possible settlement types including a site which encompasses an entire town (KS 031); large villa and manufacturing sites; small farms which either existed to supply the larger production facilities in their immediate area or served as individual family farms; and finally, sites which served utilitarian functions. See Hitchner 1993b: 162-163 for more information.

<sup>&</sup>lt;sup>17</sup> For a discussion of the distribution of sites and terminology which differentiates site types within the survey, Hitchner 1988: 12-13; Stone 2004: 135-136; Wanner 2006: 11-19.

<sup>&</sup>lt;sup>18</sup> It is important to bear in mind that, "although the lands of North Africa were already being exploited...by the Phoenician and Numidian kingdoms before the area was annexed to Rome...it is unmistakable that there was a significant intensification of farming practices on much of the land in central Tunisia...over the course of the first century CE" (Hoyer 2013: 580). Similarly, Fentress discusses the evidence for olive oil production in Carthage prior to the Roman incorporation of the area (Fentress and Docter 2008: 108-113). See also Hitchner 1994: 32, 39; Hitchner 1993a: 74; Hobson 2012: 63; Dossey 2010: 34-41. Furthermore, Cherry 1998: 1-23 and 144-152, discusses the history of Algeria, specifically its economic capabilities and output, prior to the period of Roman incorporation. He argues that the crops which were cultivated likely did not change during the Roman period, only the manner and extent to which they were produced. Similarly, Hitchner argues that land in Kasserine (in southern *Africa Proconsularis* generally), as well as Numidia and all of Tripolitania "was probably not organized on the Italian model of

also evidence of an increase of smaller, more localized settlements particularly between the third and fifth centuries. This, as will be discussed below, appears to coincide with the dramatic decline in the quantity of ARS wares found at each site along with the simultaneous increase in the number of local variant RS. Along with a push towards more local production throughout the Roman period there was also an increase in settlement density evidenced by the presence of olive presses and other fixed structures, especially those which were found in purpose built sites such as KS 225. This indicates a significant anticipated output of olive oil in order to meet the needs of the empire. By the seventh century the absence of ARS along with the sustained presence of some RS forms suggests a decline in the level of interregional connectivity in Tunisia and thus a return to a more localized individualistic society. This may even indicate a return, in large part, to the traditional form of pastoralism that had been present in this area prior to the Roman period.<sup>19</sup>

The current report catalogs and assesses the pottery from the six seasons of fieldwork in the survey and contextualizes this material in terms of what is known about the individual sites and sectors and, where possible, the larger implications of this information. Here it becomes necessary to address the difficulties and decisions that were made in interpreting the pottery evidence in the present report. The nature of survey evidence, in the absence of excavation, is such that there can be no definitive conclusions

centuriated estates, but on an essentially indigenous form of irrigation agriculture" (Hitchner 1995: 141, as well as Hitchner 1989). Therefore, while Roman settlement may not have been the initial impetus for agriculture or olive cultivation in North Africa, it certainly intensified these practices to meet interprovincial needs, and at the same time Roman incorporation did not replace all pre-Roman agricultural practices. For a discussion of harbors in North Africa and their impact on an understanding of the North African economy prior to and during the Roman period, see Stone 2014.

<sup>&</sup>lt;sup>19</sup> Hitchner 1988: 39-40. If settlement patterns around Sufetula provide any indication of the effect of certain political changes on central Tunisia, the move towards more pastoralized communities may have begun in Kasserine as early as the last quarter of the fifth century due to the Vandal conquest and the substantial lessening of centralized Roman authority over the area (Hitchner 1982: 68).

drawn concerning the meaning of the material recovered. However, in an attempt to posit the impact of the pottery assemblage from Kasserine (see Chapter 7), I have assumed that at sites, such as KS 087, where there was no evidence for fineware (ARS or RS), but there a significant quantity of TA and other coarsewares, that this site was likely solely focused on production of various agricultural products. If there had been habitation at any point, one would expect to find architectural remains and some evidence of finewares, as was recovered at other sites which attest to this type of occupation. Although, there is also the possibility that at one-time people may have lived at these sites but when they moved their finewares went with them, thus there is no such evidence attesting to their occupation. This is one of the inherent difficulties in interpreting evidence from archaeological surveys. Therefore, I am not of the opinion that the connections posited in the current report are the only possible explanations for the evidence. Ultimately, however, one interpretation of the material had to be chosen in order to attempt to understand importance of the pottery itself.

After the presentation of the overall pottery catalog in Chapter 2, there are three further concordances presented in Chapter 3. The first presents pottery by form in 5 categories: ARS wares; local RS variants; TRS; lamps of all forms; and finally transport amphorae fragments. Within each category the forms are organized by number primarily based on the forms presented in Hayes 1972 and 1980, many of which were identified by Lucinda Neuru in the original field notes.<sup>20</sup> The second concordance presents the finewares by site. Sites are presented in sequential order and are separated into two

<sup>&</sup>lt;sup>20</sup> The pottery information, including pottery assessments and material concerning the dating of sherds and sites, was originally recorded in a series of field notebooks primarily kept by Lucinda Neuru. This is the information with which I have worked in establishing the present catalogs and chronologies. See below for a more detailed discussion.

further categories, those with ARS and those with RS. This will allow a better understanding of the function of each by examining the relative occurrence of local as opposed to imported ceramic. The third concordance includes the coarsewares, which will also be included in the discussion of each site. After an examination of the pottery information, a comparison will be made between the pottery assemblage at Kasserine and the assemblages found in other North African surveys, specifically the Segermes and Libyan Valleys Surveys.

### **Chapter 2: Pottery from the Survey**

Before a discussion of the particular ceramic forms can be undertaken it is first necessary to explain the general characteristics and accepted chronologies of the pottery that was recovered, as well as present the overall ceramic catalog.

# Pottery Typology:

There were many different types of pottery recovered throughout the survey, including, of course, finewares, most notably ARS, RS, a small amount of TRS, and the *terra sigillata* mentioned previously, evidence of which was only found at two sites but constitutes the earliest sherds in the survey. There was also a large variety of coarsewares recovered including amphorae, most of which were transport amphorae, black top and red cookware, as well as small coarsewares. The ARS sherds recovered generally indicate some type of connection to northern Tunisia and particularly the coast, as some of these forms came from workshops near Carthage. Although there are many forms, especially after the third century, that were produced in the workshops at Sidi Marzouk Tounsi in central Tunisia, very near the region of the survey, as well as Sidi Aïch in southern Tunisia. The ARS wares date from the middle first to the late seventh century, although the quantity in Kasserine declines dramatically after the third.

The much more common RS wares are rather similar to their ARS counterparts and are dated as such. These wares were locally produced and did not travel far from the local workshops. This local imitation of ARS began in the second century and the presence of these wares became more prominent in the Kasserine region later in the Roman period. The chief difference between RS and ARS is the quality of the fabric used, otherwise, they are rather similar.<sup>21</sup> A very limited quantity of TRS was found in Kasserine and may indicate that there was less connection between central Tunisia and Libya. Six sites in the survey also presented evidence for Sbeitla red slip wares, which were also produced very near Kasserine, likely dating from the fifth to seventh centuries.

The coarsewares comprise many different forms including basin fragments which were a frequent occurrence in the survey, some of which resemble forms found in Carthage. These forms likely date to the time after the Byzantine re-conquest of the area, however, a small number of basin sherds date as early as the fourth century. Black top cookwares are prominent throughout the Kasserine region and were almost certainly an important regionally produced ware. These forms date primarily from the third to fifth centuries. Dolia fragments were also common at many sites, though not often in large quantities. They would generally indicate a need to store that which was produced in that area. Particularly when there were no accompanying transport amphorae (hereafter TA) sherds found at the same site, this likely indicates that that area did not focus on exporting their products, namely olive oil, but rather stored them for use locally. The dating for these sherds is ultimately uncertain, though some of the individual forms are dateable to the fourth to fifth centuries. The TA and amphorae fragments generally presented fourth to sixth century dates, with some earlier forms from the third.

Early Roman coarsewares (ERC), representing another variant of the typical cookwares in this region, unsurprisingly, date to the early period of Roman occupation,

<sup>&</sup>lt;sup>21</sup> Hayes 1972: 300-309 indicates that red slip wares are "similar in quality and appearance to the main series [ARS]" but due to a number of factors these wares did not become as popular outside their local areas of distribution. Neuru in Hitchner et al. 1990: 256, states that the finewares found at Kasserine are a local variant of the standard ARS forms of northern Tunisia, typical of this particular region. For a classification of ARS types and production centers in Tunisia: Bonifay, Capelli, Drine, and Ghalia 2010; Bonifay et al. 2012; Baklouti et al. 2015; Hayes 1997; Mackensen 2009.

likely the first to third centuries. Like the ERC, flanged bowls (FB) were found at a small number of sites and are generally later, primarily the fourth to seventh centuries. The handmade wares found in the survey are also interesting as the chronology ranges from the pre-Roman to the Medieval and Modern periods. However, the majority of the handmade pottery at Kasserine, and those listed in the catalogs, did date to the Roman period, a more precise chronology is unfortunately not available. Much like the examples of dolia, the mortaria sherds are not precisely dateable, although some date to the fourth and fifth centuries. Red cookware, dates to the third through fifth centuries, and along with the black top and small coarsewares, account for the majority of the ceramic found at a number of sites which attests to occupation between the third and fourth or fifth centuries, as will be discussed further below.

Due to the unreliable chronologies presented for many of the coarseware types, the fineware has primarily been used to determine the dating for sites and sectors while the presence of coarsewares was used in an attempt to understand the economic output of that area. However, where there is no fineware evidence, or where this evidence is not clearly dateable, the coarseware has been used to provide a tentative chronology.

# Overall Ceramic Catalog

Ware	Vessel Type	Date Range	# of sherds	# of sites
ARS:				
Form $1/5^{22}$	Dish	Flavian (earlier?)–L* 2 <sup>nd</sup>	2	2
Form 3	Dish	c. $80 \text{ CE} - \text{M} 2^{\text{nd}}$	46	10
Form 4a	Dish	$L 1^{st} - E 2^{nd}$	1	1
Form 5 (inc. vs)	Dish	$L 1^{st} - M 2^{nd}$	24	11
Form 6 (inc. v)	Dish	$L 1^{st} - L 2^{nd}$	3	3
Form 8	Carinated Bowl	$2^{nd}$ cent.	3	2
Form 9	Bowl	$M 2^{nd} -L 2^{nd}$	1	1
Form 22	Lid	$E 2^{nd} - M 2^{nd}$	6	3
Form 23	Casserole	$E 2^{nd} - E 3^{rd}$	1	1
Form 23/181	Dish/Casserole	$E/M 2^{nd} - E 3^{rd}$	1	1
Form 26	Flat-based dish	2nd half 2 <sup>nd</sup>	2	2
Form 26- black top	Flat-based dish	2nd half 2 <sup>nd</sup>	1	1
Form 26/62	Flat-based dish	M $4^{th}$ – E $5^{th}$	2	1
Form 26/181	Flat-based dish	$M 2^{nd} - E/M 3^{rd}$	12	6
Form 27 (coastal)	Dish	c. 160 – 220 CE	5	5
Form 35	Small Bowl	1st half 3 <sup>rd</sup>	2	2
Form 45	Large Bowl	$M 3^{rd} - M 4^{th}$	11	6
Form 50	Dish	$M 3^{rd} - L 4^{th}$	4	3
Form 50/51	Dish	4 <sup>th</sup>	2	2
Form 51	Dish	$4^{th}$	9	5
Form 59	Flat-based dish	$E 4^{th} - E 5^{th}$	3	3
Form 67/69v	Large Bowl/Dish	M $4^{th}$ – L $5^{th}$	1	1
Form 77	Large Plate	$5^{\text{th}}$ c.?	1	1
Form 78v	Small Bowl	$5^{\text{th}}$ c.?	1	1
Form 87v	Dish	M $5^{th} - E 6^{th}$	1	1
Form 88/89	Large Dish/Plate	$E 5^{th} - E 6^{th}$	1	1
Form 88/181	Dish	$2^{nd}$ half $2^{nd} - E 6^{th}$	1	1
Form 91	Flanged Bowl	$M/L \ 5^{th} - M \ 7^{th}$	1	1
Form 91c	Flanged Bowl	c. 530 – 600+	2	2
Form 181	Dish	$M 2^{nd} - E 3^{rd}$	2	2

<sup>&</sup>lt;sup>22</sup> The forms here presented are Hayes ARS forms unless otherwise noted.

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Form 182v	Lid	M $2^{nd}$ – E $3^{rd}$	1	1
Form 185	Lid	M $2^{nd}$ – E $3^{rd}$	4	3
Coastal	Various	$3^{rd}$ c.	76	16
Form H	Uncertain	Uncertain	1	1
Lion Mortarium	Uncertain	Uncertain	1	1
Northern	Various	$1^{st} - 2^{nd}$	5	3
Thin Wall	Uncertain	Firmly 1 <sup>st</sup>	1	1
Miscellaneous	Various	Various	213	19
RS:				
Form 2/3	Bowl	Flavian (earlier?) – M 2 <sup>nd</sup>	1	1
Form 3	Dish	60 – 150 CE	1	1
Form 6	Dish	End $1^{st}$ – End $2^{nd}$	1	1
Form 10	Carinated Bowl	Firmly 2 <sup>nd</sup>	1	1
Form 12/102v	Small Bowl	$2^{nd} - L 6^{th}/E 7^{th}$	2	2
Form 21	Casserole	$E - M 2^{nd}$	2	2
Form 23 (inc. A)	Casserole	$E 2^{nd} - E 3^{rd}$	5	3
Form 23/26v	Flat-based dish	$E/M 2^{nd} - E 3^{rd}$	1	1
Form 26 (inc. L, v)	Flat-based dish	2 <sup>nd</sup> half 2 <sup>nd</sup>	14	4
Form 26 - late	Flat-based dish	$2^{nd}$ half $2^{nd}$	32	8
Form 26/62	Flat-based dish	2 <sup>nd</sup> half 2 <sup>nd</sup> – 350/425 CE	3	3
Form 26/181	Flat-based dish	$2^{nd}$ half $2^{nd} - 1^{st}$ half $3^{rd}$	173	22
Form 27	Dish	c. 160 – 220 CE	7	7
Form 32/58	Flat-based dish	$L 3^{rd} - E 4^{th}$	1	1
Form 35	Small Bowl	1 <sup>st</sup> half 3 <sup>rd</sup>	4	2
Form 45	Large Bowl	$230/240 - M 4^{th}$	18	10
Form 50	Large Dish	230 – 400+ CE	1	1
Form 51	Dish	$E - L 4^{th}$	1	1
Form 59	Flat-based dish	320 – 420 CE	1	1
Form 61b	Flat-based dish	400 – 450 CE	1	1
Form 62	Flat-based dish	350 – 425 CE	6	5
Form 62/63	Flat-based dish	$L 4^{th} - c. 425 CE$	1	1
Form 67 (inc. v)	Large Bowl	c. 360 – 470 CE	13	5
Form 68	Large Bowl	c. 370 – 425 CE	17	9
Form 68/69	Large Bowl/Dish	c. 370 – 450+ CE	7	4
Form 69	Large Dish	c. 425 – 450 CE	2	2
Form 71v	Small Bowl	c. $375 - E 5^{th}$	1	1

Form 77	Large Plate	5 <sup>th</sup> c.?	8	4
Form 80	Shallow Bowl	$M - L 5^{th}$	3	3
Form 80/81v	(Shallow) Bowl	M – L 5th	2	2
Form 81	Bowl	2 <sup>nd</sup> half 5 <sup>th</sup>	1	1
Form 85v	Small Bowl	$M-L 5^{th}$	1	1
Form 87	Dish	$2^{nd}$ half $5^{th} - E 6^{th}$	21	6
Form 89 (inc. vs)	Large Plate	$E 5^{th} - E 6^{th}$	4	3
Form 90	Large Dish	5 <sup>th</sup> c.?	1	1
Form 91 (inc. v)	Flanged Bowl	M/L 5 <sup>th</sup> – c. 650 CE	17	12
Form 91a	Flanged Bowl	$M-L 5^{th}$	1	1
Form 91b	Flanged Bowl	450 – 530 CE	7	4
Form 91b/c	Flanged Bowl	E 6 <sup>th</sup>	2	2
Form 91c	Flanged Bowl	c. 530 – 600+ CE	4	4
Form 91c/d	Flanged Bowl	c. 530 – 650 CE	2	1
Form 91d	Flanged Bowl	c. 600 – 650 CE	1	1
Form 92	Flanged Bowl	M 5 <sup>th</sup>	3	3
Form 98	Shallow Bowl	E 6 <sup>th</sup>	1	1
Form 99 (inc. v)	Bowl	$E 6^{th} - E 7^{th}$ (c. 510-620)	5	2
Form 99c	Bowl	c. 560/580 – 620 CE	1	1
Form 103	Large Dish	c. $500 - M/L 6^{th}$	1	1
Form 105	Large Plate	c. 580/600 – 660+ CE	3	2
Form 108 <sup>23</sup>	Small Bowl	E 7 <sup>th</sup>	2	2
Form 110	Deep Bowl	$M \ 6^{th} - M \ 7^{th}$	1	1
Form 125v	Cruet	2 <sup>nd</sup> c.?	1	1
Form 181	Dish	$2^{nd}$ half $2^{nd} - 1^{st}$ half $3^{rd}$	18	8
Form 181/26	Dish	$2^{nd}$ half $2^{nd} - 1^{st}$ half $3^{rd}$	40	18
Form 182 (inc. v)	Lid	$2^{nd}$ half $2^{nd} - 1^{st}$ half $3^{rd}$	13	10
Form 182 - late	Lid	1st half 3rd	1	1
Form 183v	Deep Casserole	$2^{nd} - 3^{rd}$ c.?	1	1
Form 183/184	Casserole	$2^{nd} - 3^{rd}$ c.?	1	1
Form 184v	Shallow Casserole	$2^{nd} - 1^{st}$ half $3^{rd}$	1	1
Form 185	Casserole Lid	Uncertain	2	2
Coastal	Various	$1^{st} - 2^{nd}$	1	1
Lion Mortarium	Uncertain	Uncertain	4	2

<sup>&</sup>lt;sup>23</sup> See Figure 2.7 for illustration.

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Form A	Uncertain	c. 600 – 650 CE	118	18
Form B <sup>24</sup>	Uncertain	$2^{nd} - 3^{rd}$	7	5
Form C <sup>25</sup>	Uncertain	$M-L 5^{th}$	29	12
Form D	Uncertain	c. 600 – 650 CE	42	10
Form E	Uncertain	c. 600 – 650 CE	1	1
Form F	Uncertain	Uncertain	16	6
Form G	Uncertain	Uncertain	5	4
Form H	Uncertain	Uncertain	15	11
Form I	Uncertain	Uncertain	3	3
Form J	Uncertain	$1^{st}$ c.?	21	6
Form K <sup>26</sup>	Uncertain	$2^{nd} - 3^{rd}$	4	4
Form L	Uncertain	Uncertain	5	2
Form M	Uncertain	Uncertain	15	8
Form N	Uncertain	Uncertain	6	3
Form O	Uncertain	c. $280/300 - L 4^{th}$	5	3
Form Q	Uncertain	Uncertain	1	1
Form R	Uncertain	$2^{nd} - 3^{rd}$	1	1
Form S	Uncertain	$2^{nd} - 3^{rd}$ ?	64	22
Form T	Uncertain	Uncertain	27	10
Form U	Uncertain	Uncertain	1	1
Form V	Uncertain	Uncertain	1	1
Form X	Uncertain	$2^{nd} - 3^{rd}$ or L $6^{th} - E 7^{th}$	8	6
Form Y	Uncertain	Uncertain	1	1
Atlante 66.16	Uncertain	Uncertain	3	3
Atlante 66.22	Uncertain	Uncertain	1	1
Atlante 66.9	Uncertain	Uncertain	1	1
Atlante 67.5	Uncertain	Uncertain	3	3
Atlante 67.7/8	Uncertain	Uncertain	1	1
Stern 28	Uncertain	Uncertain	1	1
Miscellaneous	Various	4th – 5th c.? <sup>27</sup>	1,255	28
Coarseware:				
Basin	Various	4th c. +	250	52
Black Top	Cookware	3rd – 5th	1,023	63

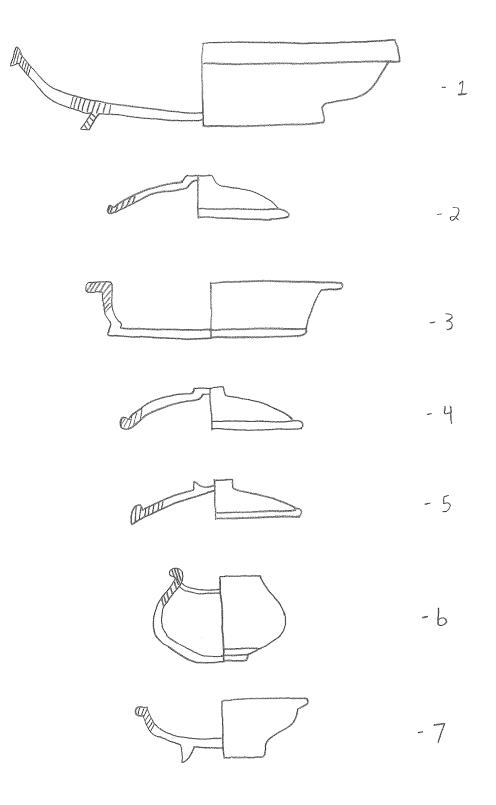
<sup>&</sup>lt;sup>24</sup> Refer to Figure 2.2 - 2.3 for illustrations.
<sup>25</sup> See Figure 2.1.
<sup>26</sup> See Figure 2.4 - 2.5.
<sup>27</sup> A fourth to fifth century date was suggested for these forms in the field notes.

Dolium	Storage Vessel	4th $- 5$ th c.?	191	29
ERC	Cookware	1st – 3rd	15	10
Flanged Bowl	Bowl	4th – 7th	29	18
Handmade	Various	Uncertain	206	33
Miscellaneous	Various	M 6th – L 7th (earlier?)	1,015	29
Mortarium	Utilitarian	4th $- 5$ th c.?	47	27
Red Cookware	Cookware	3rd – 5th	356	59
Small Coarseware	<b>Cooking Pots</b>	M 6th – L 7th (earlier?)	3,852	65
Storage Vessels	Storage Vessel	Uncertain	178	10
Pre-Roman	Jars	2nd c. BC?	2	2

\*(E = early, M = middle, L = late)

#### Nature of the Ceramic Evidence

These are the date ranges for each individual form that were used in determining the chronologies in the following discussions. Some of these forms do not provide firm chronological information or confirmed quantities of each type. This is due in part to the manner in which the survey notes were kept which evolved from one year to the next. Thus, with different styles of recording information it is not surprising that in some cases quantities of pottery were not recorded. However, the pottery drawings included in the field notes were helpful in identifying otherwise unknown forms in a number of cases. In some instances, it was not always clear whether the forms listed as ARS were actually intended to be RS as they matched with certain RS forms that had been recorded elsewhere. Ultimately, the various problems associated with quantifying and dating certain forms is due to the fact that during the survey there was never a season devoted solely to studying the recovered materials, namely the ceramics. Therefore, the pottery information, upon which this report has been built, is primarily based on the original notes and identifications that were done in the field journals.



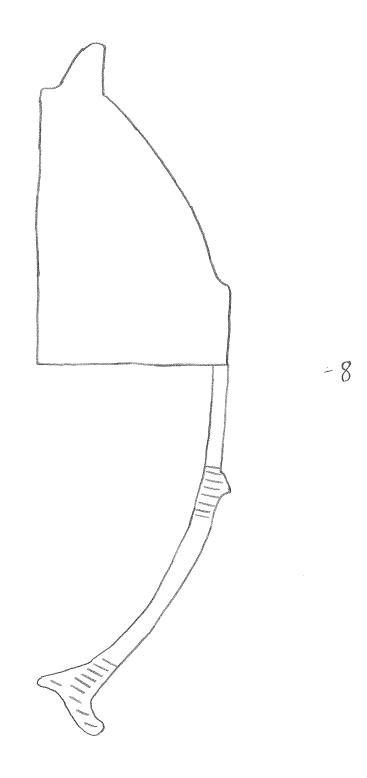


Figure 2: Select pottery sherds from the survey.

Figure 2.1- RS Form C, drawn as a variation of Hayes form 103a; 2.2- RS Form B, drawn as variation of Hayes 185; 2.3- RS Form B in another instance, drawn as Hayes 191; 2.4- RS Form K, drawn also as Hayes 185; 2.5- RS Forms K, R, and X, all of which are rather similar, as Hayes 185 variant; 2.6- One of only 2 pre-Roman sherds from the survey, that of a pale jar, possibly similar to the much later Hayes 121; 2.7- Hayes Form 108; 2.8- 2 Sbeitla Red Slip sherds, identified by Addyman 1962 as similar to Hayes 46.

One of the most difficult challenges was identifying and dating the RS lettered forms, a system developed by Lucinda Neuru herself. As previously stated, the RS numbered forms are much like their ARS equivalents in terms of dating and style, though the fabric is often different. However, the RS lettered forms have no direct Hayes equivalents. Therefore, I examined the notes to find drawings of any potential lettered forms. However, two problems arose: first, not all of the RS lettered forms were included with a drawing, which did not allow me to determine an ARS equivalent and thus there is no firm dating evidence. Secondly, the lettered forms that are equated to an ARS type in the following catalogs are preliminary as the drawings on which these determinations were made were small and rather similar one to another. Therefore, I have not allowed the chronology of each site to be determined by these sherds, rather, these forms only help support, but do not alter, the chronology indicated by the other forms.

## Quantities of Pottery:

In sum, the survey collected 11,741 diagnostic ceramic fragments, 2,885 of which constituted fineware forms (including ARS, RS, a small quantity of TRS, as well as a small quantity of lamp fragments). 72 of the sites had some type of fineware pottery; ARS, RS, or most commonly both, while 81 sites contained coarsewares. Three other sites, which did not present any amount of fineware, presented evidence of amphorae fragments, many of which were likely used for transport. This equates to an average of

roughly 40 fineware sherds per site.<sup>28</sup> A large portion of the total fineware reported is RS and is thus less reliably dateable, however, these sherds can still aid the development of a chronology based on ARS equivalents. 39 of the 84 sites had a total (ARS+RS) less than or equal to 8 sherds, thus the overall average per site is low as a significant number of sites contained more than the average 40 sherds.<sup>29</sup> There is also a slight abnormality in the collective numbers due to the fact that the field notes often do not list exact quantities of each type.<sup>30</sup> However, in attempting to reconcile this problem, I have included estimates based on the number of units in which pieces were found at each site. Therefore, a double asterisk (\*\*) symbol indicates that an uncertain quantity of sherds was found there, however, for the purposes of producing an overall count it is assumed to be one unless otherwise noted.

The presence of transport amphorae and coarseware fragments at each site were both initially determined by the information presented in the Gazetteer and supported by the field notes. The total quantity of amphorae was not included in the overall total of finewares previously discussed. However, as with the finewares, the quantity of amphorae at each site was not always evident and in these cases the total was assumed to be one, thus resulting in a total of 1,605 amphorae fragments. The amphorae found at Kasserine can generally be divided into two categories. The first are those fragments that are similar to known African transport amphorae. Secondly, there are the unknown types

 $<sup>^{28}</sup>$  This is an average of the total fineware divided by the 72 sites at which finewares were recovered. The average fineware in the survey as a whole (out of the 84 total sites of Roman date) is roughly 34 sherds per site. <sup>29</sup> Refer to Table 2.

<sup>&</sup>lt;sup>30</sup> There is also a problem in the field notes in that the number, most notably of RS miscellaneous forms, is sequential, increasing one sherd for each successive site at which it was found. The reason for this is uncertain. Therefore, the true quantities of these forms could be significantly lower, however, these particular instances are still helpful in determining that RS was present at these sites in general.

which, structurally, could have been used either for transport or local storage.<sup>31</sup> These amphorae are all assumed to be of a central Tunisian origin, however, some of them may be closely related to Tripolitanian amphorae forms as well.<sup>32</sup>

The field notes much more clearly indicated a total of 7,251 coarseware sherds. The evidence gathered from these pieces strongly indicates that they were also primarily locally produced. This information, the presence of locally produced amphorae, as well as the overwhelming amount of RS as opposed to ARS throughout the survey, would seem to suggest that Kasserine was an area heavily reliant on local production, and not trade with northern and coastal Tunisia, as their main source of pottery. This emphasis on local manufacturing becomes even more pronounced in the later periods, as RS comes to dominate the ceramic assemblage at many sites.

## Method of Field Collection:

Each of the five individual sectors were divided into one square km areas based on the Lambert grid system indicated on the *Cartes Topographique de Tunisie* maps of Kasserine.<sup>33</sup> Initially, the primary focus was to investigate the sites which had originally been identified around *Cillium* and Thelepte by the *Brigades Topographique* in the early twentieth century. Ultimately, due to the discovery of a large number of previously unrecorded sites as well as the increased numbers of sites found from one season to the

<sup>&</sup>lt;sup>31</sup> For an illustration of amphorae fragments see Figure 5 below.

<sup>&</sup>lt;sup>32</sup> Neuru, Appendix 2 in Hitchner et al. 1990: 257. In general, "the development of the production of Tunisian amphorae reflects a stimulation of African agriculture through the requirements of the Imperial administration" (Keay 1984: 408). Therefore, it again becomes evident that the incorporation of *Africa proconsularis* into the Roman empire encouraged the further development of previously underexploited technologies, such as the practice of agriculture and oil production, as well as ceramic production. This idea will be discussed further in Chapter 7.

<sup>&</sup>lt;sup>33</sup> Also, Commission de l'Afrique du Nord 1900-1901; 1934-1935.

next, the survey expanded accordingly to include them. The most important sites were examined in greater detail.<sup>34</sup>

The sectors, once divided, were then walked in ten-meter-wide sections by three teams of two or three people each. Immediate recording was done when a site was identified. The recording and survey methodology as well as the circumstances of collection changed depending upon the sector as each had very different terrain. In Sector 3 for instance, the terrain was highly uneven. In this case a team of three people walked ahead and identified potentially important areas. The sites that were identified were revisited and recorded by the two additional teams. The recording methodology also evolved from one season to the next, as more information was gathered and thus a clearer picture of the nature of the sites, sectors, terrain, and settlement history developed. This allowed for the establishment of more site specific methodologies.

Similarly, the collection of pottery evolved to reflect the increasingly complex archaeological landscape. Sites with evident architectural remains were divided into individual units (in some cases this meant individual rooms). In these instances, all surface sherds were collected. At larger sites, such as KS 223 and 225, intensive collection of sherds was conducted in randomly selected areas.<sup>35</sup> At times, the method of field collection also varied within the same site. For instance, in Sector 1 ceramic sampling was carried out in the fields associated with particular sites through the complete collection of any sherds within a 2 m radius. Unfortunately, not all fineware types are identified as to the room or unit in which they were found as not all sites were

<sup>&</sup>lt;sup>34</sup> Personal communication with R. Bruce Hitchner; Mattingly and Hitchner 1995: 192

<sup>&</sup>lt;sup>35</sup> See Hitchner 1988: 10-11 for more information in this regard.

large enough to have evidence for multiple rooms. However, where it is known, this information is discussed.

### Importance of Individual Forms:

As mentioned previously, the pottery workshop at Sidi Marzouk Tounsi was located near the site of the present survey. Therefore, the presence of ARS forms 45 B (1 sherd), 50 A (4 sherds), 51 (11 sherds), and 89 (1 sherd), as well as local RS equivalent forms 32 (1 sherd), 45 B (1 sherd), 50 A (1 sherd), 51 (1 sherd), and 89 (3 sherds) at Kasserine is important. <sup>36</sup> These are from forms that were likely produced at Sidi Marzouk Tounsi and thus may suggest an important connection between the two areas. Some of these forms, particularly forms 32, 45 B, and 50 A, were also produced at Henchir el Guellal (KS 031) within the survey area, further indicating a possible connection. The ARS E wares found in the survey, particularly 17 sherds of Hayes form 68, are important to address as well. These forms are well attested in Kasserine and Tripolitania, however, it is believed that they were most likely intended for export.<sup>37</sup> Although the ARS wares in E fabric are some of the least well understood, there is reason to believe that they were produced within the region of Byzacena, not far from Kasserine.

Fundamentally, this information indicates that these sites were active in this period (third-sixth c.). However, while ultimately unconfirmed, the presence of these specific

<sup>&</sup>lt;sup>36</sup> Bonifay states that, "La classification générale des sigillées africaines…correspond aux productions classiques plus ou moins largement exportées en Méditerranée. Cependant, ces catégories ne permettent pas d'épuiser la diversité des productions de sigillée africaine sur le terrain proprement africain" (Bonifay et al. 2012: 53). Therefore, local variants must also be considered within the discussion of the production centers, as it may be that the areas nearest these centers would have evidence of local imitations of the wares produced in that workshop.

<sup>&</sup>lt;sup>37</sup> Bonifay 2013: 545. For information concerning the export of ARS C/E and ARS E wares, Bonifay et al. 2012: 52. Fentress et al. 2004: 156-157 explains that ARS E wares were primarily produced in the fourth and fifth centuries and that due to what is termed 'import substitution' they replaced the other ARS forms in these areas and thus became the new local variant wares.

forms may also suggest that some sites around Kasserine were affiliated with the production of ARS C and ARS E wares in some way for a period of time.<sup>38</sup> If this is the case, then the evidence at Kasserine of local imitations of these wares from the nearby Sidi Marzouk Tounsi is not surprising, as variations could have easily been made for local use. Especially since ARS wares were generally made in many workshops within central Tunisia and some ARS wares may have even been made for local consumption.<sup>39</sup> These forms indicate that the workshop at KS 031 was in use at least in the third, fourth, and fifth centuries. Therefore, it becomes even clearer that certain ceramic forms may have nominally been ARS wares, however, depending upon where they were produced they may have accounted for a large portion of the 'local' wares in a given area.

# General Chronology:

While the pottery assemblage dates from the middle first to the middle seventh century, the majority of sites only have a small amount of the earliest finewares. The bulk of the pottery in each sector dates from the middle third to middle seventh centuries. Furthermore, the fineware evidence, most notably in Sectors 1 and 5, suggests a disruption of some kind between the third and fourth/fifth centuries. This aligns with the distribution of pottery in the rest of the survey area, in which the amount of ARS found at each site dramatically declines in the fourth century from the amounts present in the first three centuries C.E., and this ARS largely fades out of use by the seventh at Kasserine.

<sup>&</sup>lt;sup>38</sup> Bonifay et al. 2012: 52. Fentress et al. 2004: 155 discusses the idea that ARS may have been intended primarily for export, as more of it appears on sites outside North Africa. Thus, the North African sites which have more evidence of ARS were likely closer to production centers, and, in some cases, may even have had a role in the production process.

<sup>&</sup>lt;sup>39</sup> Bonifay et al. 2012; Bonifay 2013: 545; Baklouti et al. 2015: 27.

At the same time, the presence of RS at each site increases in the fifth century and continues to be present in large numbers into the seventh.<sup>40</sup> This apparent disruption is due to the lack of precisely dateable finewares which bridge the gap between the firmly determined periods of occupation in many areas.<sup>41</sup> Although, the coarsewares at many of these same sites generally do present forms, particularly those of red cookware and black top ware, which attest to occupation in this interim period (third – fifth centuries). However, since at many sites this is the only firm evidence which corroborates use in this period, it is clear that there was some type of disruption in the routine functioning of these areas. If everything had continued as normal in the transition from the third to fourth centuries then one would expect to find a comparable amount of finewares dating to this period as is present at other times, evidence of which is lacking.<sup>42</sup>

<sup>&</sup>lt;sup>40</sup> Refer to figures 3 and 4 below. One ceramic sherd was discovered at each of two sites, KS 012 and KS 087, both of which date to the pre-Roman period, potentially the second century B.C. These pieces are interesting, as they were the only ones found on these Roman sites which predated the Roman period. This seems to suggest that there may have been some amount of pre-Roman settlement even in the areas which would later become typically Roman, due to the fact that pottery is present in general. However, the evidence for this is minimal and seems in large part to have been lost.

<sup>&</sup>lt;sup>41</sup> The firm periods of occupation alluded to here refers to the tendency of the fineware evidence at many sites to present a first to middle third, and middle fourth/fifth to seventh century date. The problem is that at many sites there is no firm ARS/RS information which closes this chronological gap.

