PALAEOHISTORIA

ACTA ET COMMUNICATIONES INSTITUTI ARCHAEOLOGICI UNIVERSITATIS GRONINGANAE

57/58

(2015/2016)

University of Groningen / Groningen Institute of Archaeology

&

Barkhuis

Groningen 2016

Address
University of Groningen
Groningen Institute of Archaeology
Poststraat 6
9712 ER Groningen
The Netherlands
gia@rug.nl

Website
www.palaeohistoria.nl

Publisher's address
Barkhuis
Kooiweg 38
9761 GL Eelde
the Netherlands
info@barkhuis.nl
www.barkhuis.nl

Typesetting
Hannie Steegstra

Cover design
S.E. Boersma

Cover
Bronze fibula with three pinned-on rings from Crustumerium, Monte Del Bufalo burial ground, Tomb 153 (photo G.J.M. van Oortmerssen, RUG/GIA).

ISSN 0552-9344
ISBN 9789492444592

CONTENTS

CITY, COUNTRY AND CRISIS IN THE *AGER CRUSTUMINUS* CONFRONTING LEGACY DATA WITH RESURVEY RESULTS IN THE TERRITORY OF ANCIENT CRUSTUMERIUM

J.F. SEUBERS[1] & G.W. TOL[2]

[1] *University of Groningen, Groningen Insitute of Archaeology, The Netherlands*

[2] *School of Historical and Philosophical Studies, University of Melbourne Parkville, VIC 3010 Australia*

ABSTRACT. This article discusses the results of systematic field surveys in the territory of ancient Crustumerium performed by the Groningen Institute of Archaeology (GIA) between 2011 and 2013. These surveys aimed at evaluating the status of the surface record in relation to previous work in the area in the 1970s and 1990s, and at strengthening our knowledge about the ruralisation of Crustumerium before its conquest by Rome (around 500 BC). However, as soon became clear, the current surface record provided only meagre evidence for the period of focus. Instead, it is dominated by the presence of 'Roman' pottery, belonging to farm sites that often were founded in the Mid-Republican period (4th-3rd c. BC) and in many cases continued to be frequented into Late Roman times. This observation is contrary to the idea that an explosive rural infill of the countryside in the 6th century BC was followed by a rural crisis in Republican times, as has been the prevailing argument on the basis of legacy data. Furthermore, our own data led us to reconsider the supposed causal relationship between the urbanisation and ruralisation of the ancient Latin city-states. In this light the present paper, accompanied by detailed site and ceramic data, makes a case for the value of reflexivity in archaeology and shows how selective replication studies can elicit alternatives for well-established historical and archaeological narratives.

KEYWORDS: archaeological survey, *Crustumerium*, legacy data, ruralisation, Roman s*uburbium.*

1. INTRODUCTION

The ancient urban centre of *Crustumerium* was located about 15 km north of Rome and 5 km north of contemporary *Fidenae*, on a hill overlooking the Tiber valley (see fig. 1). The location of the historically attested city was established by archaeological field surveys in the 1970s (Quilici & Quilici Gigli 1974-1975; 1980), and the site and its surroundings have been under near-constant investigation ever since (Attema *et al*. 2014; di Gennaro 2013). To our current knowledge, the settlement was founded in the 9th century BC and ceased to be an urban centre at the end of the Archaic period, when it fell prey to early Roman expansionism (Attema *et al.* 2014). As such, the probably gradual abandonment of the town in the 5th century BC, which is confirmed by urban surveys (Amoroso 2002: 317), does not conflict with the historical date of its demise in 499 BC.[1]

As for the countryside, it is generally assumed that the development of Crustumerium occurred in tandem with an increased exploitation of its territory, which would be reflected by the presence of large numbers of Orientalising (725-580 BC) and especially Archaic rural sites (580-480 BC). This system remained largely intact in the 5th century BC, despite the abandonment of Crustumerium itself. It is not entirely clear, however, what happened in the countryside in the later 4th and 3rd centuries. Some sources report a decline or even collapse of the rural settlement system in the Middle Republic (Quilici & Quilici Gigli 1980: 289; Fraioli 2016: graph 3), while others point out that the birth of the villa landscape in the Roman s*uburbium* in the 4th century ensured an uninterrupted and even increased frequentation of the area (Capanna & Carafa 2009; Carandini *et al*. 2007: fig. 239). Scholars do agree on the fact that the wealth of evidence for the subsequent Imperial exploitation of the countryside can only be interpreted in terms of a successful agricultural organization, which aimed at maximizing the production of the Roman *campagna* (Quilici & Quilici Gigli 1980: 296-300; Carandini *et al*. 2007: 608).

New surveys at and around Crustumerium were performed by the Groningen Institute of Archaeology between 2011 and 2013 and have yielded both new and more detailed evidence of what happened to the town and its (former) countryside roughly between 850 BC and AD 500, especially with respect to the question of a putative Mid-Republican crisis. In the current paper we present the source data of all rural site and off-site materials recorded during the GIA surveys, and discuss the implications of the new evidence. The reader will find that most of the

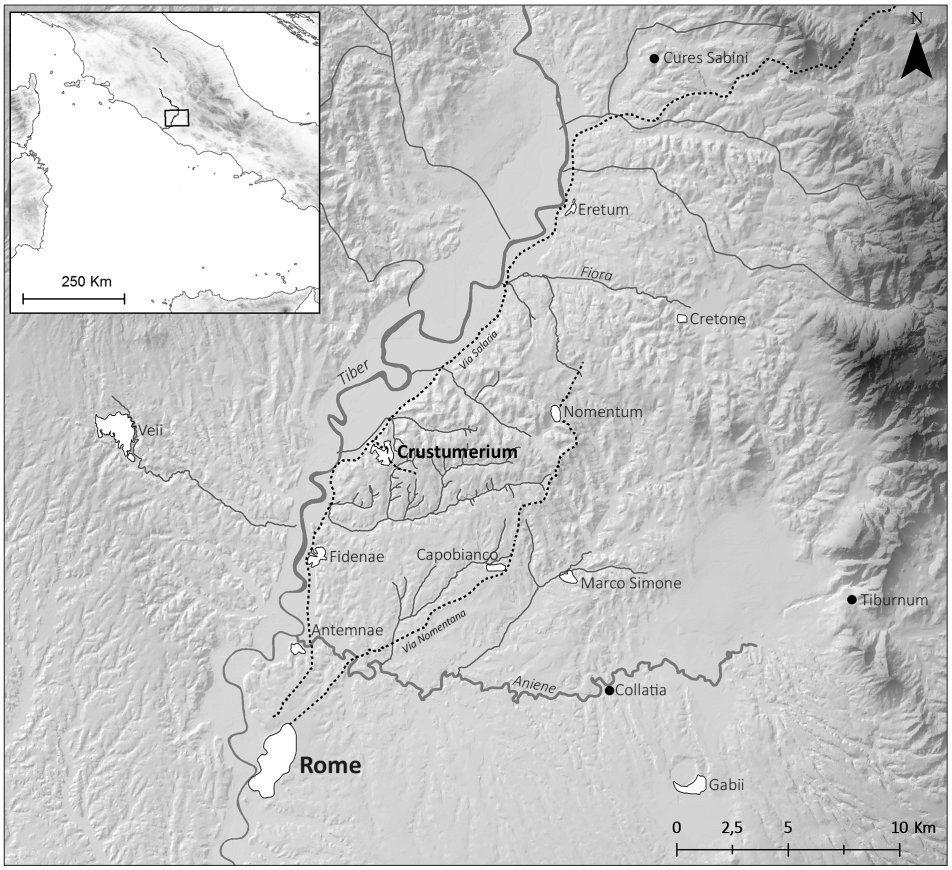


Fig. 1 The location of Crustumerium in Central Italy in relation to neighboring sites, waterways and primary Roman roads (map authors).

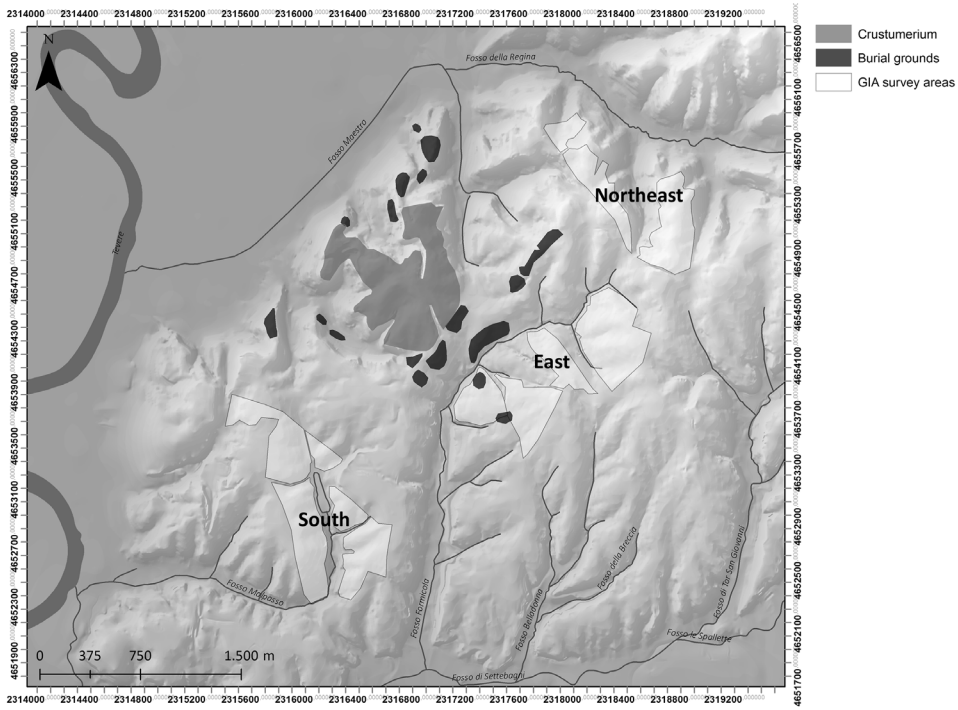


Fig. 2 The three sample areas of the GIA survey within a 2 km radius of Crustumerium in relation to the burial grounds of Crustumerium, terrain elevation and waterways (map authors).

evidence from the studied area around Crustumerium postdates the abandonment of the city. Hence we are primarily discussing strategies of land exploitation in the historical *Ager Crustuminus*, or the area that, according to historical sources, was granted to the *Crustumina* tribe under Roman authority after 495 BC (Amoroso 2000: 266).

2. A BRIEF OVERVIEW OF THE RESEARCH AREA

The remnants of Crustumerium are located on the *Marcigliana Vecchia* hill that overlooks the Tiber river and valley (fig. 1). The local geology is characterized by the overall presence of material expelled from the Monti Sabatini volcanic complex, forming the *tufo* bedrock that is characteristic of entire Tyrrhenian Central Italy. The generally soft volcanic deposits erode easily and have become deeply incised by rivers and small streams, creating a relief system with rolling hills and serrated edges that rise about 30 to 100 m above the Tiber plain. The erosion has resulted in distinct geomorphological units in the landscape, of which the hill complex of Crustumerium is a typical example. Unfortunately the soft soils have also been subject to intensive agricultural exploitation, causing a substantial acceleration of erosion which seriously threatens the archaeological record (Seubers & Trienen 2015). Monitoring the status of surface remains in this dynamic landscape has been one of the objectives of the GIA Crustumerium surveys.

Fieldwork was carried out in three sample areas that were selected on the basis of both practical and substantive considerations (fig. 2). In the northeast and east, five plots of the former *Tenuta Ciampiglia Barberini* area were chosen: these had been covered in the 1970s but they were not resurveyed in the 1990s, giving us the opportunity to survey the area for the first time in 40 years. However, because visibility conditions were unfavourable in part of the planned survey area in the 2012 campaign, we added the two plots of the former *Tenuta Ciampiglia del Bufalo* where visibility conditions were much better at the time. The remainder of the sample area to the northeast of Crustumerium was surveyed in 2013.

In the south, the former *Tenuta dell'Inviolatella*, comprising six plots of varying sizes, were surveyed (in 2011) at the request of Francesco di Gennaro of the former SSBAR (*Soprintendenza Speciale per i Beni Archeologici di Roma*), because they would be used to dispose of excess soil from construction works in nearby Settebagni. Because this would inevitably disturb (as well as cover) the local archaeological record, the surveys were followed up by rescue excavations by Andrea Di Napoli and his colleagues of the Soprintendenza (Di Napoli 2016), giving us a unique opportunity to compare surface and subsurface evidence (from survey vs. trial trenches).

The sample areas will be discussed from north to south and referred to as Northeast, East and South (see fig. 2).[2] Although not far apart, the sample areas vary considerably in their geomorphological setting. The landscape to the east of Crustumerium has more pronounced relief, with several noticeable hilltops above 120 m in height and with deep valleys which still form natural barriers in the landscape. The *Formicola* stream, for example, physically separates Crustumerium from the countryside to the east. To the northeast, steep hills overlook the wide valley of the *Regina* stream, which demarcates the territory directly north of Crustumerium. The southern area's landscape is less undulating, with larger tracts of connected land, and may be considered more easily accessible from Crustumerium itself (Seubers 2016). Moreover, it lies on the route to Fidenae and Rome (Fraioli 2016: fig. 3).