<sup>&</sup>lt;sup>42</sup> Hawthorne 1996 suggests that the size of the ceramic vessels may, in some respects, determine the amount of sherds recovered, as a switch to more communal eating habits would mean larger ceramics and thus less sherds. However, Fentress et al. 2004: 149-150 argues that larger vessels in themselves, would create more sherds. While the points raised by Hawthorne are important to consider, the current report operates in agreement with the position presented by Fentress et al.

Wanner 2006: 187 explains the number of occupied sites at Kasserine in each period. Particularly interesting is the list of sites between the third and fifth centuries, which is extremely consistent presenting 45 sites in the third, 47 in the fourth, and 46 in the fifth century. This information corroborates that presented by the ceramic evidence, however, it does not attest to the *type* of occupation at these sites in this period. Therefore, the proposed disruption in 'typical' settlement patterns is still likely, as this simply proves that there was some form of occupation in these areas from the third to fifth centuries.

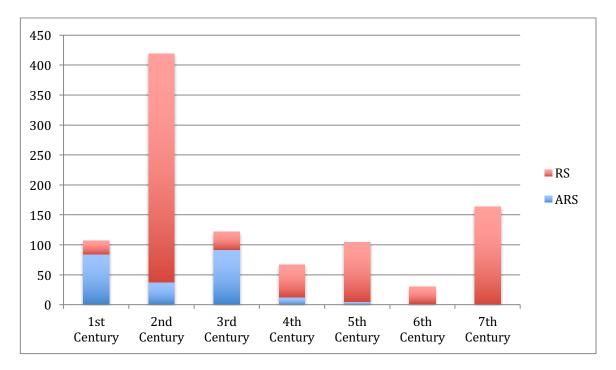


Figure 3: Distribution of ARS and RS in the periods in which their production began.

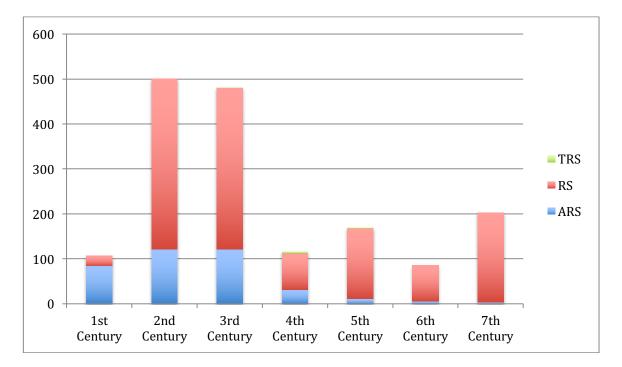


Figure 4: Distribution of ARS and RS sherds in each period in which they may have been used (thus, accounting for their entire date range).

Site	ARS	RS	CW	KS 072	3	1	31+
KS 001	0	5+	2+	KS 073	0	0	2+
KS 002	0	3+	0	KS 074	1+	1+	19+
KS 003	0	0	1+	KS 075	4	2	4+
KS 004	0	169+	569+	KS 077	0	9	5+
KS 005	0	1+	2+	KS 080	0	7+	24+
KS 006	0	1+	1+	KS 081	2	19+	181+
KS 007	0	1+	2+	KS 082	20	15+	82+
KS 010	57	125	568	KS 083	0	2+	33+
KS 012	51	0	217	KS 084	0	1+	11+
KS 014	20	36+	753+	KS 085	0	2+	125+
KS 015	0	27	83	KS 087	0	0	837
KS 020	3	23+	35+	KS 202	2+	13+	148+
KS 021	4+	23+	24+	KS 208	1+	51+	179+
KS 022	8+	35+	48+	KS 209	0	0	20+
KS 023	7	16+	23+	KS 210	0	0	10+
KS 024	0	16+	17+	KS 211	5	50+	64+
KS 025	1	24+	31+	KS 212	0	3	1+
KS 026	1	2+	3+	KS 213	7+	40+	57+
KS 027	18+	31+	210+	KS 214	17+	68+	317+
KS 028	2	0	10+	KS 215	7+	36+	31+
KS 029	0	6+	6+	KS 216	2	52+	3+
KS 030	0	8+	11+	KS 218	2	3+	64+
KS 031	0	17+	775+	KS 219	12+	37+	6+
KS 040	5	2	74+	KS 220	5	40+	45+
KS 041	6	28	47+	KS 221	12	38	65
KS 042	3	3	7+	KS 222	3	39	199+
KS 043	11	4	59+	KS 223	10+	118+	207+
KS 045	1	2	2+	KS 224	6+	47	24+
KS 046	0	7	29+	KS 225	15+	195+	403+
KS 047	6	19	78+	KS 226	1+	0	54+
KS 051	0	1+	1+	KS 228	0	1+	47+
KS 052	0	0	6+	KS 231	0	79+	36+
KS 060	1+	1+	128+	KS 233	16	48+	6+
KS 062	0	0	11+	KS 234	13	68+	4+
KS 068	0	0	7+	KS 240	0	1	3+
KS 069	0	0	1+	KS 241	20+	75+	20+
KS 071	0	0	4+	KS 242	22	130+	0

# Table 2: Distribution of ARS, RS, and Coarseware at each site

KS 243	11	124 +	6+	KS 251	13+	59	0
KS 245	17	56+	3+	KS 252	12	71+	6+
KS 246	0	0	1+	KS 264	11	80+	6+
KS 247	11	0	5+	KS 267	11	55+	3+
KS 249	0	0	2+				

### **Chapter 3: Concordances**

#### Fine Wares - Primary Concordance

African Red Slip Ware	e: <sup>43</sup>	ARS Form 5vs	
		• KS 072	1
ARS Form 1/5		• Total:	1
• KS 022	1		
• KS 082	1	ARS Form 6	
• Total:	2	• KS 213	**
		• KS 243	1
ARS Form 3		• Total:	2+
• KS 214	1		
• KS 215	2	ARS Form 6v	
• KS 219	3	• KS 027	1
• KS 221	4	• Total:	1
• KS 224	5		
• KS 234	6	ARS Form 8	
• KS 241	**	• KS 022	1
• KS 242	7	• KS 214	2
• KS 245	8	• Total:	3
• KS 267	9		
• Total:	46+	ARS Form 9	
		• KS 214	1
ARS Form 4a		• Total:	1
• KS 042	1	ADC E	
• Total:	1	ARS Form 22	1
		• KS 214	1
ARS Form 5		• KS 220	2
• KS 021	1	• KS 222	3
• KS 022	2	• Total:	6
• KS 211	3	ADS Forme 22	
• KS 214	4	ARS Form 23	**
• KS 218	1	• KS 214	
• KS 219	**	• Total:	1+
• KS 223	5	<b>ARS Form 23/181</b>	
• KS 233	2	• KS 214	1
• KS 241	**	• Total:	1 1
• KS 242	3	- Iotai:	1
• Total:	23+	ARS Form 26	
		• KS 219	1

<sup>45</sup> Double asterisk (\*\*) indicates that the number of sherds of ARS, RS, or TRS at these sites was inconclusive. However, for the purpose of obtaining a total sherd count, the numbers have been assumed to be 1 unless otherwise noted.

• Total: 1

ARS Form 26- black to	ор	• KS 027	1
• KS 218	1	• Total:	1
• Total:	1		
		ARS Form 50	
ARS Form 26/62		• KS 040	1
• KS 023	2	• KS 225	**
• Total:	2	• KS 243	2
ARS Form 26/181		• Total:	4+
• KS 202	**	ARS Form 50/51	
• KS 202	**	• KS 241	**
• KS 221	1	• KS 241 • KS 242	1
• KS 233	2	• K5 242 • Total:	1 2+
• KS 241	3	• Iotal:	<u>7</u> 7
• KS 242	4	ARS Form 51	
• Total:	12+	• KS 020	1
i otali	12.	• KS 022	1
ARS Form 27		• KS 041	1
• KS 021	1	• KS 042	1
• KS 214	**	• KS 213	5
• KS 241	**	• Total:	9
• KS 252	1		
Total:	4+	ARS Form 59	
		• KS 211	1
ARS Form 27- coastal		• Total:	1
• KS 025	1		
• Total:	1	ARS Form 59?	
		• KS 225	1
ARS Form 35		• Total:	1
• KS 223	**		
• Total:	1+	ARS Form 59a	1
ADC Form 259		• KS 022	1
<i>ARS Form 35?</i> • KS 247	1	• Total:	1
• Total:	1	ARS Form 67/69v	
• Iotai.	1	• KS 023	1
ARS Form 45		• <b>Total:</b>	1
• KS 020	1	i otai.	I
• KS 026	1	ARS Form 77	
• KS 045	1	• KS 047	1
• KS 072	1	• Total:	1
• KS 225	6		
• Total:	10	ARS Form 78v	
*	-	• KS 020	1
ARS Form 45v		• Total:	1

ARS Form 87v		• Total:	40
• KS 022	1		
• Total:	1	ARS Form Coastal- m	
		• KS 214	1
ARS Form 88/89		• KS 215	2
• KS 225	**	• KS 221	3
• Total:	1+	• KS 223	4
ADC Form 00/101 Lla	akton	• KS 225	5
ARS Form 88/181- bla		• KS 233	6
• KS 225	1	• KS 234	7
• Total:	1	• KS 241	8
ARS Form 91		• Total:	36
• KS 202	**	ARS Form H <sup>44</sup>	
• Total:	1+		1
Total.	1.	<ul><li>KS 023</li><li>Total:</li></ul>	1 <b>1</b>
ARS Form 91c		• Iotal:	1
• KS 021	1	ARS Form Lion Mort	arium
• KS 023	1	• KS 023	1
• Total:	2	• Total:	1
ADC Form 101			
<b>ARS Form 181</b>	1	ARS Form Northern	
• KS 072	1 **	• KS 042	1
• KS 224		• KS 082	1
• Total:	2+	• KS 251	3
ARS Form 182v		• Total:	5
• KS 027	1	ARS Form Thin Wall	
• Total:	1	• KS 082	1
		• Total:	1
ARS Form 185		i otai.	1
• KS 215	**	ARS Form Miscellane	eous
• KS 252	1	• KS 010	57
• KS 267	2	• KS 012	51
• Total:	4+	• KS 027	14
		• KS 043	2
ARS Form Coastal		• KS 214	4
• KS 040	4	• KS 219	5
• KS 041	5	• KS 233	6
• KS 043	9	• KS 242	7
• KS 047	5		
• KS 075	4	44	
• KS 081	2	<sup>44</sup> Similarity to ARS Haye	
• KS 082	2	be determined based on d field notes. See intro	boduction for more
• KS 251	9	information.	

• KS 243	8	• Total:	1+
• KS 245	9		
• KS 247	10	RS Form 6	
• KS 252	10	• KS 022	1
• KS 264	11	• Total:	1
• Total:	194		
		RS Form 10?	
ARS Form Miscellan	eous- closed	• KS 218	**
• KS 215	1	• Total:	1+
• KS 219	2	BC Form 12/102.	
• Total:	3	<b>RS Form 12/102v</b> • KS 022	1
	1	100 022	1 1
ARS Form Miscellan		• Total:	I
• KS 211	1	RS Form 12/102- black top	
• KS 216	2	• KS 021	1
• KS 220	3	• <b>Total</b> :	1
<ul><li>KS 221</li><li>KS 241</li></ul>	4 5	i otur.	-
	5 15	RS Form 21	
• Total:	15	• KS 214	**
ARS Form Miscellan	eaus- narthern lid	• KS 220	**
• KS 215	1	• Total:	2+
• Total:	1		
i otai.	1	RS Form 23	
ARS Unknown Form		• KS 022	1
• KS 014	20	• KS 211	2
• KS 060	**	• Total:	3
• KS 074	**		
• KS 082	15	RS Form 23a	
• KS 208	**	• KS 041	1
• KS 226	**	• Total:	1
• KS 251	**	DC France 22 marine	
• Total:	40+	RS Form 23- variant	1
		• KS 211	1 1
TOTAL DIAGNOSTI	<i>CARS: 493</i> +	• Total:	I
		RS Form 23/26v	
D - 1 C1: W (I)		• KS 027	1
Red Slip Ware- (Loca	I AKS variants):	• <b>Total</b> :	1
RS Form 2/3?			•
• KS 047	1	RS Form 26	
• Total:	1	• KS 023	2
i Utali	I	• KS 024	1
RS Form 3		• KS 223	4
• KS 211	**	• Total:	7

RS Form 26L		• KS 225	$5+^{45}$
• KS 023	2	• KS 241	14
• Total:	2	• KS 242	15
		• KS 243	16
RS Form 26v		• KS 252	17
• KS 021	5	• KS 264	18
• Total:	5	• Total:	168+
RS Form 26- late		RS Form 26/181- grav	ıd
• KS 020	2	• KS 041	2
• KS 021	2	• Total:	2
• KS 027	2		
• KS 041	18	RS Form 26/181- petit	t
• KS 225	2	• KS 041	3
• KS 264	3	• Total:	3
• Total:	29		
		RS Form 27	
RS Form 26- late, blac	-	• KS 021	1
• KS 223	1	• KS 041	1
• KS 245	2	• KS 223	**
• Total:	3	• KS 225	**
		• Total:	4+
<b>RS Form 26/62</b>	1		
• KS 029	1	RS Form 27?	
• KS 042	1	• KS 242	1
• KS 045	1	• Total:	1
• Total:	3	DC Forme 27.	
RS Form 26/181		<i>RS Form 27v</i> • KS 025	1
• KS 027	4	10 025	1
• KS 027	2	• Total:	1
• KS 040	2	RS Form 27- black top	'n
• KS 042	5	• KS 024	1
• KS 040	9	• Total:	1
• KS 072	1	i otai.	1
• KS 072	1	RS Form 32/58	
• KS 075	1 7	• KS 243	**
• KS 082	4		
• KS 202	4 **	<sup>45</sup> Exact number here is ur	ncertain, however, RS
• KS 202 • KS 208	10	26/181 was found at 5 diff	
• KS 208	10	indicating at least 5 pieces duration of the catalog, ar	
• KS 214 • KS 216	11	expressed with the #+ syn	
• KS 210	12	which indicates that at leas	t that many individual
• KS 220 • KS 223	13	pieces were found. It rem	
- NO 223	15	multiple factors, see the i information.	ntroduction for more

• Total:	1+	• Total:	1
RS Form 35		RS Form 59?	
• KS 045	1	• KS 211	**
• Total:	1	• Total:	1+
RS Form 35?		RS Form 61b	
• KS 047	3	• KS 081	1
• Total:	3	• Total:	1
RS Form 45		RS Form 62	
• KS 022	2	• KS 022	1
• KS 026	1	• KS 047	2
• KS 202	**	• Total:	3
• KS 225	3		
• KS 241	**	RS Form 62v	
• KS 242	4	• KS 021	1
• Total:	12+	• KS 023	1
		• KS 025	1
RS Form 45?	-	• Total:	3
• KS 245	2	DC E	
• Total:	2	<i>RS Form 62/63</i> • KS 243	1
RS Form 45c- variant		• Total:	1
• KS 001	**		-
• Total:	1+	RS Form 67	
		• KS 020	3
RS Form 45v		• KS 021	1
• KS 030	**	• KS 022	4
• Total:	1+	• KS 027	1
		• Total:	9
RS Form 45v- black to	р		
• KS 046	1	RS Form 67v	
• Total:	1	• KS 022	3
		• KS 025	1
RS Form 45- late	1	• Total:	4
• KS 022	1		
• Total:	1	<b>RS Form 68</b>	2
RS Form 50?		• KS 024	3
• KS 225	1	• KS 027	4 **
• <b>Total</b> :	1	• KS 030	
	I	• KS 082	3 **
RS Form 51		• KS 208	
• KS 225	1	• KS 225	2+ **
110 223	I	• KS 243	ጥጥ

• Total:	15+	• KS 027	1
		• Total:	2
RS Form 68?			
• KS 021	1	<b>RS Form 80/81v</b>	
• Total:	1	• KS 022	1
		• Total:	1
RS Form 68vs			
• KS 029	1	RS Form 80/81?	
• Total:	1	• KS 225	**
		• Total:	1+
<b>RS Form 68/69</b>	2		
• KS 022	3 **	<b>RS Form 81</b>	1
• KS 213	**	• KS 020	1
• KS 223		• Total:	1
• KS 234	2	RS Form 85v	
• Total:	7+		1
DC Form (0		• KS 043	1
<b>RS Form 69</b>	1	• Total:	1
• KS 225	1	RS Form 87	
• Total:	1	• KS 020	1
RS Form 69v		• KS 020	1
• KS 025	1	• KS 025	5
• <b>Total:</b>	1	• KS 027	2
i otal.	1	• <b>Total:</b>	2 9
RS Form 71- variant		i i otal.	,
• KS 225	1	RS Form 87v	
• Total:	1	• KS 020	5
100000	-	• KS 021	1
RS Form 77		• KS 024	3
• KS 041	1	• Total:	9
• KS 047	1		-
• KS 080	1	RS Form 87- rouletted	
• Total:	3	• KS 024	1
	-	• KS 027	1
RS Form 77?		• Total:	2
• KS 081	5		
• Total:	5	RS Form 87?	
		• KS 225	**
RS Form 80		• Total:	1+
• KS 081	1		
• Total:	1	RS Form 89	
		• KS 021	1
RS Form 80v- unslipp		• KS 022	2
• KS 024	1	• Total:	3

RS Form 89vs		RS Form 91d	
• KS 075	1	• KS 081	1
• Total:	1	• Total:	1
RS Form 90		RS Form 91Fv	
• KS 081	1	• KS 082	1
• Total:	1	• Total:	1
RS Form 91		RS Form 91v	
• KS 004	**	• KS 002	**
• KS 020	2	• Total:	1+
• KS 021	1		
• KS 025	1	RS Form 91- lion's head	
• KS 043	2	• KS 231	1
• KS 241	**	• Total:	1
• KS 242	4		
Total:	12+	<b>RS Form 91- rouletted</b>	
		• KS 041	1
RS Form 91a		• Total:	1
• KS 020	1		
• Total:	1	RS Form 91?	
		• KS 214	**
RS Form 91b		• Total:	1+
• KS 030	**		
• KS 077	1	RS Form 92	
• KS 216	2	• KS 001	**
• KS 225	3	• KS 077	1
• Total:	7+	• KS 214	**
		• Total:	3+
RS Form 91b/c	1	RS Form 98	
• KS 021	1	• KS 264	1
• KS 025	1	• Total:	1
• Total:	2	· Total.	1
RS Form 91c		RS Form 99	
• KS 022	**	• KS 020	1
• KS 030	**	• KS 225	3
• KS 043	1	• Total:	4
• KS 080	1		
• Total:	<b>4</b> +	RS Form 99c	
	-	• KS 022	1
RS Form 91c/d		• Total:	1
• KS 027	2		
• Total:	2	RS Form 99v	
		• KS 225	1

• Total:	1	• KS 020	1
		• KS 202	2+
RS Form 103		• KS 208	**
• KS 004	**	• KS 211	**
• Total:	1+	• KS 214	3+
		• KS 218	**
RS Form 105	_	• KS 219	**
• KS 025	2	• KS 220	**
• Total:	2	• KS 223	5+
		• KS 225	9+
RS Form 105v	1	• KS 231	**
• KS 021	1	• KS 233	**
• Total:	1	• KS 234	**
RS Form 108		• KS 241	**
• KS 004	**	• KS 242	5+
• KS 080	1	• KS 243	3+
• Total:	1 2+	• KS 245	2+
• Iotal:	2+	• KS 252	**
RS Form 110		• Total:	<b>40</b> +
• KS 047	1		
• Total:	1	<b>RS Form 182</b>	
100000	•	• KS 202	**
RS Form 125v		• KS 214	**
• KS 202	**	• KS 215	**
• Total:	1+	• KS 223	**
		• KS 234	**
<b>RS Form 181</b>		• KS 242	**
• KS 022	1	• KS 243	**
• KS 214	5	• KS 252	2+
• KS 216	**	• KS 264	**
• KS 223	2+	• KS 267	**
• KS 224	6	• Total:	11+
• Total:	15+	RS Form 182- late	
DC Form 101h		• KS 202	**
<i>RS Form 181b</i> • KS 047	1	• Total:	1+
	1 1		
• Total:	I	RS Form 182v	
RS Form 181v		• KS 211	2+
• KS 025	1	• Total:	2+
• KS 027	1		
• <b>Total:</b>	2	RS Form 183v	
- IVIAI.	2	• KS 223	**
<b>RS Form 181/26</b>		• Total:	1+

RS Form 183/184		• KS 020	**
• KS 214	**	• KS 022	**
• Total:	1+	• KS 024	**
		• KS 025	**
RS Form 184v		• KS 027	**
• KS 225	**	• KS 029	**
• Total:	1+	• KS 030	**
		• KS 080	**
RS Form 185	4	• KS 081	**
• KS 264	1	• KS 082	**
• Total:	1	• KS 084	**
DC Form 105.		• KS 085	**
<b>RS Form 185v</b> • KS 240	1	• KS 223	19
<b>K</b> 0 240	1 1	• KS 225	20
• Total:	1	• KS 231	21
RS Black Top Form 2	7	• KS 241	**
• KS 027	1	• KS 242	22
• Total:	1	• KS 243	23
i otai.	I	• Total:	118+
RS Form Coastal- Sta	mped		
• KS 046	1	RS Form B <sup>47</sup>	
• Total:	1	• KS 022	**
		• KS 225	2
<b>RS</b> Form Grooved		• KS 241	**
• KS 243	1	• KS 243	2
• Total:	1	• Total:	6+
RS Form Lid		RS Form B?	
• KS 242	1	• KS 267	1
• Total:	1	• Total:	1
		RS Form C <sup>48</sup>	
RS Form Mortarium		• KS 020	**
• KS 202	**	• KS 020 • KS 021	**
• KS 241	3		**
• Total:	4+	• KS 022	**
		• KS 023	**
RS Form Mortarium-	gritted	• KS 024	-11- -11-
• KS 225	1	<u> </u>	
• Total:	1	within the Kasserine field r to be similar to ARS form	

**RS Form** A<sup>46</sup>

<sup>46</sup> All of the following similarities drawn between RS lettered forms and ARS Hayes

forms are based on drawings of each found

A appears much less

<sup>&</sup>lt;sup>47</sup> RS form B, like forms K and R, is most similar to ARS form 185 (the lid to form 183).
<sup>48</sup> Form C is most similar to ARS forms 91a or 103a, both of which have a similar date range (late  $5^{\text{th}}$  C).

•	KS 025	**	• KS 216	2
•	KS 027	**	• KS 223	3
•	KS 029	**	• KS 225	4
•	KS 030	**	• KS 243	5
•	KS 081	**	• Total:	16+
•	KS 082	**		-
•	KS 225	18	RS Form G	
•	Total:	29+	• KS 022	**
			• KS 025	**
RS F	orm D <sup>49</sup>		• KS 211	**
•	KS 023	**	• KS 225	2
•	KS 024	**	• Total:	5+
•	KS 025	**		
•	KS 027	**	RS Form H	
•	KS 080	**	• KS 021	**
•	KS 213	7	• KS 022	**
•	KS 223	8	• KS 023	**
•	KS 225	10	• KS 025	**
•	KS 231	10	• KS 081	**
•	Total:	40+	• KS 082	**
			• KS 211	**
RS F	orm D- black top		• KS 223	2
•	KS 225	1	• KS 264	4
•	KS 234	1	• Total:	13+
•	Total:	2		
	-50		RS Form H- rouletted	
	orm E <sup>50</sup>		• KS 225	1
•	KS 025	**	• KS 245	1
•	Total:	1+	• Total:	2
RS F	orm F <sup>51</sup>		RS Form I	
•	KS 022	**	• KS 025	**
•	KS 081	**	• KS 082	**
			• KS 225	1
<sup>49</sup> Dra	wings of form	D suggest a strong	• Total:	3+
	imingo of totill	b suggest a sublig		

similarity to ARS form 91d. This is very likely because the abbreviation for flanged bowl was included alongside this drawing, as well as many other pieces of 91a and 91a/c listed at the same site. <sup>50</sup> Much like form A, RS form E is similar to

<sup>50</sup> Much like form A, RS form E is similar to ARS form 107.

<sup>51</sup> As with ARS form H, there was no drawing presented for this form and thus no firm identification of this type could be made. Similarly, forms G, H, I, M, N, T, U, V, and Y were also unable to be identified conclusively.

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**RS** Form  $J^{52}$ 

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•

KS 022

KS 027

KS 202

KS 223

• KS 225	6	• KS 022	**
• KS 234	7	• KS 027	**
• Total:	21+	• KS 225	3
		• Total:	5+
RS Form K <sup>53</sup>			
• KS 081	**	RS Form Q <sup>56</sup>	
• KS 225	1	• KS 022	**
• Total:	2+	• Total:	1+
KS Form K?		RS Form R <sup>57</sup>	
• KS 020	**	• KS 083	**
• KS 025	**	• Total:	1+
• Total:	2+	i otai.	<b>T</b> ,
i otai.	2	RS Form S <sup>58</sup>	
RS Form L <sup>54</sup>		• KS 020	**
• KS 027	**	• KS 021	**
• KS 223	4	• KS 022	**
• Total:	5+	• KS 023	**
		• KS 024	**
RS Form M		• KS 025	**
• KS 020	**	• KS 026	**
• KS 025	**	• KS 027	**
• KS 027	**	• KS 029	**
• KS 029	**	• KS 030	**
• KS 081	**	• KS 080	**
• KS 082	**	• KS 081	**
• KS 225	8	• KS 082	**
• Total:	14+	• KS 083	**
		• KS 085	**
RS Form M?		• KS 202	**
• KS 021	**	• KS 211	1
• Total:	1+	• KS 223	**
		• KS 225	2
RS Form N		• KS 241	**
• KS 081	**		
• KS 211	2	<sup>55</sup> Form O is possibly similar to AF	S for
• KS 233	3	<sup>56</sup> It was suggested in the pottery n	otes t
• Total:	6+	Q may be a version of ARS form likely dates to the sixth century or	

### **RS Form O<sup>55</sup>**

<sup>53</sup> Form K is most certainly similar to ARS form 185 (lid to form 183). However, much less certainly, it could also resemble ARS form 99a. <sup>54</sup> A note in the archives suggested that this may be a regional cookware form of some kind.

orm 52b. that Form r 108, and likely dates to the sixth century or later. <sup>57</sup> Form R is fairly certainly similar to ARS form

185, based on the number of separate instances in which this identification was made. Much less certainly may also relate to ARS form 111.

<sup>58</sup> Similarity of form S was undetermined, though based on the contexts listed in the field notes, the dating seems very similar to ARS form 185 (i.e.  $2^{nd}-3^{rd}$  C).

•	KS 242	21	RS FA	orm Atlante 66.16 <sup>60</sup>	
•	KS 242 KS 243	21 22	NS Pt	KS 002	**
•	Total:	64+		KS 002 KS 004	**
-	I Utal.	041	•	KS 005	**
RS Fo	orm T		•	Total:	3+
•	KS 020	**			-
•	KS 022	**	RS Fa	orm Atlante 66.22	
•	KS 027	**	•	KS 004	**
•	KS 030	**	•	Total:	1+
•	KS 082	**			
•	KS 202	**	RS Fa	orm Atlante 66.9	
•	KS 208	9	•	KS 004	**
•	KS 211	**	•	Total:	1+
•	KS 225	10			
•	Total:	26+		orm Atlante 67.5	
			•	10 002	**
RS Fo	orm T?		•	KS 004	**
•	KS 023	**	•		**
•	Total:	1+	•	Total:	3+
RS Fo	rm II		RS Fa	orm Atlante 67.7/8	
•	KS 211	1	•	KS 001	**
•	Total:	1	•	Total:	1+
				~ ~ ~	
RS Fo	orm V			orm Stern 28	
•	KS 021	**	•	KS 001	**
•	Total:	1+	•	Total:	1+
RS Fa	orm X <sup>59</sup>		RS Fa	orm Miscellaneous	
•	KS 080	**	•	KS 004	49
•	KS 202	**	•	KS 010	125
•	KS 208	**	•	KS 015	4
•	KS 225	3	•	KS 023	6
•	KS 241	**	•	KS 208	30
•	KS 242	1	•	KS 211	31
•	Total:	8+	•	KS 213	32
			•	KS 214	33
RS Fo	orm Y- variant		•	KS 215	34
•	KS 225	1	•	KS 216	35
•	Total:	1	٠	KS 219	36

<sup>&</sup>lt;sup>59</sup> Identification of form X is very uncertain. It could be related to ARS form 111, 192, or even form 185 along with forms B, K, and R.

<sup>&</sup>lt;sup>60</sup> Dating information not available for Atlante and Stern RS forms, they are included to illustrate the wide variety of RS forms found on these sites.

•	KS 220	37	• KS 251	9
•	KS 221	38	• Total:	39
•	KS 222	39		
•	KS 223	40	RS Form Miscellaneous- pa	lmette
•	KS 224	41	• KS 215	1
•	KS 225	42	• Total:	1
•	KS 231	43		
•	KS 233	44	RS Form Miscellaneous- sta	
•	KS 234	45	• KS 214	1
•	KS 241	46	• KS 223	2
•	KS 242	47	• KS 225	3
•	KS 243	48	• KS 234	4
•	KS 245	49	• Total:	10
•	KS 251	50	RS Form Miscellaneous- rol	ulattad
•	KS 252	51	<ul> <li>KS Form Miscellaneous- rol</li> <li>KS 214</li> </ul>	4
•	KS 264	52	• KS 223	4
•	KS 267	53	• KS 225	4 5
•	Total:	1,180	• Total:	13
חמ ד		1 10	i otai.	15
	orm Miscellaneous-	U U	RS Form?	
•	KS 225	4	• KS 212	3
•	KS 241	5 9	• Total:	3
•	Total:	9		
RS F	orm Miscellaneous-	- concentric	RS Unknown Form	
groo		concentric	• KS 004	112
	KS 225	1	• KS 007	**
•	Total:	1	• KS 014	36
			• KS 015	23
RS F	orm Miscellaneous-	- concentric	• KS 031	17+
stam	ped		• KS 060	**
•	KS 225	1	• KS 074	**
•	Total:	1	• KS 228	**
			• Total:	192+
RS F	orm Miscellaneous-	- knob		a a <b>z</b> a i
•	KS 214	1	TOTAL DIAGNOSTIC RS:	2,352+
•	Total:	1		
RCE	orm Miscellaneous-	_ lid	Tripolitanian Red Slip:	
л <i>з Г</i> •	KS 211	<i>- 110</i> 4	r	
•	KS 211 KS 214	4 5	TRS Form 2	
•	10217	5	• KS 004	**

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• KS 225

• KS 242

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KS 234

- KS 004 \*\* •
  - KS 211 \*\*
  - Total: • 2+

TRS Form 4b		Lamps- (all forms):	
• KS 225	**		
• KS 242	**	ARS Lamps:	
• Total:	2+		
		ARS Form 2	
TRS Form 8b		• KS 021	**
• KS 225	**	• KS 023	1
• Total:	1+	• KS 027	**
		Total:	3+
TRS Form 9	4.4	4DC E	
• KS 025	**	ARS Form 2b	**
• Total:	1+	• KS 022	
TRS Form 67 <sup>61</sup>		• KS 028	1
	**	• Total:	2+
• KS 021		ARS- nozzle	
• Total:	1+	• KS 028	1
RS Form 80v		• Total:	1 1
• KS 021	**	- Total.	1
• Total:	1+	TOTAL ARS Lamps:	6+
· I Utal.	I '		0.
TRS Form 87/105?			
• KS 021	**	RS Lamps:	
• Total:	1+		
		RS Form 1a	
TRS Form F		• KS 001	**
• KS 021	**	• KS 022	**
• Total:	1+	• KS 027	**
		• KS 041	1
TRS Form S		Total:	4+
• KS 021	**		
• Total:	1+	RS Lamp 1b	**
		• KS 024	**
TRS Form?	ste ste	• KS 027	
• KS 001	**	• Total:	2+
• KS 027	1	RS Lamp 2	
• KS 029	**	• KS 024	**
• Total:	3+	• KS 047	1
TOTAL DIAGNOSTIC TRS: 14+		• KS 081	2
IUTAL DIAGNUST	<i>IC TRS: 14</i> +	• KS 223	1
		• KS 225 • KS 225	2
		• KS 223 • KS 231	2
		- KO 201	5 10+

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· KS 202       **       KS 014         · Total:       2+       · TA sherds       34         · Total:       2+       · Total:       34         · KS 042       1       · Total:       34         · KS 042       1       · KS 020       · TA sherds       11         · KS 045       1       · TA sherds       11       · AM sherds       ***         · Total:       20+       KS 021       · Total:       12 <i>TOTAL LAMPS:</i> 26+       · TA sherds       11       · AM sherds       ***         · Ta sherds       278 <sup>63</sup> · Total:       14       · AM sherds       ***         · Total:       325+       KS 022       · Ta sherds       11         KS 005       KS 023       · Total:       12         · AM sherds       **       · Total:       12         · Total:       1+       · AM sherds       **         · Total:       1+       · AM sherds       **         · Total:       1+       · Ta sherds       2         · Total:       1+       · Ta sherds       2         · Total:       14       · Ta sherds       2         · Total:       14 <th>RS Lamp 2b</th> <th></th> <th>• Total:</th> <th>19</th>	RS Lamp 2b		• Total:	19
Total: $2+$ TA sherds $3-$ <i>ER Lamp</i> Total: $3 \in$ KS 0421 <i>KS 020</i> $\in$ KS 0451 $=$ TA sherds11 $\in$ Total:2 $=$ AM sherds $=$ Total: <i>TOTAL RS Lamps:</i> $20+$ <i>KS 021TOTAL LAMPS:</i> $26+$ $=$ Total: $12$ <i>TOTAL Construct Construction</i> $=$ Total: $12$ <i>Ta sherds</i> $278^{63}$ $=$ Total: $12$ <i>KS 004</i> $=$ Total: $325+$ $=$ Total: $12$ <i>KS 005</i> $=$ AM sherds $=$ $=$ Spatheon $1$ <i>KS 007</i> $=$ AM sherds $=$ $=$ Total: $12$ <i>KS 007</i> $=$ AM sherds $=$ $=$ Total: $12$ <i>KS 010</i> $=$ Total: $1+$ $=$ To sherds $22$ $=$ Total: $83$ $KS 025$ $=$ TA sherds $22$ $=$ TA sherds $19$ $=$ Total: $4$ $=$ Total: $4$ $=$ Total: $4$	• KS 004	**		
• Total:       3: $ER Lamp$ • Total:       3:         • KS 042       1 $KS 020$ • TA sherds       1:         • Total:       2       • AM sherds       ***       • Total:       12 $TOTAL RS Lamps:$ $20+$ • Total:       12       • AM sherds       *** $TOTAL RS Lamps:$ $20+$ • Total:       12       • AM sherds       *** $TOTAL LAMPS:$ $26+$ • TA sherds       17       • AM sherds       ***         • Ta sherds $278^{63}$ • Total:       14       • AM sherds       ***         • Total: $325+$ • Total:       14       • AM sherds       ***       • Spatheon       11         • Total: $325+$ • Total:       12       • AM sherds       ***       • O Spatheon       11         • KS 005 <b>KS 023</b> • Total:       13       • AM sherds       ***       • Total:       13         • KS 007       • AM sherds       **       • Total:       14       • AM sherds       ***         • Total:       1+       • Total:       14       • AM sherds       ***       • Total:       2-       • AM s	• KS 202	**		
ER Lamp       KS 042       1       KS 020         • KS 045       1       • TA sherds       1         • Total:       2       • AM sherds       ***         • Total:       20+       • Total:       1         TOTAL RS Lamps:       20+       • Total:       1         TOTAL LAMPS:       20+       • Total:       1         Total LAMPS:       26+       • Total:       1         Transport Amphorae (TA) By Site:       62       • Total:       14         • Ta sherds       278 <sup>63</sup> • Total:       14         • Total:       325+       • Total:       14         • Total:       325+       • Total:       15         KS 005       • AM sherds       ** $\circ$ Spatheon       1         • Total:       1+       • Total:       15         KS 007       • AM sherds       **       • Total:       14         • Total:       1+       • Total:       15         KS 010       • Total:       14       • Total:       35         • Total:       14       • Total:       35       • AM sherds       **         • Total:       1+       • Total:       35       • AM	• Total:	2+		34+
• KS 042       1 $KS 020$ • KS 045       1       • TA sherds       1         • Total:       2       • AM sherds       ***         • Total:       20+ $KS 021$ • Total:       12 $TOTAL RS Lamps:$ 20+ $KS 021$ • Total:       12 $TOTAL RS Lamps:$ 20+ $KS 021$ • Total:       12 $TOTAL LAMPS:$ 26+       • Total:       12       • AM sherds       **         • Ta sherds       278 <sup>63</sup> • Total:       14       • AM sherds       **         • Total:       325+ $KS 022$ • Total:       14         • Am sherds       **       • Spatheon       1       • AM sherds       **         • Total:       1+       • Total:       12       • AM sherds       **         • Total:       1+       • AM sherds       **       • Total:       12         • AM sherds       **       • Total:       12       • AM sherds       **         • Total:       1+       • AM sherds       **       • Total:       12         • AM sherds       **       • Total:       3       • Total:       3       • To			• Total:	34+
KS 0451TA sherds1Total:2AM sherds**TOTAL RS Lamps:20+Total:12TOTAL LAMPS:20+Total:12TotAL LAMPS:20+KS 021TA sherdsTransport Amphorae (TA) By Site: $^{62}$ TA sherds17KS 004TA sherds27863AM sherds**Total:325+Total:11Total:1+AM sherds**Total:1+AM sherds**KS 007AM sherds**Total:KS 007AM sherds**Total:TA sherds1+AM sherds**KS 010TA sherds12TA sherds14TA sherdsTA sherds1533KS 010Total:33TA sherds19TA sherds $^{22}$ 67 of 84 sites (79.8%) reported amphoraeKS 026	-			
• Total:2• AM sherds*** $TOTAL RS Lamps:$ $20+$ $Total:$ 12 $TOTAL LAMPS:$ $20+$ $KS 021$ • TA sherds12 $TTansport Amphorae (TA) By Site:26+• TA sherds12Transport Amphorae (TA) By Site:6^2KS 021• TA sherds13KS 004• TA sherds278^{63}• Total:14• Total:278^{63}• Total:14• Total:325+KS 022• TA sherds15• Am sherds**• Spatheon1• Total:12• Total:1+• TA sherds12• AM sherds**• Total:1+• TA sherds12• AM sherds**• Total:1+• TA sherds12• AM sherds**• Total:1+• TA sherds2• AM sherds**• Total:1+• TA sherds2• AM sherds**• Total:1+• Total:3-• AM sherds**• Total:83KS 025• TA sherds**• TA sherds19• Total:4 4 2^2 67 of 84 sites (79.8%) reported amphoraeKS 026KS 026$				
Total:2Add sherds $TOTAL RS Lamps:$ $20+$ Total:12 $TOTAL LAMPS:$ $20+$ $KS 021$ $TA sherds$ 17 $Transport Amphorae (TA) By Site:62TA sherds11Transport Amphorae (TA) By Site:62TA sherds11Tansport Amphorae (TA) By Site:62TA sherds11Tansport Amphorae (TA) By Site:62TA sherds11Ta sherds278^{63}TA sherds11Ta Amphorae (AM)47+O Spatheon11Total:325+Total:12KS 005KS 023TA sherds12Construction (Am sherds)**O Spatheon11KS 007Total:14+AM sherds**KS 007TA sherds12+AM sherds**Construction (Construction)Ta sherds12+AM sherds**KS 010TA sherds83KS 025TA sherds32 TA sherds19TA sherds32 AM sherds**Ta sherds19Ta sherds32 AM sherds**Ta sherds19Ta sherds32 Ta sherds32 Ta sherds19Ta sherds32 Ta sherds32 Ta sherds19Ta sherds32 Ta sherds32 Ta sherds19Ta sherds32-<$				11+
TOTAL RS Lamps: $20+$ TOTAL LAMPS: $26+$ KS 021Total LAMPS: $26+$ TA sherds $17$ Transport Amphorae (TA) By Site: $6^2$ KS 022KS 004TA sherds $278^{63}$ Total: $13$ • Total: $325+$ KS 023• Amphorae (AM) $47+$ $\circ$ Spatheon $1$ • Total: $325+$ Total: $13$ KS 005KS 023· Total: $12$ • AM sherds**· Total: $12$ • Total: $1+$ · TA sherds $12$ KS 007· AM sherds**· Total:• Total: $1+$ · TA sherds $12$ · Total: $1+$ · TA sherds $2^2$ · Total: $12$ · Total: $12$ · Total: $83$ KS 025· Total: $3^2$ · TA sherds $19$ · Total: $4^2$ · $2^2$ 67 of 84 sites (79.8%) reported amphoraeKS 026	• Total:	2		
$KS 021$ $TOTAL LAMPS:$ $26+$ $KS 021$ $Transport Amphorae (TA) By Site:(TA sherds (TA) By Site:(TA sherds 278)(Amphorae (AM) 47+(Total:Total:13KS 004TA sherds 278^{63}(Amphorae (AM) 47+(Total:TA sherds 11(Am sherds **)(Spatheon 11)Ta sherds 11(Spatheon 11)KS 005(AM sherds **)(Total:KS 023(Total:TA sherds 12(AM sherds **)(Total:TA sherds 12(Spatheon 11)KS 007(AM sherds **)(Total:KS 023(Total:TA sherds 12(AM sherds **)(Total:KS 023(Total:KS 007(AM sherds **)(Total:KS 024(Total:TA sherds 2^{-1}(AM sherds **)(Total:TA sherds 2^{-1}(Total:KS 010(TA sherds 19)KS 025(TA sherds 3^{-1})(Total:TA sherds 3^{-1}(Total:TA sherds 3^{-1}(Total:KS 012(TA sherds 19)TOtal:A(Total:A(Total:A(Total:$	TOTAL DE Lamas	201	• Total:	12+
TOTAL LAMPS: $26+$ TA sherds $1''$ Transport Amphorae (TA) By Site: $6^{2}$ KS 022KS 004Total: $12$ TA sherds $278^{63}$ Total: $14$ Total: $325+$ Total: $12$ KS 005KS 023AM sherds $**$ Total: $1+$ KS 007KS 007AM sherds $**$ Total: $1+$ KS 007Total:AM sherds $**$ Total: $14$ Total: $14$ KS 007Total:AM sherds $**$ Total: $14$ Total: $14$ Total: $14$ AM sherds $**$ Total: $14$ Total: $14$ AM sherds $**$ Total: $14$ <	IOIAL KS Lamps:	20+	KS 021	
A M sherds***A M sherds***Transport Amphorae (TA) By Site.*62KS 004• TA sherds $278^{63}$ • Total:• TA sherds $278^{63}$ • TA sherds• Am sherds $278^{63}$ • Total:• Total: $325+$ * Total:* Total: $325+$ * Total:* Total: $11$ * KS 005KS 023• AM sherds**• Total: $11$ * KS 007* Total:• AM sherds**• Total: $11$ * KS 007* Total:• AM sherds**• Total: $11$ * KS 007* Total:• AM sherds**• Total: $12$ • Total: $12$ * Total: $12$ * Total: $12$ * Total: $33$ * Total: $32$ * Total	TOTAL LAMPS.	26+		17+
Total:18Transport Amphorae (TA) By Site:62Total:18KS 004TA sherds2 $\cdot$ TA sherds $278^{63}$ TA sherds1 $\cdot$ Total: $325^{+}$ KS 023 $\cdot$ Total: $11^{+}$ TA sherds1 $\cdot$ Total: $11^{+}$ Total:1 $\cdot$ Total: $12^{-}$ Total:3 $\cdot$ Total: $12^{-}$ Total:3 $\cdot$ Total: $12^{-}$ Total:3 $\cdot$ Total: $12^{-$		20		**
Transport Amphorae (TA) By Site: $^{62}$ KS 004KS 022• TA sherds278 $^{63}$ • Amphorae (AM)47+• Total:325+* Total:325+• AM sherds**• Total:1+KS 007KS 027• AM sherds**• Total:1+• AM sherds**• Total:1+• AM sherds**• Total:1+• Total:1:• Total:1+• Total:3:• Total:1+• Total:3:• Total:83• Total:83• Total:3:• TA sherds19***• Total:***• Total:**				18+
KS 004KS 022• TA sherds $278^{63}$ • Amphorae (AM) $47+$ • Total: $325+$ • Total: $325+$ • Total: $12$ • Total: $12$ • Total: $14$ • Total: $32$ • Total: $14$ • Total: $32$ • Total: $14$ • Total: $32$ • Total: $33$ • Total: $32$ • Total: $3$	Transport Amphorae (TA)	By Site: <sup>62</sup>	i otai.	10
TA sherds $278^{63}$ TA sherds $11$ Amphorae (AM) $47+$ $\circ$ Spatheon $11$ Total: $325+$ Total: $12$ AM sherds** $\circ$ Spatheon $11$ KS 005KS 023TA sherds $12$ AM sherds** $\circ$ Total: $12$ Total: $1+$ AM sherds**Total: $1+$ Total: $12$ AM sherds** $\bullet$ Total: $12$ Total: $1+$ $\bullet$ Total: $12$ Total: $83$ $KS 024$ $\bullet$ Total:Total: $83$ $KS 025$ $\bullet$ TA sherds $32$ TA sherds $19$ $\bullet$ Total: $4 32 67$ of 84 sites (79.8%) reported amphorae $KS 026$ $KS 026$			KS 022	
• Amphorae (AM) 47+ • Total: 325+ • AM sherds ** • Total: 1+ • Total: 1+ • AM sherds ** • Total: 1+ • AM sherds ** • Total: 1+ • AM sherds ** • Total: 15 • AM sherds ** • Total: 15 • AM sherds ** • Total: 15 •	KS 004		• TA sherds	11+
• Total:       325+       • Total:       1;         KS 005       KS 023       • TA sherds       1;         • Total:       1+       • AM sherds       **         • Total:       1+       • AM sherds       **         • KS 007       • Total:       1;         • AM sherds       **       • Total:       1;         • Total:       1+       • AM sherds       **         • Total:       1+       • Total:       1;         • AM sherds       **       • Total:       1;         • Total:       1+       • Total:       2-         • Total:       1+       • Total:       2:         • Total:       1+       • Total:       3:         • Total:       1+       • Total:       3:         • Total:       1+       • Total:       3:         • Total:       83       • Total:       3:         • Total:       83       • So25       • Total:       3:         • TA sherds       19       • Total:       4:         • So26       • Total:       4:       4:	• TA sherds	$278^{63}$	• AM sherds	**
KS 005       KS 023         • AM sherds       **       • TA sherds       12         • Total:       1+       • AM sherds       **         • Total:       1+       • AM sherds       **         • Total:       1+       • Total:       13         • AM sherds       **       • Total:       14         • Total:       1+       • Total:       14         • Total:       1+       • TA sherds       2-         • Total:       1+       • TA sherds       **         • Total:       1+       • Total:       3-         • Total:       83       • Total:       3-         • Total:       83       • S 025       • TA sherds       **         • TA sherds       19       • Total:       4-         • Total:       19       • Total:       4-         • 52 67 of 84 sites (79.8%) reported amphorae       KS 026       5-	• Amphorae (AM)	47+	• Spatheon	1
• AM sherds**• TA sherds12• Total:1+• AM sherds**• Total:1+• AM sherds**• Total:1+• TA sherds2-• Total:1+• TA sherds**• Total:1+• TA sherds**• Total:1+• TA sherds**• Total:1+• TA sherds**• Total:83• Total:3-• TA sherds83• Total:3-• Total:83• TA sherds**• TA sherds19• Total:4- $e^2$ 67 of 84 sites (79.8%) reported amphorae <b>KS 026</b>	• Total:	325+	• Total:	13+
• AM sherds**• TA sherds12• Total:1+• AM sherds**• KS 007• Total:13• AM sherds**KS 024• Total:1+• TA sherds• Total:1+• TA sherds• Total:3-• TA sherds83KS 025• Total:83KS 025• TA sherds19• Total:• TA sherds $3-$ • TA sherds $3-$ • TA sherds $4-$ • TA sherds $4-$ • TA sherds $19$ • Total: $4-$ • Total: $4-$ • Total: $4-$ • Total: $5-$ • TA sherds $19$ • Total: $4-$	KS 005		KS 023	
• Total:1+• AM sherds**KS 007• Total:11• AM sherds**KS 024• Total:1+• TA sherds2-• Total:1+• TA sherds**• TA sherds83• Total:3-• Total:83KS 025• TA sherds**• TA sherds19• Total:4- $^{62}$ 67 of 84 sites (79.8%) reported amphoraeKS 026	• AM sherds	**		12+
KS 007• Total:13• AM sherds** $KS 024$ • Total:1+• TA sherds• Total:1+• TA sherds• TA sherds83• Total:83 $KS 010$ • Total:• Total:83 $KS 012$ • TA sherds• TA sherds19• TA sherds**• TA sherds19• Total:4• Total:4• Total:4	• Total:	1+		**
KS 007 $\cdot$ AM sherds**KS 024• Total:1+• TA sherds2-• KS 010• AM sherds**• TA sherds83• Total:3-• Total:83KS 025• TA sherds19• Total:4- $^{62}$ 67 of 84 sites (79.8%) reported amphoraeKS 026				13+
• Total: 1+ • TA sherds 2- • $KS 010$ • TA sherds 83 • Total: 83 • $KS 025$ • TA sherds 19 • Total: 3- • TA sherds 3- • AM sherds ** • TA sherds 4- • TA sherds 8- • Total: 4- • Total: 4-	KS 007			
KS 010AM sherds**• TA sherds83• Total:3-• Total:83 $KS 025$ • TA sherds3-• KS 012• AM sherds**• TA sherds**• TA sherds19• Total:4- $6^2$ 67 of 84 sites (79.8%) reported amphorae $KS 026$ $KS 026$	• AM sherds	**	KS 024	
KS 010Total:3-• TA sherds83• Total:3-• Total:83 $KS 025$ • TA sherds3- $KS 012$ • TA sherds**• AM sherds**• TA sherds19• Total:4- $62$ 67 of 84 sites (79.8%) reported amphorae $KS 026$ $KS 026$	• Total:	1+	• TA sherds	2+
• TA sherds 83 • Total: 83 • Total: 83 • Total: 83 • TA sherds 3- • TA sherds 3- • AM sherds $*^{*}$ • TA sherds 4- • Total: 4- • Total: 4-	¥77 040		• AM sherds	**
• Total:       83       KS 025         KS 012       • TA sherds       3-         • TA sherds       19       • AM sherds       **         • Total:       4-       4-         • 62 67 of 84 sites (79.8%) reported amphorae       KS 026		0.2	• Total:	3+
KS 012• TA sherds3-• TA sherds19• AM sherds**• TA sherds19• Total:4- $62$ 67 of 84 sites (79.8%) reported amphoraeKS 026				
KS 012       • AM sherds       **         • TA sherds       19       • Total:       4-         • 62 67 of 84 sites (79.8%) reported amphorae       KS 026       KS 026	• Total:	83		
• TA sherds 19 • Total: 4-	VC 017			3+
$^{62}$ 67 of 84 sites (79.8%) reported amphorae <b>KS 026</b>		10		**
or of of sites (79.878) reported amphorae	• I A sherds	19	• Total:	4+
	<sup>52</sup> 67 of 84 sites (79.8%) ret	orted amphorae	KS 026	
			• TA sherds	**

(KS 087, 227, 246). The exact quantities of transport amphorae fragments are uncertain, although, as above, are assumed to be one in order to gain a better representation of sherd patterns. Sherds listed here are all most likely fragments of transport amphorae and of central Tunisian origin, unless otherwise noted. <sup>63</sup> For illustrations, see figure 5 below.

AM sherds 2 +**Total:** 3+ ٠

#### KS 027

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•	TA sherds	126+
•	AM sherds	35+

AM sherds	35+
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•	Total:	161+	KS 047	
			• TA sherds	**
KS 02			<ul> <li>AM sherds</li> </ul>	**
•	AM sherds	**	• Total:	2+
•	Total:	1+		
KS 02	00		• TA sherds	**
NS 02		12+	<ul><li>TA sherds</li><li>AM sherds</li></ul>	**
•	AM sherds	**	• Total:	2+
•	Total:	13+	· Total:	<u>7</u> 1
	i otai.	10 1	KS 072	
KS 03	80		AM sherds	**
•	TA sherds	8+	• Total:	1+
•	AM sherds	**		
•	Total:	9+	KS 074	
			• AM sherds	**
KS 03	81		• Total:	1+
•	TA sherds	230+		
•	AM sherds	5+	KS 075	
	<ul> <li>Spatheon</li> </ul>	2	• TA sherds	**
•	Total:	237+	• AM sherds	**
VCA	10		• Total:	2+
KS 04 •		**	KS 077	
•	AM sherds	**	• TA sherds	**
•	Total:	2+	<ul><li>AM sherds</li></ul>	**
	I Utali	2	• Total:	2+
KS 04	1		i otai.	2
•	TA sherds	**	KS 080	
•	AM sherds	**	• AM sherds	**
•	Total:	2+	• Total:	1+
KS 04			KS 081	
•	TA sherds	**	• TA sherds	**
•	AM sherds	**	• AM sherds	
•	Total:	2+	• Total:	2+
KS 04	13		KS 082	
•	TA sherds	**	• TA sherds	29+
•	AM sherds	**	• AM sherds	**
•	Total:	2+	• Total:	30+
KS 04	16		KS 083	
•	AM sherds	**	• TA sherds	2
•	Total:	1+	• AM sherds	**

• Total:	3+	• Dressel 18m	**
		• AM sherds	**
KS 084		• Total:	22+
• AM sherds	**		
• Total:	1+	KS 215	
		• TA sherds	2+
KS 085		• Total:	2+
• TA sherds	4+	WG 01/	
• AM sherds	**	KS 216	**
• Total:	5+	• TA sherds	**
KC 007		• AM sherds	
KS 087	199 <sup>64</sup>	• Total:	2+
<ul><li>TA sherds</li><li>AM sherds</li></ul>	199 40+	KS 218	
• Total:	40+ <b>239</b> +	• TA sherds	**
· Iutali	2377	<ul><li>AM sherds</li></ul>	10
KS 202		• Total:	10 11+
• TA sherds	28+	i otai.	11'
<ul> <li>AM sherds</li> </ul>	**	KS 219	
• Total:	29+	• TA sherds	**
100000		• AM sherds	**
KS 208		Total:	2+
• TA sherds	2+		
• AM sherds	11	KS 220	
• Total:	13+	• TA sherds	13+
		• AM sherds	**
KS 211		• Total:	14+
• TA sherds	3+		
• AM sherds	**	KS 221	
• Total:	4+	• TA sherds	5
		• Total:	5
KS 212			
• AM sherds	**	KS 222	_
• Total:	1+	• TA sherds	7+
VC 212		• Dressel 18m	**
KS 213	<b>a</b> .	• AM sherds	10
• TA sherds	2+	• Total:	18+
• AM sherds	5	KS 223	
• Total:	7+	• TA sherds	67+
KS 214		<ul><li>IA sherds</li><li>AM sherds</li></ul>	0/+ **
• TA sherds	20+	<ul><li> AiM sherds</li><li> Total:</li></ul>	<b>68</b> +
- IA Shelus	207	- Iotai:	<b>UO</b> T
		KS 224	

• TA sherds

10+

<sup>&</sup>lt;sup>64</sup> These sherds are almost entirely locally produced.

•	AM sherds	**	• TA sherds	**
•	Total:	11+	• AM sherds	**
			• Dressel 18m	**
KS 22			• Total:	3+
	TA sherds	101+		
	AM sherds	**	KS 243	
•	Total:	102+	• TA sherds	**
KG aa			• AM sherds	**
KS 22		**	• Total:	2+
•	TA sherds o Dressel 18m	**	KS 245	
•	AM sherds	2+	• TA sherds	**
•	Total:	∠+ <b>4</b> +	<ul><li>AM sherds</li></ul>	**
•	I otal:	47	• Total:	2+
KS 22	7		i i otai.	21
	TA sherds	2+	KS 246	
	AM sherds	1	• TA sherds	**
•	Total:	3+	• Total:	1+
KS 22	8		KS 247	
•	TA sherds	**	• TA sherds	**
•	AM sherds	4	• AM sherds	**
•	Total:	5+	• Total:	2+
KS 23	1		KS 252	
	TA sherds	7+	• TA sherds	**
	AM sherds	**	AM sherds	**
	• Spatheon	**	• Dressel 18m	**
•	Total:	9+	• Total:	3+
KS 23	3		KS 264	
•	TA sherds	**	• TA sherds	**
•	AM sherds	**	• Dressel 18m	**
•	Total:	2+	• AM sherds	**
			• Total:	3+
KS 23				
•	TA sherds	**	KS 267	
•	AM sherds	**	• TA sherds	**
•	Total:	2+	• Total:	1+
KS 24	0		Total TA + AM:	1,605
•	AM sherds	**		
•	Total:	1+	GRAND TOTAL DIAGNOS	STIC
KS 24	1		FINEWARE:	2,885
				<i>2</i> ,00J

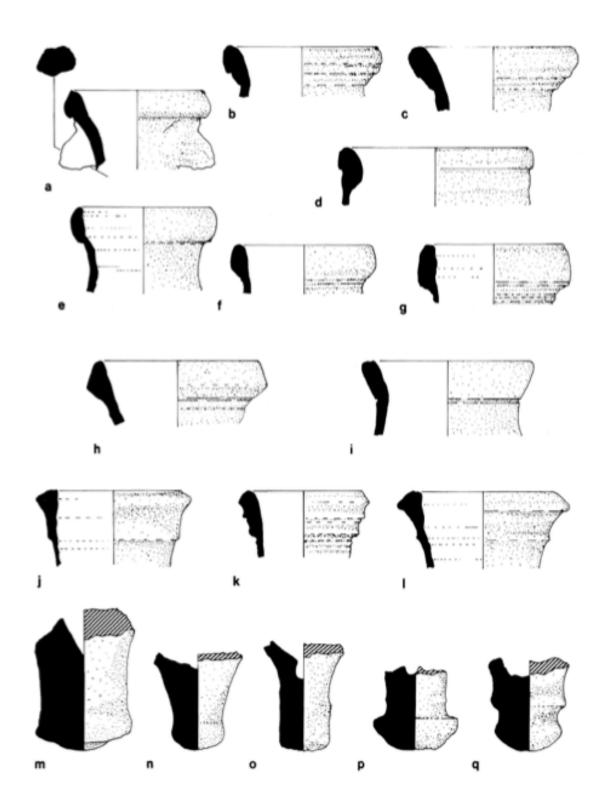


Figure 5: Amphorae types from the survey (after Neuru in Hitchner et al. 1990: 258).

## Fine Wares - Concordance By Site

Africa	n Red Slip Ware: <sup>65</sup>		<ul><li>ARS 91c</li><li>ARS Lion Mortarium</li></ul>	1 1
KS 01	0		ARS Elon Mortanum     ARS H	$1^{166}$
•	ARS Miscellaneous	57	ARS Lamp 2	1
•	Total:	57	• Total:	7
KS 012	2		KS 025	
•	ARS Miscellaneous	51	• ARS 27- coastal	1
•	Total:	51	• Total:	1
KS 014	4		KS 026	
•	ARS Unknown Form	20	• ARS 45	1
•	Total:	20	• Total:	1
KS 02	0		KS 027	
•	ARS 45	1	• ARS 6v	1
•	ARS 51	1	• ARS 45v	1
•	ARS 78v	1	• ARS 182v	1
•	Total:	3	ARS Miscellaneous	14
			• ARS Lamp 2	**
KS 02.			• Total:	18+
•	ARS 5	1		
•	ARS 27	1	KS 028	
•	ARS 91c	1	• ARS Lamp 2b	1
•	ARS Lamp 2	**	ARS Lamp nozzle	1
•	Total:	4+	• Total:	2
KS 022	2		KS 040	
•	ARS 1/5	1	• ARS 50	1
•	ARS 5	2	ARS Coastal	4
•	ARS 8	1	• Total:	5
•	ARS 51	1		
•	ARS 59a	1	KS 041	
•	ARS 87v	1	• ARS 51	1
•	ARS Lamp 2b	**	ARS Coastal	5
•	Total:	8+	• Total:	6
KS 02.	3		KS 042	
•	ARS 26/62	2	• ARS 4a	1
•	ARS 67/69v	1		

<sup>65</sup> ARS was found at 50 of the 84 sites, which had some form of pottery (59.5%).

<sup>66</sup> For more information about ARS and RS lettered forms and the forms equivalent to each, see the primary concordance.

• ARS 51	1	ARS Unknown Form
• ARS Northern	1	• Total:
• Total:	3	
	-	KS 202
KS 043		• ARS 26/181
ARS Coastal	9	• ARS 91
ARS Miscellaneous	2	• Total:
• Total:	11	
		KS 208
KS 045		ARS- unknown form
• ARS 45	1	• Total:
• Total:	1	
		KS 211
KS 047		• ARS 5
• ARS 77	1	• ARS 59
ARS Coastal	5	<ul> <li>ARS Misc northern</li> </ul>
• Total:	6	• Total:
KS 060		KS 213
ARS- unknown form	**	• ARS 6
• Total:	1+	• ARS 26/181
		• ARS 51
KS 072		• Total:
• ARS 5vs	1	
• ARS 45	1	KS 214
• ARS 181	1	• ARS 3
• Total:	3	• ARS 5
		• ARS 8
KS 074		• ARS 9
ARS- unknown form	**	• ARS 22
• Total:	1+	• ARS 23
		• ARS 23/181
KS 075		• ARS 27
ARS Coastal	4	• ARS Coastal- misc.
• Total:	4	<ul> <li>ARS Miscellaneous</li> </ul>
WG 004		• Total:
KS 081		
ARS Coastal	2	KS 215
• Total:	2	• ARS 3
VC 003		• ARS 185
KS 082	1	• ARS Coastal- misc.
• ARS 1/5	1	• ARS Misc closed
ARS Coastal	2	• ARS Misc northern lid
• ARS Northern	1	• Total:
ARS Thin Wall	1	

15 **20** 

\*\* \*\* 2+

\*\* 1+

3 1

1 5

\*\* \*\* 5 **7**+

1 4

17+

2 \*\*

2

1

1 7+

KS 216		KS 225		
• ARS Misc northern	2	• ARS 45	6	
• Total:	2	• ARS 50	**	
		• ARS 59?		
KS 218		• ARS 88/89	**	
• ARS 5	1	• ARS 88/181- black top	1	
• ARS 26- black top	1	• ARS Coastal- misc.	5	
• Total:	2	• Total:	15+	
KS 219		KS 226		
• ARS 3	3	• ARS- unknown form	**	
• ARS 5	**	• Total:	1+	
• ARS 26	1			
<ul> <li>ARS Miscellaneous</li> </ul>	5	KS 233		
<ul> <li>ARS Misc closed</li> </ul>	2	• ARS 5	2	
• Total:	12+	• ARS 26/181	2	
		• ARS Coastal- misc.	6	
KS 220		<ul> <li>ARS Miscellaneous</li> </ul>	6	
• ARS 22	2	• Total:	16	
• ARS Misc northern	3			
• Total:	5	KS 234		
WG 221		• ARS 3	6	
KS 221	4	• ARS Coastal- misc.	7	
• ARS 3	4	• Total:	13	
• ARS 26/181	1			
• ARS Coastal- misc.	3	KS 241	**	
• ARS Misc northern	4	• ARS 3	**	
• Total:	12	• ARS 5		
KS 222		• ARS 26/181	3 **	
• ARS 22	3	• ARS 27	**	
• Total:	3	• ARS 50/51		
i otai.	5	ARS Coastal- misc.     ARS Miss - northern	8 5	
KS 223		• ARS Misc northern		
• ARS 5	5	• Total:	20+	
• ARS 35	**	KS 242		
• ARS Coastal- misc.	4	• ARS 3	7	
• Total:	10+	• ARS 5	3	
		• ARS 26/181	4	
KS 224		• ARS 50/51	1	
• ARS 3	5	<ul> <li>ARS 50/51</li> <li>ARS Miscellaneous</li> </ul>	7	
• ARS 181	**	• Total:	22	
• Total:	6+	10(41.		

KS 243		• RS 92	**
• ARS 6	1	• RS- Atlante 67.7/8	**
• ARS 50	2	• RS- Stern 28	**
<ul> <li>ARS Miscellaneous</li> </ul>	8	• RS- Lamp 1	**
• Total:	11	• Total:	5+
KS 245		KS 002	
• ARS 3	8	• RS 91v	**
<ul> <li>ARS Miscellaneous</li> </ul>	9	• RS- Atlante 66.16	**
• Total:	17	• RS- Atlante 67.5	**
		• Total:	3+
KS 247			
• ARS 35?	1	KS 004	
ARS Miscellaneous	10	• RS 91	**
• Total:	11	• RS 103	**
VG 271		• RS 108	**
KS 251	0	• RS Atlante Form 66.9	**
ARS Coastal     ARS Northans	9	• RS Atlante Form 66.16	**
ARS Northern	3 **	• RS Atlante Form 66.22	**
ARS- unknown form		• RS Atlante Form 67.5	**
• Total:	13+	• RS Lamp 2b	**
KS 252		RS Miscellaneous	49
• ARS 27	1	RS Unknown Form	112
• ARS 185	1	• Total:	169+
<ul> <li>ARS Miscellaneous</li> </ul>	10	KS 005	
• Total:	10		**
i otai.	12	RD / Rulific 00.10	1+
KS 264		• Total:	1+
ARS Miscellaneous	11	KS 006	
• Total:	11	• RS- Atlante 67.5	**
		• Total:	1+
KS 267		10000	•
• ARS 3	9	KS 007	
• ARS 185	2	RS Unknown Form	**
• Total:	11	• Total:	1+
	-	KS 010	
Red Slip Ware (Local variants- A	ARS):67	RS Miscellaneous	125
WG 001		• Total:	125
KS 001	ste ste		
• RS 45cv	**	KS 014	
		RS Unknown Form	36

<sup>&</sup>lt;sup>67</sup> RS was found at 68 of the 84 sites, which had some form of pottery (80.95%).

KS 015		KS 022	
RS Miscellaneous	4	• RS 6	1
RS Unknown Form	23	• RS 12/102v	1
• Total:	27	• RS 23	1
		• RS 45	2
KS 020		• RS 45- late	1
• RS 26- late	2	• RS 62	1
• RS 67	3	• RS 67	4
• RS 81	1	• RS 67v	3
• RS 87	1	• RS 68/69	3
• RS 87v	5	• RS 80/81v	1
• RS 91	2	• RS 89	2
• RS 91a	1	• RS 91c	**
• RS 99	1	• RS 99c	1
• RS 181/26	1	• RS 181	1
RS Form A	**	RS Form A	**
• RS Form C	**	• RS Form B	**
• RS Form K?	**	• RS Form C	**
• RS Form M	**	• RS Form F	**
RS Form S	**	• RS Form G	**
• RS Form T	**	• RS Form H	**
• Total:	23+	• RS Form J	**
		RS Form O	**
KS 021		• RS Form Q	**
• RS 12/102- black top	1	RS Form S	**
• RS 26- late	2	• RS Form T	**
• RS 26v	5	• RS Lamp 1	**
• RS 27	1	• Total:	35+
• RS 62v	1		
• RS 67	1	KS 023	
• RS 68?	1	• RS 26	2
• RS 87	1	• RS 26L	2
• RS 87v	1	• RS 62v	1
• RS 89	1	• RS Form C	**
• RS 91	1	RS Form D	**
• RS 91b/c	1	RS Form Hv	**
• RS 105v	1	RS Form S	**
• RS Form C	**	• RS Form T?	**
• RS Form H	**	RS Miscellaneous	6
• RS Form M?	**	• Total:	16+
• RS Form S	**		
• RS Form V	**	KS 024	
• Total:	23+	• RS 26	1

•	RS 68	3	• RS 68	4
٠	RS 80v- unslipped	1	• RS 80v- unslipped	1
•	RS 87v	3	• RS 87	2
٠	RS 87- rouletted	1	• RS 87- rouletted	1
٠	RS Form A	**	• RS 91c/d	2
٠	RS Form C	**	• RS 181v	1
٠	RS Form D	**	• RS Black Top- Form 27	1
٠	RS Form S	**	• RS Form A	**
٠	RS Lamp 1b	**	• RS Form C	**
٠	RS Lamp 2	**	• RS Form D	**
٠	Total:	16+	• RS Form J	**
			• RS Form L	**
KS 02	25		• RS Form M	**
•	RS 27v	1	• RS Form O	**
•	RS 62v	1	• RS Form S	**
•	RS 67v	1	• RS Form T	**
•	RS 69v	1	• RS Lamp 1a	**
•	RS 87	5	• RS Lamp 1b	**
٠	RS 91	1	• Total:	31+
٠	RS 91b/c	1		
•	RS 105	2	KS 029	
•	RS 181v	1	• RS 26/62	1
•	RS Form A	**	• RS 68vs	1
•	RS Form C	**	• RS Form A	**
•	RS Form D	**	• RS Form C	**
•	RS Form E	**	• RS Form M	**
•	RS Form G	**	• RS Form S	**
•	RS Form H	**	• Total:	6+
•	RS Form I	**		
•	RS Form Kv	**	KS 030	
•	RS Form M	**	• RS 45v	**
•	RS Form S	**	• RS 68	**
•	Total:	24+	• RS 91b	**
			• RS 91c	**
KS 02			• RS Form A	**
•	RS 45	1	• RS Form C	**
•	RS Form S	**	• RS Form S	**
•	Total:	2+	• RS Form T	**
	-		• Total:	8+
KS 02				
٠	RS 23/26v	1	KS 031	
٠	RS 26- late	2	RS Unknown Form	17+
•	RS 26/181	4	• Total:	17+
•	RS 67	1		

KS 040		• RS 181b	1
• RS 26/181	2	• RS Lamp 2	1
• Total:	2	• Total:	19
KS 041		KS 051	
• RS 23a	1	RS Unknown Form	**
• RS 26- late	18	• Total:	1+
• RS 26/181- grand	2		
• RS 26/181- petit	3	KS 060	
• RS 27	1	RS Unknown Form	**
• RS 77	1	• Total:	1+
• RS 91- rouletted	1	WG 0 <b>-0</b>	
• RS Lamp 1a	1	KS 072	1
• Total:	28	• RS 26/181	1
		• Total:	1
KS 042	1	KS 074	
• RS 26/62	1	RS Unknown Form	**
• RS 26/181	2	• Total:	1+
• Total:	3	i otal.	1 '
KS 043		KS 075	
• RS 85v	1	• RS 26/181	1
• RS 91	2	• RS 89vs	1
• RS 91c	1	• Total:	2
• Total:	4	KS 077	
KS 045		• RS 26/181	7
• RS 26/62	1	• RS 91b	1
• RS 35	1	• RS 92	1
• Total:	2	• Total:	9
	-		
KS 046		KS 080	
• RS 26/181	5	• RS 77	1
• RS 45v BT	1	• RS 91c	1
• RS Coastal- stamped	1	• RS 108	1
• Total:	7	• RS Form A	**
		• RS Form D	**
KS 047	1	RS Form S	**
• RS 2/3?	1	RS Form X	
• RS 26/181	9	• Total:	7+
• RS 35?	3	KS 081	
• RS 62	2	• RS 61b	1
• RS 77	1	• RS 77?	5
• RS 110	1	• RS 80	1
		100 00	1

1	• RS 181/26	2+
1	• RS 182	**
**		**
**	• RS Form J	**
**	• RS Form S	**
**	• RS Form T	**
**	• RS Form X	**
**	RS Mortarium	**
**	• RS Lamp 2b	**
**	• Total:	13+
2		
19+	KS 208	
	• RS 26/181	10
	• RS 181/26	**
4	• RS Form T	9
3	• RS Form X	**
1	RS Miscellaneous	30
**	• Total:	51+
**		
**	KS 211	
**	• RS 3	**
**	• RS 23	2
**	• RS 23- variant	1
**	• RS 59?	**
15+	• RS 181/26	**
	• RS 182v	2+
	• RS Form G	**
**	• RS Form H	**
**	• RS Form N	2
2+	• RS Form S	1
	• RS Form T	**
	• RS Form U	1
	<ul> <li>RS Miscellaneous</li> </ul>	31
1+	<ul> <li>RS Miscellaneous- lid</li> </ul>	4
	• Total:	50+
ale ale		
		3
2+	• Total:	3
	KS 213	
**	• RS 68/69	**
**	RS Form D	7
**	RS Miscellaneous	32
	1 *** ** ** ** 2 19+ 4 3 1 ** ** ** ** ** ** ** ** 15+ ** ** 15+ ** ** 15+ ** ** ** ** ** ** ** ** ** ** ** ** **	1       • RS 182         **       • RS Form J         **       • RS Form S         **       • RS Form T         **       • RS Form X         **       • RS Form X         **       • RS Mortarium         **       • RS Lamp 2b         **       • RS 208         19+       KS 208         • RS Form T         3       • RS Form T         3       • RS Form T         3       • RS Form X         1       • RS Form X         **       • Total:         **       • Total:         **       • RS 597         15+       • RS 181/26         • RS 597       • RS 181/26         • RS 597       • RS Form G         **       • RS Form G         **       • RS Form G         **       • RS Form M         **       • RS Form N         2+       • RS Form S         • RS Form U       **         **       • RS Form N         2+       • RS Form M         **       • RS Form O         **       • RS Form O         **       • RS Form?