3. CRUSTUMERIUM AND ITS TERRITORY BEFORE AND AFTER 500 BC: DIFFERENT DATASETS AND DIVERGING SCENARIOS

We could say that the current archaeological narrative of what happened after the 'rise and fall' of Crustumerium contains several different and sometimes contradictory chapters. The first surveys of the settlement site and its surroundings, between 1974 and 1976, were part of the large *Latium Vetus* project, with an explicit focus on the study of the protohistoric and Archaic periods (Quilici & Quilici Gigli 1986: 9).[3] The survey recorded 128 rural sites, half of which were thought to have been founded during the Archaic period, but with only a quarter surviving into the Middle Republic (Quilici & Quilici Gigli 1980: 289), followed by a progressive decline in subsequent centuries.

In other words, the ruralisation (denser settlement) of the countryside is thought to be a direct consequence of the success of the Archaic urban centre, and crisis ensued inexorably when the urban centre fell away. The rebirth of a rural economy should, in this scenario, be dated to the Imperial period (some five centuries later). Unfortunately, the publication of the Latium Vetus surveys focuses primarily on the evidence from the urban survey (Quilici & Quilici Gigli 1980: 71-160) and only some fragments of the ceramics that might illustrate the ruralising trend were published.[4] Nonetheless, Gabriele Cifani has illustrated that the development described here is consistently observed throughout the larger research area of the Latium Vetus project, for example around *Fidenae* and "*Ficulea*"[5], and during earlier work on *Collatia* (Cifani 2002: 250-251).

A second study of 'Roman Crustumerium' is based on urban surveys of 1995-1996 and is therefore restricted to a discussion of the evidence of the settlement area only (Amoroso 2000). However, this study was part of a much larger initiative to systematically study the ancient Roman countryside, which was suitably dubbed "the Suburbium project".[6] This dataset has a lot to offer for a study of the indigenous settlement system of Archaic Latium Vetus, but has so far only been used sporadically to illustrate general settlement trends from a Rome-centric perspective (Cifani 2002; Cifani 2009; Carafa 2004; Capanna and Carafa 2009; Carandini 2007; Fulminante 2014).
With the inclusion of surveys for governmental cartography, like the AGRO project,[7] there is an exceptionally

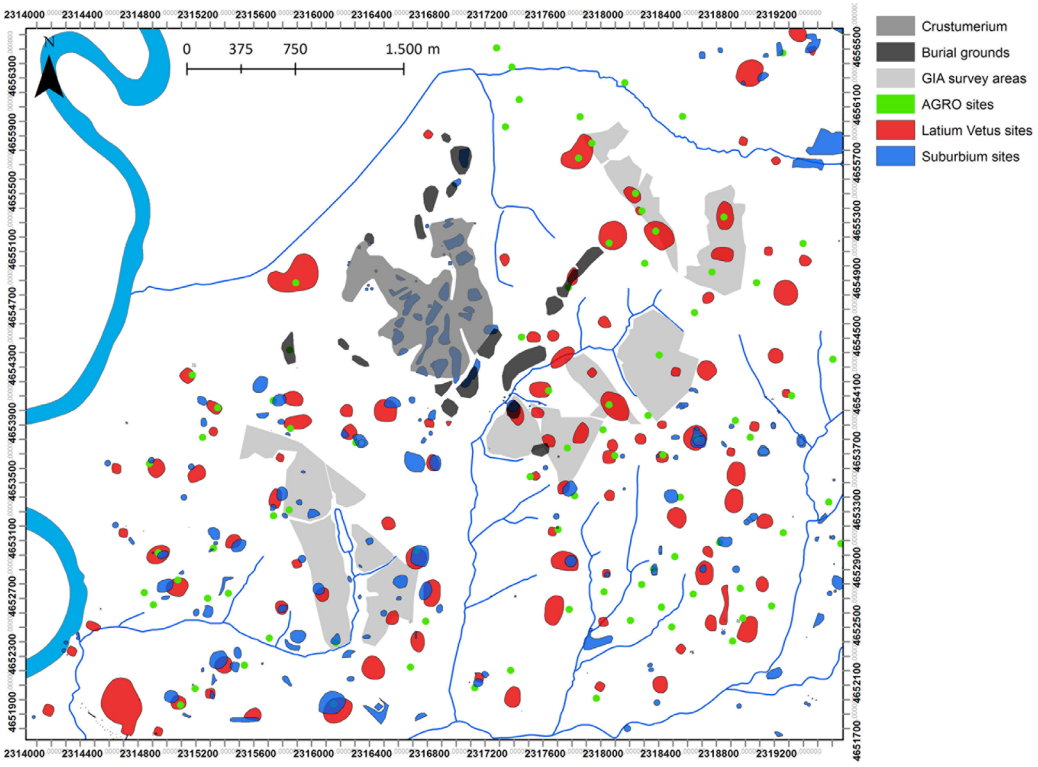


Fig. 3 Map illustrating the density of observations of ceramic surface scatters from the legacy survey record in the GIA sample areas (map authors).

dense record of existing survey data around Crustumerium (fig. 3). However, since such legacy data generally consists of simple maps and brief inventories, we are not always able to connect these "dots" to the actual "broken pots" they represent (Witcher 2006). Moreover, the quantity and quality of the information we do have differ for each of our sample areas.

In the northeast we are dealing primarily with Latium Vetus data. A high density of Archaic sites was recorded here in the 1970s, but no physical records of the local archaeology are available and the site descriptions are too concise to provide detailed information about the observed materials. No systematic resurveys or updated records are available for this area, because the Suburbium researchers were denied access in the 1990s.

In the south, the existing survey record is richer overall, but most of the qualitative data we have is derived from the Suburbium archive (Fraioli 2016). The Latium Vetus surveys recorded only two sites in this sample area as opposed to the twelve sites recorded by the Suburbium project. Nonetheless, the settlement trend reconstructed for the wider, southern ager of Crustumerium on the basis of either survey seems to be similar, and (again) stresses a peak of habitation in the Archaic period and a Republican crisis followed by Imperial revival (Fraioli 2016: graph 3).

The contrast between the different survey datasets has implicitly been made apparent by Cifani, who in his inter-regional comparison replaced the Latium Vetus survey data by the more recent data from the Suburbium surveys to again press an argument for Archaic ruralisation (Cifani 2009: 316). Indeed both datasets, from significantly overlapping research areas, show a substantial increase of activity in the 6th century rural landscape, which should be attributed to the success of the indigenous Latin urban centres. However, it is surprising that substantial differences in the longer-term settlement trends between the two data sets are left undiscussed.

When forcing the comparison (fig. 4) we can note that the Suburbium data not only attests to the continued

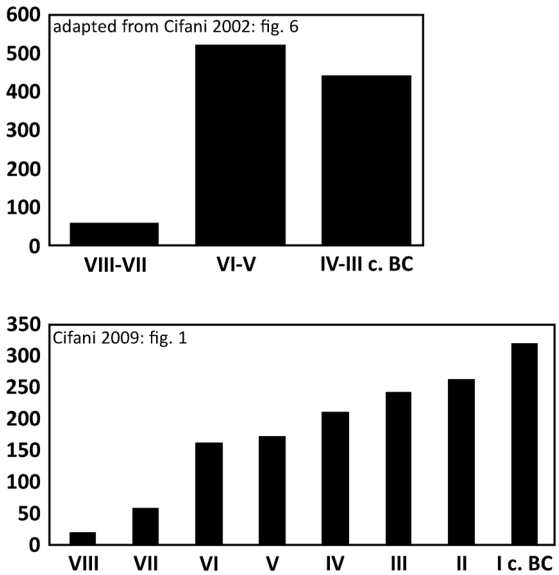


Fig. 4 Different settlement trends for the northern suburbium of Rome as proposed by Cifani, first on the basis of the Latium Vetus surveys (2002) and later on the basis of the Suburbium surveys (2009).

success of Archaic rural strategies, it indicates that the countryside flourished and land-use increased in each subsequent century up until the Imperial period. The fact that by the end of the Late Republic the number of sites had doubled rather than halved is totally contrary to the Latium Vetus interpretation of the survey record from virtually the same research area (Attema *et al*. 2016b). The similarities between the Latium Vetus and Suburbium datasets are in fact only partial, and the two surveys actually describe two substantially different long-term scenarios.

In the Latium Vetus scenario, rural territories north of Rome underwent developments similar to those of Etruscan towns like Veii and Caere, where golden ages are followed by crises, of which the 5th/4th century contraction is only one example (Patterson *et al*. 2004: 8). In this case the crisis is interpreted historically as a result of disruptive Roman expansionism and the collapse of the primary infrastructure alongside the Tiber. For the *Ager Crustuminus* the effect of the shifting economic and political balance is believed to have been so severe that the rural population only recovered as late as the 1st century BC (Quilici & Quilici Gigli 1980: 289-300).

In the second scenario, as suggested by the Suburbium data, the crisis in North Latium is almost entirely absent. In this different reading of the data, a crisis at Veii would have actually enabled Rome to consolidate its power and infrastructure in Latium Vetus and to successfully implement a new rural strategy for its hinterland from the 4th century onward (Capanna and Carafa 2009: 33-39; Carandini 2007: 601). In 2002 Cifani already put forward parallels with similar settlement trends in the Sabine area up to 100 km from Rome (Cures Sabini and ancient Reate (Rieti)) and for important Latin centres like Tibur (Tivoli, east of Rome) (Cifani 2002: 250-251). Moreover, the linear increase in rural site numbers from Archaic to Mid-Republican times has also been documented for various parts of southern Latium (Tol 2012: 364, fig. 7.3). In these cases, ruralisation first becomes evident in the Archaic period and grows continuously in near-linear progression, resulting in much greater numbers of rural sites by Mid-Republican times and an even further increase in the Imperial period.

The contrast between these diverging scenarios, arising from different surveys of virtually the same research area in the case of the Latium Vetus and Suburbium surveys, can possibly be explained by different field methods and by the way the archaeological raw data has been handled and interpreted. We should consider first of all that ceramic typo-chronologies lie at the basis of the supposed settlement trends. Therefore, as our knowledge of ceramics is subject to change and refinement, which is demonstrably true for recent decades of Central Italian archaeology, legacy data and their interpretations are (and should be) occasionally reviewed.

4. METHOD AND AIMS OF THE GIA RESURVEY

In the preparatory stages of the current research, the analysis of existing survey data around Crustumerium showed that spatial data of higher quality and more detailed ceramic studies would be required to arrive at a detailed picture of past settlement dynamics. Exploratory revisits of known sites in the surroundings of Crustumerium indicated that systematic resurveys would be a viable option for obtaining such information.

The objective of the resurvey that followed was to take a closer look at the composition, chronology and spatial consistency (preservation) of surface find assemblages around Crustumerium and to gather evidence on the organisation of rural space around the urban settlement. However, within the time frame of the current project and with intensive survey methods, we would not be able to perform surveys on the same scale as previous site-based surveys and the fieldwork was restricted to the study of the three above-mentioned areas, all within a 2-km radius from Crustumerium.

Surveys were conducted according to a standardized block-survey method. A grid of units (measuring 50 x 50 metres) was predesigned in the GIS and laid out in the field with a hand-held GPS.[8] Five walkers traversed each unit in parallel lines, each covering a swath-width of 2 m (1 m to both sides), amounting to an average surface coverage of 20%.[9] The surveyed areas could be investigated under comparable and consistently good soil visibility (topsoil free of vegetation, ploughed or harrowed).

Although the surveys entailed systematic collection of all finds within each walker's lane, on larger Roman sites only small samples of building materials were collected[10] and on several occasions find densities were not recorded.[11] Contours of distinct find concentrations were recorded digitally on the basis of direct observations in the field for the purpose of comparability with site-based legacy data. These areas with a density of surface ceramics that contrasts noticeably with the direct surroundings are what we will refer to as "sites", and the associated find assemblage is derived from all the "units" that fall within the site's range. Finds collected from units that do not contain (part of) a noticeable find density are called "off-site" finds.[12] For considerations on site definition comparable to ours see Di Giuseppe *et al*. 2002: 105-107.

5. RESULTS FROM THE GIA RESURVEYS 2011-2013

This section presents a synthesis of the results of the GIA Crustumerium surveys for the Iron Age and Archaic period; the Republican period; and the Imperial period and Late Antiquity. Finally, we shall briefly address off-site records and site loss.

The total collection of material from the southern sample area (fig. 2) numbers some 6000 sherds from 218 units, weighing a total of 207.6 kg. In comparison, the amount of material collected in the east (25,100 sherds, 1030 kg, 223 units) and northeast (9,200 sherds, 320 kg, 119 units) was substantially higher. In the total rural survey c.1000 diagnostic fragments were selected during post-fieldwork processing, deriving from 1.6 sq km of surveyed surface, 29 distinct find locations (sites) and spatially undefined off-site scatters. The ultimate selection published here (see appendix), which lies at the basis of our final analysis, amounts to a little less than 400 fragments. Drawings are provided for fragments that could not be readily assigned to known pottery shapes. For common pottery forms only some representative fragments were drawn.