• Total:	40+	• RS 21
KS 214		• RS 26/181
• RS 21	**	<ul> <li>RS 181/26</li> <li>RS Misseller cours</li> </ul>
• RS 26/181	11	<ul><li> RS Miscellaneous</li><li> Total:</li></ul>
• RS 91?	**	• Iotai:
• RS 92	**	KS 221
• RS 181	5	RS Miscellaneous
• RS 181/26	3+	• Total:
• RS 182	**	
• RS 183/184	**	KS 222
RS Miscellaneous	33	RS Miscellaneous
• RS Misc knob	1	• Total:
• RS Misc lid	5	
• RS Misc stamped	1	KS 223
• RS Misc rouletted	4	• RS 26
• Total:	<b>68</b> +	• RS 26- late, black
		• RS 26/181
KS 215		• RS 27
• RS 182	**	• RS 68/69
RS Miscellaneous	34	• RS 181
• RS Misc palmette	1	• RS 181/26
• Total:	36+	• RS 182
		• RS 183v
KS 216	10	• RS Form A
• RS 26/181	12	• RS Form D
• RS 91b	2	• RS Form F
• RS 181	**	• RS Form H
• RS Form F	2	• RS Form J
RS Miscellaneous	35	• RS Form L
• Total:	52+	RS Form S
KS 218		RS Miscellaneous
• RS 10?	**	RS Misc stamped
• RS 10? • RS 68	**	RS Misc roulettee
<ul> <li>181/26</li> </ul>	**	RS Lamp 2
• Total:	3+	• Total:
i otai.	51	KS 224
KS 219		• RS 181
• RS 181/26	**	RS Miscellaneous
RS Miscellaneous	36	• Total:
• Total:	<b>37</b> +	i viai.
		KS 225
KS 220		• RS 23?

**	
1	
**	
37	
40+	

38 ous 38

	-	
٠	<b>RS</b> Miscellaneous	39
٠	Total:	39

S 22	3	
٠	RS 26	4
٠	RS 26- late, black top	1
٠	RS 26/181	13
٠	RS 27	**
٠	RS 68/69	**
٠	RS 181	2+
٠	RS 181/26	5+
٠	RS 182	**
٠	RS 183v	**
٠	RS Form A	19
٠	RS Form D	8
٠	RS Form F	3
٠	RS Form H	2
٠	RS Form J	5
٠	RS Form L	4
٠	RS Form S	**
٠	<b>RS</b> Miscellaneous	40
٠	RS Misc stamped	2
٠	RS Misc rouletted	4
٠	RS Lamp 2	1
٠	Total:	118+

٠	RS 181	6
٠	<b>RS</b> Miscellaneous	41
٠	Total:	47

•	RS 23?	**

•	RS 26- late	2
•	RS 26/181	5+
٠	RS 27	**
٠	RS 45	3
•	RS 50?	1
•	RS 51	1
٠	RS 68	2+
٠	RS 69	1
٠	RS 71- variant	1
٠	RS 80/81?	**
٠	RS 87?	**
٠	RS 91b	3
٠	RS 99	3
٠	RS 99v	1
٠	RS 181/26	9+
٠	RS 184v	**
٠	RS Mortarium- gritted	1
•	RS Form A	20
٠	RS Form B	2
٠	RS Form C	18
٠	RS Form D	10
•	RS Form D- black top	1
•	RS Form F	4
٠	RS Form G	2
٠	RS Form H- rouletted	1
•	RS Form I	1
•	RS Form J	6
•	RS Form K	1
٠	RS Form M	8
•	RS Form O	3
٠	RS Form S	2
•	RS Form T	10
•	RS Form X	3
•	RS Form Y-variant	1
•	RS Miscellaneous	42
•	RS Misc closed form	4
•	RS Miscconcentric groove	
•	RS Miscconcentric stamp	1
•	RS Misc lid	6
•	RS Misc stamped	3
•	RS Misc rouletted	5
•	RS Lamp 2	2
•	Total:	195+

KS 22	8			
•	RS- unknown form	**		
•	Total:	1+		
KS 23	1			
•	• RS 91- lion's head			
•	RS 181/26	**		
•	RS Form A	21		
•	RS Form D	10		
•	RS Miscellaneous	43		
•	RS Lamp 2	3		
•	Total:	<b>79</b> +		
KS 23.	3			
•	RS 181/26	**		
•	RS Form N	3		
•	<b>RS</b> Miscellaneous	44		
•	Total:	<b>48</b> +		
KS 23-	4			
•	RS 68/69	2		
•	RS 181/26	**		
•	RS 182	**		
•	RS Form D- black top	1		
•	RS Form J	7		
•	<b>RS</b> Miscellaneous	45		
•	RS Misc lid	7		
•	RS Misc stamped	4		
•	Total:	<b>68</b> +		
KS 24	0			
•	RS 185v	1		
•	Total:	1		
KS 24				
•	RS 26/181	14		
•	RS 45	**		
•	RS 91	**		
•	RS 181/26	**		
•	RS Mortarium	3		
•	RS Form A	**		
•	RS Form B	**		
•	RS Form S	**		
		-اد ماد		

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•	RS Miscellaneous	46
•	RS Misc closed form	5
•	Total:	75+
KS 24	2	
•	RS 26/181	15
٠	RS 27?	1
٠	RS 45	4
•	RS 91	4
•	RS 181/26	5+
•	RS 182	**
•	RS Lid	1
•	RS Form A	22
•	RS Form S	21
•	RS Form X	1
•	<b>RS</b> Miscellaneous	47
•	RS Misclid	8
•	Total:	130+
VC 24	2	

### KS 243

•	RS 26/181 RS 32/58	16 **
•	RS 62/63	1
٠	RS 68	**
٠	RS 181/26	3+
•	RS 182	**
•	RS Grooved	1
•	RS Form A	23
•	RS Form B	2
•	RS Form F	5
•	RS Form S	22
•	<b>RS</b> Miscellaneous	48
•	Total:	124+

## KS 245

•	RS 26- late, black top	2
•	RS 45?	2
•	RS 181/26	2+
٠	RS Form H- rouletted	1
٠	RS Miscellaneous	49
٠	Total:	56+

## KS 251

•	RS Miscellaneous	50
•	RS Misc lid	9
•	Total:	59

### KS 252

•	RS 26/181	17
•	RS 181/26	**
•	RS 182	2+
•	<b>RS</b> Miscellaneous	51
•	Total:	71+

### KS 264

•	RS 26- late	3
٠	RS 26/181	18
٠	RS 98	1
٠	RS 182	**
٠	RS 185	1
٠	RS Form H	4
٠	<b>RS</b> Miscellaneous	52
٠	Total:	80+

#### KS 267

٠	Total:	55+
٠	RS Miscellaneous	53
٠	RS Form B?	1
•	RS 182	**

# Coarseware – Concordance By Site

KS 00.	1		• Total:	568
•	Dolium	**		
•	Mortarium	**	KS 012	
٠	Total:	2+	Basin	3
			Black Top	13
KS 00.			Black Top Lid	4
•	Hand Made	**	<ul> <li>Black Top Form 196</li> </ul>	1
•	Total:	1+	Cookware	60
			Coastal Cookware	1
KS 00-			Early Roman Coarse Ware	1
•	Basin	**	Miscellaneous Coarse Ware	18
•	Black Top	47+	• Pale Jar	$1^{68}$
•	Hand Made	5	Small Coarse Ware	88
•	Miscellaneous Coarse Ware	6 **	<ul> <li>Storage Vessel</li> </ul>	$27^{69}$
•	Mortarium		• Total:	217
•	SB Striped	2	WG 014	
•	Small Coarse Ware	507	KS 014	-
•	Total:	569+	• Basin	5
KS 00.	5		• Black Top	50
NS 00.	Black Top	**	• Early Roman Coarse Ware	1 **
•	Mortarium	**	Hand Made	
•	Total:	2+	<ul> <li>Miscellaneous Coarse Ware</li> <li>Montarium</li> </ul>	3 2
	i otai.	<i>2</i> '	<ul><li>Mortarium</li><li>Small Coarse Ware</li></ul>	2 689
KS 00	6			2
•	Black Top	**	<ul><li>Storage Vessel</li><li>Total:</li></ul>	2 753+
•	Total:	1+	, iotai.	155+
			KS 015	
KS 00	7		Black Top Lid	5
٠	Basin	**	• SB Striped	1
•	Dolium	**	Small Coarse Ware	77
•	Total:	2+	• Total:	83
KS 01		_	KS 020	
•	Basin	4		
•	Black Top	95	<sup>68</sup> This sherd, found in the south necr	
•	Dolium	2	important to discuss as it is dated to the p period, along with the sherd recovered at sit	
•	Early Roman Coarse Ware	2	<sup>69</sup> In the field notes, the description o	
•	Hand Made	2	vessels' is not entirely clear. It would ge	nerally be
•	Miscellaneous Coarse Ware	101	assumed that they are types of amphorae, they may just as easily be dolia. Du	
•	Mortarium	1	discrepancy, these and the following sherd	
•	Red Cookware	9	'storage vessels' are not included in either	
•	Small Coarse Ware	352	however, they are discussed.	

Basin Form A	**	• SB Striped **	:
Basin Form D	**	Shiped     Small Coarse Ware 2+	_
<ul> <li>Basin Form E</li> </ul>	**	• Total: 24	
<ul> <li>Basin Form J/K</li> </ul>	**	· 10tal. 24	Т
<ul> <li>Basin Form K</li> </ul>	**	KS 022	
<ul><li>Basin Form Nv</li></ul>	**	Basin Form A     **	
<ul> <li>Basin Form Q</li> </ul>	**	Basin Form C **	
<ul> <li>Basin Form R</li> </ul>	**	Basin Form E     **	
<ul> <li>Basin Form T</li> </ul>	**	Basin Form F     **	
<ul><li>Basin Form 197</li></ul>	**	Basin Form H     **	
	4+	Basin Form I     **	
<ul><li>Black Top</li><li>Black Top Lid</li></ul>	4⊤ 2	Basin Form K **	
<ul><li>Black Top Lid</li><li>Dolium Form C</li></ul>	∠ **	Basin Form M     **	
<ul><li>Dolium Form D</li></ul>	**	Basin Form Q     **	
<ul><li>Dolium Form G</li></ul>	**	Basin Form T     **	
<ul> <li>Dolium Form J</li> </ul>	**	Basin Form 197     **	
<ul> <li>Dolium Form K</li> </ul>	**	Black Top     16	+
<ul> <li>Dolium Form L</li> </ul>	**	Black Top Lid 5+	
<ul><li>Dolium Form L</li><li>Dolium Form My</li></ul>	**	Dolium Form A     **	
<ul><li>Dolium Form MV</li><li>Dolium Form N</li></ul>	**	Dolium Form D     **	
<ul><li>Dolium Form N</li><li>Dolium Form O</li></ul>	**	Dolium Form E     **	
	**	Dolium Form Gv **	
<ul><li>Dolium Form P</li><li>FB Form 2d</li></ul>	**	Dolium Form H     **	
	2+	Dolium Form M     **	:
<ul><li>Hand Made</li><li>Miscellaneous Coarse Ware</li></ul>	∠⊤ 4	Dolium Form N     **	
<ul><li>Red Cookware</li></ul>	4 **	• FB Form 2c **	
<ul> <li>Small Coarse Ware</li> </ul>	**	• Mortarium 3+	_
<ul><li> Sman Coarse ware</li><li> Total:</li></ul>		Red Cookware     **	
• Total:	35+	• SB Form 2b/c **	
KS 021		• SB Form 2d **	
Basin Form C	**	• SB Striped **	
Basin Form E	**	Shiped     Small Coarse Ware     **	
Basin Form K	**	• Total: 48	×+
Basin Form L	**	10tai. +0	
Basin Form S	**	KS 023	
<ul> <li>Black Top</li> </ul>	**	Basin Form A     **	:
<ul> <li>Black Top Lid</li> </ul>	8+	Basin Form D?     **	:
Dolium Form J	**	Basin Form E     **	:
• FB Form 2b	**	Basin Form Jv     **	:
• FB Form 2c	**	Basin Form K     **	:
• FB Form 2d	**	Basin Form L     **	:
<ul><li>Mortarium</li></ul>	**	Black Top     8+	-
Red Cookware	**	Black Top Lid	
<ul> <li>SB Ware</li> </ul>	**	Black Top Basin     **	:

٠	Dolium Form C	**	KS 026	
•	Dolium Form Q	**	Black Top	2+
•	Dolium Form R	**	Dolium Form G	**
•	FB Form 2d	**	• Total:	3+
•	Mortarium	**		
•	Red Cookware	**	KS 027	
•	Small Coarse Ware	**	Basin Form A	**
•	Total:	23+	Basin Form B	**
			Basin Form C	**
KS 024			Basin Form D	**
•	Basin Form A	**	Basin Form E	**
•	Basin Form E	**	Basin Form F	**
•	Basin Form M	**	Basin Form G	**
•	Basin Form O	**	Basin Form H	**
•	Black Top	6+	Basin Form J	**
•	FB Form 2c/d	**	• Basin Form L	**
•	FB Form 2d	**	Basin Form M	**
•	Hand Made	**	Basin Form N	**
•	Mortarium	**	Basin Form O	**
•	Red Cookware	**	Basin Form P	**
•	SB Striped Form A	**	Basin Form Qv	**
•	Small Coarse Ware	**	Black Top	3+
•	Total:	17+	Black Top Lid	6
			Dolium	37+
KS 025			Dolium Form B	**
•	Basin Form A	**	Dolium Form C	**
•	Basin Form C	**	Dolium Form G	**
•	Basin Form E	**	Dolium Form H	**
•	Basin Form H	**	Dolium Form I	**
•	Basin Form K	**	<ul> <li>Dolium Form J- Large</li> </ul>	**
•	Basin Form L	**	Dolium Form Nv	**
•	Basin Form 197	**	• FB Form 2	**
•	Black Top	11+	• FB Form 2b	**
•	Black Top Jar	2	• FB Form 2c/d	**
•	Black Top Lid	4	• FB Form 2d	**
•	Dolium Form A	**	Hand Made	37+
•	Dolium Form B	**	Miscellaneous Coarse Ware	59
٠	Dolium Form D	**	Red Cookware	**
•	Dolium Form F	**	Small Coarse Ware	38+
•	Mortarium	**	Storage Vessel	3
•	Red Cookware	**	• Total:	210+
•	Small Coarse Ware	**		
•	Total:	31+	KS 028	

• Miscellaneous Coarse Ware 8

•	Red Cookware	**
•	Small Coarse Ware	**
•	Total:	10+

•	Basin Form D	**
•	Basin Form F	**
•	Black Top	**
•	Dolium	**
•	Dolium Form B	**
•	Dolium Form C	**
•	Total:	6+

### KS 030

•	Basin	2+
•	Black Top	2+
•	Dolium Form Rv	**
•	Miscellaneous Coarse Ware	**
•	Mortarium	2+
•	Red Cookware	**
•	Small Coarse Ware	2+
•	Total:	11+

### KS 031

•	Basin	35
•	Basin Form 197	**
•	Black Top	23+
•	Black Top Jar	5
•	Black Top Lid	124
•	Dolium	84+
•	Handmade	5+
•	Miscellaneous Coarse Ware	189
•	Mortarium	7
•	SB Ware	2+
•	Small Coarse Ware	241
•	Storage Vessel	59
•	Total:	775+

# KS 040

•	Basin	**
•	Black Top	5+
•	Dolium	**
•	Hand Made	**
•	Mortarium	**

٠	Red Cookware	**
٠	Small Coarse Ware	64+
٠	Total:	74+

#### KS 041

•	Basin	**
•	Black Top	2+
٠	Dolium	**
٠	Mortarium	**
٠	Red Cookware	**
٠	Small Coarse Ware	41+
•	Total:	47+

### KS 042

٠	Basin	**
٠	Black Top	**
٠	Dolium	**
٠	Hand Made	**
٠	Red Cookware	**
٠	Small Coarse Ware	2+
		<b>-</b> .

• Total: 7+

# KS 043

•	Basin	7+
٠	Black Top	**
•	Dolium	**
•	Mortarium	4+
•	Red Cookware	**
•	Small Coarse Ware	45+

• Total: 59+

### KS 045

•	Black Top	**
•	Red Cookware	**

• Total: 2+

#### KS 046

٠	Basin	**
٠	Black Top	**
٠	Dolium Form Vs	**
٠	Mortarium	**
٠	Red Cookware	**
٠	Small Coarse Ware	24+
٠	Total:	29+

•	Basin	7+
٠	Black Top	**
٠	Dolium	**
٠	Red Cookware	**
٠	Small Coarse Ware	68+
•	Total:	78+
KS 05	51	
•	Red Cookware	**
•	Total:	1+
KS 05	52	
•	Small Coarse Ware	6+
•	Total:	6+
KS 06	50	
•	Basin	10+
•	Black Top	2+
•	Black Top Form 262	**
•	Dolium	**
•	Hand Made	5+
•	Mortarium	**
•	Red Cookware	**
•	Small Coarse Ware	107 +
•	Total:	128+
KS 06	52	
	р <sup>.</sup>	4

#### ŀ р.

KS 047

•	Total:	11+
٠	Small Coarse Ware	**
٠	Hand Made	6+
•	Basin	4+

### KS 068

•	Hand Made	7+
•	Total:	7+

### KS 069

•	Hand Made Jar	**
•	Total:	1+

#### KS 071

•	Black Top	**
•	Hand Made	2+
•	Red Cookware	**

•	Total:	4+
KS 07.	2	
•	Black Top	**
•	Red Cookware	**
•	Small Coarse Ware	29+
•	Total:	31+
KS 07.	3	
•	Small Coarse Ware	2+
•	Total:	2+
KS 07	1	
•	Dolium	**
•	Hand Made	4+
•	Red Cookware	**
•	Small Coarse Ware	13+
•	Total:	19+
KS 07	5	
•	Basin	**
•	Black Top	**
•	Red Cookware	**
•	Small Coarse Ware	**
•	Total:	4+
KS 07	7	
•	Basin	**
•	Black Top	**
•	Dolium	**
•	Red Cookware	**
•	Small Coarse Ware	**
•	Total:	5+
KS 08	0 <sup>70</sup>	
•	Basin Form N	**
•	Basin Form Q	**
•	Basin Form R	**
•	Basin Form T	**
•	Basin Form V	**

<sup>70</sup> Sherds recovered at this site due to diagnostic, as well as intensive, sherd collection. Refer to Chapter 2 for more information about the various collection methods and possible problems.

•	Black Top	**
•	Dolium Form G	**
•	Dolium Form U	**
•	Red Cookware	**
•	Small Coarse Ware	15+
•	Total:	24+

•	I otal:	<b>24</b> +
5 08	1	
٠	Basin	19+
٠	Basin Form C	**
٠	Basin Form D	**
٠	Basin Form G	**
٠	Basin Form J	**
٠	Basin Form K	**
٠	Basin Form M	**
٠	Basin Form Q	**
٠	Basin Form S	**
٠	Basin Form U	**
٠	Basin Form V	**
٠	Black Top	2+
٠	Black Top Jar	3
٠	Black Top Lid	15
٠	Dolium Form A	**
٠	Dolium Form F	**
٠	Dolium Form G	**
٠	Dolium Form J	**
٠	Dolium Form Ov	**
٠	Dolium Form Q	**
٠	Dolium Form U	**
٠	FB Form 2	**
٠	FB Form 2d	**
٠	Hand Made	2+
٠	Miscellaneous Coarse Ware	4
•	Mortarium	**

Mortarium • \*\* Red Cookware ٠ • SB \*\* • Small Coarse Ware 46+ • Storage Vessels 68 • Total: 181+

### KS 082

•	Basin	**
•	Black Top	7+
•	Dolium Form Av	**

•	FB Form 2b	**
•	FB Form 2d	**
•	Miscellaneous Coarse Ware	1
•	Red Cookware	**
٠	Small Coarse Ware	65+
٠	Storage Vessels	4
٠	Total:	82+

### KS 083

•	Black Top	3+
٠	Early Roman Coarse Ware	1
٠	Hand Made	12+
٠	Miscellaneous Coarse Ware	1
٠	Red Cookware	**
٠	Small Coarse Ware	9+
٠	Storage Vessels	6
٠	Total:	33+

# KS 084

٠	Black Top	**
٠	Hand Made	6
•	Red Cookware	**
٠	Small Coarse Ware	3
•	Total:	11+

# KS 085

•	Total:	125+
٠	Storage Vessels	**
٠	Small Coarse Ware	35+
٠	Miscellaneous Coarse Ware	12
٠	Hand Made	66+
•	Black Top Lid	5
٠	Black Top	6+

### KS 087

•	Basin	11
٠	Black Top	152
٠	Early Roman Coarse Ware	3
٠	FB Ware	1
•	Hand Made	10
•	Miscellaneous Coarse Ware	147
•	Mortarium	6
•	Red Cookware	62

Red Cookware 62

	Total:	837
•	Storage Vessel	7
•	Small Coarse Ware	43871

٠	Basin	3+
•	Black Top	24
•	Black Top Form 196	**
•	FB Form 2	**
•	Hand Made	4+
•	Miscellaneous Coarse Ware	32
•	Mortarium	3
•	Red Cookware	64+
•	Small Coarse Ware	16+
•	Total:	148+

# KS 208

•	Total:	179+
•	Small Coarse Ware	44+
•	Red Cookware	11+
•	Mortarium	3+
•	Miscellaneous Coarse Ware	102
•	Hand Made	4
•	Black Top	15+

### KS 209

٠	Total:	20+
•	Small Coarse Ware	9+
•	Red Cookware	3
•	Miscellaneous Coarse Ware	7
٠	Basin	1

#### KS 210

•	Miscellaneous Coarse Ware Red Cookware	4 2+
•	~ ** ~	4+
•	Total:	10+

### KS 211

•	Basin Form E	**
•	Basin Form Q	**

•	Black Top	15+
•	Hand Made	2+
•	FB Form 2b	**
•	Red Cookware	6+
•	Small Coarse Ware	38+
•	Total:	64+

#### KS 212

•	Basin	**
•	Total:	1+

#### KS 213

٠	Basin	1
٠	Basin Form Av	**
٠	Black Top	3
٠	Red Cookware	26+
٠	Small Coarse Ware	26+
٠	Total:	57+

#### KS 214

417	r	
٠	Basin	7+
•	Basin Form C	**
•	Basin Form E	**
•	Basin Form T	**
•	Black Top	91+
•	Black Top Lid	2
•	Early Roman Coarse Ware	2+
•	FB Form 2b	**
•	Miscellaneous Coarse Ware	9
٠	Mortarium	2+
•	Red Cookware	69+
٠	Small Coarse Ware	131+
٠	Total:	317+

#### KS 215

٠	Basin Form F	**
٠	Black Top	4+
٠	Red Cookware	13+
٠	Small Coarse Ware	13+
٠	Total:	31+

### KS 216

•	Black Top Lid	1
---	---------------	---

Red Cookware
 \*\*

<sup>&</sup>lt;sup>71</sup> One of these sherds is that which has been mentioned previously, it presented a painted circle design and has been dated to the second century B.C.

•	Small Coarse Ware	**
•	Total:	3+

•	Basin	3
•	Basin Form Q	**
•	Black Top	8+
•	Black Top Lid	2
•	Miscellaneous Coarse Ware	46
•	Mortarium	1
•	Red Cookware	2+
•	Small Coarse Ware	**
•	Total:	64+

### KS 219

•	Basin Form C	**
•	Black Top	**
•	FB Ware	**
•	Hand Made	**
•	Red Cookware	**
•	Small Coarse Ware	**
•	Total:	6+

### KS 220

•	Basin	2+
•	Black Top	15+
•	Black Top Lid	2
•	Miscellaneous Coarse Ware	3
•	Red Cookware	**
•	Small Coarse Ware	22
•	Total:	45+

### KS 221

٠	Black Top	10
٠	Black Top Lid	2
•	Miscellaneous Coarse Ware	33
•	Red Cookware	20
•	Total:	65

# KS 222

•	Basin	1
•	Basin Form T	**
•	Black Top	28+
•	Black Top Lid	3

•	Early Roman Coarse Ware	1
•	Hand Made	4
•	Miscellaneous Coarse Ware	102
•	Red Cookware	21+
•	Small Coarse Ware	38+
•	Total:	199+

#### KS 223

	E	
•	Basin Form C	**
•	Basin Form L	**
•	Basin Form Q	**
•	Black Top	30+
•	Black Top Lid	1
•	FB Form 2a	**
•	FB Form 2b	**
•	Hand Made	7+
•	Miscellaneous Coarse Ware	22
•	Red Cookware	**
•	Small Coarse Ware	141+
•	Total:	207+

### KS 224

٠	Basin	3
•	Basin Form Cv	**
•	Basin Rim	1
•	Black Top	3+
•	Early Roman Coarse Ware	2
•	Miscellaneous Coarse Ware	12
•	Red Cookware	**
•	Small Coarse Ware	**
٠	Total:	24+

#### KS 225

•	Basin	1
•	Basin Form C	**
•	Basin Form F	**
•	Basin Form J	**
•	Basin Form Q	**
•	Basin Form T	**
•	Black Top	61+
•	Black Top Lid	6
•	Dolium Form I	**
•	Early Roman Coarse Ware	**
•	FB Form 2b	**

•	FB Form 2d	с .
•	Hand Made	5+
•	Miscellaneous Coarse Ware	46
•	Red Cookware	4+
•	Small Coarse Ware	270 +
•	Storage Vessel	1
•	Total:	403+

•	Basin	1
•	Black Top	7
•	Black Top Form 110	1
•	Black Top Form 196	1
•	Black Top Lid	2
•	Miscellaneous Coarse Ware	5
•	Red Cookware	**
•	Small Coarse Ware	36+
•	Total:	54+

# KS 228

•	Total:	47+
•	Red Cookware	**
•	Miscellaneous Coarse Ware	36
•	Black Top Lid	1
•	Black Top	8+
•	Basin	1

# KS 231

•	Total:	36+
•	Small Coarse Ware	32
•	Miscellaneous Coarse Ware	1
•	Black Top	2
•	Basin Form Cv	**

# KS 233

•	Basin Form Q	**
•	Black Top	**
•	Dolium Form D	**
•	Mortarium	**
•	Red Cookware	**
•	Small Coarse Ware	**
•	Total:	6+

# KS 234

•	Black Top	**
٠	Mortarium	**
٠	Red Cookware	**
٠	Small Coarse Ware	**
•	Total:	4+

### KS 240

٠	Basin Form F	**
٠	Black Top	**
•	Small Coarse Ware	**

• Total: 3+

# KS 241

•	Basin Form A	**
٠	Basin Form C	**
٠	Basin Form D	**
٠	Basin Form L	**
٠	Basin Form Mv	**
٠	Basin Form Q	**
•	Basin Form V	**
•	Dolium Form A	**
٠	Dolium Form D	**
٠	Dolium Form I	**
٠	Dolium Form M	**
٠	Dolium Form N	**
٠	Dolium Form R	**
٠	Dolium Form T	**
٠	FB Form 2	**
٠	FB Form 2a	**
٠	Hand Made	**
٠	Mortarium	**
٠	Red Cookware	**
٠	Small Coarse Ware	**
٠	Total:	20+

# KS 243

٠	Basin Form T	**
٠	Black Top	**
٠	FB Form 2c/d	**
٠	Hand Made	**
٠	Red Cookware	**
٠	Small Coarse Ware	**
٠	Total:	6+

•	FB Form 2b	**
٠	Red Cookware	**
٠	Small Coarse Ware	**
٠	Total:	3+

# KS 246

٠	Red Cookware	**
٠	Total:	1+

### KS 247

** **
**
**
**
5+

# KS 249

•	Early Roman Coarse Ware	**
•	Small Coarse Ware	**
•	Total:	2+

\*\*

### KS 252

• Basin Form Q

Black Top \*\*
FB Form 2b/c \*\*
Hand Made \*\*
Red Cookware \*\*
Small Coarse Ware \*\*
Total: 6+

#### KS 264

٠	Basin Form C	**
٠	Black Top	**
٠	Hand Made	**
٠	Mortarium	**
٠	Red Cookware	**
•	Small Coarse Ware	**

• Total: 6+

# KS 267

•	Black Top	**
•	Red Cookware	**
٠	Small Coarse Ware	**

• Total: 3+

# **GRAND TOTAL COARSEWARE: 7,251**

#### **Chapter 4: Interpretation of Ceramic Patterns**

There are certain ARS and RS forms that are not discussed in the present chapter, primarily the miscellaneous categories of finewares and the wares which presented forms not clearly identifiable as a dish or a bowl for instance. Therefore, this chapter does not claim to provide an exhaustive account of every ARS and RS form recovered in Kasserine. However, that which is presented below does allude to an interesting preference, on the part of those in Kasserine, in terms of fineware and coarseware vessels.<sup>72</sup>

#### Discussion of ARS Vessels

There were 493 diagnostic ARS sherds recovered throughout the course of the survey. 336 of the recovered sherds are from forms which did not clearly provide information concerning the nature of the vessel (including various miscellaneous forms, coastal, and northern, etc.). Therefore, of the 157 remaining sherds, dishes and flat-based dishes account for the majority of the forms recovered (118 sherds). 21 sherds comprise various forms of bowls, including large and small varieties. There are 11 sherds from three different forms which were identified as various lids. Interestingly, there were only 2 sherds from casserole forms and 1 sherd from a large plate form. This information considered together would seem to suggest some type of, if not largely communal, at least familial dining practice. Plates and bowls are generally indicative of individual dining practices, forms which are relatively underrepresented in this assemblage.

#### Discussion of RS Vessels

There was much more evidence for local RS pottery than there was for ARS wares, the RS assemblage presented a total of 2,352 sherds. Unfortunately for the present discussion, nearly

<sup>&</sup>lt;sup>72</sup> Information concerning the type of vessel which each ARS and RS form represents was compiled from Hayes 1972; 1980. For an illustration of this distribution see the Overall Catalog in Chapter 2.

80% of these sherds (1,865) were from either RS lettered or miscellaneous forms. While tentative dating information can be gleaned from the similarities between RS lettered forms and ARS forms as well as a possible date for the miscellaneous forms, these categories do not present firm evidence concerning vessel form. Ultimately, of the remaining fragments it becomes clear that the local fineware assemblage is also dominated by various dish forms, as was the ARS category (286 sherds, roughly 67%). This is not entirely surprising due to the fact that it was a common practice to import various ARS dish forms. Therefore, it is likely that when those in the Kasserine region began producing their own local finewares, the primary forms would be those of various dishes, in order to serve the need for such vessels in the area (i.e. the presumed practice of communal/familial dining). The RS wares also represent fifteen primary vessel categories, while the ARS forms only represent nine. In addition to the dish forms, there were also 98 sherds from various forms of RS bowls, the second most represented category. Furthermore, there was evidence for 16 lids, 15 large plates, 10 casseroles, and 1 cruet.

#### Discussion of Coarseware Vessels

There were 7,251 coarseware fragments recovered, the overwhelming majority of which were small coarseware fragments which accounted for 3,852 sherds (53% of total coarseware assemblage). The small coarsewares are interesting for multiple reasons, one of which is that they were nearly ubiquitous at the surveyed sites. Furthermore, the 1,015 miscellaneous coarseware fragments, while not confirmed as representative of any individual category, were strongly suggested in the field notes to have been from small coarseware vessels. Therefore, it is clear that the coarseware assemblage was dominated by various small coarseware forms. These fragments may have served any number of functions, many likely served as various cookware forms, but they may also have played a role in agricultural production due to their presence at a

number of production sites. There were also 1,023 sherds of black top ware recovered, a specific type of cookware. The region was rife with sherds from multiple cookware forms including black top as well as red cookware (356 sherds). 250 basin sherds were recovered which testifies to the large diversity of forms present within this region. There was a relatively small quantity of dolia fragments recovered (191) as well as 178 sherds of storage vessels. These storage vessels may have been varying forms of dolia, or may have been amphorae sherds. These large storage vessels are relatively rare in the overall quantity of recovered coarsewares and may suggest one of two things. Either those in Kasserine did not have a tremendous need to store various agricultural goods, as most was consumed or exported, or these goods may have been stored in other ways. The most interesting pieces recovered were the 15 ERC sherds, dating to the earliest periods of Roman control of the area, and the only 2 pre-Roman sherds recovered on these typically Roman sites.

#### **Chapter 5: Interpretation of Evidence – Sectors and Sites**

As previously stated, the chronology of the finewares ranges from the middle first through the middle seventh centuries. However, the majority of sherds are later, dating primarily to the third to seventh centuries. For instance, there is a marked decrease in the amount of ARS dated to the fourth century in comparison to the amount that dates to the third.<sup>73</sup> This is even clearer due to the fact that 60 of 84 sites with ceramic evidence had a greater quantity of RS than ARS sherds and, in most cases, the difference was substantial. 15 of the 84 sites had the same amount of ARS and RS, which in most cases was because the site did not report any of either type. Therefore, only 9 sites had a higher quantity of ARS than RS, 4 of which were in Sector 5.

Sector 1 presented 38 of the sites which had more RS than ARS, while Sector 2 presented 7, Sector 3 accounted for 8 such sites, Sector 4 (KS 031) had 1 such site, and Sector 5 had 6 sites with more local than imported finewares. Therefore, many of these sites should have later dates, especially considering the quantity of ARS sherds that can be dated to the earliest parts of the empire (first and second centuries). For instance, 106 of the 238 precisely dateable ARS sherds recovered (44.5%) are from forms that date exclusively, or at least primarily, to this period. Thus, nearly one half of the recovered ARS sherds date to the period in which the interaction with the coast was most prominent, and this was also the period predating the development of local fineware production. Therefore, it is clear that once local production began in the region there was a significant decrease in imported wares.

<sup>&</sup>lt;sup>73</sup> Similarly, in her report on the pottery from Leptiminus, Karen Carr states that, "there is considerably less imported slipped table ware (*ARS fineware*) at Leptiminus in the 4<sup>th</sup> c. than there was in the 3<sup>rd</sup> c. – or at least much less of it reached the suburban periphery." While, at the same time, imported ARS C and E wares were found in the urban survey and the quantity of ARS again increased in the fifth century (Carr 2009: 108). This is indicative of Bonifay's suggestion (2013: 542-557) that more local production occurs on inland sites than in coastal areas. It also suggests a potentially interesting dichotomy between the pottery present in urban as opposed to suburban areas within the same survey region. The ways in which different regions developed after instances of decreased contact with northern Tunisia will be presented further below.

This relative dating is supported by the work of Neuru who indicates that the finewares at Kasserine suggest the inhabitants were importing ARS from the coast in the first and second centuries, namely ARS forms 3, 4, 5, 6, 8, 22, 23, 26, 27, 181, and 182. By the third century ARS forms 45, 50, and 58 were being imported as well. Also, in the second century local imitations began being produced. This claim is supported by the substantial increase in the quantity of RS sherds from the first to second centuries: 381 RS sherds are from a form that began being produced in the second century, compared to only 24 sherds from RS forms which began in the first century. Furthermore, certain forms, such as Hayes 87 and 90, may have continued being locally produced into the sixth century. Forms such as 91c, 91d, 102, 108, and 110 were produced in the sixth and seventh centuries and also appear at Carthage, thus possibly indicating a renewed connection with the coast under influence of the Justinianic re-conquest of the area.<sup>74</sup> This final suggestion, while interesting, is more difficult to confirm. Only nine ARS sherds were reported in the present catalog which dated to the sixth and seventh centuries, only two of which are from forms that began production in this time. The majority of these pieces are of forms, such as 91 'c' and 'd,' which continue in use into these later periods but did not necessarily begin production due to a re-conquest of the area.