A catalogue containing information on all recorded sites and finds – accompanied by drawings – can be found in the appendix to this article. Any 5-digit number mentioned in this paper is always an indication of location in reference to figs. 5 to 7, the appendix and the maps accompanying each separate section.[13] Table 8 and graph 9B (figs. 8 and 9) give an overview of the chronology attributed to individual sites on the basis of the GIA survey, making a clear distinction between confirmed occupation on the basis of the date range of specific pottery shapes, and possible occupation on the basis of the broad date range of pottery classes and fabrics. Graph 9A presents an overall trend of pottery consumption over the entire research area on the basis of the weighted average (or so-called *media ponderata*) of the chronological range of all diagnostic finds.[14]

5.1 The Early Iron Age and Archaic period

From the GIA surveys and additional Suburbium records, very little evidence was retrieved that is contemporaneous to the earliest phases of the settlement of Crustumerium. In the overall chronological trend (graph 9A) we can observe the first increase of surface evidence between 650 and 500 BC, which is restricted to four locations (fig. 10).

In the northeast sample area, site 20149 contains several fragments of *bucchero* (plate II-1 and -2) within a discrete find scatter. However, the few early finds are chronologically isolated from the rest of the find assemblage, which comprises a mix of Mid-Republican to Mid-Imperial materials. A similar small quantity of early materials was found further east, around unit 20325. Here finds of bucchero and an Archaic *dolium* rim (off-site fragments XXVI-17 and XXVII-19) were found in close proximity to each other but unrelated to a clearly defined find scatter or to building material (the location was therefore not classified as a site).

In the eastern sample area we can report just a single find of pre-Roman pottery (site 21096, plate XI-1). It concerns a fragment of *impasto rosso*, which was found in isolation within a context of a very different chronology. In this specific case we can very probably attribute the find to a funerary context, because the find location lies within the sepulchral areas of Crustumerium.

Finally, in the far south of the southern sample area, site 10158 constitutes the only location with evidence for the Early Iron Age (a single impasto fragment with incised decoration; plate XXII-1) and for continuity of occupation, with some Archaic coarse wares and Early Republic pottery (*chiaro sabbioso* shapes). Overall the find assemblage is characterized by the presence of red augite building materials that are probably associated with a primary occupation phase in the Early to Mid-Republican period. Although ceramics of later phases are present, there are no building materials to suggest the structural re-use of the location after around 200 BC. The absence of Imperial construction phases is likely to have made the recognition of pre-Roman pottery easier during the survey, as we lacked large quantities of Roman building debris at the surface.

The partial excavation of site 10158 confirmed the presence of a small Early- to Mid-Republican structure, but provided no evidence for earlier structural remains (Di Napoli 2016: 41). Overall, we thus have just a handful of fragments that attest to the site's earliest occupation phase gathered from both surveys and the excavation of the site (see Fraioli 2016: fig. 5a-2, 16 and 17). Possibly this state of affairs is representative of the overall poor visibility of the 7th and 6th centuries BC in terms of the number of recognizable pottery fragments. The same conclusion has been drawn on the basis of the large-scale trial excavations in our southern sample area: "It has not been possible to obtain direct information on the nature of frequentation in the Archaic period, which has only been attested in a few surface finds" (Di Napoli 2016: 48). From this we can deduce that pre-Roman evidence is certainly not absent, but that 'early' finds seem to appear only in small numbers, as the Suburbium surveys also show, either in assemblages of a demonstrably younger date (*e.g.* at 20149 and 10158) or in contexts without a clear spatial or chronological definition (*e.g.* at 20325).

Of course we should take the impaired visibility of early finds into account, but we cannot overlook the reality of the evidence, which suggests that there seem to be very few rural sites in our sample area that can be tied to Crustumerium chronologically. This contradicts the available legacy data. Among eight Archaic sites counted in our southern sample area in the 1990s (Fraioli 2016: fig. 4, no. 9, 34, 38, 40, 44, 49 (an unconfirmed duplicate of LV24), 52, 56) we could confirm the chronology of only one (site 44 = 10158). Among eleven Archaic sites counted in our northeastern and eastern sample areas in the 1970s (Quilici & Quilici Gigli: tav. CXXIII 54, 55, 57, 58, 62, 92, 103, 105, 106, 113, 114) we could confirm the chronology of none.[15] However, two new find locations with early materials were spotted.

The revision of the chronology of these known sites appears to have followed from advances in local

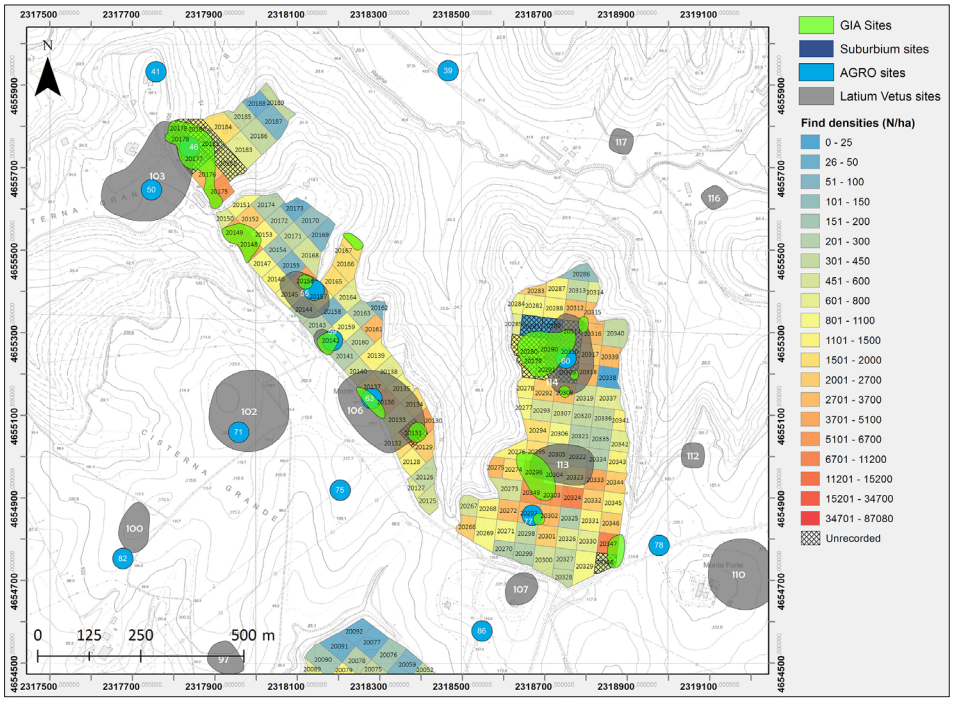


Fig. 5 Find densities and sites recorded during the GIA block survey of sample area Northeast (Tenuta Ciampiglia Barberini) in relation to the legacy survey record (map authors).

typo-chronologies and the allowance of uncertainty in dating pottery of poor chronological resolution collected from the surface. For previous work we can demonstrate that the Archaic/Early Republican phase of the surface record was mostly based on the presence of coarse ware forms (Fraioli 2016: fig. 5a-c) that predominantly date to the Mid or even Late Republic (Olcese 2003; Bertoldi 2011).[16] The Latium Vetus surveys also rely strongly on the broad date ranges of generic ceramic classes and even building materials (*e.g. rosso-bruno* tile) to arrive at Archaic dates (Attema *et al*. 2016b; Bronkhorst & Seubers 2015), and this practice is duplicated in some of the Suburbium work (Finocchietti 2008: 86, note 37). Even at the time, other researchers participating in the latter project pointed out how these criteria for ceramic classification might create biased interpretations of the local settlement history (Di Girolami 1995: 118).[17]

Of course shifting ceramic evidence towards a younger date on the basis of recent chrono-typologies has consequences for the overall interpretation of what the territory and agricultural strategy of Crustumerium looked like, but the difference between the urban and rural archaeology of Crustumerium goes beyond the chronology of the pottery. Intuitively we expected the assemblages of the urban centre and its rural counterparts to be of similar composition, because the relationship between city and country supposes reciprocity and exchange (Millett 1991: 175). Rural sites come into existence to provide for the urban centre, but in their turn still depend on the protection and functions of the city. Especially within the short distances considered here, traffic between city and country would not have taken a lot of effort (Seubers 2016), allowing easy circulation of goods and especially pottery. However, the "domestic ceramic blueprint" of urban Archaic Crustumerium – comprising an assemblage of fine impasto, bucchero, Archaic coarse wares, dolium, loomweights, *fornelli* and red augite building materials – similar to what has been attested in Archaic rural sites elsewhere in the region (Carandini *et al*. 2007), has not been identified anywhere in the GIA rural survey.

5.2 The Republican Period

In the 5th century we see a slight decline in the count of diagnostic pottery and site numbers (fig. 9A and 9B), as was also witnessed in previous surveys, whereas all sites in the GIA survey show evidence of certain or possible Mid-Republican occupation. The uncertainty in establishing Early Republican activity at a site is at least partially caused by the lack of pottery shapes or wares that are specific for the 5th century. There is evidence, however, that quite a few of the confirmed Mid-Republican sites were founded as early as the Early Republican period (for example, site 20131).

Rural activity seems to increase especially and very substantially in the first half of the 4th century BC, gaining momentum up to at least 250 BC. Obviously the strength and certainty of the evidence is a direct consequence of the wide occurrence of well-dated black-gloss pottery in this period (fig. 11). On the basis of the spread of black-gloss pottery we may assume the landscape to have been very densely occupied, in line with a strategy of intensive agricultural exploitation. We can identify two, possibly three, site classes on the basis of the size and composition of the different surface assemblages. The smallest scatters are discrete and had a short life span (fig. 11, 10008, 10087, 20029, 21046). They are often found in proximity to a larger find concentration, in which case we

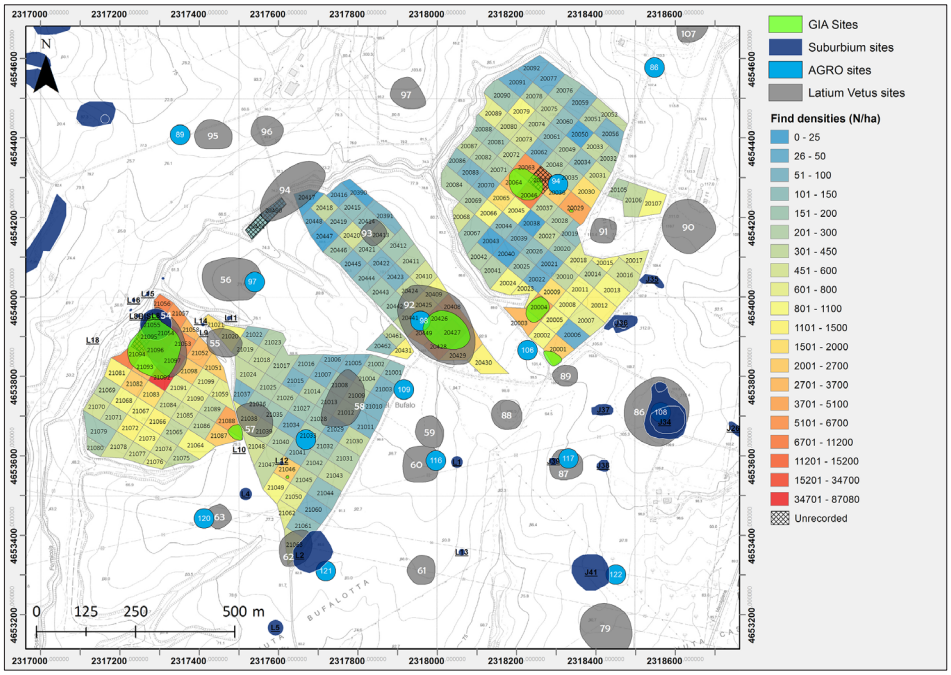


Fig. 6 Find densities and sites recorded during the GIA block survey of sample area East (Tenuta Ciampiglia Barberini and Ciampigia Del Bufalo) in relation to the legacy survey record (map authors).

are very probably dealing with tombs or small outbuildings. Another category seems to consist of larger, multi-period sites (fig. 11, 10034, 10166, 20131, 20156, 20296) characterized by a more dense and diverse find assemblage including building materials. Finally, the largest Republican conglomerates (fig. 11, 10158, 10199, 20047, 20290) have a life span longer than five centuries, and (apart from 10158) display strong Imperial phases.

These site classes are certainly not absolute and may not be of functional significance. However, the presence of such a large number and wide variety of *loci* of activity in the 4th and 3rd centuries, numbering at least 20 sites over an area of just 1.6 sq km, not only contradicts the idea of a Mid-Republican crisis, but forces us to face a completely opposite scenario. Actually the evidence shows that most of the rural infill of the (former) territory of Crustumerium took place in the Mid-Republican period, when the majority of the sites were founded and pottery consumption peaked to an unprecedented level. The excavations of several sites in the Inviolatella area provide additional evidence: "It is important to stress that during the Mid-Republican period (…) the investigated area seems to have been intensively occupied with small and large areas of activity and/or habitation" (Di Napoli 2016: 48).

Among the results of the excavations are the uncovering of the already mentioned Early/Mid-Republican structure at 10158 (Di Napoli 2016: 41), but also the important discovery of a probably Mid-Republican sanctuary at site 10008. In this case the survey offered only meagre diagnostic evidence from a dispersed scatter, but we were able to establish a chronology of the site and to pinpoint its precise location (Di Napoli 2016: 33-37).

The phase of Mid-Republican growth is fis followed by a LR decline in pottery consumption (fig. 9A), although this is probably influenced by the discontinued use of black-gloss pottery, which causes a drop in the count of diagnostic fragments. As for a decrease of occupied locations (fig. 9B), we only witness the abandonment of several of the smallest Mid-Republican sites. In the northeast, 20156, 20131 and 20427 are abandoned, but the largest sites keep displaying activity. In the southern sample area, the Late Republican decline looks more sudden, given the contrast with the especially strong increase of Mid-Republican materials and sites in this area. The occupation of site 10158 probably ceased and most of the less clearly defined find scatters yielded very few if any Late Republican materials.

In most cases continuity from the Mid to Late Republic is a prelude to continuation into the Early Imperial phase. At the end of the Republic only few of the very small sites were abandoned, and in the Imperial period we see no new occupation of previously unoccupied locations. In other words, even though rural infill becomes less dense towards the Imperial period, all locations of remaining occupation were established in the Mid Republic.

5.3 The Imperial Period and Late Antiquity

Evidence for Imperial-period occupation is provided by a number of well-known types of fine wares, amphorae and coarse wares that are found in relatively large numbers throughout the investigated areas. Although overall pottery consumption levels are high throughout the Early- and Mid-Imperial periods, the two noted peaks (fig. 9A) might be slightly artificial, corresponding to the introduction in the study area of highly visible *terra sigillata* and African Red Slip Ware (ARSW). This increase in pottery use goes hand in hand with a decline in the number of occupied sites, which is at first sight more substantial

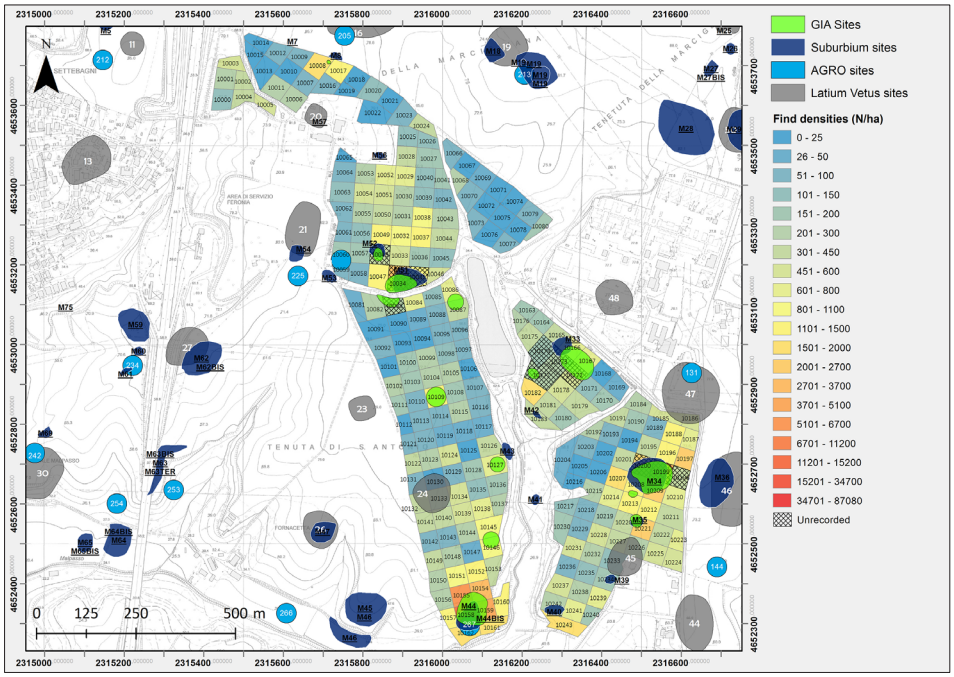


Fig. 7 Find densities and sites recorded during the GIA block survey of sample area South (Tenuta dell'Inviolatella) in relation to the legacy survey record (map authors).

during the Mid Imperial period (fig. 9B). The latter development may reflect a profound change in land use and ownership, in which the Republican-period settlement pattern of small, closely spaced holdings was gradually replaced by a system of larger estates. In other words, the number of rural production units decreases as they increase in scale.

The eastern part of the northeastern sample area clearly illustrates this development. Three relatively small sites of Mid-Republican date, each with similar mixed 'household' assemblages, were identified close to each other (fig. 12, sites 20290, 20296 and 20347). Only one of these – site 20290 – appears to retain its residential function throughout the Imperial period, when it possibly expanded (given the distribution of closely datable forms; fig. 12) and parts of the structure were embellished with mosaic floors. Its function as the centre of a productive establishment is further emphasised by the recovery of recently ploughed-up, large fragments of dolium (see appendix).

At the same time the two other sites in this area are mainly characterized by the presence of building materials, which suggests that they functioned as outbuildings of the main villa complex; they probably were completely abandoned during the Early- or Mid-Imperial period. A continuous low-density scatter of mainly Mid-Imperial pottery, identified in the area between sites 20296 and 20347, is hard to explain, but may constitute the material reflection of further ancillary structures or functional areas (tombs?).

A second example of settlement upscaling during the Early- and Mid-Imperial period is provided by site 21096, located in the eastern sample area. It is strategically situated overlooking the Formicola stream, and is visually dominated by the ruins of the medieval *Torretta della Bufalotta*. At this location a small quantity of Orientalizing/Archaic pottery was found, as well as the remnants of what might be a Republican farmstead, in line with earlier observations.[18] In the Late Republican or Early Imperial period the establishment was converted into a large and lavishly decorated villa complex, as is clear from the luxury architecture (marbles, tesserae and painted plaster) as well as architectural terracottas. An important restructuring of the estate may have taken place in the 2nd century, as is indicated by several tile stamps from the main complex, while at the same time a small outbuilding (as indicated by a separate concentration of pottery and architectural ceramics) and a monumental mausoleum were constructed (Quilici & Quilici Gigli 1980: tav. LXXXII).

In the southern sample area, the same expansion of the villa system is well illustrated by the excavation of site 10199. Here the survey had suggested an Early-/Mid-Republican founding date and continued use of the site up to the 3rd century AD. Subsequent excavation by the Superintendency of Rome identified the foundations of a large building complex, with multiple construction phases. The reorganization of the originally Republican farmstead took place in the Early Imperial phase and was followed by an expansion in the Mid-Imperial period, when areas for production and habitation were separated into a proper *pars rustica* and *pars dominica* (Di Napoli 2016: 42-47).

From the Late Imperial period onwards a strong decline in both settlement numbers and pottery use can be noted, although this does not affect all sample areas to the same extent. Whereas the southern area was completely abandoned, some degree of continuity is observed at the main villa complexes in the two other areas (sites 21096, 20290), as is indicated by the occurrence of several late

African Red Slip vessels (mainly Hayes forms 61 and 91).[19] Although this indicates that these sites continued to be well connected to Mediterranean-wide exchange networks, their small numbers make any inferences about the activities they might represent speculative. All three sample areas appear to have been completely abandoned by the mid-6th century AD.

5.4 Comments on off-site materials and site loss

In fig. 9C the use of pottery on sites and outside of sites is presented by separate trends. Overall, the off-site assemblage constitutes a stable background noise of building materials with an occasional diagnostic potsherd. If we take it as an indicator for the circulation of pottery in the countryside and the intensity of its use we can note that activity starts to increase in the second half of the 5th century BC and remains stable (with only slight fluctuations) up to AD 300. Among the three sample areas we can note some differences in the quantities of off-site material, which may be related to local site densities and the topography of the terrain.

Sites in the northeast sample area lie at 109 m a.s.l. on average, with an average slope of 15 degrees. The overall density of surface finds was very substantial, with distinct find concentrations nearly every 100 m and a substantial fall-off 'halo' especially around the larger sites (fig. 5). The steep slopes in combination with long-term

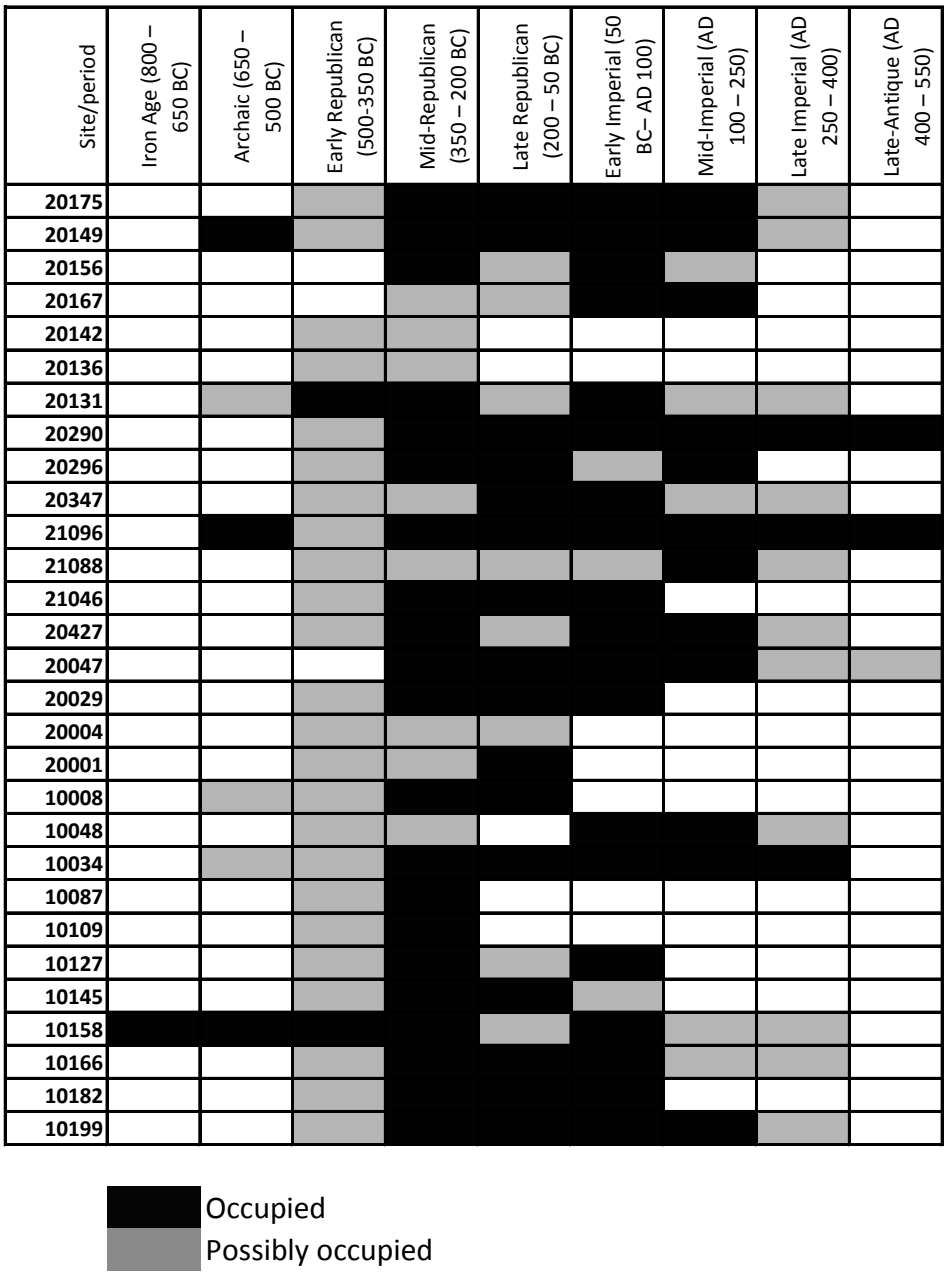


Fig. 8 The chronology of the sites recorded in the course of the GIA survey around Crustumerium (authors).