However, it is apparent that an increase in the quantity of RS coupled with a subsequent decrease in ARS suggests the possibility of less contact with the coast. Michel Bonifay discusses that generally inland regions of Africa not only have vastly different pottery assemblages than those of coastal cities, but also that the inland regions tend to receive less of the 'typical' fineware forms and thus, generally rely on more locally produced variants. He also suggests that the relative importance of a site, regardless of whether it is a coastal or inland site, would be

<sup>&</sup>lt;sup>74</sup> For more information concerning the production of local variants and the renewed connection with Carthage see especially, Neuru in Hitchner et al. 1990: 255-259; Neuru, Kyle, Demers, and Hayes 1980.

more likely to determine its pottery assemblage, as a more important inland site may have less local wares than a less important coastal site.<sup>75</sup> Therefore, it is clear that there is no single method by which these assemblages can be interpreted. However, the overwhelming amount of locally produced wares at Kasserine including finewares, amphorae, and coarsewares, combined with the region's geographical location, strongly suggests that this was an area that by the thirdfourth centuries had become more heavily focused on local production.<sup>76</sup>

The most active period of this local production in the Kasserine region is considered to have been the fourth and potentially the fifth century. At this time new local facsimiles began being produced primarily including versions of ARS forms 59, 77, and 87 among others.<sup>77</sup> Recovered at Kasserine were 92 ARS sherds of a form that began in the third century, compared to 12 ARS sherds that began being produced in the fourth century. The total quantity of ARS sherds recovered dating from the third-sixth c. is 111. This is in stark contrast to the 30 RS sherds recovered which began production in the third and 55 sherds beginning in the fourth century. The total RS recovered dating from the third-sixth c. was 214. Accounting for every period in which these forms occurred, that is, accounting for their entire date range instead of simply the century in which their production began, the total ARS from the third-sixth century becomes 169 compared to 678 RS sherds from the same period.

				Total (3rd-6th)-
	3rd Century	4th Century	Total (3rd-6th)	entire range
ARS	92	12	111	169
RS	30	55	214	678

#### *Table 3: Comparison of ARS and RS in third – sixth centuries*

<sup>&</sup>lt;sup>75</sup> Bonifav 2013: 542-557. Further clarifying his argument, he states that, "as with amphorae, inland regions seem to have vastly different patterns of fine wares in comparison to coastal regions" (Bonifay 2013: 547). <sup>76</sup> Neuru in Hitchner et al. 1990: 255-259.

<sup>&</sup>lt;sup>77</sup> Neuru in Hitchner et al. 1990: 255-259. Aside from the second century with 381 RS sherds, the fifth century presenting 100 RS sherds, is the period with the most evidence for local production, ultimately confirming Neuru's suggestion.

This is a significant difference in overall quantity, which, at one level, may be explained by the relative ease of obtaining RS as opposed to ARS ceramic. Although, when the numbers from the first century are compared to those from the second, it becomes clear that there was a conscious choice made, on the part of those in Kasserine, to begin producing their own local variants.<sup>78</sup> Due to the steadily decreasing presence of ARS sherds from the first through fourth centuries the difference between the first and second centuries may be an early indication of the interest in Kasserine to focus on local production and distribution which only becomes clearly evident in the fourth century and later. The following discussion illustrates these differences even more clearly, demonstrating the distribution of pottery sherds in each sector, each of which is comprised of a varying number and type of individual sites.

#### Distribution by Sector

Sector 1 – Overall Chronology: Early/Middle 1st century – Middle 7th century

- Sector 1 encompasses 46 sites<sup>79</sup>
  - Although the highest concentration in the individual sites appears to be within the period of M  $1^{st}$  L  $3^{rd}$  and M/L  $4^{th}$  M  $5^{th}$  with some potential evidence of continuity from the  $3^{rd}$  into  $4^{th}$  and  $5^{th}$  into  $7^{th}$  centuries.

٠	African Red Slip (ARS):	392	= 8.52 sherds/site
٠	Red Slip (RS):	2,045	= 44.46 sherds/site
٠	Transport Amphorae (TA) and Amphorae:	817	= 17.76 sherds/site
٠	Coarse Wares:	4,248	= 92.35 sherds/site
٠	Total $(ARS + RS)$ :	2,437	

Sector 2 – Overall Chronology: Middle 1<sup>st</sup> century – Middle 7<sup>th</sup> century

- Sector 2 encompasses 7 sites
  - At these individual sites, most pottery occurrences correspond to the E/M  $3^{rd}$  M  $7^{th}$  centuries.

٠	African Red Slip (ARS):	24	= 3.43 sherds/site
٠	Red Slip (RS):	139	= 19.86 sherds/site

<sup>&</sup>lt;sup>78</sup> Of the finewares recovered: 84 ARS and 24 RS sherds are from forms dating to the first century. While 38 ARS and 381 RS sherds were recovered from forms which began being produced in the second century. Therefore, it is clear that there was a substantial shift in their method of production.

<sup>&</sup>lt;sup>79</sup> The sites included in each sector are only the sites within which sherds of ARS, RS, TA (also AM in general), or coarse wares were found; all other sites were excluded in this catalog. Throughout the survey, only 14 total sherds of TRS were recovered, thus, they were not included in this catalog.

٠	Transport Amphorae and Amphorae:	66	= 9.43 sherds/site
٠	Coarse Wares:	181	= 25.86 sherds/site
•	Total:	115	

Sector 3 – Overall Chronology: 1<sup>st</sup> – Middle 7<sup>th</sup> century

- Sector 3 encompasses 11 sites
  - The dating for the pottery at each was heavily focused in the M  $3^{rd} M/L 6^{th} + .^{80}$

 Although there is more evidence of a pronounced break between the 3<sup>rd</sup> and 4<sup>th</sup> centuries.

• At many sites there was simply nothing before the 4<sup>th</sup> or 5<sup>th</sup> centuries.

٠	African Red Slip (ARS):	42	= 3.82 sherds/site
٠	Red Slip (RS):	91	= 8.27 sherds/site
٠	Transport Amphorae and Amphorae:	466	= 42.36 sherds/site
٠	Coarse Wares:	1,530	= 139.1 sherds/site
٠	Total:	133	

Sector 4 – Overall Chronology: Possibly 4<sup>th</sup> – 6<sup>th</sup>, though ultimately uncertain<sup>81</sup>

<ul> <li>Sector 4 encompasses 1 site</li> </ul>		
• African Red Slip (ARS):	0	
• Red Slip (RS):	17	= 17 sherds/site
• Transport Amphorae and Amphorae:	237	= 237 sherds/site
Coarse Wares:	776	= 776 sherds/site
• Total:	17	

Sector 5 – Overall Chronology: Middle/Late 1<sup>st</sup> – Middle 7<sup>th</sup> century

- Sector 5 encompasses 18 sites
  - While there are sites in this sector that bridge the gap between the 3<sup>rd</sup> and 4<sup>th</sup> centuries, and sometimes the 3<sup>rd</sup> and 5<sup>th</sup>, most sites have a tendency to showcase a distinct break between the 3<sup>rd</sup> and E/M 4<sup>th</sup> and E/M 5<sup>th</sup> centuries, which can be seen elsewhere throughout the survey.

• African Red Slip (ARS):	41 = $2.28$ sherds/site
• Red Slip (RS):	80 = 4.44 sherds/site
• Transport Amphorae and Ampho	rae: $19 = 1.06$ sherds/site
Coarse Wares:	511 = 28.39 sherds/site
• Total:	121

Sector 6 – Did not include any sites with ARS, RS, or TA sherds.<sup>82</sup>

<sup>&</sup>lt;sup>80</sup> This chronology may also persist into the seventh century, although this is, at present, uncertain due to the unreliability of the evidence which suggests this continuity.

<sup>&</sup>lt;sup>81</sup> There were only 17 RS sherds at this site, which were of an unknown form. However, Hitchner indicates that the dating for this sector ranged from the second through early seventh centuries, with one sherd having a first century date (Hitchner 1988: 34-36). The discussion of this site presented below confirms that the heaviest periods of occupation were at least the third to sixth, and possibly seventh centuries.

	Avg. ARS/site	Avg. RS/site	Avg. TA/site	Avg. CW/site
Sector 1	8.52	44.46	17.76	92.35
Sector 2	3.43	19.86	9.43	25.86
Sector 3	3.82	8.27	42.36	139.1
Sector 4	0	17	237	776
Sector 5	2.28	4.44	1.06	28.39

Table 4: Average ceramic distribution per site in each sector

#### Ceramic Evidence - Sector and Site Discussion

One of the most important ideas illustrated in the above chart is that, while most of the sectors nominally date from the first to seventh centuries, this is only due to a small amount of evidence in many cases. Especially in Sectors 1 and 5, there were many sites which presented evidence for a significant break between the third and fourth or fifth centuries, due to the lack of fineware dateable to this period. However, not all of the sites in either sector presented this problem, therefore, the chronologies for the sectors as a whole do cover the entire range from the first to seventh.

The sites in each sector can generally be understood as follows: Sector 1 consists of large and small farms, field systems, wells, and animal pens, all indicative of a mixed agricultural system, as well as elements suggestive of intense habitation, including a cemetery and funerary monuments. This sector, along with sector 3, may also have had pre-Roman settlement due to the two ceramic sherds found as KS 012 and KS 087, dated to the second century B.C. The 7 sites (KS 020-026) surveyed in 1984 which comprise Sector 2 were likely agricultural settlements and were situated along the Roman road from *Cillium* to Thelepte. The difference in the distribution

<sup>&</sup>lt;sup>82</sup> This sector was not examined in the same way as Sectors 1-5. It was only surveyed by vehicle on the final day of the 1984 field season, Hitchner 1988: 10.

of pottery at these sites suggests a settlement hierarchy focused around the large villa complex at KS 022.

32 sites were recorded in Sector 3 with fieldwork focusing on the 11 which had more substantial signs of Roman period occupation. Except KS 086, the evidence suggests that these settlements practiced the cultivation of cereals, olives, and animal grazing, very much like those present in Sector 1. These sites were divided into three general categories: indigenous habitats, small farms, and agricultural villages. Sector 4 is comprised of one site (KS 031) and can be understood as an entire urban agglomeration extending over 533,300 square meters. In Sector 5, 18 sites were dated to the Roman period most of which were located in the western half of the sector due to modern habitation which obscures the eastern half. The small farm settlements along with 2 aqueducts and a water storage facility seem to have been modest in comparison to those discovered in Sector 1, primarily due to the terrain. Sector 6, as discussed above, was surveyed by vehicle during the 1984 field season thus no individual sites were identified or examined in this area.<sup>83</sup> Every site will be discussed in terms of the architectural remains discovered in that area, however, some have very little ceramic evidence of any kind. This examination will be done by sector with the intention that a concise discussion of each site will allow a clearer understanding of the overall function of that sector.

#### Sites in Sector 1

The sites in Sector 1 had the highest average of ARS and RS sherds per site of any sector recorded in the survey, and there were more than five times as many RS as ARS sherds recovered.<sup>84</sup> Unsurprisingly, the average quantity of RS compared to ARS is higher in every

<sup>&</sup>lt;sup>83</sup> For more information about the individual sectors and their components, Hitchner 1988: 10, 13-14, 23, 27-28, 34, 36; Hitchner 1993b; Hitchner et al. 1990.

<sup>&</sup>lt;sup>84</sup> For this and all subsequent discussions of the average of individual wares in each sector, refer to Table 4.

sector, further illustrating the apparent preference of those in Kasserine for locally produced ceramic. In terms of Sector 1 itself, it is possible that the smaller farms and animal pens would have more evidence of locally produced wares, while the larger farms, most prominent in this sector, would provide more evidence of imported finewares. Every sector presented a higher average amount of coarsewares per site than finewares, however, Sector 1 presents the third highest amount behind Sectors 3 and 4 in this regard. The following is a discussion of the individual sites in Sector 1 and the ceramic evidence associated with each.

KS 001: This site was divided into individual units all of which were primarily focused around a central open courtyard. The presence of an olive press combined with other closely associated structures such as an animal pen and outbuilding (KS 008), a possible tomb (KS 205), and a type of walled enclosure (KS 298), would seem to suggest that this site was more than a simple residence but was more likely a large farm complex with all the necessary accoutrements.<sup>85</sup> The exact quantity of RS is uncertain, but it is interesting to note the relative dearth of pottery generally, which causes problems for the present report. Due to the presence of an olive press at this site, one may may have expected to find some transport amphorae, which is surprisingly absent in this case. There was a very small number of coarsewares found at this site as well, one dolium and one mortarium fragment, potentially hinting at some kind of storage and small scale processing of goods.

KS 002: This site was a small farm with one olive press and a single courtyard. It was located only 500 m from KS 001 and based on its proximity may have formed part of a larger network with sites KS 001 and 003. Even though there is only a slight presence of ceramic, it can still be

<sup>&</sup>lt;sup>85</sup> Gazetteer; Hitchner 1988: 14.

ascertained that there was a tendency towards local rather than imported pottery.<sup>86</sup> This information combined with the association of these three sites seems to suggest that they were self sufficient entities which may not have placed as much importance on trading.

KS 003: This is a small structure which may have been part of the agricultural activity taking place nearby, potentially serving as a building in which to process the agricultural products. There was no ARS or even RS at this site, however, there was at least the presence of coarseware in the form of 1 sherd of handmade ceramic. This piece may have served any number of purposes whether in food preparation or maybe even in agricultural production of some kind. This information may support the theory that this was a processing building for goods from KS 001 and 002.

KS 004:<sup>87</sup> Much like KS 001, this site is also a large farm complex specializing not only in the processing of olive oil but also, and to a greater extent than KS 001, on raising livestock. Unit A (units 1 and 2) was the main dwelling in which the person in charge of operating the farm lived and is supported by the 49 miscellaneous RS and 139 small coarse ware (hereafter SC) sherds that were recovered from this area. Furthermore, this site was strategically well placed on the main trans-migration route between Kasserine and Thelepte. Due to this information, the presence of a rural market at KS 004 has been postulated.<sup>88</sup> This market may have served as an

<sup>&</sup>lt;sup>86</sup> As has been seen multiple times in this report to this point, the people in this region were devoted to local production and consumption. This 'local initiative' in Kasserine in terms of trade and manufacturing is discussed in Mattingly and Hitchner 1995: 199-200.

<sup>&</sup>lt;sup>87</sup> See Figure 10 for a plan of this site.

<sup>&</sup>lt;sup>88</sup> Hitchner 1988: 17-18. Cameron and Garnsey add that the establishment of rural markets had been carefully controlled under the early empire, however, became more common during the later period. As a consequence, separation from the urban centers became much more prominent. Similarly, those in more rural areas may have relied almost entirely on "small market towns" to provide necessities (Cameron and Garnsey 1998: 308, 333). This correlates with the fineware dating for this site, namely, the fifth to seventh centuries. See also, Conant 2012: 99 and Shaw 1981: 41-44.

opportunity for pastoralists from the low steppe to trade their livestock for oil or other cereals.<sup>89</sup> This suggestion is strengthened further by the ceramic evidence, which presented 325 transport amphorae (hereafter TA) sherds, the highest amount of any site in the survey, along with 569 coarsewares, including 47 black top sherds and 507 SC. The majority of these forms served as cookware of some kind.<sup>90</sup> More specifically, 55 RS sherds of an unknown form along with 300 SC were found within the terraced market area along with the 46 TA, 57 RS, and 45 SC sherds recovered from the room containing the olive press. The fineware evidence indicates that this site dates from the late fifth through the middle seventh century which could relate to the reemergence of pastoralism, due in part to the emphasis on the economic connections with these nomadic peoples. The SC supports this as these forms generally dated from the middle sixth to late seventh century. The black top wares dated from the third to fifth century and may indicate a small occupation in this area earlier, but the major period of use was definitively that indicated by the finewares. The significant number of enclosures found at this site would likely have been used as animal pens housing the animals received through trading oil, wine, and other cereals to these nomads. In order to store, transport, and trade these products not only would transport amphorae have been necessary, thus explaining the abundance of these fragments recovered especially those from within the olive press room itself, but the fine and coarsewares could have been used in this process as well.

KS 005-007: KS 005 is described as a monumental tomb, KS 006 a small structure, and KS 007 potentially either a place of cultic worship or a small farm. However, the function of these

<sup>&</sup>lt;sup>89</sup> Cherry further supports this notion, stating that this type of rural market was not unprecedented but was known in various parts of Algeria, particularly prior to the Roman period (Cherry 1998: 17-18).

<sup>&</sup>lt;sup>90</sup> Interestingly, Leitch indicates that between the first and fifth centuries C.E. North African cookwares were exported throughout the Mediterranean more than any other Roman cookwares. In the earlier period of production (primarily the second-third centuries) these cookwares were likely made in workshops which also produced amphorae forms. The various cookware forms were also being traded along the same routes as amphorae and agricultural products (mostly olive oil) as well (Leitch 2013: 281-284). See also, Bonifay 2004: 69.

three sites is ultimately uncertain. Due to the small quantity of ceramic evidence present, a clearer determination of the function and dating of each site must be the subject of future work. Although tentatively, the few black top and basin sherds recovered may indicate a third to fifth century date, with a high probability of later use as well.

KS 010: This site also appears to have been a large mixed farm with an associated animal pen. The larger buildings were likely entirely devoted to the production, storage, and processing of agricultural products from the farm complex. The smaller building, the main dwelling, contained at minimum 111, and likely 158, SC and very probably also contained most of the 95 black top fragments recovered. Overall, this site presented a significant amount of ceramic evidence: 57 ARS sherds; 125 RS sherds; 83 TA; and 569 total coarseware fragments. All 57 ARS, 39 TA, and 205 SC sherds were recovered within the larger building which suggests that these wares were used in the production and storage of the agricultural materials. While all of the recovered fineware was of a miscellaneous form, one may assume that this site likely had an early date, possibly first-third centuries like many other sites in Sector 1, due to the amount of ARS recovered. Higher quantities of ARS generally tend to indicate more connection with the coastal regions and thus an earlier date as the presence of these wares and connection with the coast diminished over time. At the same time, this site probably continued into later periods as well due to the increased number of RS sherds which is more likely to indicate a heavier focus on local production and thus a later date. The TA sherds recovered also support this dating as the amphorae are generally dated to the third to sixth centuries. The coarseware evidence could also support this relative chronology in that the black top would indicate a presence somewhere between the third and fifth centuries, and the SC attests to the later occupation of this site, generally dating to the middle sixth to late seventh century.

KS 012: This site is comprised of two cemeteries (covering an area of 85 x 50 m – 4,250 m<sup>2</sup>) which were associated with KS 004. This is one of the few sites at which more ARS (51) than RS (0) was found, which again likely indicates an earlier date for this site. Although, its association with KS 004 and the majority of coarsewares recovered here, may not support this conclusion. The 217 coarsewares found at this site included multiple black top forms, some early cookware forms, as well as the expected SC. Interestingly, there were also 27 storage vessel fragments which were not clearly identified in the field notes and may either refer to amphorae or dolia. Either way, it is clear that there was likely some kind of cult going on in this area from presumably a very early period due to the ceramics, including ARS, which were probably votive offerings of some kind. There was also 1 sherd of a pale jar that, along with the sherd recovered at predominantly Roman sites that could indicate some type of continuity from the earlier period. One hypothesis may be that a type of funeral cult continued in this region from the pre-Roman period, and adapted to incorporate Roman style ceramics.

KS 014: This site forms an organized system of terraced fields built to take advantage of drainage patterns and is associated with the farm complex at KS 010. There were only 20 ARS and 36 RS sherds recovered in this area. However, 754 coarsewares were recovered, which was the third highest amount in the entire survey at any one site and consisted almost entirely of SC. Ultimately, these fields did not present any architectural remains and thus the ceramic evidence may simply be the result of a trash dump which was later used as fertilizer for the fields.

KS 202: This site is described as another large mixed farm complex with associated monumental tombs (KS 203 and 204). However, there is not much information provided about the site otherwise. The TA sherds are typical of a site which has olive presses and production

capacities, and the significant quantity of coarsewares (148 sherds) likely indicate a domestic setting and support the presence of a production center. The quantity of fineware is below average, but the increased amount of RS over ARS is still present. The fineware at this site suggests an early second to middle fourth century as well as a middle/late fifth through middle seventh century date. Interestingly, the ARS also helps to confirm the later date due to the presence of ARS form 91. The presence of 24 black top, 64 red cookware, and 48 SC sherds may help bridge the apparent gap in chronology presented by the fineware evidence, by indicating a third to fifth and middle sixth to late seventh century date respectively.

KS 208: This site is a courtyard farm, much like KS 002, a single small farm that was likely for private use, and these were generally located near larger farms or settlements. There is an outbuilding associated with this site and there may be a connection to KS 003 which lies only 100 meters away. Of the 13 amphorae sherds recovered, the majority were not explicitly identified as transport amphorae. This is important to note as it may further support that this site was primarily the farm of a single family that focused primarily on providing for their own needs by storing that which they produced. There may have been less explicit motivation for transport, at least not to the same extent as is present at other sites. The nearly negligible amount of ARS and the quantity of RS may further indicate that this was an area separated from other towns. This would explain the different pottery assemblage, which contained a significant quantity of coarseware. Most of these forms are either explicitly or thought to be SC wares. This information considered together dates the site primarily to the second to fifth centuries, with possible occupation in the sixth and seventh as well.

KS 209-210: KS 209 is another courtyard farm while KS 210 is a cemetery. Neither of these sites presented any evidence of finewares, imported or otherwise, which is curious especially

considering the nature of KS 209. However, both did include a small quantity of coarsewares, primarily consisting of small and miscellaneous wares. This leads to an uncertain chronology for these sites as there were no firmly dateable ceramics recovered, although there is some evidence for at minimum a sixth to seventh century date.

KS 211: Another small farm complex, KS 211 presented evidence of animal pens, a well, and a field irrigation system. This site is moderately more complex than some of the other courtyard farms in the survey. The few ARS sherds recovered here indicate some type of interaction with northern or coastal Tunisia, or may simply suggest trade with more well-connected towns in the region. The dating for this site suggests occupation from the middle first to the middle third century followed by a small break between the middle third and early fourth centuries and finally a continuation of the site from the early fourth to early fifth centuries. 16 of the 18 precisely dateable sherds at this site were from the earlier period, while 2 of the 18 dated to the latter. This is a trend that is seen on many sites in the survey in which there seems to have been a break between the third and fourth centuries. This discontinuity appears to have been a transitional period in which the sites were becoming more focused on local production, especially because 4 of the 5 ARS sherds recovered dated to the first to second centuries. Thus, there is only one ARS fragment which dates to the period after this discontinuity and further supports the notion that ARS sherds generally indicate an earlier date.

KS 212-213: These sites, along with KS 210, formed part of a larger burial ground which was likely associated with the settlement at KS 214. The overall lack of significant ceramic evidence at KS 212 is not surprising. The 3 RS sherds that were recovered were neither precisely dateable nor of sufficient quantity to allow any meaningful interpretations. KS 213 presented a higher overall quantity of sherds: amphorae fragments, a few ARS sherds, one of which (from

form ARS 51) was definitively found within a tomb. There was also some RS most of which was from miscellaneous forms, along with small quantities of red cookware and SC, some of which was found in tombs. Ultimately, it is difficult to discuss the nature of these sites other than to explain that there was ceramic evidence recovered here, which may have been some type of grave goods or votive offerings as was seen at KS 012.

KS 214: Another large mixed farm with two associated cemeteries (KS 212 and 213, covering an area of 10,000  $\text{m}^2$  and 112  $\text{m}^2$  respectively). Interestingly, this site includes a series of three interconnected courtyards, the southernmost of which formed the main dwelling while the others were used as animal pens and storage facilities. This is also the only site in the survey which was aligned with a north-south orientation, which may indicate some sort of centuriation in the area. The ceramic evidence at this site strongly indicates a middle first (~60 C.E.) to late third century date, and somewhat less clearly indicates continued habitation from the middle fifth through the middle seventh centuries. There were no clearly dateable fineware forms which would bridge the gap between the late third and middle fifth centuries. However, there were 91 black top and 69 red cookware sherds which may tentatively date to the third to fifth century. Given this information it is more difficult to determine an overall chronology for this site as the coarseware dating is only generally acceptable. However, this information indicates that there was some type of change occurring in this third to fifth century period, due to the lack of fineware and sole presence of coarseware dating to this period. This may indicate decreased trade capacity or even economic trouble in the region. Ultimately, 35 of the 37 clearly identifiable fineware sherds dated to the earlier period of occupation and two sherds (RS forms 91 and 92) attest to the later period.

KS 215: A group of at least 18 graves in very much the same style as those of KS 210 and 212 form this cemetery, which, based on the fineware evidence is to be dated to the middle first to middle third centuries. However, one of the graves contained 13 red cookware sherds which would place it in the third to fifth century, and one contained 13 SC sherds dating to the sixth to seventh centuries. Ultimately, this indicates that the most important period of use for this cemetery was the first to third centuries, however, it was likely also used in later periods.

KS 216: This site was a cistern forming the water and soil retention structure stretching from KS 004. The ceramic evidence indicates that this area should be firmly dated to the middle second to middle third centuries. There is also a possibility that this area may have been used later as a trash dump, due to the presence of 2 sherds of RS form 91b that date to the middle fifth to middle sixth centuries and 3 coarseware forms.

KS 218: This structure is similar in plan to KS 003 and presented evidence of a small rectangular building with a courtyard. It may have been a moderately sized dwelling or a storage area for agricultural produce. The serious lack of fineware and the presence of coarsewares, in the form of 10 black top and 46 miscellaneous sherds, may suggest that the latter is the more likely interpretation. A storage and processing center likely would not have necessitated the quantity of finewares that an individual dwelling would. The finewares that were recovered however, generally indicate a late first to middle third and middle/late fourth to early fifth century chronology.

KS 219: This courtyard farm is designated as such despite the presence of multiple courtyards, due to the size of the site as well as the lack of olive pressing rooms or any visible remains of animal pens. The distribution of fineware at this site, dating tentatively from the middle first to middle third centuries, is unsurprising as the RS outnumbers the ARS. However,

the relative lack of coarseware, especially compared to some other sites, is interesting to note at a such a small farm. The coarseware that was recovered, primarily SC and red cookware, likely indicate that they were used for domestic cooking purposes as there was no large processing facility at this site.

KS 220-222: KS 220 and 221 are only 100 m distant from one another, KS 222 is very near as well and consists of two closely placed buildings. As small structures these sites have been identified as outbuildings of some kind having to do with the farming operations at KS 233. All three of these areas are dateable between the middle first to middle third centuries due to recovered finewares. A significant amount of coarseware was also found at these sites: 53 black top, 41 red cookware, and 60 SC sherds. These forms generally served as some type of cookwares presumably. However, due to the presence of TA fragments, some RS, the various coarsewares, and because all three sites are outbuildings associated with KS 233 these ceramics were likely used in the agricultural production process. These coarsewares may possibly extend the chronology of these sites into the fifth century.

KS 223 (including KS 224):<sup>91</sup> This site was a large industrial farm complex with associated cisterns and animal pens and included an area for housing. KS 225 lies only 400 m away from this site and both seem to have worked in conjunction to manage the agricultural output of this entire area. There is one monumental building which consists of units 2-6, 8-9, and 16, with towers on the corners as well as a large inset entryway.<sup>92</sup> This led the investigators to determine that this site likely formed an entire industrial villa complex, with defensive structures, not

<sup>&</sup>lt;sup>91</sup> See Figures 11 and 13 for a detailed plan of the site and the press rooms.

<sup>&</sup>lt;sup>92</sup> Gazetteer; Hitchner et al. 1990: 236-239. This monumental building served multiple functions being subdivided into the main dwelling (unit 6), courtyards (units 5 and 8), units serving a role in the production process (units 2, 3, 4, and 9), and a structure for storage or defense purposes (unit 16).

simply a large farm.<sup>93</sup> Unit 6, which included at least 1 RS 181/26 and 8 SC sherds, was the domestic area of the site. Some ARS, RS form 181/26, and 12 SC sherds were found in many of the productive units as well (including units 3, 4, and 9). One of the main functions of this site would have been the processing and distribution of agricultural goods from the smaller surrounding farms. In this regard, KS 225 also played a substantial role. Ultimately, there is no information provided that confirms either TA or SC were found in the press room. However, SC was found in many of the courtyards including 34 sherds from unit 5, the courtyard situated to the west of unit 4. This ceramic evidence suggests an interesting chronology, namely, occupation from the late first into the third century as well as the middle fourth into the fifth century, with some evidence of continuity into the seventh. The earliest date range is certain due to the majority of recovered sherds supporting this dating as well as the fact that KS 224, the associated cemetery, presents pottery which also securely dates from the middle first to middle third century.

KS 225:<sup>94</sup> Much like KS 223, this site is also a large industrial farm with animal pens and cemetery, located very near KS 223. Unlike its neighbor, KS 225 is the most complex site in Sector 1 and appears to have been originally built for the express purpose of producing primarily olive oil but also wine, to some extent. The majority of the buildings, built in *opus africanum*, appear to have served a utilitarian function.<sup>95</sup> This is due to the lack of domestic architecture and

<sup>&</sup>lt;sup>93</sup> Mattingly and Hayes indicate that the location of some of these later forts and defensive structures on what were earlier clearly undefended civilian farms indicates that originally many of these areas in North Africa did not have significant military importance. These structures developed later for, what was likely, some sort of personal defense purposes. Oftentimes, these fortified areas were dated to the third – fourth centuries (Mattingly and Hayes 1992: 415-418). For Nador see also: Anselmino et al. 1989: 52-55, 217-224; Cameron, Ward-Perkins, and Whitby 2000: 325-326, 335-336. For similar sites in Libya: Cameron and Garnsey 1998: 285.

<sup>&</sup>lt;sup>94</sup> See Figure 12 and 13 for detailed plans of this site.

<sup>&</sup>lt;sup>95</sup> Speaking about pressing facilities in both Spain and North Africa, Hitchner states that "the unpretentious character of most of the associated structures is an unequivocal indication of the intensely industrial character of oil production...suggestive of an intent to produce large volumes of surplus olive oil on a regular basis" (Hitchner 1993a: 76).

the proximity of KS 223, which indicates that this site was likely not a residential area but rather was focused solely on processing and distributing agricultural products. Therefore, it is highly probable that these two sites worked together as part of a monumental villa complex with purpose built storage and processing centers for that which was produced in the area.

In unit 21 of KS 225, one of the oil storerooms, there was one sherd each of ARS 45 and RS 181/26. There were also 158 SC sherds found within units that likely served as store rooms, 13 of which were from unit 21 itself. 101 TA sherds, one of the highest totals of any site, as well as the 403 total coarsewares, both of which were higher than the totals for KS 223, support the idea that this site was much more focused on the processing of goods for transport, trade, and export than was KS 223. This idea is even further supported when one considers that only 1 dolium and 1 storage vessel sherd were recovered at this site which accounts for a miniscule percentage of the total coarseware, thus the priority was export. This evidence firmly supports a date from the early second through early sixth century. The 67 recovered black top sherds as well as the 270 SC support this chronology, and may even provide evidence for occupation into the late seventh century. For the most part this matches with the chronology presented for KS 223, there was no firm evidence for occupation between the third and fourth centuries, however, the 30 black top sherds at 223 may serve to bridge the chronological gap.

KS 226-228: KS 226 and 227 are cairn graves while KS 228 is a small *opus africanum* building. Between the three sites 2 fineware sherds were recovered, however, there was evidence of 101 coarseware fragments. There were also 12 TA sherds recovered between the three. Not much is known about them and the lack of fineware limits the ability to determine a specific chronology. However, based on the TA, black top, and SC recovered the sites may date to the third to sixth, and possibly seventh, century.

KS 231: This is another cairn grave group which had evidence of TA and RS although no ARS. This information suggests a date of middle second to the middle third century as well as the early fifth to middle seventh century. The latter seems more likely to have been the most prominent period of use due to the fact that there were no recovered ARS sherds as well as 32 of the 36 coarsewares at this site dating to the sixth and seventh centuries. 1 RS lamp fragment and 26 SC sherds were recovered within tomb 2 at this site, demonstrating that these ceramics may have served as grave goods or may be suggestive of ritualized funerary cult, as evidenced elsewhere in Sector 1.

KS 233: This courtyard farm was different than some of the previous sites discussed. This site was clearly a sizeable settlement during the Roman period due to the three associated outbuildings (KS 220, 221, and 222), all of which likely served as storage and processing facilities for agricultural production. However, due to modern habitation in the area, as well as large robber trenches, no significant remains were found. The small amount of ceramic evidence that was recovered could suggest an area that was focused on local production and distribution due to the relative lack of TA sherds as well as the presence of only a very small number of coarseware, including dolia. The tentative dating for this site includes the late first to the late third century. All 11 of the precisely dateable fineware sherds were from this period, however, there were a number of miscellaneous sherds recovered which did not have a certain date, thus, the site may have continued in use after the third.

KS 234: Another courtyard farm, this site may have had its own associated outbuilding but the remains were not clearly identifiable. This area, as with many others in this sector, likely had a strong connection to the large industrial complexes at KS 223 and 225, due to its proximity to the latter. The dating for this site very nearly resembles that of KS 223 as there is strong evidence for a middle first to late third century date. All 13 ARS sherds at this site date to this period, after which there was no ARS recovered. There is also some evidence for a middle/late fourth to middle fifth century date of occupation. However, this later date is based on only a small number of RS 68/69 sherds and the RS miscellaneous forms which could possibly date to this period. The presence of 4 coarseware sherds, including 1 black top and 1 red cookware sherd, may indicate some kind of continuation between the third and fifth centuries. However, this at minimum suggests that there was some kind of substantial change happening in this area at this time in order to explain the sudden disappearance of fineware. In this case, the evidence suggests that due to the proximity of this site to KS 225, the previously reported connection between KS 223 and 225, as well as the exact same chronology, KS 234 was surely part of the agricultural process centered around this large villa complex.

KS 240: This small structure may have been an outbuilding associated with KS 237 and 252. The fineware recovered here was extremely limited and on the basis of one RS sherd may, tentatively, date to the second to third centuries. The 3 coarseware (1 basin, 1 black top, and 1 SC) sherds suggest radically different dates for this site, including a third to fifth century date, as well as possible occupation in the middle sixth to late seventh. However, not much is known about this site in general and future work with the ceramic evidence may seek to develop a more reliable chronology for the coarsewares in order to date this site as well as others in the survey.

KS 241-242: KS 241 is a large mixed farm with animal pens and field walls (KS 235 and KS 236) which separate the site from the fields of KS 252. The ARS forms found at the two sites were almost identical: ARS forms 3, 5, 26/181, and 50/51, as well as RS forms 26/181, 45, 91, 181/26, Forms A, S, and X, were found at both sites in very similar quantities. This suggests extensive connection between the two which is unsurprising due to KS 242 originally forming

the majority of KS 241. This appears to have been an area that was gradually built up over time as the need arose, as opposed to KS 225, which was built at one time for a specific purpose. The pottery firmly supports a date from the middle first to the end of the fourth century with evidence also suggesting the middle fifth to middle seventh centuries. The presence of animal pens along with the absence of any evidence for olive presses and the field walls isolating this site, indicate that this was a mixed farm which was likely more heavily focused on animal husbandry than producing agricultural products. This assertion is supported by the overwhelming lack of amphorae as the two sites combined only provided evidence for 3 sherds, as well as the low quantity of coarsewares generally, which only included 7 basins, 7 dolia, and a small amount of other wares. The presence of dolia forms, combined with this lack of TA, indicates that this site was focused less on producing agricultural goods for export and instead stored on site that which they produced. Therefore, there is reason to believe that not all farms in Sector 1 were solely focused on the production of cereals.

KS 243: As with so many in Sector 1, this site is a large mixed farm complex with outbuilding (KS 244), tomb (KS 255), cistern, and field walls (KS 238). The lack of amphorae sherds and coarsewares is surprising for a site that has an olive press and processing area, but is not completely without precedent. Unit 1 consists of three individual rooms, all of which served a role in the production of olive oil. At least 1 ARS 50 sherd, along with 1 sherd of RS forms A and B, were found in this area indicating that the finewares may have been used in the production process. There were also sherds from RS form 181/26 found in units 2 and 3, the main dwelling and storage facility respectively. The early/middle second to early fifth century date for this site is made certain due to the ceramic evidence, which also may suggest an early to

middle seventh century date. However, the latter is far from certain being based solely on the recovered fragments of RS form A and 1 SC sherd.