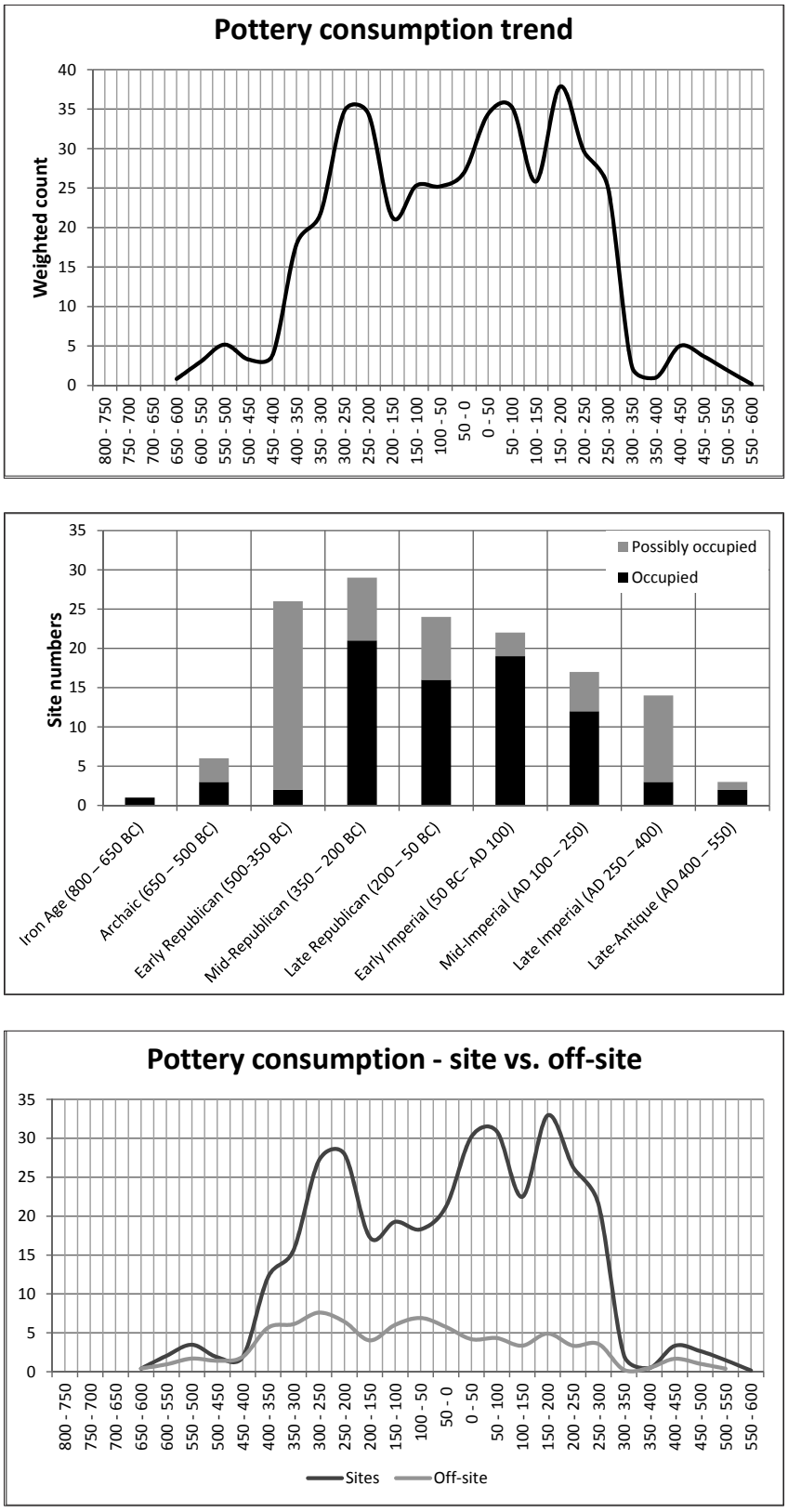


Fig. 9 Graphs showing the general chronological trends derived from all diagnostic fragments recorded in the GIA survey (graphs authors).
A: The average cumulative number of diagnostic finds recorded during the GIA rural survey in 50-year intervals (*media ponderata* dates).
B: The number of sites with certain and possible occupation phases in different phases of the region's settlement history, based on the ceramic data acquired in the GIA survey around Crustumerium.
C: The average cumulative number of diagnostic finds recorded during the GIA rural survey in 50-year intervals split between site and off-site samples (*media ponderata* dates).

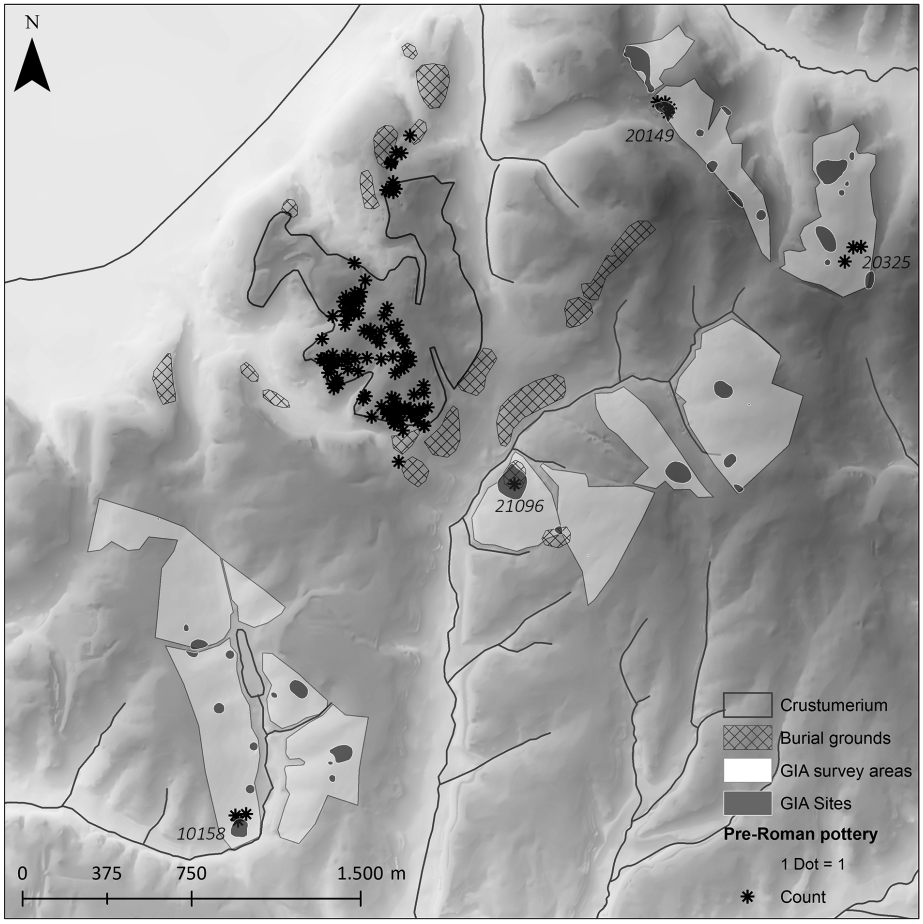


Fig. 10 The distribution of pre-Roman pottery (impasto bruno, impasto rosso and bucchero) in the urban and rural surveys (map authors).

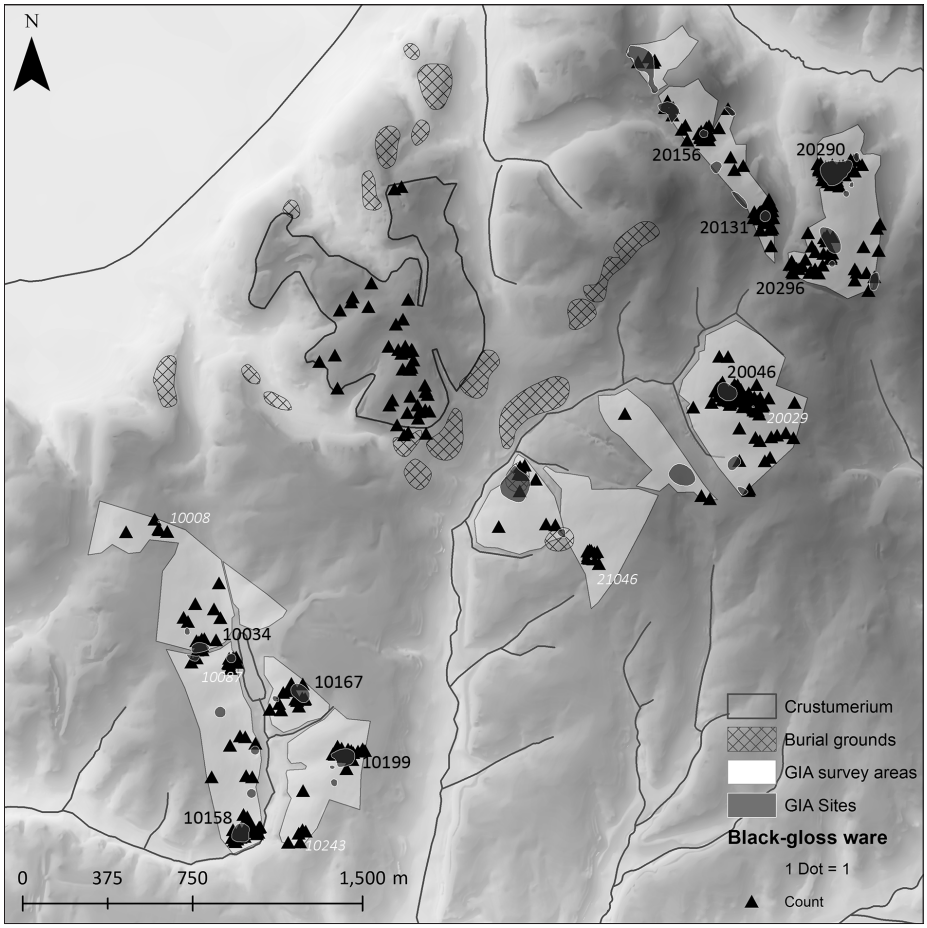


Fig. 11 The distribution of black gloss pottery in the urban and rural surveys (map authors).

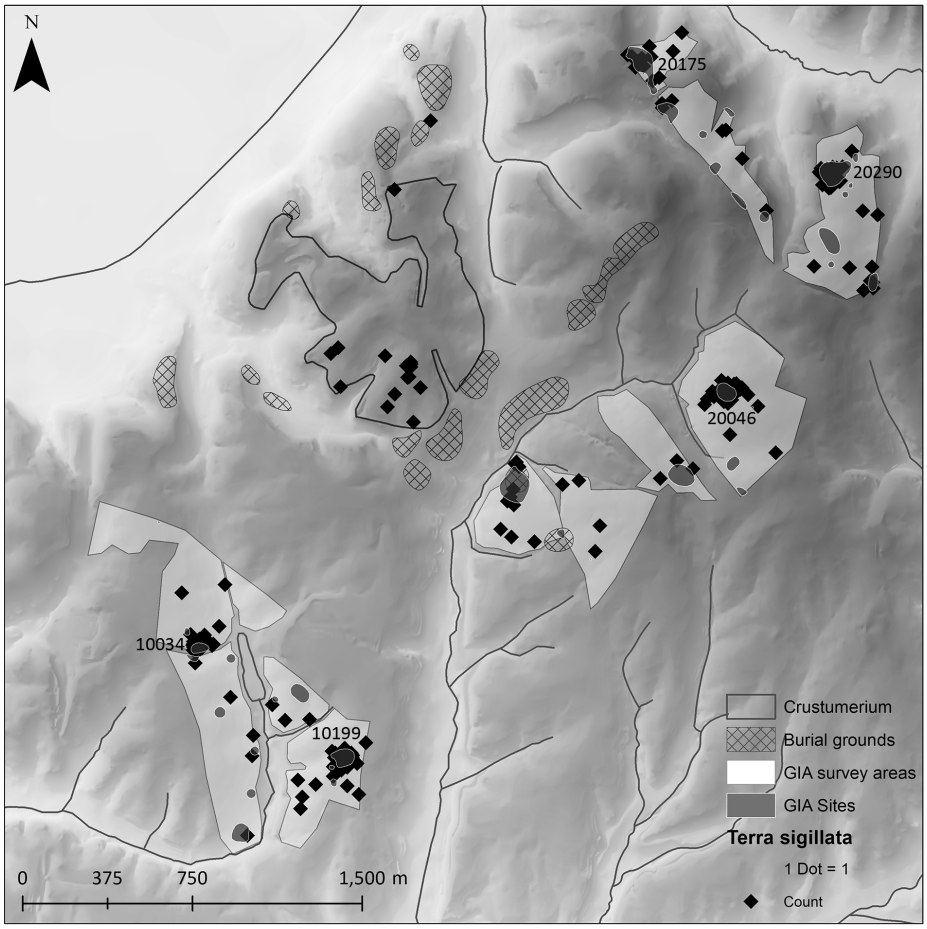


Fig. 12 The distribution of terra sigillata pottery in the urban and rural surveys (map authors).

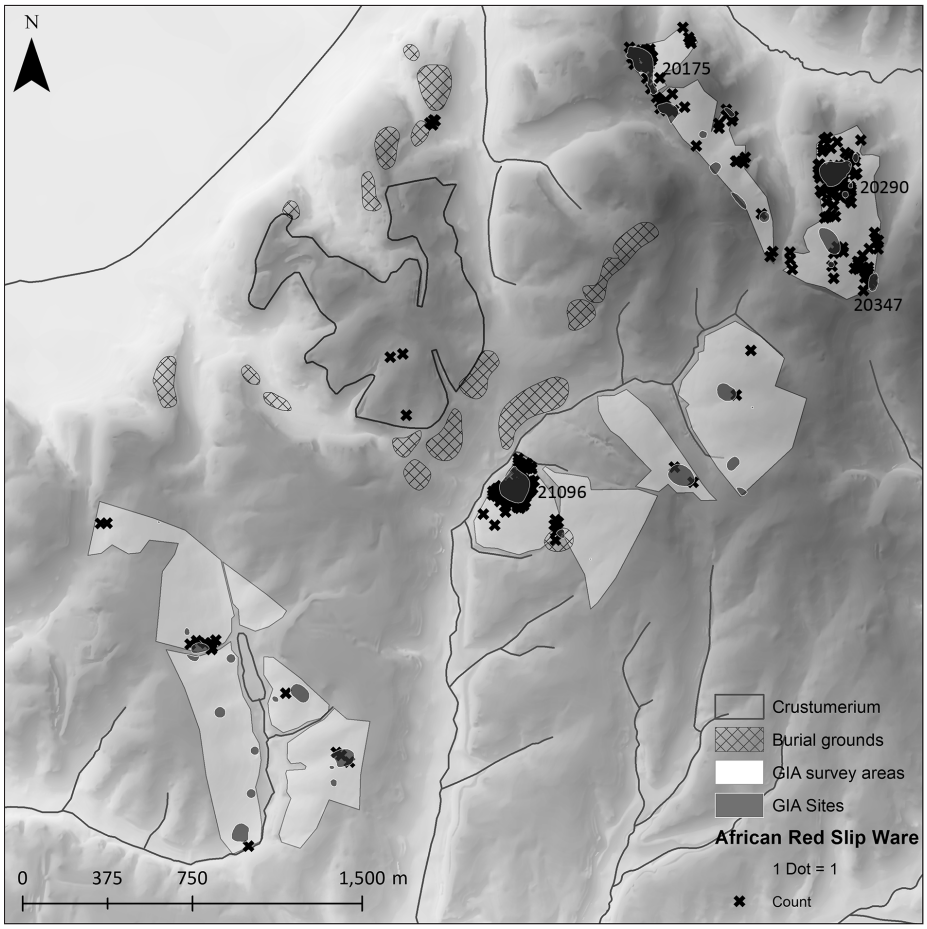


Fig. 13 The distribution of African Red Slip Ware and African cook-ware pottery in the urban and rural survey (map authors).

intensive ploughing and associated erosion (Seubers & Trienen 2015: fig. 2A) have probably caused the migration of surface finds from high-density scatters, and the consequent dispersion of materials over the entire area. Nonetheless many of the surface scatters can still be associated with AGRO and Latium Vetus records of the 1970s and 1980s and have retained enough spatial integrity to allow us to distinguish (smaller) clusters of surface finds within larger sites.