KS 245: This courtyard farm has visible vestiges of rather shallow walls built straight on the bedrock. These walls form multiple rooms all of which were set around an open courtyard. There was no evidence of a press room or any substantial storage areas, which may explain the lack of TA and amphorae sherds, although the miniscule amount of recovered coarseware is more surprising. The ceramic evidence suggests a firm date for this site from the middle first to the middle fourth centuries. However, it may have continued into later periods due to the other RS fragments with, as yet, undetermined chronologies, as well as the 2 sherds of red cookware and SC. The coarsewares may indicate occupation into the fifth and possibly sixth to seventh centuries, although this conclusion is ultimately tentative.

KS 246 and 249: KS 246 is a cairn grave while KS 249 is a group of cairn graves which formed a cemetery along with KS 248 and 270. There were no fineware sherds recovered at either site, as well as only 1 TA sherd and 3 coarseware fragments between the two. A date of the second to third centuries was suggested in the Gazetteer, however, the coarseware may suggest a longer period of use. The grave at KS 246 included one sherd of red cookware, which may date to the third to fifth century. A grave at KS 249 included a sherd of early roman coarseware, which could date to this second to third century period. While another burial included a piece of SC, which may indicate that this area was being used for burials, intermittently, into the sixth and even seventh centuries. However, due to the overall lack of evidence no firm conclusions can be drawn about these sites at present, future work will be necessary for more conclusive results.

KS 247: This series of eight wells was probably associated with the settlement at KS 266. Of the 11 recovered fineware sherds all were ARS and only 1 was firmly dateable suggesting an early third century date. There was a very small amount of amphorae and coarsewares recovered at this site likely indicating that this was not the original area in which these pieces were used. This is another instance in which more work is necessary in order to further develop an understanding of the ceramic evidence.

KS 251: This is a cemetery arranged in much the same way as that of KS 224 that is, with extended inhumation graves facing northeast-southwest. The site is located only 200 m from KS 219 and 300 m from KS 233, which indicates that there was likely some association between the three sites. The dating for this area is ultimately uncertain as the majority of the recovered fineware were miscellaneous forms. However, a first to third century date is likely due to the ARS Northern and Coastal forms, as well as the fact that the two potentially associated sites both firmly dated to this period.

KS 252: This is a courtyard farm with an associated outbuilding at KS 240 and field walls at KS 237 and 238. This site is similar in overall plan to KS 214 and many other farms of this type as it is focused around a central courtyard structure. However, these two in particular also have small yards attached to this central building. A staggered group of rooms forms the main dwelling of the site. A rather small amount of amphorae fragments may suggest that that which was produced at this site was meant for use within the immediate area and did not need to be transported far. There were sherds of RS form 26/181 recovered within the main dwelling, and one may assume that this would have been the likely find spot for many of the other fineware sherds as well. Although 61 of the 83 recovered fineware sherds were of miscellaneous forms and thus not reliably dateable, those which were strongly indicated a middle second to middle

third century date, with a high probability of later habitation as well due to the amount of RS fragments. The minor amount of coarseware at this site may also suggest a later period of occupation, in the form of the black top and red cookware possibly indicating a continued presence at least into the fifth century.

KS 264: There was evidence for a small structure at this site likely associated with the activities of KS 219, which lies only 120 m distant. The coarsewares were generally the same forms which were found at many other sites in Sector 1; namely, black top, handmade, mortarium, red cookware, and SC. The relative lack of amphorae is similar to the distribution found at KS 219. The presence of a higher quantity of fineware at this site may indicate that this was a storage area of some kind. The chronology of this site is uncertain. However, it is likely, due to the few dateable RS sherds as well as its connection with KS 219, that it ranged from the middle second to the middle/late third century, with some evidence of use in the early sixth century, again coinciding with the chronology of KS 219.

KS 267: Much like KS 247, KS 267 was a series of wells associated with the courtyard farm at KS 266, for which no ceramic evidence was present in the field notes. Most of the ceramic wares from this site were of miscellaneous forms, however, there was firm evidence for a middle first to middle/late third century date and likely would have been in use later as well. As with so many other sites in this sector, this later date, presumably the third to fifth century, is seemingly supported by the black top ware and red cookware, as well as the SC. It could be postulated that with the evidence from this site as well as KS 247, the farm at KS 266 likely dated to this period.

The close proximity as well as the significant similarities among the types of sites in this sector suggest that many of them were intended to perform the same basic function, that is, farming various areas within Sector 1. This even further supports the idea that the economic

activity of this area was likely focused around the vast villa complex at KS 223 and 225, which were by far the largest and most complex in this sector and likely functioned to process and distribute agricultural goods. Many of the sites within Sector 1 presented an apparent break in chronology between the third and fourth or fifth centuries as no fineware sherds were found which dated to this intermediate period. However, in some cases this gap may be bridged by the coarsewares.

Many times black top ware and/or red cookware was found at these sites, both of which can cautiously be dated to the third to fifth centuries. Either way however, this begs the question concerning why no finewares were found connecting the third to fourth centuries if the site truly was still in use and there was no break in occupation. I suggest that at minimum this represents a disruption of sorts, in that there seems to have been a substantial shift in the function of these sites at this time, otherwise there should have at least been some fineware recovered dating to this period. Finally, a few larger sites, particularly KS 223, KS 225, and KS 022 in Sector 2, are some of the most important in the entire survey area, however, they present less coarseware evidence than would typically be expected. This also needs to be explained in some way. Fundamentally, however, the same arrangement of space, a central administrative center around which are placed the smaller tributary farms, can also be seen in Sector 2 at KS 022, indicating that this was likely a normal practice in the region.

#### Sites in Sector 2

Sector 2 presents the lowest average amount of ARS per site, second only to Sector 5, along with the third highest average of RS sherds per site. Along with the second lowest average TA fragments and the lowest average coarsewares of any unit. The below average number of TA

fragments is especially surprising for the sites in this area considering they were primarily located along the road from Kasserine to Thelepte.

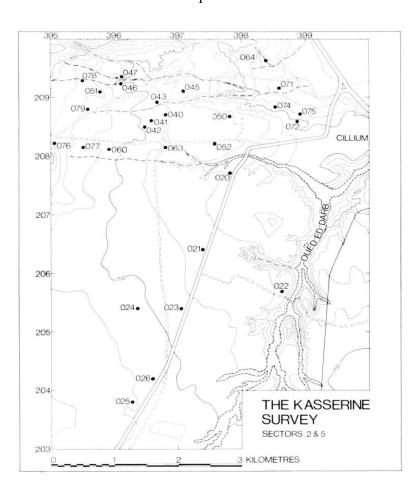


Figure 6: Location of the sites surveyed within Sectors 2 and 5 (after Hitchner 1988: 24).

One may have assumed that the road would have facilitated the export of more agricultural products and thus the need for more TA than in other sectors. However, that for which the above catalog fails to account is the potential for transportation of oil, wine, and other products in animal skins, which was a relatively common practice in non-coastal areas.<sup>96</sup>

KS 020: The sites in Sector 2 all closely follow the Roman road from Kasserine to Thelepte, except KS 022 which lies approximately 1-1.5 km away, all are at least 1 km distant from Cillium (Kasserine). Located 2 km west of Cillium along the road, lies KS 020 a small courtyard

<sup>&</sup>lt;sup>96</sup> This idea is further discussed in Peña 1998: 117-118; Bonifay 2013: 535-539, 552-557; Stone 2009.

farm. The presence of TA fragments at this site is unsurprising due to its location, as well as the fact that all of the sites in this area seemingly centered on the villa complex at KS 022. The fineware evidence at KS 020 highly favors local varieties (23 RS sherds compared to 3 ARS sherds), and provides a chronology dating primarily from the early fourth to the middle seventh century with some evidence for an earlier date, possibly second to third century. However, it is likely that this site was occupied and saw the heaviest use in the later period due to the presence of certain RS forms, such as RS 67, which was not present at Carthage likely indicating a date after the third to fourth century.

The coarsewares recovered from this site also support that goods were being produced here. The 10 dolia fragments may signify that there was either some expectation that the goods would stay at this site for an extended period of time, that there was a surplus of goods than even that which could be distributed, or that those producing the olive oil kept some for themselves. This is interesting to note because at the sites in Sector 1 dolia fragments were not a common occurrence, especially not in this quantity. The basin and SC sherds recovered here would support the later date for this site as these forms date to the period after the Byzantine reconquest in the early sixth century. The black top and red cookware, as discussed at other sites, may bridge the apparent gap between the third and fourth centuries, however, with so few fragments recovered it is difficult to determine this for certain.

KS 021: This site lying 1.5 km south of KS 020 is considered to have been a large mixed farm, which is surprising as there was little evidence presented for animal pens and production or storage areas. However, there were vestiges of one large building measuring approximately 40 x 40 meters which may have served this purpose. 2 of the 4 recovered ARS sherds date to the middle first to the early third century. However, the remaining 2 sherds, as well as the majority

of RS at this site, date from the early fourth to middle/late seventh century. This chronology correlates with that of KS 020 and due to their proximity it seems likely that there was a connection between the two. 17 TA fragments were recovered at this site which is the highest of any within Sector 2. One may assume that the most TA fragments would have come from a site which had definitive areas dedicated to storage and production, however, that is not the case. The RS again far outnumbers the ARS found at this site and the coarsewares (especially the black top ware, red cookware, and SC) are indicative of an area of habitation. The basin, dolia, and mortaria fragments may, along with the TA, suggest not only an area of production on site, likely the 40 x 40 meter building discussed above, but also that there was some amount of storage of these goods as well. The coarseware evidence generally supports the fineware chronology. However, the black top and red cookware may again help bridge the apparent gap between the third and fourth centuries, while the basins and SC attest to sixth and seventh century occupation.

KS 022:<sup>97</sup> This site is known as Henchir el Guellali (the site of the pots), due to the evidence for kilns in the area, and is located 3 km south of *Cillium*. Mosaic floors in multiple units along with the remains of a bath complex indicate the fundamentally elite nature of this site. This suggests that this was likely an industrial and residential villa complex which also had other associated necessities like animal pens and storage areas. This site was divided into the *pars urbana* and the *pars rustica*, further indicating the way in which this site differs from all those previously discussed. In fact, another important characteristic of this site, along with some evidence for metallurgy.<sup>98</sup> This may explain the serious lack of imported fineware. It is possible

<sup>&</sup>lt;sup>97</sup> See Figure 14 for a plan of this site.

<sup>&</sup>lt;sup>98</sup> Evidence for metallurgy in this region was first attested by the Brathay group, see Addyman 1962; Addyman and Simpson 1966. However, 11 smelting sites around Sufetula were further elaborated by Hitchner as having been found generally on sites that were also olive farms. This led him to believe that these smelting sites operated in order

that the kilns at this site had some connection to Sidi Marzouk Tounsi which was relatively near the area of Sector 2 and Kasserine generally. Some of the primary wares being produced at Sidi Marzouk Tounsi included Hayes forms 51 and 89 among others, KS 022 had evidence of both ARS form 51, and local imitations of form 89. This indicates that at minimum there was some type of connection between the sites and may even suggest that KS 022 served some of the same ceramic production responsibilities. While the latter conclusion is uncertain, it is clear that this site definitely produced finewares and roof tiles for local use.

Since there are only a small number of certified villa complexes in the entire region this is inherently a valuable site to study. This site becomes even more important due to the fact that it is the largest such villa in the entire Kasserine-Sbeitla (Sufetula) region.<sup>99</sup> KS 223 and 225, as discussed above, are considered to have had sizeable industrial capabilities, however, the present site is more than four times larger than either. Given all this information concerning the site itself, it is rather surprising to have so little ceramic evidence. Only 11 TA sherds were collected along with only 8 ARS and 35 RS sherds, although the 48 coarsewares was the highest recovered at any site in Sector 2. The overall quantity of fineware, particularly RS, may be higher but due to the uncertainty encountered in the field notes some forms provide only an estimated quantity. The coarseware included 11 basins, 21 black top wares, 7 dolia, 3 mortaria, and 2 Sbeitla wares.

These forms indicate not only habitation but also signify a need to store that which was produced or collected from the surrounding areas. The Sbeitla wares further indicate that in addition to the connection to Thelepte to the south, Kasserine had a close connection with Sbeitla to the northeast as well. This in itself is not surprising due to the proximity of Kasserine and

to create tools for use on that farm and maybe for local use as well (Hitchner 1982: 65). Considering the size and importance of this villa and the substantial evidence for farming and production capabilities, it would not be surprising if the evidence for metallurgy at this site equated to making tools primarily for use at KS 022 or at the sites associated with this farm.

<sup>&</sup>lt;sup>99</sup> Hitchner 1982: 57-144; for previous work see Addyman 1962; Addyman and Simpson 1966.

Sbeitla, however, it is surprising that Sbeitla wares were only found at six sites in the survey: three in Sector 2, two in sector 3, and KS 031 as one would expect to have found them more often.<sup>100</sup> These wares may have come from Henchir es Srira, in which case they were likely more closely associated with northern Tunisian wares as opposed to the wares being made locally in central Tunisia. This development of pottery is thought to be typical of workshops located near olive oil producing regions.<sup>101</sup> Ultimately, this indicates that there was significant interaction between Kasserine and many of the important nearby towns.

The pottery recovered at this site provides evidence indicating a middle first to middle seventh century date, with the highest concentration of sherds dating to the early third to early seventh centuries, similar to the other sites in this area. This is further supported by the multiple RS forms, particularly form 67 and 67v, which were not present at Carthage. The evidence for the earlier date suggests that this site was likely the first to develop in the region and due to increased demand for agricultural products the other sites in this sector developed later, thus explaining the relative lack of earlier sherds at those sites. This information clearly demonstrates that KS 022 was not only the most important site in the sector but was likely the most important villa complex in the entire region at this time, although, strangely, the amount of recorded ceramic does not support this idea.

KS 023: This site was located 1.1 km south of KS 021, still along the Roman road. It consisted of sherd scatter in an olive field and there were no architectural remains identified, therefore the function of the site was not able to be determined. However, the 12 TA fragments

<sup>&</sup>lt;sup>100</sup> Leitch expands on this idea stating that, "areas of political or agricultural importance…were made 'connectable' via road, and this had an interesting knock-on effect for sites near them, which were receiving imported goods though they may not have had direct access to a major road" (Leitch 2010: 17). Therefore, not only do these wares indicate a connection between this region and the surrounding regions, it may further indicate that due to their presence along the Roman road, the sites in Sector 2 may have also facilitated the movement of these materials to less well-connected areas.

<sup>&</sup>lt;sup>101</sup> Baklouti et al. 2015: 27-28; Bonifay 2004: 46 (Figure 22); Carr 2009; Mackensen 2009; Hitchner 1982.

along with the 10 black top wares and 3 dolia sherds likely indicate that this site was some sort of storage or processing area, especially since dolia are only necessary for the storage of large amounts of agricultural products. The multiple versions of cookware may indicate that there was originally some sort of habitation at this site as well, although that is pure speculation due to the lack of architectural remains. The fineware suggests a middle second to middle seventh century date, which is supported by the coarseware evidence. Ultimately, more work with the evidence from this site is necessary in order to determine its precise function.

KS 024: This is a large mixed farm with evidence of a series of rooms as well as an L-shaped structure of significant size (22 x 30 m) which may have served as some sort of animal pen. Due to the nature of this site and its position along the Roman road one may wonder why there is no evidence of ARS at all. In this regard, it is interesting to note the striped Sbeitla ware which was found at this site, one of only six sites in the entire survey in which such ceramic evidence was recovered. This again indicates that there were established trade connections between Kasserine and Thelepte, but also between Kasserine, especially Sector 2, and Sbeitla. The lack of TA sherds is important to note as well, however, it must be borne in mind that transport of goods in interior regions of North Africa may have been done by any number of means, including transport amphorae but also animal skins.<sup>102</sup> This lack of amphorae is even more important as there were no fragments of dolia recovered at this site as there were at multiple other sites in this sector; ultimately indicating that the primary goal of this farm was to produce for export. The basins and black top wares recovered may have played a part in the processing of these goods, while the cookwares again support the presence of a domestic setting. The local fineware indicates firmly an early fourth to middle seventh century date. There were only 2 fineware sherds possibly suggesting an earlier second to third century date and 7 coarseware fragments

<sup>&</sup>lt;sup>102</sup> See note 96 above.

suggesting a possible third to fifth century date. The later period is highly probable considering its connection with the other sites in this sector but also the presence of multiple fourth and fifth century pottery forms which were not present at Carthage (RS forms 27 black top and 68).

KS 025: This large mixed farm with associated cemetery extends over an area of 110 x 100 m and lies 1.3 km south of KS 023. The extensive robber trenches along with modern agriculture severely limits the conclusions which can be drawn, however, the structures were all generally aligned northeast-southwest. A small cemetery which contained at least eleven graves was also located here. As with many sites in this sector, only a few recovered fineware sherds date to the earlier second to third century, and therefore the major period of occupation was certainly the early fourth to middle seventh century. This dating is again supported by the coarseware, a few sherds of which might also suggest some sort of occupation from the third century onwards. As with previous sites, there are multiple coarsewares which may have been used in the production process and this site, unlike KS 024, produced evidence of 4 dolia fragments, suggesting that the prime objective for those at KS 025 was not export. Without further information concerning the organization of rooms and buildings at this site more conclusive results are not possible.

KS 026: 700 m northwest of KS 025, and 1 km south of KS 023, the architectural remains have all been destroyed by modern plowing and thus the building at this site is barely discernible at all, much less its original function. This destruction explains the serious lack of any ceramic evidence, which only presented evidence for 2 amphorae, 3 fineware, and 3 coarseware sherds. However, based on the few recovered fragments the site dates at least from the early/middle third to middle fourth century and probably into the fifth based on the 2 recovered black top sherds. There was likely occupation beyond the fifth century based on the settlement patterns at other sites in the area, however, this cannot be conclusively determined.

The repeated pattern of sites in this sector showing significant evidence for habitation and use from the fourth century onwards with only scant evidence for earlier occupation would suggest that they all developed at the same time for some express purpose. When this information is combined with the evidence at KS 022 of occupation and use from the first century onwards, one can conclude that the growth of the other sites in this area (KS 020-021 and 023-026) were likely predicated on the growth of KS 022, the growth of Cillium, and the increased demand for agricultural products. Ultimately, the sites in Sector 2 served the same fundamental purpose as those in Sector 1, to provide goods to an administrative center which could then distribute them more easily. There is also the possibility that the sites in this sector, particularly KS 020 and KS 021, may have served as *mansiones*, and thus, people staying in the various rooms at each site may, to some extent, account for the ceramic distribution.

## Sites in Sector 3

Sector 3 has the second highest average ARS per site as well as one of the lowest averages of RS. Excluding Sector 4, which only encompasses one site, Sector 3 has the highest per site average of TA and coarsewares. The high amount of ARS and TA may be explained by the fact that most of the sites in this sector were either small farms or general agricultural settlements. Therefore, the need to distribute their goods to nearby towns may have required the presence of such transport amphorae. At the same time, the increased prevalence of ARS at these sites may also have been a by-product of economic interaction as these wares may have been used as methods of payment, possibly even trade goods. The significant amount of coarseware, which could have been used for daily processes such as cooking and preparing food as well as serving as storage vessels, may be explained by the fact that this sector also contained domestic living units.

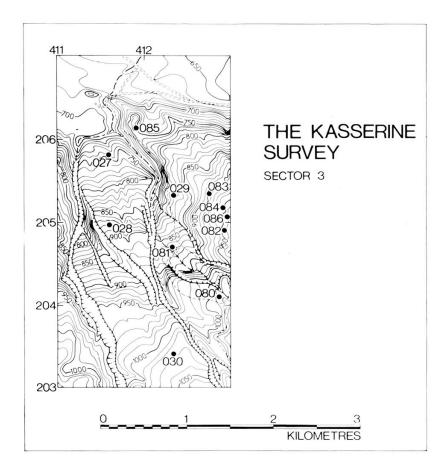


Figure 7: Map showing the location of sites surveyed within Sector 3 (after Hitchner 1988: 27).

KS 027:<sup>103</sup> This is a large mixed farm with animal pens and a tomb, characteristic of many of the mixed farms previously discussed. However, this site also included an extensive series of nineteen terraced fields suggesting even more strongly an agricultural economy centered around cereal and olive cultivation. There is extensive evidence for three individual building periods at this site based upon the construction technique and materials for the walls, ultimately indicating intense habitation from the Roman to modern period. There were also remains of animal pens, oil presses, storage areas, and two kilns recovered, which may, in much the same way as KS 022, suggest some sort of ceramic production possibly for primarily local distribution. In the later periods of use the site appears to have been fortified with small defense towers placed

<sup>&</sup>lt;sup>103</sup> Refer to Figure 14 below.

strategically around the site, which may be a response to the increased raiding in the area in the fifth and sixth centuries.<sup>104</sup>

The 161 total amphorae fragments, most of which (126) were TA, was one of the highest amounts recorded in the survey. Along with the extensive field systems, this would indicate that this area likely produced a sizeable surplus of agricultural goods and thus needed the ability to export them. While at the same time, the 44 dolia fragments, second only to KS 031 which presented 84 sherds, would also indicate plans for long term storage, possibly storing agricultural goods for local distribution as well as export at a later time. The 18 ARS and 31 RS sherds, characteristic of a site with habitation, possibly on a large scale, provided a chronology extending from the early second to middle third and middle fourth to middle seventh centuries. There were only two fineware sherds recovered, those of ARS 45v and RS form O, which may represent continuity between the third and fourth centuries. 9 black top sherds may also attest to occupation in this period.

Ultimately, there was likely some sort of disruption for one reason or another, reminiscent of the chronologies at many other sites in the survey. This disruption in chronology may not have constituted the entire depopulation of the area, however, with the present evidence it does seem likely that there was some shift in primary focus during this period. Otherwise, if things continued as normal at this time, one would expect to find the same distribution of fineware, some of which would date to the third to fourth century. Therefore, the later date is more likely due to a higher presence of fineware from this period, the relative lack of ARS after the fourth century, the later sixth to seventh century date for many of the coarsewares (15 basins and 38 SC), as well as the overwhelming amount of TA fragments, which are of forms generally dating between the third and sixth centuries. This information along with the series of terraced fields

<sup>&</sup>lt;sup>104</sup> Mattingly and Hayes 1982; Anselmino et al. 1989; also see note 93.

suggests that agricultural production was taking place at this site on a rather massive scale, something similar to that seen at KS 223 and 225.

KS 028: This site was described as an 'impermanent settlement' as there was not much evidence, architectural, ceramic, or otherwise recovered in the area. 1 TA sherd, 2 ARS lamp fragments, and 10 coarseware sherds constitute the entirety of the ceramic. This suggests that the site probably served as some sort of campsite for those travelling through the area. The transitory use of this site would explain the lack of ceramic as there was no source of continual occupation, thus the by-products of such habitation are lacking. The suggested date is incomplete as it is only based on 2 ARS sherds, but includes the middle/late fifth to middle sixth century. The one recovered SC sherd supports this dating and would even suggest use into the late seventh century. The one red cookware sherd may also indicate some type of use in the third to fifth centuries. However, with so little firm evidence at this site, these conclusions are only preliminary.

KS 029: This courtyard farm included animal pens, an olive oil press, and terraced fields. The latter is crucially important and suggests that the farms in this area, large or small, likely served a more significant role in agricultural production than those in other sectors due to the ubiquity of terraced fields in this area. The 12 TA fragments may suggest the production of an agricultural surplus at this site, which was intended for export to various areas much like that found at KS 027. Also much like KS 027 there were dolia fragments found at this site indicating some type of need for large storage vessels. There were only 6 fineware sherds recovered, all of which were local RS and strongly indicated a fourth to fifth century date with some evidence potentially indicating a second to third, and seventh century date. The one black top sherd may

tentatively connect the third to the fifth century periods of occupation. Primarily though the dating for this site should be treated as fourth to fifth century.

KS 030: Another large mixed farm, this site contained at least one olive press and presented evidence for terracing, which is normal within this sector. As with many other sites in this area, the 8 TA sherds would presumably suggest some type of trade connections throughout the region and elsewhere. The 8 fineware fragments recovered were locally produced and date from the middle third to the end of the sixth century and may continue into the seventh as well. The majority of the recovered coarsewares, indicative of habitation and production capabilities, date to the same span of time, third to fifth and sixth to seventh centuries.

KS 080: Another large mixed farm, KS 080 has cross-oued walls and architectural remains that may have been an animal pen. There is evidence that this site began as a single room containing the olive press and slowly expanded to include more territory due to an increased necessity for terraced fields. A connection to sites KS 081 and 082 is probable due to the similarity in overall plan, function, chronology, and finally proximity as all three lie within a 1 km radius of each other. The lack of TA fragments and only 1 amphorae sherd at this site is surprising due to the presumed function of the entire area, that of exporting surplus goods. However, its connection to these other sites, both of which had evidence for walls and defense towers, may indicate that these were more important sites and thus KS 080 may have been a subsidiary. The lack of ARS and small presence of RS at this site is not unprecedented, however, more fineware sherds may have been expected at a site with a domestic quarter. Although there was a relatively important presence of 24 coarseware sherds, which include 5 basin fragments, 2 dolia, and 15 SC sherds. The dateable RS sherds strongly indicate a fifth to middle seventh century date with only one lettered form tentatively suggesting a second to third century date.

KS 081:<sup>105</sup> This site is yet another large mixed farm with animal pens and extensive terracing, nearly ubiquitous in this sector. The site also includes living quarters, areas for olive pressing and storage, as well as towers and a fortified wall which may indicate that this site served as a place of refuge in times of insecurity in the region. Only 2 amphorae sherds were recovered at this site, 1 of which was from a known TA form. This is again strange at a site with such extensive hypothesized economic output, though not completely unprecedented. There was, however, one Sbeitla sherd recovered, which as previously discussed would likely indicate some type of trade connections with the area of Sbeitla, making the lack of TA even more ponderous. Only 2 ARS and 19 RS sherds were discovered in this area which suggest an interesting chronology, namely, occupation in the third, fifth, and again in the seventh century. There was no fineware evidence recovered which suggested a continuity between these periods. This may support the idea that KS 027 was the earliest in this sector and due to a growing demand other sites then developed, thus explaining the later chronology for many of these. The 181 coarseware sherds was one of the highest quantities recovered in the entire surveyed region, and included many different types. The 29 basin, 20 black top, and the majority of the 46 SC sherds, likely indicate the presence of extensive habitation at this site accounting for many of the everyday cooking wares and dating generally to the third to fifth and sixth to seventh centuries. There were 7 dolia fragments and 68 sherds from other storage vessels, likely indicating that these ceramics were used in part of the production process of olive oil. This is confirmed due to the 5 storage vessel sherds from one of the olive pressing rooms at unit 14, as well as, unsurprisingly, 4 sherds from two of the storage rooms at this site (units 63 and 68). There were also 5 SC sherds recovered from unit 59, thought to be another storage room, which ultimately serves to indicate

<sup>&</sup>lt;sup>105</sup> See Figure 16 for a plan of this site.

that these SC were not only cooking wares but may also have been used in the production of olive oil.

KS 082: Appearing to have served a function like that of KS 080 and KS 081, KS 082 shows a similar process of evolution as is evident at KS 081. Forming another large mixed farm complex, this site was originally focused around the olive press building and expanded from there. The presence of animal pens, terraced fields, olive pressing and storage facilities, as well as towers and enclosure walls places this site within the same context in which, especially KS 081, existed. Fundamentally, the presence of 29 TA fragments indicates the ability for surplus production at this site. Except for KS 027 and KS 087, this site had the highest presence of TA sherds in Sector 3, indicating that KS 082 likely played an important role in the production and possibly even distribution of olive oil and other products in this region. This conclusion is also supported by the higher presence of ARS (20) than RS (15), which is a rarity at any site in the survey as local variants outnumber ARS in all but 9 instances. This may indicate that this area had important economic trade connections and capabilities, as ARS would suggest an association with more well-connected areas. The 82 coarseware sherds are also symptomatic of an area of habitation and production. There were very few (only about 5) sherds recovered of dolia or other storage vessel forms, which would imply that that which was produced at this site was primarily for export. The chronology for this site is also different from the majority of other sites in this region. The fineware suggests a firm date of the first to third century as well as an equally certain date from the middle/late fourth to middle sixth century and beyond. 8 coarseware sherds, including black top and red cookware forms, would suggest a third to fifth century date, while the 65 SC are focused in the sixth and seventh centuries. This may indicate continuous presence of one form or another from the first to seventh centuries at this site. Therefore, along with the

evidence at KS 027, KS 082 was also likely one of the first sites in this area and helped foster the development of the rest of the region.

KS 083: KS 083 is a farm which has a rather unusual plan in that it includes megalithic tombs as well as nearly a dozen dolmens of substantial size (nearly 5 meters in diameter). This site has evidence for occupation in the eleventh and twelfth century as well as the modern period. The Roman period ceramic is rather scant yielding only 2 TA and 2 fineware sherds, both of which were from RS lettered forms. The rather small quantity of coarseware, about 33 sherds in total, primarily suggest an area of habitation but not industrial production capabilities, primarily consisting of various cookwares. This does not allow for a certain chronology but a best approximation based on the similarity of the RS to Hayes forms would suggest a second to third century date, with a very high likelihood that there was a later period of occupation as well. The 1 early Roman coarseware sherd would likely support this date, however, the 3 black top and 9 SC sherds attest to a later period of occupation, at minimum the third to sixth centuries.

KS 084: This is another courtyard farm with a rather strange overall plan, which at one time had an olive press. Only 1 TA, 1 RS, and 11 coarseware sherds were found at this site. This is likely due to the fact that this area has been occupied since antiquity and some of the rooms show evidence of having been remodeled since the Roman period. Therefore, the lack of ceramic sherds is unsurprising. The one fineware sherd recovered was from an RS lettered form, which would suggest an early to middle seventh century date. However, it is almost certain that there was earlier Roman period settlement, but due to the restructuring of the buildings and the site as a whole, any other evidence has been lost.

KS 085: This is another site, along with KS 084, which presents an irregular overall plan and also was largely reused in the modern period. Along with KS 027 and KS 084, KS 085 likely

served as an olive farm in the Roman period. However, the later additions to the site have destroyed most of the Roman period remains and scattered the ceramics such that there were only 4 TA and 2 RS sherds recovered. This is important to consider but in such small quantities it is difficult to determine the original role of the site from this evidence alone. The chronology again is very uncertain, as both RS sherds were from lettered forms and present a second to third and seventh century date. However, there were 125 coarsewares present which may indicate that this was, at one time, a large settlement area. This is especially true considering the 66 sherds from handmade wares, one of the highest in the survey, and the 35 SC sherds, indicating that there was a sizeable occupation here. This period of occupation becomes clear when one compares the overwhelming amount of coarseware found here to the 33 and 11 sherds at KS 083 and KS 084 respectively.

KS 087: This site was a courtyard farm that was surveyed briefly in the 1984 season. There were no fineware sherds recovered at this site, however, the 239 combined TA and amphorae sherds recovered was the highest amount in the survey, as well as 837 coarseware fragments, also the highest of any site. There were the remains of a press fulcrum on site, but no mention of any architecture which may have represented a domestic area. Therefore, it is likely that this site was solely used for production purposes. The presence of TA, black top ware, red cookware, and SC likely indicates a third to seventh century date. The few sherds of early Roman coarseware may also indicate an earlier date for this site, potentially second century and later.

In this sector there were multiple dolmen clusters dating to the prehistoric period, most of which showed no connection to any of the Roman period sites. The discontinuity between these periods may, in some ways, be reminiscent of the discontinuity found at many sites throughout the survey between the third and fourth centuries. Many of the Roman period sites seem to have

begun as a single building which included an olive press. They then expanded due to an increased demand for olive oil and other products, which facilitated the growth of olive and cereal cultivation in the region. Only two sites provide firm evidence for occupation in the first and second centuries, KS 027 and KS 082. The majority of the other sites present pottery dating to the fourth or fifth century and beyond. This represents an increase in finewares dateable to the fourth century from those present in the third, most of which were RS.<sup>106</sup> There was also evidence at many sites for continued occupation into the eleventh and twelfth centuries and even into the modern period. The extensive use of terracing in this sector is also crucially important as it implies the need for such extensive field networks. However, it also suggests the ability of the sites in this area to produce a surplus of economically valuable goods as well as their ability to store and export these goods. While there were many small and large mixed farm complexes in Sector 3, KS 027 and KS 082 present the earliest chronologies, the highest quantities of TA, and most extensive architectural remains, ultimately indicating that they likely served as the administrative centers of this region, much like KS 223 and KS 225 in Sector 1 and KS 022 in Sector 2.

## Sites in Sector 4

KS 031:<sup>107</sup> This site, situated 15 kilometers north of Kasserine, was a small town or possibly urbanized village based on the evidence for artisan activity and religious monuments suggestive of a more densely settled area. At this site were found remains of multiple olive presses, terraces for arboriculture, pottery kilns, a small aqueduct,<sup>108</sup> a cistern, a bath complex, remains of a

<sup>&</sup>lt;sup>106</sup> The preference for local rather than imported ceramic in Sector 3, and the survey as a whole, is evidenced by the distribution of fineware at these sites: 42 ARS to 91 RS sherds.

<sup>&</sup>lt;sup>107</sup> Refer to Figures 17 and 18 for detailed plans.

<sup>&</sup>lt;sup>108</sup> During the survey, Hitchner's team discovered 40 previously unknown oil presses around Kasserine. 18 of these new oil presses were found at the present site, KS 031, and indicates sizeable economic output in this area. In terms of the aqueduct at this site, Matthew Hobson suggests that aqueducts present in central Tunisia were generally smaller rural versions of those which were built to serve the urban centers. These rural aqueducts still extended great

Christian basilica,<sup>109</sup> two necropoleis, defensive structures, and multiple kardines suggestive of an urban grid plan. The architecture present at this site is radically different from that which was observed elsewhere, especially the bath complex and aqueduct which were only present at a small number of other sites. This indicates a more advanced long term urban settlement and thus not simply individual habitation or production areas.

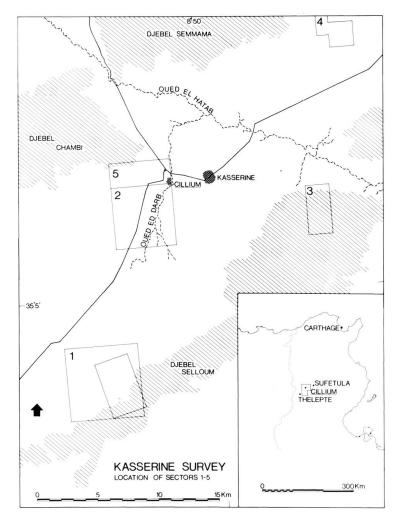


Figure 8: Map showing location of Sector 4 in relation to the other sectors surveyed (after Hitchner 1988: 9).

distances and were integral for rural agriculture, especially at Ksar el Guellal (KS 031). Due to the success of agriculture in these areas the market for olive oil likewise increased (Hobson 2012: 120, 124-125).

<sup>&</sup>lt;sup>109</sup> Merrills and Miles discuss the dominance of oleoculture at Ksar el-Guellal in the third century and most importantly that the Christian basilica, aqueduct, bath complex, and circuit wall were all built at this site during the Vandal period (Merrills and Miles 2010: 158). This suggests growth and not decline during the Vandal period, a point which will be further discussed in Chapter 7.

The presence of olive presses at this location is not surprising as they were common at most sites in the region and the terraced fields surrounding KS 031 were likely used to cultivate the requisite olives and other agricultural products. The ceramic evidence recovered from this site would likewise support the idea that KS 031 was intensely involved in the manufacture of olive oil and other goods, probably for export. 230 TA sherds were recovered which was the highest of any site within the surveyed area. This strongly indicates that this region was interested in the export of surplus goods especially when one understands that these 230 sherds are in stark contrast to the mere 7 amphorae sherds at this site. There were also at least 2, quite possibly more, Sbeitla wares recovered, making KS 031 one of only 6 sites in the survey that contained this type of evidence. This again indicates a series of highly elaborated trade networks to the northeast and southwest of Kasserine. This is not surprising, to some extent, since Sector 4 lies nearly halfway between Kasserine and Sbeitla and is the closest of any surveyed area to this region.