The sample area East (fig. 6) is characterized by lower-lying terrain and gentler slopes (92 m a.s.l. and a 9-degree slope on average). This may have caused the few sites in the area to become less dispersed, but the archaeological landscape is demonstrably 'emptier' as well; the majority of units produced only few surface finds. The few sites that were distinguished can all within a certain margin of error be linked to previous observations, whereas some previously recorded sites, like LV58 and LV93, seem to have completely disappeared.

Just 1.5 km southwest, the southern sample area is marked by substantially lower-lying terrain than the other sample areas (fig. 7; 66 m a.s.l. and a 10-degree slope on average). Despite the presence of four substantial and well recognizable sites (all of which nearly exactly match Suburbium records), and despite the fact that almost 90% of the units produced at least some surface finds, large parts of the land seem to be virtually empty. The only records we have from the Latium Vetus surveys in the area, LV24 and LV45, remain unconfirmed.

The recovery rate of known sites in the GIA survey can be considered to be quite high, given the favourable survey conditions (good visibility throughout) and allowing for a certain margin of cartographical error in the legacy data (Seubers forthcoming) and for the effects of ongoing erosion and associated surface-find migration (Seubers &Trienen 2015). Nine out of 40 known sites were not reidentified, but in at least three of these locations elevated find densities were still noted. This puts the recovery rate of known sites in the forty-year research history above 80%.[20]

In the northeast area, both the Latium Vetus and AGRO records appear to be quite accurate and traces of all known sites were found at or very near the given locations (fig. 5). In several cases the large find areas indicated on the Latium Vetus maps were found to consist of several smaller clusters.

In the eastern sample area the resurvey results of LV93, LV55 and LV58 were negative. Also, the site around unit 20427 appeared to be substantially smaller than the existing record suggested. Site 55 may represent the remains of *a cappuccina* tombs, given the elevated density of Roman tile. Sites 58 and 93, however, have left only very vague traces and should be considered totally lost. We can note that these find locations were also unrecognized in the Suburbium surveys of the 1990s. In fact, only LV54 and LV62 were recovered at that time, and both were reconfirmed in 2012.

In the southern area, the GIA survey of 2011 only covered LV24 and LV45 and surface evidence of neither was found. In the Suburbium survey, site 24 too remained unconfirmed, but it was included in the final map as an Archaic site with a bibliographical source (Fraioli 2016: fig. 4, n.49; Fraioli 1997: 126). In the GIA surveys all the site records of the 1990s were confirmed directly or were at least recorded as elevated surface find densities.

6. DISCUSSION

Landscape archaeology is unique in its ability to study long-term settlement dynamics on a large geographical scale. However, over the years the discussion on field-survey methodology has become increasingly reflexive and the focus of the discipline has shifted from acquiring large-scale overviews of settlement histories to raising survey intensity through more explicit sampling strategies, more detailed material studies (including archaeometrical analyses) and a focus on biases in the surface record (Whitelaw 2013: 72). To arrive at the large-scale and long-term narrative that we quietly still aim for, we mostly depend on legacy data (Witcher 2012: 13). But even though we continue to update and elaborate existing datasets with recent fieldwork, we often have to deal with serious issues of incompatibility (Witcher 2008). Especially in Italy, with its long tradition of extensive surveys, working out how old and new data from surveys of the same area should be fitted together for an integral analysis is perhaps more important than designing new survey projects (Witcher 2006: 62).

At the outset of the current project, with its focus on the urban and rural development of Crustumerium, we were simply in search of the Archaic countryside that had been promised us by existing publications. We wanted to find out what this rural landscape actually looked like in terms of surface archaeology, and set out to do so through an in-depth analysis of legacy data. However, we failed to find a satisfactory answer to this basic question and instead came across contradictions in the available datasets. This is when we realised that new empirical work was needed to consolidate our knowledge of the settlement history of Crustumerium and its territory. At the same time, resurveys allowed us to reflect upon changes in the landscape and to look at previous work comparatively in order to update parts of the existing narrative in line with the advances in survey methodology and ceramic studies over recent decades.

In this paper we have wanted to show that with the bird's eye view adopted for interregional quantitative analyses, the qualitative attributes of the underpinning data are often left out of consideration. For us this is the "broken pots versus meaningless dots" debate, as Rob Witcher phrased in its essence (Witcher 2006). It should be clear that counting dots from legacy data sets (or even selected data) for diachronic comparisons, for

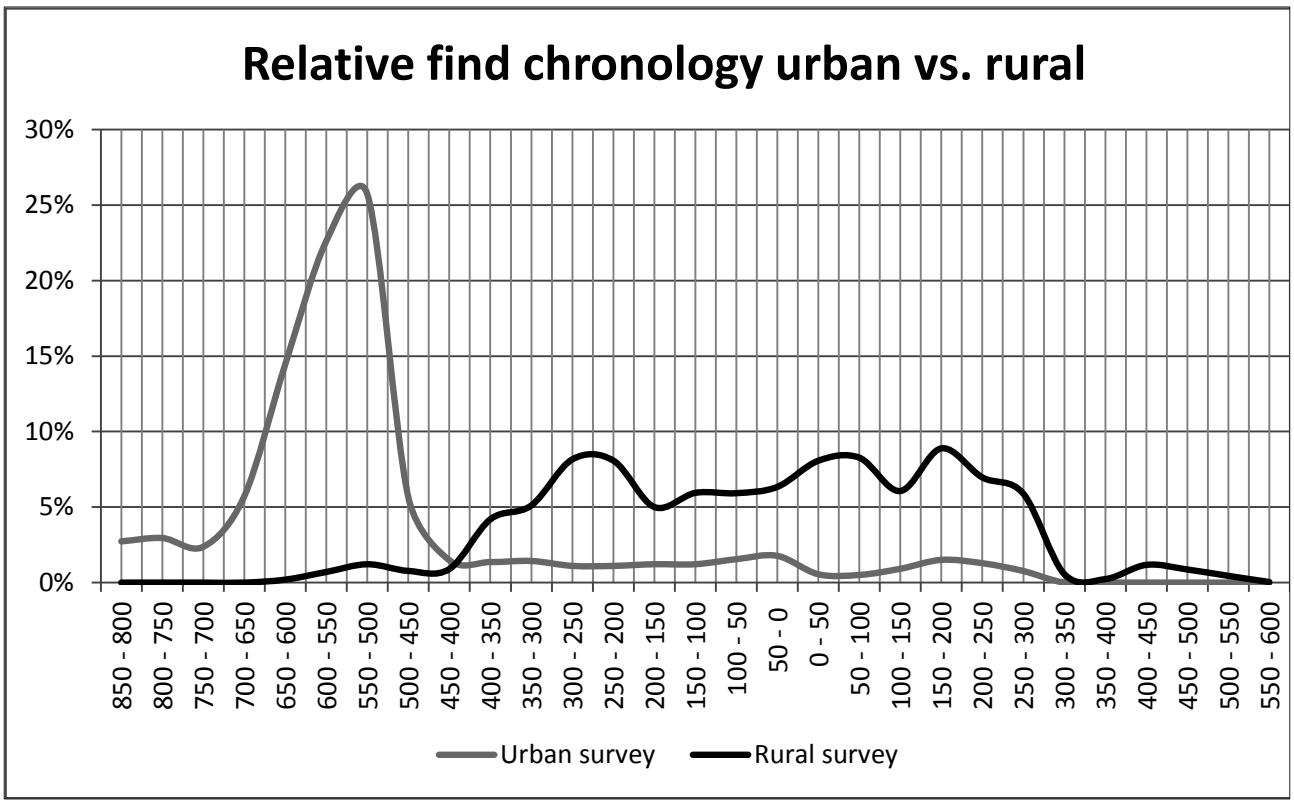


Fig.14 A comparison of the relative numbers of diagnostic finds in the urban and rural Crustumerium surveys in 50-year intervals (*media ponderata* dates; graph authors).

want of the bigger picture, should be preceded by data validation. The underlying ceramic data, just to mention one problem, lends itself to multiple readings because it is often, also by us, built up from first-hand observations and personal diagnoses. Replication studies are of great importance in archaeology because chrono-typologies of specific regions are under constant development and liable to change with the discovery of every new context. Preferably such restudies should be possible without new fieldwork, which means it is essential that surface find assemblages are properly sampled, administered and kept in accessible storage. The restudy of the Tiber-valley survey ceramic data, for example, showed how a rearrangement of the chronology of bucchero and coarse wares revealed a hiatus in the ceramic record of the 5th century, which in its turn suggested a previously undocumented phase of discontinuity (or crisis) in rural habitation (Patterson *et al.* 2004: 7).

The Suburbium and GIA resurveys at Crustumerium, across the Tiber, ironically have had the opposite effect, actually contradicting the idea of a Republican crisis in the area, which had prevailed for decades on the basis of the first fieldwork. The latest evidence in fact suggests that the ruralisation of Crustumerium, and the whole of northern Latium Vetus, took place nearly entirely in Republican times. This alternative interpretation was already proposed on the basis of the Suburbium data (Capanna & Carafa 2009: 38, fig. 12), but the degree to which the data diverges from the Latium Vetus project only becomes obvious when the Suburbium survey is treated as a comparative resurvey of Latium Vetus sites (rather than as a complementary dataset). The differing settlement histories documented by survey datasets of different parts of the Tiber valley (in the Etruscan, Latin and Sabine territories) should be explored further (Seubers forthcoming). In this context, the full publication of the Suburbium data and more restudies of legacy survey data up to the level of the raw ceramic evidence are eagerly anticipated.

7. CONCLUSION

Our current reading of the ceramic chronology of individual finds has led us to an interpretation of the occupation phases of individual sites and of long-term settlement trends that clearly differs from prevailing ideas on the development of rural settlement around Crustumerium. Our interpretation diverges from the idea of a causal relationship between urbanisation and ruralisation for ancient Latin city-states, and hence calls forth new views on the dynamics of city and country, not only for Crustumerium, but indeed for the whole of Archaic Latium Vetus. Fig. 14 shows how the chronologies of the overall assemblages of urban and rural pottery from the GIA surveys suggest a near-complete lack of correlation between the rise and fall of the urban centre and the rural infill of the countryside (Seubers forthcoming).

Evidence for ruralisation certainly first appears during the reign of Crustumerium, but it appears to have been an independent process that was not tied to the fate of the city. It is even likely that the number of rural sites increased in the Early Republic (fig. 9B), after the abandonment of Crustumerium, despite ceramic consumption remaining low. Between the 5th and the 3rd century the countryside became progressively densely occupied, ceramic consumption increased and many new sites were being founded, with a peak in the Mid Republic. At this time site numbers were high and the off-site record was becoming denser as well, although quite a number of the sites were small and short-lived, and in some cases have survived only as poorly defined scatters that stand out from off-site find densities only in retrospect. In subsequent periods the number of sites slightly declined, but this may be seen as a process of selection of the key sites of Mid-Republican origin. We are now dealing especially with larger farms that in the course of the Imperial period gradually grew into complex estates with high pottery consumption and elaborate architecture. The process of intensification seems to continue with a further centralisation of rural activity at just a few villas until the landscape around Crustumerium was completely abandoned in the course of the 6th century AD.

Even though we have noted some differences in the development of our three sample areas, the overall trend described here is consistent and we can safely say that it matches the observations made by various researchers in different areas of the wider suburbium (Capanna & Carafa 2009; Seubers forthcoming), as well as in other parts of Latium (Tol 2012) and neighbouring regions (Cifani 2002: 250-251). It seems logical to suggest that around Crustumerium, as in these other areas, we are witnessing a dynamic strategy of agricultural exploitation, which may have been tentatively explored in the 6th century BC, but which only fully took shape and started to mature from the Mid-Republican period onward.

The causes for the shifting interpretation may be sought in changes both in the actual data and in their interpretation, and therefore could be manifold. The earliest phases of multi-period sites are certainly hard to recognize and may go largely unnoticed amidst large quantities of highly visible Roman ceramics. Additionally, the ongoing destruction of the archaeological record due to agricultural activities may have a more severe impact on ceramic types of less standardized production and on pottery consisting of coarse clays fired at low temperatures.

However, we must add that many sites in the GIA survey seem to have survived over the past 40 years with substantial spatial integrity. And though we certainly support the idea that the recognisability of Archaic materials (and therefore the number of 6th-century sites) has decreased over time, the apparent increase of recorded Mid-Republican sites between different resurveys cannot be explained along the same line of reasoning. Also, in restudying the few collected fragments from the Latium Vetus rural surveys, no substantial differences in the weathering or fragmentation of pottery could be noted in comparison to our own ceramic collections. In other words, as far as we can determine, the quality and density of the surface find material does not seem to have changed substantially over the past 40 years. The effect of post-depositional processes therefore fails to offer a satisfactory explanation for our changing perception of the archaeological landscape of Crustumerium over time.

In fact, the different scenarios addressed in this paper do not seem to be based on changes in the actual ceramic evidence. Instead, as our methods change and knowledge progresses, separate studies of similar evidence have been shown to lead to different interpretations. The Latium Vetus surveys were demonstrably dependent on the usage of non-local reference collections (mostly Etruscan funerary contexts) and leaned heavily on ideas about the chronology and spread of certain shapes, fabrics and wares that were not widely proven. The Suburbium surveys followed in the same tradition, but also made wide use of the new typological studies based on stratigraphical evidence from Rome (Carafa 1995). The GIA survey in its turn benefited from an increased understanding of the different shapes and chronological range of *ceramica comune* in Latium (Olcese 2001; Bertoldi 2011) and was able to confront the ceramic evidence with that from many other excavations and regional ceramic studies that were previously unavailable (di Gennaro *et al*. 2009; Carandini *et al*. 2007; Pensabene *et al*. 2001).

Obviously archaeologists should be aware that the progressive maturation of regional archaeological knowledge has implications for the reading of new and old data alike. As large ceramic datasets are invaluable to the discipline of landscape archaeology, the information we derive from them should be fully falsifiable and open to review or refinement at any time. Allowing for reflexivity in our view is the only way to fully exploit the available (old and new) evidence for the historical development of Latium Vetus.

8. ACKNOWLEDGEMENTS

We would like to thank Francesco di Gennaro, Paolo Carafa and Maria Cristina Capanna for providing access to research data archived at the SSBAR and the University of Rome “La Sapienza” and, with Angelo Amoroso, for their openness in the sharing of personal knowledge and experience.

As the director of “The People and the State” project and the GIA, and our nestor, we owe much gratitude to Peter Attema. Finally, our survey team must be thanked for their eagerness to keep working each day for as long as necessary, or at least for as long as cold beer was provided.

Drawings in the appendix are made by Miriam Los-Weijns and the plates assembled by Erwin Bolhuis.

REFERENCES

AMOROSO, A., 2002. Nuovi dati per la conoscenza dell'antico centro di Crustumerium. *Archeologia Classica* LIII (3), 287-329.

AMOROSO, A., 2000. Crustumerium, da città antica a suburbium di Roma. *Bullettino della Commissione Archeologica Comunale di Roma* 101, 263-282.

AMOROSO, A. & P. BARBINA, 2003. L'istituzione delle tribú *Claudia* e *Clustumina* nel *Latium Vetus*. Un esempio di gestione del territorio da parte di Roma nel V secolo a.C. *Bullettino della Commissione Archeologica Comunale di Roma* CIV, 19-36.

ATTEMA, P.A.J., F. DI GENNARO & E. JARVA (eds.), 2013. *Crustumerium, Ricerche internazionali in un centro latino, Archaeology and identity of a Latin settlement near Rome* (Corollaria Crustumina 1). Groningen, Groningen Institute of Archaeology & Barkhuis.

ATTEMA, P.A.J., F. DI GENNARO, J.F. SEUBERS, B. BELELLI MARCHESINI & B. ULLRICH, 2014. Early urbanization at Crustumerium (Rome, Italy) between the 9th and 5th B.C. *Journal of Roman Archaeology*, Supplement 97, 175-196.

ATTEMA, P.A.J., J.F. SEUBERS & S.L. WILLEMSEN (eds.), 2016a. *Early states, territories and settlements in protohistoric Central Italy* (Corollaria Crustumina 2). Groningen, Groningen Institute of Archaeology & Barkhuis.

ATTEMA, P.A.J, T.C.A. DE HAAS, J.F. SEUBERS & G.W. TOL 2016b (in press), In search of the Archaic country side. Different scenarios for the ruralisation of Satricum and Crustumerium. *The Age of Tarquinius Superbus conference proceedings (Rome)*.

BERNARDINI, P., 1986. *La ceramica a vernice nera dal Tevere.* Rome, De Luca.

BERTOLDI, T., 2011. *Ceramiche comuni dal suburbio di Roma.* Rome, Aracne.

BOUMA, J.W.,1996. *Religio votiva: the archaeology of Latial votive religion: the 5th-3rd c. BC votive deposit south west of the main temple at Borgo Le Ferriere.* Groningen, University of Groningen (dissertation).

BRONKHORST, R. & J.F. SEUBERS, 2015. Tussen legacy en legacy data: de erfenis van een verloren landschap rondom Crustumerium (Noord-Latium, Italië). *Tijdschrift voor Mediterrane Archeologie* 53, 29-35.

CARAFA, P., 2004. Il Paesaggio Etrusco-Italico. In: H. Patterson (ed.), *Bridging the Tiber: approaches to regional archaeology in the Middle Tiber Valley.* London, The British School at Rome, 45-59.

CARAFA, P., 1995. *Officine ceramiche di età regia: produzione di ceramica in impasto a Roma dalla fine dell'VIII alla fine del VI secolo a.C.* Roma, "L'Erma" di Bretschneider.

CARANDINI, A., P. CARAFA & CAPANNA, M.C., 2007. Il Progetto "Archaeologia del Suburbio per la ricostruzione dei paesaggi agrari antichi" impostazione e metodolgia della ricerca. In: C. Cupitò & A. Carandini (eds.), *Il territorio tra la via Salaria, l'Aniene, il Tevere e la via "Salaria vetus": Municipio II*. Rome, "L'Erma" di Bretschneider, 13-25.

CARANDINI, A., M.T. D'ALESSIO & H. DI GIUSEPPE, 2007. *La fattoria e la villa dell'auditorium nel quartiere Flaminio di Roma.* Rome, "L'Erma" di Bretschneider.

CARANDINI, A. & A. RICCI, 1985. *Settefinestre, una villa schiavistica nell'Etruria Romana, La villa e i suoi reperti.* Modena, Panini.

CASCINO, R., H. DI GIUSEPPE & H. PATTERSON, 2012. *Veii. The Historical Topography of the Ancient City: a restudy of John Ward-Perkins' survey.* London, British School at Rome.

CIFANI, G., 2009. Indicazioni sulla proprièta agraria nella Roma arcaicia in base all'evidenza archeologica. In: V. Jolivet, C. Pavolini, M.A. Tomei & R. Volpe (eds.), *Suburbium II.* Rome, Ecole française de Rome, 311-324.

CIFANI, G., 2002. Notes on the rural landscape of central Tyrrhenian Italy in the 6th-5th c. B.C. and its social significance. *Journal of Roman Archaeology* 15, 247-260.

CUPITÒ, C. & A. CARANDINI, 2007. *Il territorio tra la via Salaria, l'Aniene, il Tevere e la via "Salaria vetus": Municipio II.* Rome, "L'Erma" di Bretschneider.

DI GENNARO, F., 2013. Alla ricerca dell'identità di Crustumerium. In: P.A.J. Attema, F. di Gennaro & E. Jarva (eds.) *Crustumerium. Richerche Internazionali in un centro latino. Archaeolog and identity of a Latin settlement near Rome.* Groningen, Groningen Institute of Archaeology & Barkhuis, 3-20.

DI GENNARO, F., F. BARTOLI, E. FODDAI, B. GIORGETTA, C. IAIA, M. MERLO, S. PASQUARELLI & T.S. KORTENAAR, 2009. Contesti e materiali della prima età del ferro, di età orientalizzante, arcaica e tardo-arcaica da Fidene. *Collection* École française de Rome 425, 137-210.

DI GENNARO F. & M. DE FILIPPIS, 1995. Un sepolcreto d'età imperiale nella Tenuta Boccone d'Aste. *Quaderni del centro di studio per l'archeologia etrusco-italica* 23 (Archeologia Laziale XII, 1), 267-274.

DI GIROLAMI, G., 1995. *Resti Archeologici e Ricostruzione del Paesaggi Antichi nel Territorio della IV Circoscrizione del Comune di Roma: La Tenuta del Bufalo.* Rome, Università di Roma "La Sapienza" (dissertation).

DI NAPOLI, A., 2016. Exploratory trenches in the Southern territory of Ancient Crustumerium (Tenuta Inviolatella Salaria). In: P.A.J. Attema, J.F. Seubers & S.L. Willemsen (eds.), *Early states, territories and settlements in protohistoric Central Italy* (Corollaria Crustumina 2). Groningen, Groningen Institute of Archaeology & Barkhuis Publishing, 33-49.

DI SARCINA, M.T., 2012. La ceramica d'impasto rosso. In: R. Cascino, H. di Giuseppe & H. Patterson (eds.), *Veii. The Historical Topography of the Ancient City.* Rome, British School at Rome, 179-201.

DUNCAN, G.C., 1964. A Roman pottery near Sutri. *Papers of the British School at Rome* 32, 38-88.

ETTLINGER, E., et al., 1990. *Conspectus formarum terrae sigillatae Italico modo confectae.* Bonn, Habelt.

FINOCCHIETTI, L., 2008. Tra Crustumerium, Nomentum e Roma: confini e organizzazione del territoria. *Bolletino di Archeologia Online,* special volume.

FRAIOLI, F., 2016. The Southern Ager of the Ancient City of Crustumerium. In: P.A.J. Attema, J.F. Seubers & S.L. Willemsen (eds.), *Early states, territories and settlements in protohistoric Central Italy* (Corollaria Crustumina 2). Groningen, Groningen Institute of Archaeology & Barkhuis, 17-32.

FRAIOLI, F., 1997. *I Paessaggi Antichi della Campagna Romana. Verifica sul terreno e ipotesi di ricostruzione delle tenute di Malpasso, Involiatella e Marcigliano.* Rome, Università di Roma "La Sapienza" (dissertation).

FROVA, A. & A. BERTINO, 1973. *Scavi di Luni: relazione preliminare delle campagne di scavo 1970-1971.* Rome, "L'Erma" di Bretschneider.

FULMINANTE, F., 2014. *The urbanization of Rome and Latium Vetus: from the Bronze Age to the Archaic Era.* New York, Cambridge University Press.

HAYES, J.W., 1972. *Late Roman pottery.* London, British School at Rome.

JOHNSON, P. & M. MILLETT 2013. *Archaeological survey and the city.* Oxford, Oxbow Books.

MARABINI MOEVS, M.T., 1973. *The Roman thin walled pottery from Cosa (1948-1954).* American Academy in Rome.

MEJER, L., 2010a. Cooking Ware. In: M. Moltesen & A. Poulsen (eds.), *A roman villa by Lake Nemi: The Finds.* Rome, Edizioni Quasar, 63-116.

MEJER, L., 2010b. Thin-walled ware. In: M. Moltesen & A. Poulsen (eds.), *A roman villa by Lake Nemi: The Finds.* Rome, Edizioni Quasar, 123-150.

MILLETTI, M. & F. PITZALIS, 2012. Impasto rosso-bruno. In: G. Bartoloni & V. Acconcia (eds.), *L'abitato etrusco di Veio. Ricerche dell'Università La Sapienza II. Un edificio tardo-arcaico e la sequenza stratigrafica.* Rome, Iuno, 141-153.

MOLTESEN, M. & A. POULSEN (eds.), 2010. *A roman villa by Lake Nemi: The Finds.* Rome, Edizioni Quasar.

MOLTESEN, M. & J. RASMUS BRANDT, 1994. *Excavations at La Giostra: a mid-republican fortress outside Rome.* Rome, "L'Erma" di Bretschneider.

MOREL, J., 1981. *Céramique campanienne: les formes.* Rome, École française de Rome.

OLCESE, G., C. COLETTI & G. TASSINARI, 2003. *Ceramiche comuni a Roma e in area Romana: produzione, circolazione e tecnologia (tarda età repubblicana -prima età imperiale).* Mantova, Società Archeologica Padana.

PANCIERA S. & F. DI GENNARO, 2010. Ficulea: un nuovo frammento epigrafico. Problemi storici e topografici. *Rendiconti della Pontificia Accademia Romana di Archeologia* LXXXII, 145-176.

PATTERSON, H., H. DI GIUSEPPE & R.E. WITCHER, 2004. Three South Etrurian 'Crises': First Results of the Tiber Valley Project. *Papers of the British School at Rome* 72, 1-36.

PENSABENE, P., S. FALZONE & C. ANGELELLI, 2001. *Scavi del Palatino I: l'area sud-occidentale del Palatino tra l'età protostorica e il IV secolo a.C. : scavi e materiali della struttura ipogea sotto la cella del tempio della Vittoria.* Roma, "L'Erma" di Bretschneider.