The 775 coarseware fragments were also the highest amount of any site in the survey besides KS 087. This information is also unsurprising simply due to the size of this area in relation to other individual sites, as KS 031 formed an entire town and would have needed to provide all the supplies required for the town to function. For instance, the multiple domestic structures in this area would have required coarsewares for everyday use some of which may have been used in the process of producing and storing agricultural products. Of the coarsewares recovered, there were 84 dolia fragments, the highest in the survey, along with 59 storage vessel sherds, which were likely dolia of some sort. Since this was an entire urban village it is not surprising to find dolia as they would have been necessary for various parts of communal living, as there was certainly a need to provide everyone in the town that which they needed. While at the same time,

the high quantity of TA indicates that there were also areas which focused substantially on trade and export. 36 basin sherds, 152 black top wares, and 7 mortaria all presumably indicative of a domestic setting were recovered. There were also 70 miscellaneous coarseware and 41 SC which were definitively found in domestic areas, units 3 and 4 respectively. Many of the other miscellaneous wares and SC were found in varying contexts through varying survey methods, but it is likely that some of them were used in the process of manufacturing olive oil and other such goods. The 152 black top wares date from the third to fifth century, while the 36 basins and 241 SC date to at least the time after the Byzantine re-conquest of the area, likely the sixth to late seventh century.

Due to this information it would be expected that a comparable amount of fineware would have been recovered here, however, no ARS, only 17 RS sherds all of which were from unknown forms were ultimately found. However, there was an interesting occurrence in that at least one, and quite possibly more, sherd of *terra sigillata* was found at this site, dating conclusively to the first century. This absence of fineware does not negate the presence of the extensive architectural remains at this site, as it was clearly a small town, however, it is strange that so few sherds were recovered. This becomes even more curious due to KS 031 being described as a major producer of ARS wares in A/D fabric, producing the forms which have been discussed previously.<sup>110</sup> Some of these forms were found at sites throughout the Kasserine survey including 1 sherd of RS form 32, 11 ARS and 18 RS form 45, and 6 ARS as well as 1 RS

<sup>&</sup>lt;sup>110</sup> Primarily these forms consisted of Hayes ARS forms 28, 31, 32, 44, 45 A, B, and C, 46, 48, and 50 A. This site, along with Sidi Marzouk Tounsi, are discussed more fully by Mackensen 2006: 111-121. Also Hitchner supports this assertion stating that, "At the Roman urban site, Ksar el Guellal, in the Kasserine region, where no fewer than 23 presses have been identified, a dense concentration of Red-Slip pottery and amphorae sherds has been found. These ceramic manufactories look very much like embryonic factory operations with complementary, and vertical, 'linkages' to local olive production operations" (Hitchner 1993a: 78, and note 25). Peacock et al. support the identification of this site as Ksar el-Guellal and describe it as an olive farm which produced Red Slip forms (Peacock et al. 1990: 74-75 as well as Figures 1 and 10). Therefore, although operating on a smaller scale than the better known Sidi Marzouk Tounsi, the pottery workshop at this site did produce some of the important ARS forms of this time.

sherd of form 50. Although the RS fragments recovered from KS 031 were of an unknown form, it is likely that some of them were from forms produced in this A/D fabric. This site is also reported as having produced ARS lamps of various forms<sup>111</sup> which indicates that this was a rather important workshop within the area. Mackensen has published a lamp fragment from Sabratha the provenance of which he attributes, on the basis of petrographic analysis, to this workshop. This also then indicates that there were substantial trade networks not simply between Kasserine and Thelepte, and Kasserine and Sbeitla, but also possibly Kasserine and northwestern Libya.<sup>112</sup>

Interestingly, in terms of the fine tablewares, it has been argued that only some of the workshops which produced in ARS A/D fabric intended those ceramics to be exported throughout the Mediterranean. Thus, many of these products stayed in Tunisia and may not have even traveled far from where they were originally produced.<sup>113</sup> Therefore, it is difficult to determine whether the products found at these sites, which were ultimately designated as ARS forms, were actually meant for export or may have simply served as the local ceramic and thus may not truly represent imported finewares.<sup>114</sup> If KS 031 truly was a major producer of ceramic in ARS A/D fabric, many forms of which are found on sites in the Kasserine region, it would in some ways explain the lack of finewares at this site. Ultimately, this workshop was active in the third through fifth centuries and therefore helps support the overall chronology for this site.

Apart from the extensive Roman ceramics, there were no pre-Roman versions retrieved at KS 031. This information combined with the clearly laid streets and grid plan indicate that this site

<sup>&</sup>lt;sup>111</sup> Forms include Atlante IV B, Atlante VI B, Atlante VIII C<sup>1</sup>, as well as Atlante VII A<sup>1</sup> and A<sup>2</sup>.

<sup>&</sup>lt;sup>112</sup> Mackensen 2002.

<sup>&</sup>lt;sup>113</sup> Bonifay et al. 2012: 46-47; Bonifay et al. 2010; Mackensen 2006.

<sup>&</sup>lt;sup>114</sup> "La classification générale des sigillées africaines... correspond aux productions classiques plus ou moins largement exportées en Méditerranée. Cependant, ces catégories ne permettent pas d'épuiser la diversité des productions de sigillée africaine sur le terrain proprement africain" (Bonifay et al. 2012: 53). Bonifay further supports the notion that certain products, while primarily exported, may have been used as local wares (Bonifay 2011: 21).

was originally settled by the Romans. Combined with the presence of fortification walls and defense towers, this also suggests that KS 031 began as a military outpost, probably in the first century and then became a *pagus* in which veterans were settled. The chronology for this site extends from the first through seventh centuries. This is supported not only by the coarsewares but also the pottery production in ARS A/D fabric. There is also strong evidence due to the recovered TA sherds, that this site had a substantial presence and economic output in the third through sixth centuries further solidifying the notion of occupation in this area.

Therefore, it is clear that this site was likely originally inhabited by the Romans as a fort on the frontier of the empire and later developed into an urbanized area with everything necessary for a Roman town. This site was especially well suited to a Roman presence in North Africa due to the large olive oil production capacities and the inherent ability to store and/or transport the goods, reinforced by the ceramic evidence. It is very likely that this site saw its greatest period of occupation during the third through fifth or sixth centuries, at which time pottery was being produced on site and the coarseware and amphorae evidence indicate a large economic output.

## Sites in Sector 5<sup>115</sup>

The quantity of ceramic recovered in Sector 5 was much lower than that of other sectors. For instance, there was just over one amphora sherd per site which is much different than that which is found elsewhere in the survey. This minimal presence of amphorae, a significant amount of coarsewares, along with the information that most of the sites surveyed in this sector were small farms or farm houses, may indicate that these sites were possibly seasonally occupied and were impermanent residences. The higher amount of RS than ARS sherds in this area would also seem

<sup>&</sup>lt;sup>115</sup> Refer to Figure 6 above for the position of the sites in this area in relation to those in Sector 2.

to support this idea as the ceramics recovered would only have been those deemed necessary for the seasonal activities at these sites.

KS 040-041: Both of these sites contained a single small rectangular building with nearly the same measurements, 31 x 18 m compared to 32 x 19 m, and both had evidence for multiple rooms on site. Although neither presented the remains of an olive press proper the name of KS 040, Henchir Misra, likely indicates that there was a press here at one point. Also, remnants of an olive press drain were located at KS 041 therefore, both are described as small courtyard olive farms. Both sites individually presented 2 amphorae sherds and only 2 collective dolia fragments, indicating that the economic output of these areas was not extensive. Both sites had little evidence of ARS presenting only 5 and 6 sherds as well as 2 and 28 RS sherds respectively. KS 040 was one of rather few areas that presented more evidence for ARS than RS and the reason for this is ultimately uncertain, especially considering the size, economic potential, and overall locally focused nature of this site. The 28 RS sherds at KS 041 is more conventional in terms of the quantities that were found at other sites. There were 121 sherds of coarseware at these two sites and a combined 7 black top sherds as well as 105 SC, 64 in KS 040 and 41 in KS 041. Most of the coarseware recovered were cookwares of various kinds. This information would suggest that these were small residential farms that primarily focused on providing for themselves and did not produce for export. When viewed together this information indicates a middle/late second to end of the fourth century date and the coarsewares may tentatively extend this chronology into the fifth through seventh century. Therefore, it is likely that there was some type of occupation at these sites from the middle/late second into at least the sixth and likely the seventh century, although, clearly the nature of that settlement changed over time.

KS 042: This site, located 200 m south of KS 041, contained two hydraulic installations constructed in limestone. These structures were likely used to catch rainwater in order to provide irrigation for the nearby fields and also served as cisterns. It is uncertain whether this site was truly ever inhabited or whether it always served a utilitarian function. The relative lack of ceramic evidence may be helpful in this regard. Only 2 amphorae sherds, 3 ARS, 3 RS, and 7 total coarseware sherds were found. This likely indicates that this is a secondary deposition or that this site may have served as a trash dump to some extent. If it truly had been inhabited at any point and not simply used for irrigation one would anticipate more pottery, however, this idea will only be clarified with more detailed analysis. The ceramics that were recovered strongly denote a middle/late first to early fifth century date and, based on the SC, may extend into the sixth and seventh centuries, although this is somewhat less certain.

KS 043: Not much is known about this site as most of the remains had collapsed to a great extent. However, it was postulated that this functioned as an individual farm house. The 2 amphorae sherds, 11 ARS, 4 RS, and 59 coarsewares would seem to support this conclusion. Much like KS 040 and KS 041 above, KS 043 was probably a rather small farm which functioned for itself and did not engage in export of any kind. As seen previously, there were more ARS than RS sherds recovered here and again the reason for this is ultimately uncertain, though it is interesting to note. The coarseware assemblage was dominated by 45 SC sherds, as well as 7 basins and 4 mortaria, which in this context likely indicate a small residential area focused on self-sufficiency. The fineware points to occupation in the third and again in the middle/late fifth to middle seventh century, the later date being supported by the SC. The coarseware again may bridge the apparent gap in the form of 1 black top and 1 red cookware sherd dating from the third to fifth century.

KS 045: 200-300 m north of KS 040 lies KS 045 which consists of a small rectangular building (7 x 4.5 m) with very few architectural remains still visible. This was defined as a low level habitation site and from the rather scant ceramic evidence this seems likely. Although some of the pottery may have been lost due to whatever may have destroyed the rest of the architecture at this site, the total lack of any amphorae sherds as well as only 3 fineware and 2 coarseware sherds is striking. This site may cautiously be dated to the middle second to early fifth century.

KS 046: This is another small olive farm which had evidence of an inner courtyard with multiple rooms and an orthostat which likely belonged to an olive press. The dimensions of the main building are the same as the buildings found at KS 040 and KS 042, showing some amount of interaction and continuity at the sites in this region. There was only 1 amphora sherd recovered and no ARS, which seems strange because even the smallest farm sites generally presented some of these forms. There were however, 7 RS and 29 coarseware fragments. The majority of the coarseware, as is evidenced elsewhere, consisted of SC found in multiple areas of the site. These wares are generally indicative of a small domestic unit and minor production capacity. The chronology for this site extends from the middle second to middle fourth century and may extend into the fifth to seventh centuries as well. However, the latter date is entirely based on the coarseware evidence, which may indicate a change in the focus of the settlement after the fourth.

KS 047: This is a small farmstead which had storage rooms for agricultural material and there were also the remnants of a well. Only 1 TA sherd was recovered here indicating that again, the farms in this sector were not as heavily focused on exporting their goods as were those in Sectors 1-4. The fineware distribution is more characteristic as the RS (19) outnumbered the ARS (6) sherds. There was a substantial presence of 78 coarseware fragments, the vast majority of which were SC. As has been seen at many of the small farms in this area, the prime focus was likely on producing for themselves, thus explaining why there were so many different cookwares found. However, at this site more architectural remains were recovered, along with a high quantity of coarsewares, suggesting that this may have been a more sizeable settlement. The fineware evidence suggests occupation from the beginning of the second to the middle third century and again in the middle fourth to middle seventh century. However, the 2 sherds of black top ware and red cookware may fill the void indicating a presence in the third to fifth centuries. Therefore, there was likely some type of occupation at this site from the beginning of the second to the middle seventh century.

KS 051: Like KS 045 this was also a very small habitation unit (6 x 4 m), amounting to little more than a single domestic structure lying 300 m west-southwest of KS 046. As a habitation unit it is surprising that there were not more coarsewares, although the lack of fineware could be explained by its designation as a low-level site. There were no amphorae or ARS and only 1 sherd each of RS and red cookware. This lack of evidence could be due to modern disruption of the original area, and leads to a rather uncertain chronology. The RS sherd was not precisely dateable and the red cookware sherd may indicate habitation in the third to fifth centuries. However, this absence of evidence may also indicate that this was never an important site and only experienced a short period of occupation.

KS 052: This site lies 600 m from the Cillium-Thelepte road and only 20 m distant from a modern farmhouse. Originally a small house, in Late Antiquity this area was converted into a tomb, based on the presence of a tombstone and altar table at the doorway of the original house, before ultimately being converted back for domestic purposes during the modern period. Therefore, the lack of any ceramic evidence, save 6 SC sherds, is not surprising due to so much

later presence and restructuring of the site. These fragments indicate some type of small dwelling and suggest a sixth to seventh century date, however, it is likely that this site was also occupied prior to this period.

KS 060: Located along the same main road which runs through the valley and near KS 052, this site is a large olive farm. It is much larger than the other small farms in this sector (namely, KS 040, KS 041, KS 046, and KS 047), which places it in a category between the smallest and largest agricultural complexes (i.e. KS 022) in the survey area. This site contained a large L-shaped building which contained at least five rooms situated around a central courtyard. These five rooms were all involved in the process of oil production, there were also three other units which probably served as domestic structures. Therefore, the presence of 2 TA, 1 ARS, and 1 RS sherd is rather surprising, as one would expect there to be more fragments attesting to the occupation and use of this site. However, the 128 coarsewares are more helpful in determining the function of this site. The 10 basins and 107 SC may suggest a site with sizeable production capacity as opposed to the red cookware and mortaria which are more indicative of domestic living areas. This information collectively presents a third to late seventh century date. The chronology may in fact be earlier, however, the finewares are not precisely dateable and thus the earliest date is provided by the black top and red cookware.

KS 062, 068-069, 073: None of these sites were listed in the Gazetteer and none contained any evidence of TA, ARS, or RS. All did present a few pieces of coarseware: 11 at KS 062, mainly handmade ware and basins; 7 at KS 068 all of which were handmade wares; 1 at KS 069 which was another handmade piece; and 2 sherds in KS 073 both of which were from SC vessels. It is likely that there were no architectural remains recovered in these areas, however, the pottery distribution may hint that these were a few small domiciles which may not have even had farming capabilities. These just as easily could have served as nothing more than trash dumps which presented some sherd scatter and thus were surveyed accordingly. Based on the presence of the basins and the SC these sites likely date to the period after the Byzantine re-conquest of the area, likely even into the seventh century. However, at present, these conclusions are ultimately unconfirmed.

KS 071: This site was comprised of an assumed domestic unit with at least one, possibly two, associated cisterns. There were no definitive ancient ruins found here, but there were the remnants of a ruined modern house. This habitation and rebuilding in later periods likely explains the total lack of any TA, ARS, or RS sherds at this site. There were 4 coarseware sherds recovered including 1 black top, 2 handmade, and 1 red cookware sherd. This presumably dates the site from the third to fifth centuries, although again, more information is needed in order to confirm this chronology.

KS 072: The precise function of this site was uncertain as it consisted of a series of holes cut into the ground. These may have been quarry pits for building materials, however, the nearest houses are rather far away. As there were no architectural remains recovered it is difficult to interpret the ceramic evidence. However, there was more ARS than RS recovered here, which is important as there were so few sites at which this was the case. The 31 coarsewares consisted almost entirely of SC, along with 1 sherd each of black top ware and red cookware. This information indicates a late first to fifth century date and may, on the basis of the SC, stretch into the later sixth century as well.

KS 074: The structure at this site was a conduit of some kind, likely a Roman aqueduct, which stretched into Cillium and served either a particular structure or another more general purpose. Due to this information the ceramic evidence is not helpful in determining the function,

as it is at farm settlements for instance, especially since the majority of the ceramic is coarseware and was found in the surrounding area 5 to 10 m from the conduit itself. However, this does help place this structure in a chronological context and it was likely in use from at least the third century (likely earlier due to the ARS) to the sixth or maybe even seventh century.

KS 075: This site lies within the vicinity of a nearby necropolis and contains a rather sizeable piece of carved limestone (measuring 0.33 x 0.70 m). The surface of this limestone is all that is visible on the ground and due to erosion the sherds have likely been redeposited since antiquity. Ultimately, this was a monumental tomb which may explain the higher presence of ARS than RS encountered here, much like some of the tombs found in other sectors which also included similar fineware distribution. This site was presumably in use between the middle second and early sixth centuries.

KS 077: This is a small farm located only 100 m from the main east-west road running through the valley and 500 m west of KS 060. The fields in this vicinity are underdeveloped and consist mainly of scrubs. There was evidence of a building which originally measured 18 x 12 m as well as possible evidence for a cistern. The 1 amphorae and 1 dolium sherd indicate that there may have been a practice of storing that which was produced in the area. The lack of any ARS and presence of 9 RS sherds indicate that this was likely a site which was not well connected with other major towns in the region. This is further supported by the distance between KS 077 and the main road leading from Cillium to Thelepte. The other coarseware evidence at this site is generally cookware of various kinds indicative of a small domestic setting with some farming capabilities, albeit on a rather small scale. Much like KS 075, the dating for this site would seem to encompass the middle second to middle sixth century, with the only evidence for occupation

Sector 5 is unique in a number of ways. First of all, the sites in this area had very little capability for extensive economic output and export based on the ceramic evidence recovered at each (much less evidence for TA and ARS, for example). This region has more sites that were primarily focused on self-sufficiency than were recorded elsewhere in the survey. Nonetheless, it is interesting to note that Sector 5 contained four of the nine sites which had more ARS than RS. Again the meaning here is ultimately uncertain, however, this would seem to suggest a connection to more well developed towns, potentially due to trade. Interestingly though, Sector 5 presents at one and the same time, the most sites which appear to have focused on producing solely for themselves as well as nearly half of the sites with more ARS that would seemingly imply more well developed trade connections.

There was some evidence of sizeable farms such as at KS 060, which was larger than most of the farms in this sector but not as large as KS 022 for instance. Clearly, this area had the ability to produce a surplus, the majority of sites simply did not. Multiple sites in this region did not include any production or even domestic structures as they served purely utilitarian purposes such as drainage (KS 042), an aqueduct (KS 074), quarrying areas (KS 072), and tombs (KS 075). Along with this there were also low-level habitation sites, not found outside Sector 5, equating to little more than an individual dwelling with very minimal production capacity. There were also four sites (KS 062, 068-069, 073) each of which likely comprised a single domestic structure, which had no evidence for any type of farming. This information indicates that Sector 5 was the most heavily diversified region in the survey. There is very little evidence that these

sites worked together towards the same goal and there is no administrative facility around which the rest of the sites are centered.

Overall, it can be seen that the distribution of pottery at each site varies considerably not only in quantity, but even in terms of the types of ceramic that are found. The following chapter will focus on making a cursory comparison of the information from Kasserine with two other North African surveys, namely the Libyan Valleys and Segermes Surveys.

## **Chapter 6: Comparison Across Surveys**

As alluded to previously, comparing the results from one survey to those of another is not an easy task and the difficulties of this type of work have been discussed in multiple publications.<sup>116</sup> However, the main difficulties come from the lack of any standard terminology or method for determining what constitutes a site, a sector, a 'diagnosable' amount of pottery per unit area, and even the way in which chronologies are determined.<sup>117</sup> The problems in comparative studies are further exacerbated by the incomplete nature of the published material from many North African surveys as well as the manner in which material was recorded, catalogued, and presented. Even the ways in which pottery chronologies are determined differs.<sup>118</sup> In order to try to eliminate some of these problems, Sørensen described six different categories into which areas were divided in the Segermes Survey. These areas were classified depending upon whether each had an identifiable function, was dateable, and whether there were or were not structures of some kind.<sup>119</sup>

However, methodological constraints are not the only cause for concern in comparative studies. It is also important to recognize some of the potential assumptions that go along with an analysis of this kind such as, "we assume that pottery was of equal accessibility, desirability, value and function and that none of this had any effect on its use or discard."<sup>120</sup> It must be borne in mind that certain ceramic forms were more valuable than others, whether due to their range of

<sup>&</sup>lt;sup>116</sup> Primarily considered in the present report are Alcock and Cherry 2004; Carr 2009; Fentress, Fontana, Hitchner, and Perkins 2004; Lund 2009; Stone 2004; and Witcher 2006.

<sup>&</sup>lt;sup>117</sup> In this regard, see especially Stone 2004: 135-136, 138. Witcher 2006: 6-8 discusses the difficulties concerning the ways in which surveys present results and the conclusions that are reached, as well the discrepancies in the relative chronologies of different pottery forms (*terra sigillata* v. ARS for instance). While Lund 2009: 65-72 discusses the inherent difficulties in determining precisely the chronology for individual forms. This is due to a number of factors, not least of which, the variability from one project to the next concerning the precise date ranges used for these forms.

<sup>&</sup>lt;sup>118</sup> As regards this issue see especially Witcher 2006: 6-7.

<sup>&</sup>lt;sup>119</sup> Sørensen 1995: 123-125; Lund 1995: 454-455. Lund 2009 discusses further issues regarding the dating and comparison of results from one survey to another.

<sup>&</sup>lt;sup>120</sup> Witcher 2006: 8.

potential uses or due to their aesthetic value. These matters notwithstanding, the present chapter will compare the raw data from Kasserine with that from other surveys, all of which have varying methodologies and ways of presenting results. An evaluation of raw data as the most basic comparable unit can be helpful in determining the settlement patterns of these areas as well as the longevity of individual sites. This will hopefully provide a more objective form of comparison by avoiding the inherent difficulties caused by various methodological differences.

In what follows, the ceramic evidence from Kasserine will be compared with the evidence from two other regions in North Africa, particularly those covered in the Libyan Valleys (hereafter ULVS) and Segermes Surveys.<sup>121</sup> Due to time restraints, this is the most detailed comparison that could be done. As such, this chapter does not claim to provide a complete understanding of the importance of the Kasserine assemblage in the context of Africa as a whole. A more conclusive understanding will only be gained through future work which should consider the results from other African surveys, especially those of Jerba and Utica, as well.<sup>122</sup> However, the comparison to ULVS and Segermes is important in order to better interpret and better understand the information and general trends present at Kasserine. In fact, the general ceramic trend at Kasserine is also evident at ULVS, both of which are very different from the pottery distribution at Segermes. This comparison will be based on the fineware evidence from the three surveys with the hope that a comparison of the quantities of sherds and an associated discussion of the particularly relevant forms will avoid many problems.<sup>123</sup>

It will first be necessary to outline the overall goals for each of the pottery reports here discussed, all of which inevitably differed depending upon the primary objectives of each survey.

<sup>&</sup>lt;sup>121</sup> Libyan Valleys Survey: Dore 1996. Segermes: Sørensen 1995; Lund 1995.

<sup>&</sup>lt;sup>122</sup> Jerba: Fentress, Drine, and Hold 2009. For preliminary reports at Utica: Fentress, Ghozzi, Quinn, and Wilson: 2012; 2013; Ben Jerbania, Fentress, Ghozzi, and Wilson: 2014.

<sup>&</sup>lt;sup>123</sup> Lund did not present the coarseware and amphorae information in his report at Segermes, therefore, these pieces could not be compared.

The principal objective of the present report has been to account for the entire pottery assemblage recovered at Kasserine and examine the impact of these ceramics in light of the architecture and function of each site at which they were found. Ultimately, this was done in order to allow a better and more complete understanding of the trade and economic output of each sector and how they related one to another. The purpose of Dore's report concerning the ceramic from the ULVS was primarily to establish a date range for the sites on which the forms were found, as opposed to providing an in-depth study of the finewares themselves. This pottery information presents a chronology which spans the first through seventh centuries, much like Kasserine and Segermes.<sup>124</sup> On the other hand, the Segermes pottery catalog presented by Lund only examined the fineware and lamp evidence due to various financial and time constraints.<sup>125</sup> With this information in mind, a comparison of the results of each is rather interesting.

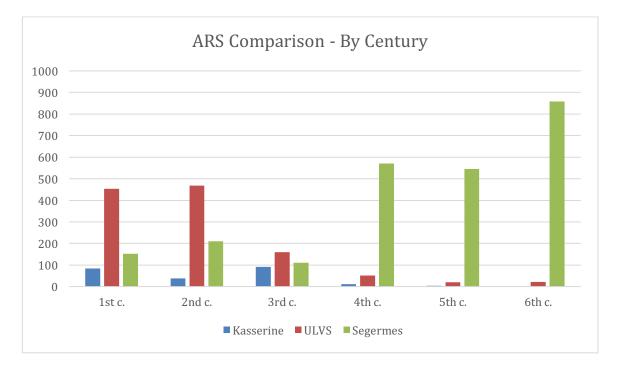
It is immediately apparent that Kasserine presents a much lower overall quantity of ARS sherds than either ULVS or Segermes. However, the trend of general decline in the amount of ARS from the third through sixth centuries can be seen at both Kasserine and ULVS. Also, both surveys present a pronounced drop in the quantity of ARS sherds from the third to fourth centuries.<sup>126</sup> Similarly, Segermes presents a pattern much like that of ULVS at least in the first three centuries, i.e. a rise in ARS in the second century compared to the quantity present in the first, and a decline from the second into third centuries. However, Segermes differs from Kasserine and ULVS in the later periods in that instead of declining in the third through sixth centuries the number of ARS sherds actually increases substantially in this period. In fact, until approximately 400 CE, the ARS quantity at Segermes was much lower than the expected

<sup>&</sup>lt;sup>124</sup> Dore 1996: 320-321; Lund 1995.

<sup>&</sup>lt;sup>125</sup> Lund 1995: 449.

<sup>&</sup>lt;sup>126</sup> According to Fentress et al. 2004, both also present below average ARS totals for the fourth-fifth centuries, and ULVS continues to have a below average amount until the end of the seventh century.

average.<sup>127</sup> However, in the beginning of the sixth century, particularly c. 510-520, the same time in which ARS 88 began being produced, the ARS quantities rise to nearly four times the average amount.<sup>128</sup>



*Figure 9: Distribution of ARS in each survey, only accounting for the century in which the forms began being produced.* 

Commenting on pottery distribution throughout Tunisia in general, Lund explains that "the distribution pattern of ARS 88 is but one indication that pottery – at least in the Late Roman period – was mostly supplied on a local rather than inter-regional level in Tunisia."<sup>129</sup> This suggestion is supported by the Kasserine assemblage which presented a much higher quantity of

<sup>&</sup>lt;sup>127</sup> This average is that determined by Fentress et al. 2004 which compared the quantities of ARS recovered from eight different surveys.

<sup>&</sup>lt;sup>128</sup> Fentress et al. 2004: 151-153 for more information and for the graphs which illustrate the relationship of each individual survey to the averages of the combined data.

<sup>&</sup>lt;sup>129</sup> Lund 1995: 452. This idea is further elaborated by Bonifay who states that, "le commerce méditerranéen n'est sans doute pas le seul débouché des surplus de l'économie africaine" (Bonifay 2011: 19). Therefore, ARS wares were not solely produced for export, but many forms may have been distributed locally or within the same region.

local RS than overall ARS wares. However, this is not to say that the local pottery present in Kasserine was the same as that which constituted local wares in all regions of North Africa, as 'local' in this sense is a relative term. In fact, in ULVS, Tripolitanian Red Slip (TRS) wares are considered the local ceramics, while forms such as ARS 88, 99, 103, and 104 become the local variants in the Segermes region. Not only does this support the idea that different types of pottery reached the inland regions as opposed to that which was available to those on the coast, as Bonifay suggested,<sup>130</sup> it also indicates that the idea of a 'local' pottery style is much more complex than it at first appears. While ARS in many cases was made for export, simply stating that the presence of ARS on individual sites indicates imported wares, and thus not local production, is somewhat misguided.

Geographically, Segermes is located near the coast and between two of the most important pottery workshops in Tunisia, namely Sidi Khalifa and Oudhna.<sup>131</sup> Sidi Khalifa, located directly south of Segermes, was known to have produced ceramics in ARS C/D and D fabric including Hayes form 88.<sup>132</sup> Oudhna, to the northwest of Segermes, produced wares in ARS D<sup>1</sup> and D<sup>2</sup> fabric including Hayes forms 95-99, 103, and 104. Bonifay explains that the products from both workshops were generally made explicitly for export.<sup>133</sup> Interestingly, at Segermes there were 257 recovered sherds of ARS 88, 112 from ARS 99, 184 of ARS 103, and 118 of ARS 104,<sup>134</sup>

<sup>&</sup>lt;sup>130</sup> Bonifay 2013: 542-557.

<sup>&</sup>lt;sup>131</sup> Bonifay 2011: 26. Refer to Figure 1 above.

<sup>&</sup>lt;sup>132</sup> Mackensen and Schneider 2002: 128 discuss the other forms produced at Sidi Khalifa including Hayes 61B, 67, and most importantly, 86, 87B, and 88.

<sup>&</sup>lt;sup>133</sup> "Cependant, la sigillée issue des grands ateliers semble trouver moins de débouchés en Afrique que sur les marchés extérieurs: du IVe au VIIe s., Carthage est essentiellement approvisionnée par les deux ou trois grands ateliers situés dans un rayon de 40 km, notamment El Mahrine et Oudhna. En revanche, elle fait peu appel aux productions des ateliers de Byzacène, Sidi Khalifa et Sidi Marzouk Tounsi. Il est également nécessaire de distinguer entre les cités côtières et celles de l'intérieur" (Bonifay 2011: 21). Ibid: 23; Bonifay et al. 2012: 48-50; Further discussion of exportation, Hayes 1972: 128-136, 152-155, 157-166. Therefore, it is clear that the majority of ARS forms produced were intended to be exported, for more information concerning where individual ARS forms were exported, see Bonifay 2014. For more about the workshop at Oudhna specifically see Barraud et al. 1998.

<sup>&</sup>lt;sup>134</sup> Lund 1995: 462-467. These forms account for 13.1%, 5.7%, 9.4%, and 6.0% of the entire fineware assemblage respectively.

consequently, the four highest totals for any individual forms in the whole survey, aside from the category of 'unassigned' sherds. While located in the vicinity of both workshops that produced these wares, there was no clear evidence presented that Segermes was in anyway involved in the production of these ceramics. Therefore, it begs the question, why were these forms, which were explicitly produced for export outside North Africa, found in such high quantities, on a site that did not play a role in their production?

This idea supports Bonifay's assumption that although forms produced between the fourth and seventh centuries were made primarily for export there is also evidence that, "en effet...certaines productions africaines sont réservées au marché local."<sup>135</sup> Therefore, it becomes even clearer that certain ARS forms could, and in this case, did, constitute the 'local' form of ceramic.<sup>136</sup> In some ways, this may also be due to a high demand by those in Segermes for these specific fineware forms. However, with two important ceramic production centers very near Segermes, there would have been no need for those in this area to begin producing their own ceramic wares, as it would have been easier to acquire that which was needed from these workshops.

This information is even more striking when compared to the presence, or rather lack thereof, of these wares in Kasserine and ULVS. In the ULVS there were no ARS 88 sherds recovered, and only 7 sherds of form 99 (0.6% of the total ARS recovered), and 9 sherds of form 104 (0.78%). At Kasserine there were only 2 sherds recovered from possible ARS 88 (0.41%) forms and no sherds of forms 99, 103, or 104. Therefore, while these forms may have been destined for

<sup>&</sup>lt;sup>135</sup> Bonifay 2011: 21. Further supporting this idea Carr states that "most of the pottery produced and used in Tunisia was made locally and used locally" (Carr 2009: 124).

<sup>&</sup>lt;sup>136</sup> This same type of 'local' ceramic distribution is seen at Carthage during the Vandal period at which time Carthage's "supply of fine red slip tableware was much more local in character, produced mainly at the nearby workshops of El Mahrine and Oudhna, and at the unidentified 'Atelier X'" (Conant 2012: 98). As regards this issue, see also Bonifay 2004: 49 and 451.

export, the evidence does not suggest that they were exported much within Africa proper. Thus, the presence of these wares at Segermes is important and must be explained in some way. This likely indicates that these forms functioned as the local ceramic in this region due to the multiple factors mentioned previously. This would also explain the relative lack of local 'Segermes' forms reported by Lund, with only 9 different forms accounting for a mere 12 sherds.

Alternatively, in the ULVS, TRS wares constituted the local ceramic and began being produced in the early or middle third century. Up to this point the majority of the ceramic assemblage in this region had consisted of various ARS wares. However, once the local TRS wares became more readily available the demand for ARS dropped substantially, thus explaining the dramatic decline in the quantity of ARS in this area from the third to fourth centuries.<sup>137</sup> This idea is further supported due to the much higher presence of TRS than ARS wares after the third century. In fact, there were 793 TRS sherds recovered dating to the third to sixth centuries, the same period in which only 255 ARS sherds were recovered. Therefore, it becomes clear that the quantity of ARS recovered in any individual survey is reliant upon the geographical relationship between that area and ARS pottery workshops, as well as the amount of ceramic that was being locally produced or imitated. The ease of obtaining these pieces would have eliminated the need for imported ceramic in large part, save only for special occasions or to be used as symbols of wealth within a social hierarchy.

On the other hand, at Kasserine the amount of ARS drops significantly from the first to second centuries, correlating with the development of local production of RS wares in the region. Therefore, it is unsurprising that the 493 total ARS wares pale in comparison to the 2,352 local RS sherds recovered in the survey. Fundamentally, the evidence suggests that this drop in ARS

<sup>&</sup>lt;sup>137</sup> "Quantities of ARS decline markedly after the 3<sup>rd</sup> century, in response, it would seem, to the rise in TRS output" (Dore 1996: 320). This same trend can also be seen in Figure 9 above.

at Kasserine, due to the development of local production, is mirrored in the ULVS, but was simply delayed one century. The amount of ARS in Kasserine present in the second century is less than half the quantity which was present in the first (84 in the first vs. 38 in the second). Similarly, the amount of ARS in the ULVS in the third century is much less than half that which was present in the second (468 in second vs. 160 in third). Ultimately, these changes were for the same reason, the development of their own local production capacities. However, these productions did not begin at the same time, thus explaining the slightly different ceramic trends at Kasserine and ULVS.

Therefore, although Kasserine and ULVS do not present the exact same pattern of ARS, the general trends are similar. Once, the local productions became widely available there was a drop in demand for ARS. There is also the fact that the pottery at both decreases sharply from the third to fourth centuries. While this development has been explained at ULVS, the drop at Kasserine signals some kind of a change in settlement pattern. Many of the sites report a much lower amount of finewares in this transitional period and occupation at some sites is often solely reliant upon coarseware evidence.

Alternatively, however, Segermes thrives in the fourth century with more than five times the amount of ARS that was present in the third (111 in the third vs. 571 in the fourth). Part of this shift may have been due to the fact that the nearby pottery workshops producing in  $D^1$  and  $D^2$  fabric were heavily active in this period, with  $D^1$  becoming one of the most prevalent fabrics from the fourth century onwards.<sup>138</sup> Ultimately, the reason that Segermes has a peak in its ceramic assemblage in the sixth century, late compared to others, is the high quantity of ARS 88 recovered in this region. This is a perfect example of the wares produced in this area, either at Oudhna or Sidi Khalifa, heavily impacting the pottery present in Segermes.

<sup>&</sup>lt;sup>138</sup> Bonifay et al. 2012: 48.

Not only does geographical location play an important part in determining the ceramics available and present in a specific area, but also the time in which workshops begin production of specific forms. While these ideas are interesting to note, ultimately, these conclusions are only tentative due to the relative lack of material included. Future work will need to consider the information from other surveys in North Africa as well as include a discussion of the coarseware evidence. Although not all surveys provide this information, those that do (for example, at least Kasserine and ULVS here presented) may allow for even better understanding of the nature of economic trade connections throughout North Africa.<sup>139</sup> Ultimately, this comparison is important as it shows that while Kasserine may seem isolated, both geographically and due to the relatively low quantity of ARS recovered, the pottery assemblage here truly mirrors some of the most important trends seen in the larger urbanized areas. In this way, a better understanding of Kasserine can be gained based not only on the relationship of the survey sectors to one another, but also through understanding the ways in which the assemblage at Kasserine developed over time in a manner not atypical in the context of North Africa. Thus, this allows a clearer sense of the way in which Kasserine fits into the larger picture of the Roman provinces of North Africa.

<sup>&</sup>lt;sup>139</sup> For a fuller discussion of the nature of the trade of coarsewares especially cookware, in North Africa, see Leitch 2010; 2013.

## **Chapter 7: Conclusion**

The pottery from the Kasserine Survey, when set against the evidence for settlement, provides new and important information on the impact of the Roman incorporation of the Tunisian high steppe. Although the survey was not permitted to conduct work on sites pre-dating the Roman period, there is widespread evidence of megalithic tombs and small settlement sites belonging to the first millennium B.C.E. and earlier.<sup>140</sup> Likewise, at some sites, especially those in Sector 5, there was substantial evidence for reuse after the Roman period, during Medieval and Modern times. The question of continuity aside, and with the understanding that agriculture had taken place in this area prior to the Roman period,<sup>141</sup> it is clear that Roman intervention in these regions served as an impetus for the emergence, growth, and development of the urban centers at Cillium and Thelepte as well as large scale olive oil production and animal husbandry.

The Kasserine Survey recorded 11,741 diagnostic pottery sherds including 2,885 fineware sherds; 1,605 combined TA and AM; and 7,251 coarseware fragments. The coarsewares generally consisted of various small tablewares and multiple cookware forms. In the absence of stratigraphic excavation by the survey, secure dating for these forms must remain tentative. The finewares recovered primarily consisted of ARS and RS, with a small amount of TRS and lamp fragments. This information indicates an overall chronology ranging from the first to seventh centuries in the region of Kasserine.

Many of the sites at which fineware was recovered presented very few of the earliest dated sherds as the pottery at most sites was chiefly dateable between the third and seventh centuries C.E. The Kasserine pottery indicates that during the first centuries after Roman incorporation of the area (primarily the first and second centuries) finewares were imported, primarily from the

<sup>&</sup>lt;sup>140</sup> In addition to the megalithic tombs, two pre-Roman ceramic fragments, recovered at KS 012 and KS 087, attest to the pre-Roman habitation and settlement of sites which later became important Roman sites.

<sup>&</sup>lt;sup>141</sup> Hoyer 2013; Fentress and Docter 2008; Cherry 1998; Hitchner 1993a; 1994; Hobson 2012; Dossey 2010.

northern and eastern coasts of Tunisia, the original ARS production centers, the earliest of which was at Oudhna – nearly one-half (i.e. 106 of 238) of all dateable ARS sherds recovered in the survey dated to this period. The earliest imported ARS forms in Kasserine primarily consisted of Hayes forms 1 (dish), 3 (dish), 4 (dish), 5 (dish), 6 (dish), 8 (carinated bowl), 26 (flat-based dish). However, in the late second and early third century central Tunisia began producing its own versions of ARS, the sherds originally identified by Lucinda Neuru and referred to in this report as RS. The earliest dated RS forms in Kasserine were local versions of previously imported ARS vessels including RS 2/3 (bowl/dish), 3 (dish), 6 (dish), 10 (carinated bowl), 21 (casserole), and 26 (flat-based dish), which are, unsurprisingly, rather similar to the earliest ARS forms.

This preference for locally produced fineware only becomes more pronounced in later centuries, primarily during the third and fourth century period when the amount of imported ARS at Kasserine dramatically decreases while there is a concurrent rise in the amount of RS recovered (see Figures 3 and 4). These local wares were produced in numerous places in central Tunisia (Sidi Marzouk Tounsi, Henchir es Srira, and Henchir el-Guellal, among others) primarily imitating the ARS vessel forms (mainly various dishes) which had previously been imported (see Chapter 4). In sum, these local finewares replaced the need for imported ARS and in so doing serve as a sign of the increasing economic potential and development of central Tunisia.<sup>142</sup>

The preference for local production evident in Kasserine is not atypical. This is something that is clearly evident in other regions as well, especially those covered by the ULVS and

<sup>&</sup>lt;sup>142</sup> Sidi Marzouk Tounsi (the most prominent workshop in this period) and Henchir es Srira were known to have produced in ARS C fabric including: Hayes 31 (large dish), 32 (dish), 45 B (large bowl), 48 A and B (plates), 49 (plate), 50 A (large dish), 51 A/B (dish/bowl), 52 B (small bowl), 53 A (bowl), 54 (dish), 55 (large dish), 56 (decorated dish), 82 B (large plate), and 89 A (large plate). Henchir el-Guellal produced finewares in ARS A/D fabric, primarily: Hayes 28 (bowl), 31, 32, 44 (small bowl), 45 A, B, and C, 46 (large bowl), 48, and 50 A, along with ARS lamps: *Atlante* IV B, *Atlante* VI B, *Atlante* VIII C, and possibly *Atlante* VII A<sup>1</sup> and A<sup>2</sup>. All of which began producing in the early/middle third century C.E. when ARS production was no longer solely based along the northern and eastern Tunisian coasts.

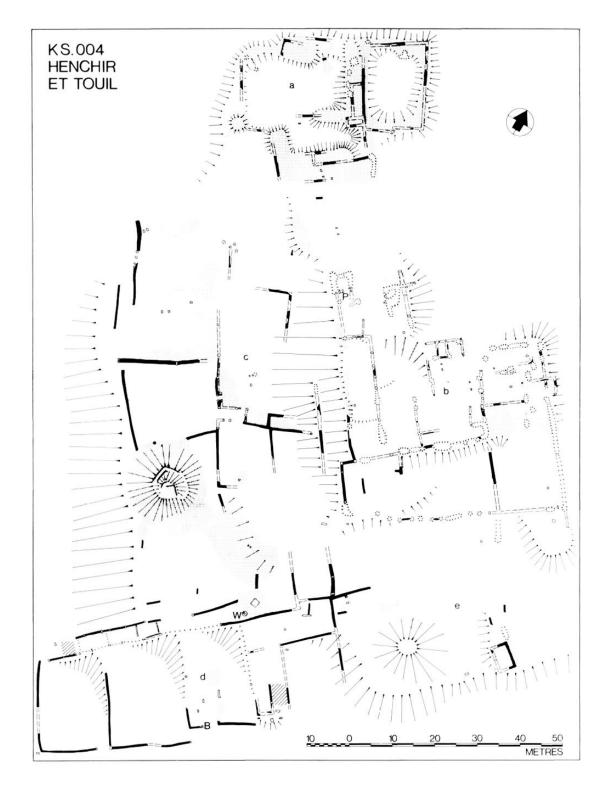
Segermes Surveys. There is one fundamental difference among these surveys concerning the exact determination of what constitutes 'local' ceramic. In Kasserine, it is clearly the RS wares which were based on ARS precedents. In the ULVS, TRS wares, mainly beginning in the third century, function as the local form of pottery. In a very similar way, once the TRS wares began being produced, there was a significant decline in the number of ARS sherds recovered due to decreased demand. The Segermes Survey provides a different, though equally compelling, argument concerning the nature of 'local' products. Although the ARS distribution at Segermes is the opposite of that at Kasserine and ULVS (increasing between the fourth and sixth centuries, the same time in which the ARS decreases substantially in the other two), the local form of ceramic in this region becomes ARS forms 99, 103, 104, and especially 88. This is due to the location of Segermes between two of the most important ARS workshops in Tunisia: Sidi Khalifa and Oudhna. Thus, these forms, being so prevalent in the immediate vicinity, functioned as de facto local wares.

During the third – fourth, and in some cases fifth, centuries many sites in Kasserine have no firm fineware evidence especially in Sector 1, but even those that do present a much lower quantity of ARS than had been present in the first and second centuries. One thing can be said for certain, throughout the entire region of the survey, some type of substantial change occurred between the late third and fifth centuries. There are a significant number of sites in each sector, which have fineware that indicates a break in chronology in this period. Many of them presented fineware dated between the first and third centuries, and the fourth, or sometimes fifth, and seventh centuries. However, there was no firm fineware evidence which would attest to occupation in the interim (third-fourth/fifth century) period. At present it is difficult to determine the specific reason for the lack of finewares at a number of sites in Kasserine between the third

and fifth centuries. The sixth century Byzantine reconquest of central Tunisia does not reveal significant changes in the ceramic record in the area, as local RS production continues. A small quantity of ARS 87 (dish), 88/89v (large dish/plate), 91 (flanged bowls), and 91 c sherds were recovered in Kasserine dating to the sixth century. By the seventh century, most sites present a negligible quantity of finewares though there is a continued presence of locally produced RS. Primarily consisting of ARS 91, RS 91 (and various forms are all flanged bowls), 91c, 91 c/d, 91 d, 99 (bowl), 99 c (bowl), 105 (large plate), 108 (small bowl), 110 (deep bowl), and possibly, though ultimately unconfirmed, RS Forms A, D, and E.

The settlement chronology from the Kasserine survey, based chiefly on the ARS-RS wares recovered by the survey, shows an increase from 16 sites in the first century to 36 and 45 in the second and third centuries. The third to fifth century period is stable presenting 45, 47, and 46 inhabited sites respectively, before dropping to 30 and 10 respectively in the sixth and seventh centuries.<sup>143</sup> Thus, in the Cillium-Thelepte region the ceramic evidence suggests a period of rapid growth from the first to third centuries C.E. (based on the number of inhabited sites, which itself was based on ceramic evidence). This was followed by a period of relative stability from the third to fifth centuries and ultimately a fall-off in settlement from the fifth into seventh centuries. This pattern of growth, stability, and decline is very similar to that found in a number of other surveys, including the ULVS discussed in the previous chapter.

<sup>&</sup>lt;sup>143</sup> Wanner 2006: 187.



Appendix I: Selected Individual Site Plans

Figure 10: Plan of KS 004 in Sector 1 (after Hitchner 1988: 18).

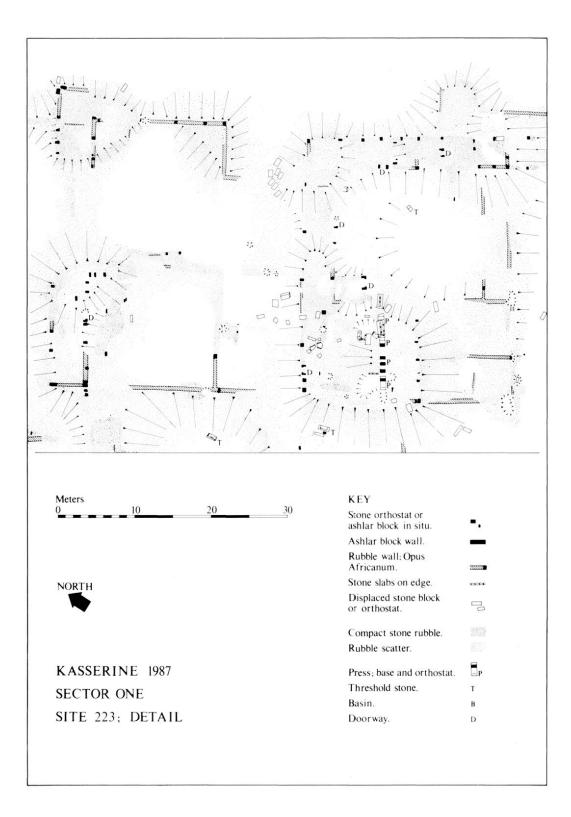


Figure 11: Detailed plan of site KS 223, the administrative center in Sector 1 (after Hitchner et al. 1990: 238).



Figure 12: Plan of site KS 225 in Sector 1 (after Hitchner et al. 1990: 234).

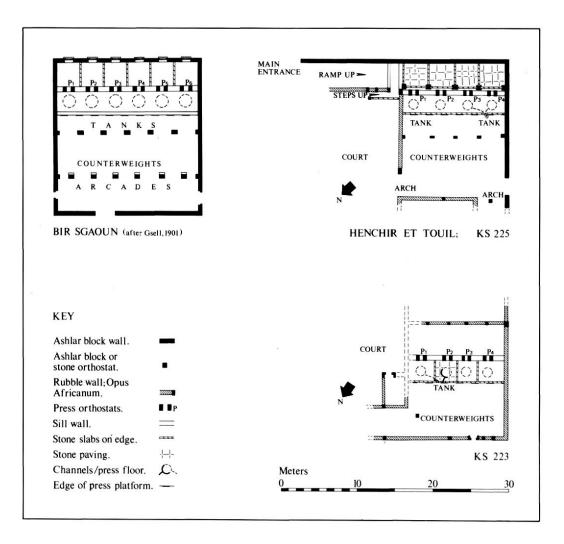


Figure 13: Plan of the olive pressing areas at KS 223 and 225. The press facility at Bir Sgaoun is provided for reference (after Mattingly, Appendix 1 in Hitchner et al. 1990: 251).

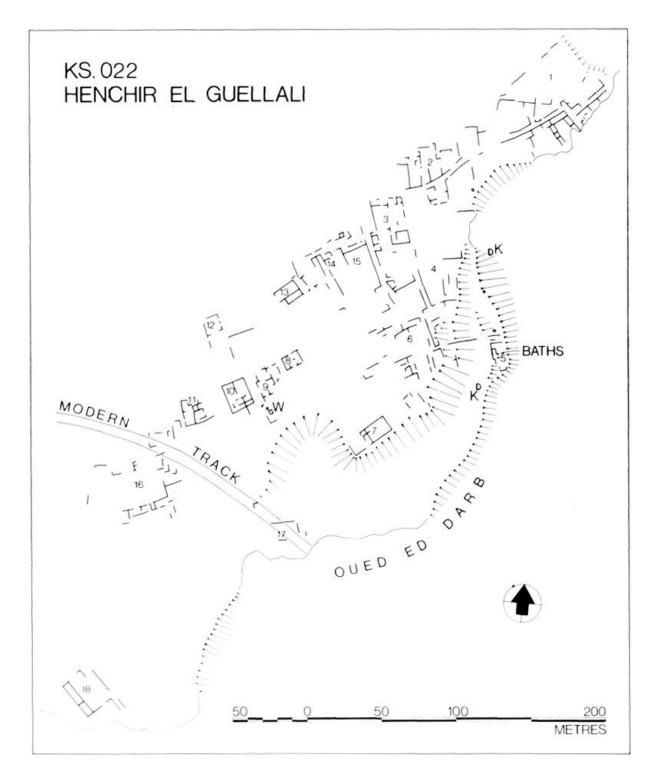


Figure 14: Plan of site KS 022 in Sector 2 (after Hitchner 1988: 25).

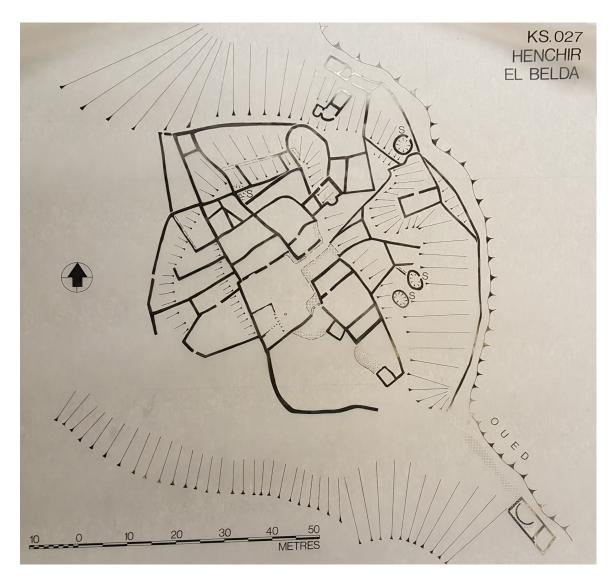


Figure 15: Plan of KS 027 in Sector 3. Strange alignment due to modern habitation in the area.

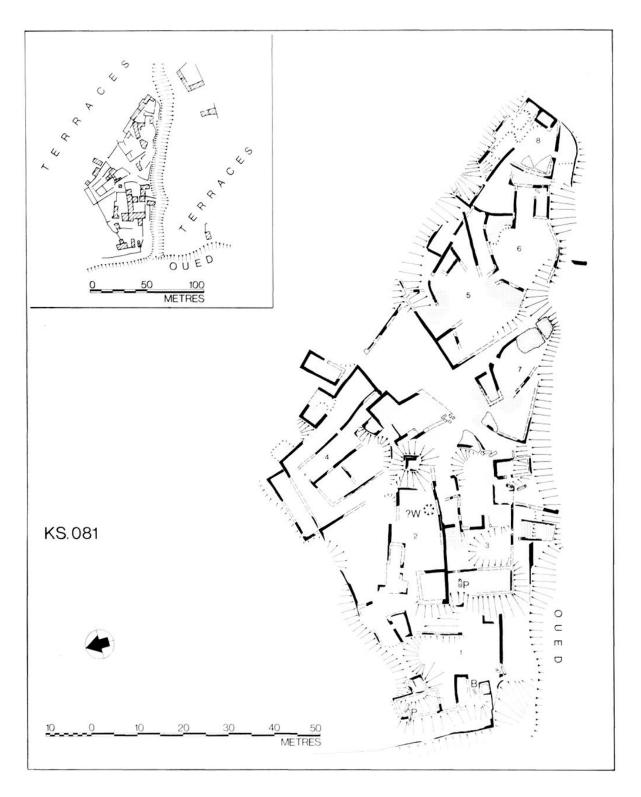


Figure 16: Plan of KS 081 in Sector 3 (after Hitchner 1988: 31).

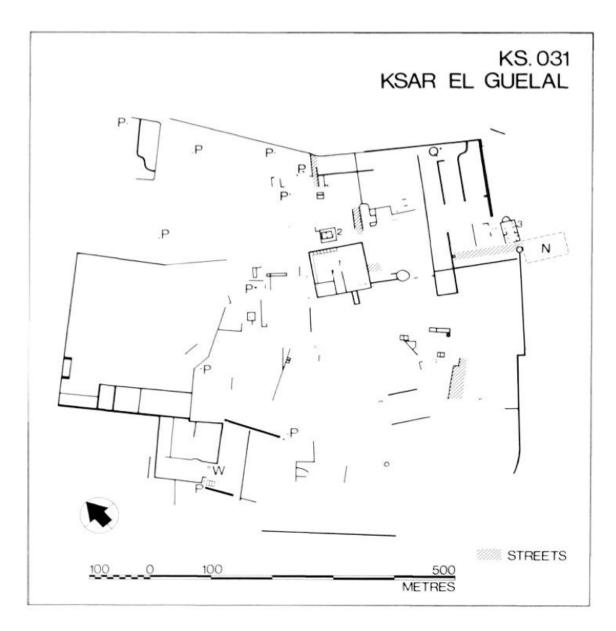


Figure 17: Plan of site KS 031 (after Hitchner 1988: 33).

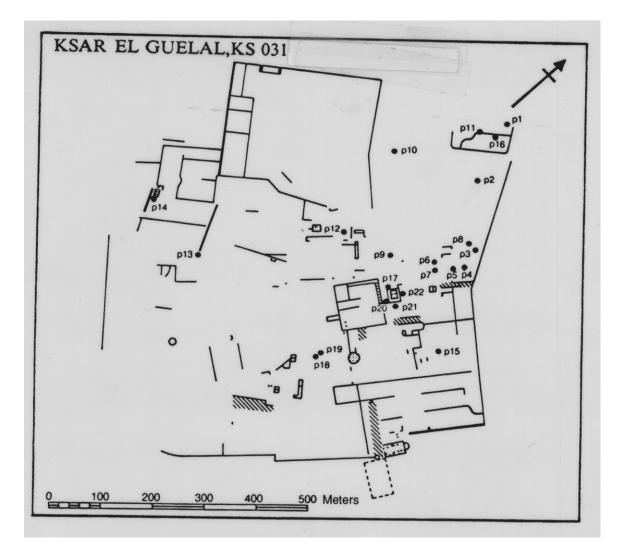


Figure 18: Detailed plan of the location of individual presses at KS 031.

## **Bibliography**

- Addyman, P.V. "The Archaeology of the Sbeitla Area: Interim Report." *Brathay Exploration Group Annual Report and Account of Expeditions in 1962* (1962): 60-77.
- Addyman, P.V., and W.G. Simpson. "The Archaeology of the Sbeitla Area: Second Interim Report." *Brathay Exploration Group Annual Report and Account of Expeditions in 1966* (1966): 153-70.
- Alcock, Susan E., and John F. Cherry, eds. *Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World*. Oxford: Oxbow, 2004.
- Anselmino, L., M. Bouchenaki, A. Carandini, Ph. Leveau, D. Manacorda, C. Pavolini, G. Pucci, and P. Salama. *Il Castellum del Nador: storia di una fattoria tra Tipasa e Caesarea (I-VI sec. d.C.). Monografie di Archeologia Libica 23.* Rome: L'Erma di Bretschneider, 1989.
- Baklouti, Siwar, Lara Maritan, Néija Laridhi Ouazaa, Claudio Mazzoli, Samia Larabi
  Kassaa, Jean-Louis Joron, Boutheina Fouzaï, Lluís Casa Duocastella, and
  Moufida Labayed-Lahdari. "African Terra Sigillata from Henchir Es-Srira
  Archaeological Site, Central Tunisia: Archaeological Provenance and Raw
  Materials Based on Chemical Analysis." *Applied Clay Science* 105-106 (2015):
  27-40.
- Ballet, Pascale, Michel Bonifay, and Sylvie Marchand. "Africa vs Aegyptus : Routes, Rythmes Et Adaptations De La Céramique Africaine En Egypte." Entre Afrique et Égypte: Relations et échanges entre les espaces au sud de la Méditerranée à L'époque Romaine. Bordeaux: Ausonius Éditions, 2012. 87-117.
- Barraud, Dany, Michel Bonifay, Faouzia Dridi, and Jean-François Pichonneau.
  "L'industrie Céramique de L'antiquité Tardive." Oudhna (Uthina): La Redécouverte d'une Ville Antique de Tunisie. Bordeaux: Ausonius Publications, 1998. 139-167.
- Bénabou, Marcel. La résistance africaine à la romanisation. Paris: Librairie François Maspero, 1976.
- Ben Jerbania, Imed, Elizabeth Fentress, Faouzi Ghozzi, and Andrew Wilson."Excavations at Utica by the Tunisian-British Utica Project 2014." (2014): 1-34.

- Bonifay, Michel. *Etudes Sur La Céramique Romaine Tardive D'Afrique*. Oxford: Archaeopress, 2004.
  - ——. "Production et Diffusion des ceramiques Africaines durant l'Antiquite Tardive."
     When Did Antiquity End? Archaeological Case Studies in Three Continents. Ed.
     Redha Attoui. Oxford: Archaeopress, 2011. 15-30. BAR International Ser. 2268.
    - —. "Africa: Patterns of Consumption in Coastal Regions Versus Inland Regions. The Ceramic Evidence (300-700 A.D.)." *Local Economies? Production and Exchange of Inland Regions in Late Antiquity*. Ed. L. Lavan. Leiden: Late Antique Archaeology, 2013. 529-566.
  - ———. "Céramique Africaine Et Imitations: Où, Quand, Pourquoi?" As Produções Cerámicas de Imitação na Hispania. Ed. R. Morais, A. Fernández, and M.J. Sousa. Vol. Tomo I. SECAH, 2014. 75-91.
- Bonifay, Michel, Claudio Capelli, Ali Drine, and Taher Ghalia. "Les Productions
   D'Amphores Romaines Sue Le Littoral Tunesien: Archéologie Et Archéometrie."
   *Rei Cretariae Romanae Fautorum Acta* 41 (2010): 1-9.
- Bonifay, Michel, Claudio Capelli, and Céline Brun. "Pour une approche intégrée
   Archéologique, Pétrographique et Géochimique des Sigillées Africaines."
   Industria Apium: l'archéologie: une démarche singulière, des pratiques multiples.
   Paris: Presses Universitaires De Louvain, 2012. 41-62.
- Cameron, Averil, and Peter Garnsey, eds. *The Cambridge Ancient History: The Late Empire, A.D. 337-425.* Vol. XIII. Cambridge: Cambridge University Press, 1998.
- Cameron, Averil, Bryan Ward-Perkins, and Michael Whitby, eds. *The Cambridge Ancient History: Late Antiquity: Empire and Successors, A.D. 425-600.* Vol. XIV. Cambridge: Cambridge University Press, 2000.
- Carandini, A., ed. Atlante Della Forme Ceramiche. I. Ceramica Fine Romana Nel Bacino Mediterraneo (medio e tardo impero). Vol. 2. Istituto Della Enciclopedia Italiana, 1981.
- Carr, Karen. "Strong local production in Tunisia: supplementing Bonifay from the case of Leptiminus." *Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia).* Vol. 76. Portsmouth: Journal of Roman Archaeology, 2009. 105-127.

Cherry, David. Frontier and Society in Roman North Africa. Oxford: Clarendon, 1998.

- Commission de l'Afrique du Nord. "Répertoires archaeologiques Tunisie 1:100,000 feuille XLVII Kasserine 12." *Archive 17 G/4*. Paris: Archives of the Academie des Inscriptions et Belles-Lettres, 1900-1901.
- Commission de l'Afrique du Nord. "Carte de Tunisie, 1:50,000 feuille LXXXIV Kasserine Tunisie, Répertoire des ruines." *Archive 17 G/9*. Paris: Archives of the Academie des Inscriptions et Belles-Lettres, 1934-1935.
- Conant, Jonathan P. Staying Roman: Vandals, Moors, and Byzantines in Late Antique North Africa, 400-700. Diss. Harvard University, 2004.
- Cook, S.A., F.E. Adcock, M.P. Charlesworth, and N.H. Baynes, eds. *The Cambridge Ancient History: The Imperial Crisis and Recovery A.D. 193-324*. Vol. XII. Cambridge: Cambridge University Press, 1989.
- Davies, John. "Ancient Economies." *A Companion to Ancient History*. Ed. Andrew Erskine. Malden: Wiley-Blackwell, 2013. 436-46.
- Dietz, Søren, Laila Ladjimi Sebaï, and Habib Ben Hassen, eds. Africa Proconsularis: Regional Studies in the Segermes Valley of Northern Tunesia. Vol. I and II.
   Copenhagen: Carlsberg Foundation and The Danish Research Council for the Humanities, 1995.
- Dossey, Leslie. *Peasant and Empire in Christian North Africa*. Berkeley: University of California Press, 2010.
- Dore, John. "The UNESCO Libyan Valleys Archaeological Survey Pottery." Farming the Desert: The UNESCO Libyan Valleys Archaeological Survey. Ed. Graeme Barker, David Gilbertson, Barri Jones, and David Mattingly. Vol. II. Tripoli: UNESCO Publishing, 1996. 319-389.
- Esmonde Cleary, Simon. *The Roman West, AD 200-500: An Archaeological Study*. Cambridge: Cambridge University Press, 2013.
- Fentress, Elizabeth, and Sergio Fontana, Robert Bruce Hitchner, and Phillip Perkins, "Accounting for ARS: Fineware and Sites in Sicily and Africa." *Side-by-Side*

*Survey: Comparative Regional Studies in the Mediterranean World*. Oxford: Oxbow, 2004. 147-162.

- Fentress, Elizabeth, and Roald F. Docter. "North Africa: Rural Settlement and Agricultural Production." *Rural Landscapes of the Punic World*. London: Equinox, 2008. 101-128.
- Fentress, E., A. Drine, and R. Hold. An Island Through Time: Jerba Studies: The Punic and Roman Periods. Vol. I. Portsmouth: American Academy in Rome, 2009. Supplementary Ser. Number 71.
- Fentress, Elizabeth, Faouzi Ghozzi, Joephine Quinn, and Andrew Wilson. "Excavations at Utica by the Tunisian-British Utica Project 2012." (2012): 1-28.
- Fentress, Elizabeth, Faouzi Ghozzi, Joephine Quinn, and Andrew Wilson. "Excavations at Utica by the Tunisian-British Utica Project 2013." (2013): 1-18.
- Hawthorne, J. Commensalism and common sense: a new approach to archaeological ceramics. *Assemblage 1*: 3-6. 1996.

Hayes, J.W. Late Roman Pottery. London: British School at Rome, 1972.

- *———. Handbook of Mediterranean Roman Pottery*. London: University of Oklahoma and British Museum, 1997.
- Heather, Peter. *The Fall of the Roman Empire: A New History of Rome and the Barbarians*. Oxford: Oxford University Press, 2006.
- Hitchner, Robert Bruce. Studies in the History and Archaeology of Sufetula and its Territorium down to the Vandal Conquest. Diss. University of Michigan, 1982.
- . "The Kasserine Archaeological Survey, 1982-1986 (University of Virginia, USA
   Institut National d'Archéologie et d'Art de Tunisie)." *Antiquités Africaines* 24 (1988): 7-41.
  - . "The organization of Rural Settlement in the Cillium-Thelepte region (Kasserine, central Tunisia)." *L'Africa-Romana* 6 (1989): 387-402.

—. "Olive Production and the Roman Economy: the case for Intensive Growth." *La production du vin et de l'huile en Mediterrannée*. Ed. M.C. Amouretti and J.P Brun. Athens: Publications de l'Université de Provence, 1993a. 499-508.
 Reprinted as "Olive Production and the Roman Economy: The Case for Intensive

Growth in the Roman Empire." *The Ancient Economy*. Ed. Walter Scheidel and Sitta von Reden. New York: Routledge, 2002. 71-86.

- –. "The Kasserine Archaeological Survey 1982-1985." *Africa: Fouilles, Monuments Et Collections Archéologiques En Tunisie 1992-1993*. Ed. Ministère de le Culture. Tunis: Institut National du Patrimoine, 1993b. 158-207. Tomes XI – XII.
- ——. "Image and Reality: The Changing Face of Pastoralism in the Tunisian High Steppe." *Landuse in the Roman Empire*. Ed. Jesper Carlsen, Peter Ørsted, and Jens Erik Skydsgaard. Vol. 22. Rome: L'Erma Di Bretschneider, 1994. 27-44.
- —. "Historical Text and Archaeological Context in Roman North Africa: The Albertini Tablets and Kasserine Survey." *Methods in the Mediterranean*. *Historical and Archaeological Views on Texts and Archaeology*. Ed. D. Small. Leiden: Brill, 1995. 124-42.
- ———. "The Mediterranean and the History of Antiquity." A Companion to Ancient History. Ed. Andrew Erskine. Malden: Wiley-Blackwell, 2013. 429-35.
- Hitchner, R. Bruce, Simon Ellis, Alan Graham, David Mattingly, and Lucinda Neuru.
  "The Kasserine Archaeological Survey. 1987 [Institut National a'Archéologie et d'Art de Tunisie- University of Virginia, USA]." *Antiquités Africaines* 26 (1990): 231-59.
- Hobson, Matthew Simon. *The African Boom? Evaluating Economic Growth in the Roman Province of Africa Proconsularis*. Diss. University of Leicester, 2012.
- Hoyer, Daniel. "Public Feasting, Elite Competition, and the Market Economy of Roman North Africa." *The Journal of North African Studies* 18.4 (2013): 574-91.
- Kaegi, Walter E. *Muslim Expansion and Byzantine Collapse in North Africa*. Cambridge: Cambridge University Press, 2010.
- Keay, S.J. Late Roman Amphorae in the Western Mediterranean: A Typology and Economic Study. 1st ed. Oxford: British Archaeological Reports International Series 196, 1984.
- Leitch, Victoria. "Trade in Roman North African Cookwares." Bollettino Di Archeologia On Line B 11/12 (2010): 11-23.

—. "Reconstructing History through Pottery: The Contribution of Roman N African Cookwares." *Journal of Roman Archaeology* 26 (2013): 281-306.

- Leone, Anna. *The End of the Pagan City: Religion, Economy, and Urbanism in Late Antique North Africa*. Oxford: Oxford University Press, 2013.
- Lund, John. "Hellenistic, Roman and Late Roman Fine Wares from the Segermes Valley
  Forms and Chronology." *Africa Proconsularis: Regional Studies in the Segermes Valley of Northern Tunesia*. Ed. Søren Dietz, Laila Ladjimi Sebaï, and Habib Ben Hassen. Vol. II. Copenhagen: Carlsberg Foundation and The Danish Research Council for the Humanities, 1995. 449-597.
  - —. "Methodological constraints affecting the precise dating of African Red Slip Ware." *Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia).* Vol. 76. Portsmouth: Journal of Roman Archaeology, 2009. 65-73.
- Mackensen, Michael. "A late mid-Roman African red slip ware lamp from Sabratha and lamp production at Djilma (central Tunisia)." *Libyan Studies* 33 (2002): 57-69.
- . "The Study of 3rd Century African Red Slip Ware Based on the Evidence from Tunisia." *Old Pottery in a New Century: Innovating Perspectives on Roman Pottery Studies*. Ed. Daniele Malfitana, Jeroen Poblome, and John Lund. Catania: Atti Del Convegno Internazionale Di Studi Catania, 2006. 105-24.
- ——. "Technology and Organisation of ARS Ware Production-centers in Tunisia." Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia). Vol. 76. Portsmouth: Journal of Roman Archaeology, 2009. 17-45.
- Mackensen, Michael, and Gerwulf Schneider. "Production Centres of African Red Slip Ware (3rd-7th c.) in Northern and Central Tunisia: archaeological provenance and reference groups based on chemical analysis." *Journal of Roman Archaeology* 15 (2002): 121-58.
- Mackensen, Michael, and Gerwulf Schneider. "Production Centres of African Red Slip Ware (2nd-3rd c.) in Northern and Central Tunisia: archaeological provenance and reference groups based on chemical analysis." *Journal of Roman Archaeology* 19 (2006): 163-90.

Manton, E. Lennox. Roman North Africa. London: Seaby, 1988.

- Mattingly, D.J., and J.W. Hayes. "Nador and fortified farms in North Africa." *Journal of Roman Archaeology* 5 (1992): 408-418.
- Mattingly, David J., and R. Bruce Hitchner. "Roman Africa: An Archaeological Review." *The Journal of Roman Studies* 85 (1995): 165-213.
- McCormick, Michael. "Bateaux de vie, bateaux de mort: maladie, commerce, transports annonaires et le passage économique du Bas-empire au moyen âge." *Morfologie sociali e culturali in Europa fra tarda antichità e alto Medioevo* 45 (1998): 35-122.
- Merrills, Andy, and Richard Miles. The Vandals. Malden: Wiley-Blackwell, 2010.
- Neuru, Lucinda, D. Kyle, A. Demers, and John Walker Hayes. "Late Roman Pottery: A Fifth Century Deposit from Carthage." *Antiquités Africaines* (1980): 195-211.
- Peacock, D.P.S., F. Bejaoui, and N. Ben Lazreg. "Roman pottery production in central Tunisia." *Journal of Roman Archaeology* 3 (1990): 59-84.
- Peña, J.T. "The mobilization of state olive oil in Roman Africa: the evidence of late 4thc. ostraca from Carthage." Carthage Papers: The Early Colony's Economy, Water Supply, A Public Bath, and the Mobilization of State Olive Oil. Vol. 28. Portsmouth: Journal of Roman Archaeology, 1998. 117-238.

Raven, Susan. Rome in Africa. Third ed. New York: Routledge, 1993.

- Scheidel, Walter, and Sitta von Reden, eds. *The Ancient Economy*. New York: Routledge, 2002.
- Shaw, Brent D. "Rural Markets in North Africa and the Political Economy of the Roman Empire." *Antiquités Africaine* 17 (1981): 37-83.
- Sørensen, Lone Wriedt. "The 1987 Field Survey at Segermes, Tunisia: Methods, Preliminary Results and Discussion." *Africa Proconsularis: Regional Studies in the Segermes Valley of Northern Tunesia*. Ed. Søren Dietz, Laila Ladjimi Sebaï, and Habib Ben Hassen. Vol. II. Copenhagen: Carlsberg Foundation and The Danish Research Council for the Humanities, 1995. 115-133.
- Stone, David L. "Problems and Possibilities in Comparative Survey: A North African Perspective." Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World. Oxford: Oxbow, 2004. 132-146.

-. "Supplying Rome and the empire: the distribution of stamped amphoras from *Byzacena*." *Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia)*. Vol. 76. Portsmouth: Journal of Roman Archaeology, 2009. 127-151.

- –. "Africa in the Roman Empire: Connectivity, the Economy, and Artificial Port Structures." *American Journal of Archaeology* 118.4 (2014): 565-600.
- Wanner, Robert. A Gazetteer for the Kasserine Archaeological Survey (Kasserine-Feriana Region of Tunisia). MA Thesis. Tufts University, 2006.
- Witcher, Robert E. "Broken Pots and Meaningless Dots? Surveying the Rural Landscapes of Roman Italy." *Papers of the British School at Rome* 74 (2006): 1-26.
- ———. "The Countryside." A Companion to Ancient History. Ed. Andrew Erskine. Malden: Wiley-Blackwell, 2013. 462-73.