QUILICI, L. & S. QUILICI GIGLI, 1986. *Fidenae.* Latium Vetus IV. Rome, Consiglio Nazionale delle Ricerche.

QUILICI, L. & S. QUILICI GIGLI, 1980. *Crustumerium.* Latium Vetus III, Rome, Consiglio Nazionale delle Ricerche.

RASMUSSEN, T.B., 1979. *Bucchero pottery from southern Etruria.* Cambridge, New York, Cambridge University Press.

ROSSI DIANA, D. & M. CLEMENTINI, 1988. Nuove considerazioni sul tipo del bacino di impasto augitico. *Atti della Accademia Nazionale dei Lincei* XLIII (Classe di scienze morali, storiche e filologiche, Rendiconti, 8), 39-72.

SEUBERS, J.F., 2016. Many rivers to Cross. Revisiting the territory of ancient Crustumerium with a cost surface based site catchment analysis. In: P.A.J. Attema, J.F. Seubers & S.L. Willemsen (eds.), *Early states, territories and settlements in protohistoric Central Italy,* Groningen, Groningen Institute of Archaeology & Barkhuis, 51-66.

SEUBERS, J.F. & T. TRIENEN, 2015. A hand to the plough. A GIS-based cartographical analysis of changes in elevation due to terrain modification and erosion in the settlement areas of Ancient Crustumerium. *Archeologia e calcolatori* 26, 169-188.

SEUBERS, J.F. forthcoming. *New light through old windows. Revisiting the urban-rural continuum of the ancient Latin city-state*; *Crustumerium and Rome between 850 and 300 BC*. Groningen, Rijksuniversiteit Groningen (dissertation).

STANCO, E.A., 2009. La seriazione cronologica della ceramica a vernice nera etrusco laziale nell'ambito del III secolo a.C. In: V. Jolivet, C. Pavolini, M.A. Tomei & R. Volpe (eds.), *Suburbium II, Il suburbia di Roma dalla fine dell'età monarchica all nascità del sistema delle ville (VII secolo a.C.).* Rome, Collection de l'École française de Rome 419, 157-193.

TOL, G.W., 2012. *A fragmented history: a methodological and artefactual approach to the study of ancient settlement in the territories of Satricum and Antium.* Eelde; Groningen, Barkhuis & Groningen University Library.

WHITELAW, T., 2013. Collecting cities: some problems and prospects. In: P. Johnson & M. Millett (eds.), *Archaeological Survey and the City* (University of Cambridge Museum of Classical Archaeology Monograph 2). Oxford, Oxbow books, 70-106.

WITCHER, R., 2008. (Re)surveying Mediterranean Rural Landscapes: GIS and Legacy Survey Data. *Internet archaeology* 24.

WITCHER, R., 2006. Broken Pots and Meaningless Dots? Surveying the Rural Landscapes of Roman Italy. *Papers of the British School at Rome* 74, 39-72.

WITCHER, R. & CRAVEN, M., 2012. 'Much that has long been hidden': Reconstructing the survey methodology. In: R. Cascino, H. di Giuseppe & H. Patterson (eds.), *Veii. The Historical Topography of the Ancient City.* Rome, British School at Rome, 9-29.

WITCHER, R.E., 2012. 'That From A Long Way Off Look Like Farms': The Classification of Roman Rural Sites. *Journal of Roman Archaeology*, Supplementary Series 88, 11-30.

NOTES

1 Historically, the territory of *Crustumerium* was absorbed by Rome in 495 BC, when the 'tribù clustumina' became the 21st clan of Rome. The *Ager Crustuminus* would have been part of the *Ager Romanus* from then on (Livy II, 21, 7 and XLII, 32, 2. Pliny, *Naturalis Historia*, 3.9).

2 The land division and toponyms used to establish the boundaries of the research areas in the former *circoscrizione IV del Comune di Roma* were adopted from the cadastral Alessandrino map of 1660 (di Gennaro & Filippis 1995: 267); for a map of the research areas, see also Carandini, Carafa & Capanna 2007: fig. 2 and 3.

3 In practice this means that the remains of Early and Middle Republican sites are included in the study, though they are not discussed fully or in depth, and that Late Republican and Imperial traces are often mentioned only in footnotes.

4 A restudy of the published rural evidence from the Latium Vetus surveys around Crustumerium (including part of the Fidenae and Ficulea data) showed that 117 allegedly Archaic sites are rep-

resented by just 42 published pottery fragments (Seubers forthcoming).

5 The site of historical "Ficulea" is still debated. Its location in the area of Marco Simone Vecchio (now urbanised), as proposed in the 1993 Latium Vetus publication, has not been confirmed with certainty (Panciera & di Gennaro 2010).

6 The full publication of the *Suburbium* data is still pending. It is only by courtesy of Paolo Carafa and Maria Cristina Capanna that it has been made available to us, in reference to *Dati della Cattedra di Archeologia Greca e Romana,* prof. P. Carafa*, Sapienza Università di Roma*.

7 The AGRO project of government-commissioned surveys in the 1980s has resulted in a quite accurate map of archaeological traces in the landscape. However, most sites are only described as "area fittile" (area with surface ceramics), and no other information is provided.

8 In preparation of our work in the GIS, the designated research areas were overlaid with a grid of 50 x 50 m that was adjusted to recent aerial photography to correct for field boundaries and inaccessible zones. All units were attributed a unique number and uploaded to a hand-held computer with GPS and ArcPad software for transferring the predesigned survey grid to the field.

9 All ceramics collected from 20% of one unit would amount to a "standard sample".

10 To give an indication of what we mean by "dense" scatters, experiments with a string square sample (full ceramic count for a 25 sq m area) on a specifically dense Roman site (21096) resulted in estimates of well over 100,000 fragments per unit (extrapolated to 2500 sq m) .

11 Roman rural sites were surveyed systematically, but in specific cases no find densities were recorded because of the time and effort required to collect, count and weigh huge quantities of building materials. Units and sites without density recordings are clearly marked as such in the tables and maps presented in this paper.

12 For example, the first site in the appendix, site 20175, is named after the unit where a distinct find concentration was first noted, but the site's assemblage was taken from seven units (20175 to 20181). The finds taken from other units in this field are very probably associated with the main find concentration, but they are counted as "off-site" finds.

13 In the remainder of this paper we will refer to unit numbers to specify find locations, while site numbers refer to the unit in or around which the find scatter was recorded (also see the catalogue). The term "site" is used in the same way it was used in the legacy data: to specify a find scatter of a noticeably high density and a distinct spatial definition. The "off-site" assemblage refers to all finds recovered outside of these distinct scatters (see Di Giuseppe *et al*. 2012: 105-107).

14 With media ponderata a pottery fragment is not counted once for every phase it represents, but its contribution to the overall chronology (which is 1 in total) is divided by the number of phases covered by its date range.

15 Not counting the single fragment which can be associated with the burial grounds of Crustumerium (54 = 21096).

16 For the Suburbium surveys, most of the ceramic dates were taken from Carafa (1995), which at the time was one of the few collective works on ceramics from Latium Vetus (Rome).

17 On the reading of his own ceramic survey data from the Tenuta Ciampiglia Del Bufalo (which partially overlaps the GIA sample area), Gianluca Di Girolami writes (1995: 118): "allo studio dei materiali ceramici non sono stati rinvenuti elementi sufficienti a collocare detti siti all'interno della fascia cronologica che comprende VI e V secolo." In his case this means that the alleged Archaic/ Early Republican date of 9 Latium Vetus sites had to be dismissed for lack of evidence.

18 Latium Vetus site 54; Suburbium site L8. The protohistoric pottery may be related to the nearby Ciampiglia Del Bufalo necropolis of Crustumerium.

19 Similar small-scale continuity of activity – mainly restricted to larger villa complexes – has been observed in other parts of Latium Vetus as well. See Tol 2012: 380, for the area around *Antium*.

20 In comparison, attempted revisits of 132 Forma Italiae sites in the lower Astura valley (Pontine region; Piccarreta 1977) showed that over the course of three decades 48% of known sites had been lost due to construction or agriculture, whereas an additional 8% of previously documented sites could not be revisited owing to limited soil visibility or denied access (Tol 2012: 51-52 and fig. 3.3a).

APPENDIX 1

CATALOGUE OF SITES AND ARTEFACTS RECORDED BY THE CRUSTUMERIUM SURVEY (GIA 2011-2013)

This catalogue presents the site- and pottery data gathered during systematic field surveys carried out by the GIA between 2011-2013 in the territory of Crustumerium. Three different sample areas were investigated and for each area the sites are discussed in a sequence from east to west and north to south. The sample areas are referred to as Northeast, East and South respectively.

The site descriptions comprise:

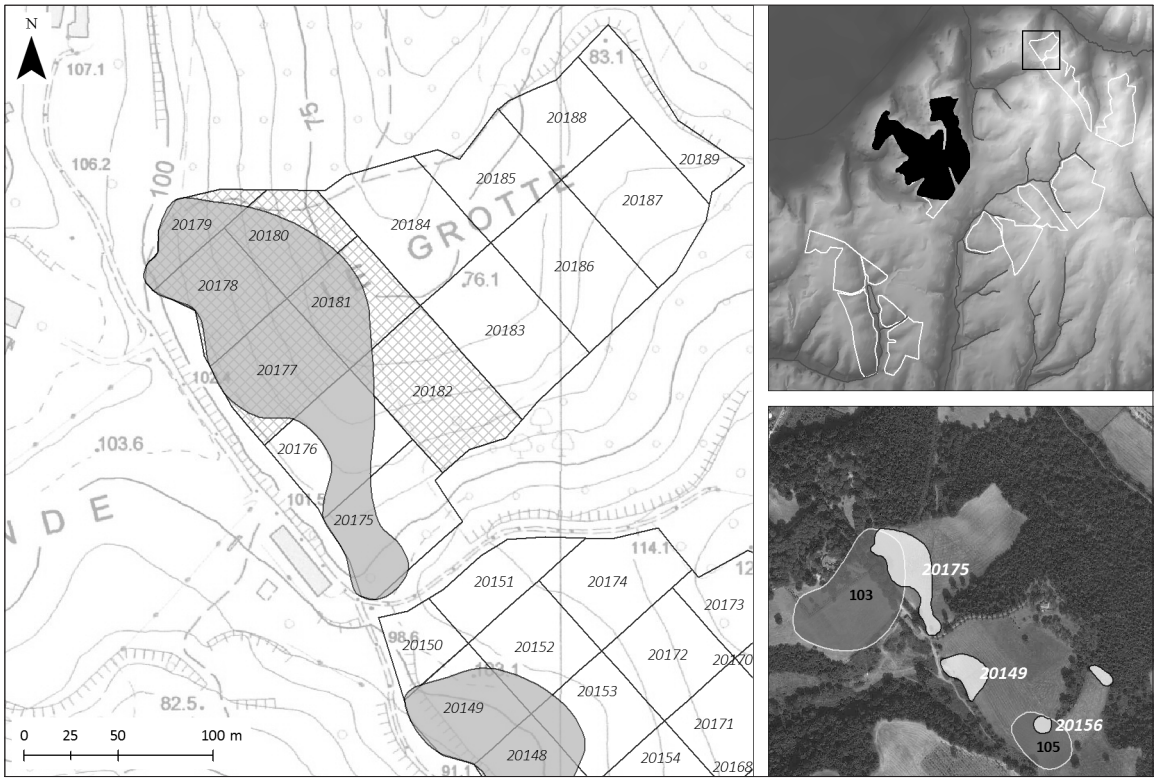
- An accompanying location map, displaying the areas surveyed (generally 50x50m blocks) and the extent of the relevant site (or find density) displayed as a shaded polygon;
- Site-identifiers (a five-digit GIA site ID and, where applicable, identifiers used during previous investigations);
- Locational information (a toponym, site coordinates (X and Y in EPSG 26592), Z in metres above sea level, average slope of the find location (in degrees) and the approximate extent of the find scatter (in sq m);
- Information on the investigations (visibility conditions, survey and sampling strategies). The reader is referred to the discussion in the text for a general explanation of the survey and sampling strategy;
- Information on the characteristics of the site (a description of the architecture and artefacts, size estimate and any additional remarks);
- References to legacy data if applicable.

Each site entry is followed by a table listing its diagnostic artefacts, including references to dated parallels and related drawings in the Plates section. The few impasto, impasto rosso and some impasto chiaro sabbioso (ICS) fragments are dated in accordance with Carafa (1995), supplemented by various site publications. Dates for coarse and depurated wares generally refer to the classifications by Olcese (2003) and Bertoldi (2011), as well as a number of site-focused publications (e.g. Dyson 1976 for Cosa; Duncan 1964 and 1965 for Sutri). For the different classes of fine ware, commonly used typologies are employed: Rasmussen (1979) for bucchero*;* Morel (1981) and the recently revised dates of the *Gruppo dei Piccoli Stampigli* as published in Stanco (2009) for black gloss ware; Ettlinger *et al.* 1990 for terra sigillata; Atlante I (1981), supplemented by Bonifay (2004) for African Red Slip Ware (ARSW) and Marabini Moevs (1974) for thin-walled ware. For the identification and dating of amphora fragments the database of the *University of Southampton Amphora Project* was used (*USAP* 2005), complemented by Bonifay (2004).

A list of off-site materials is included at the end of the catalogue.

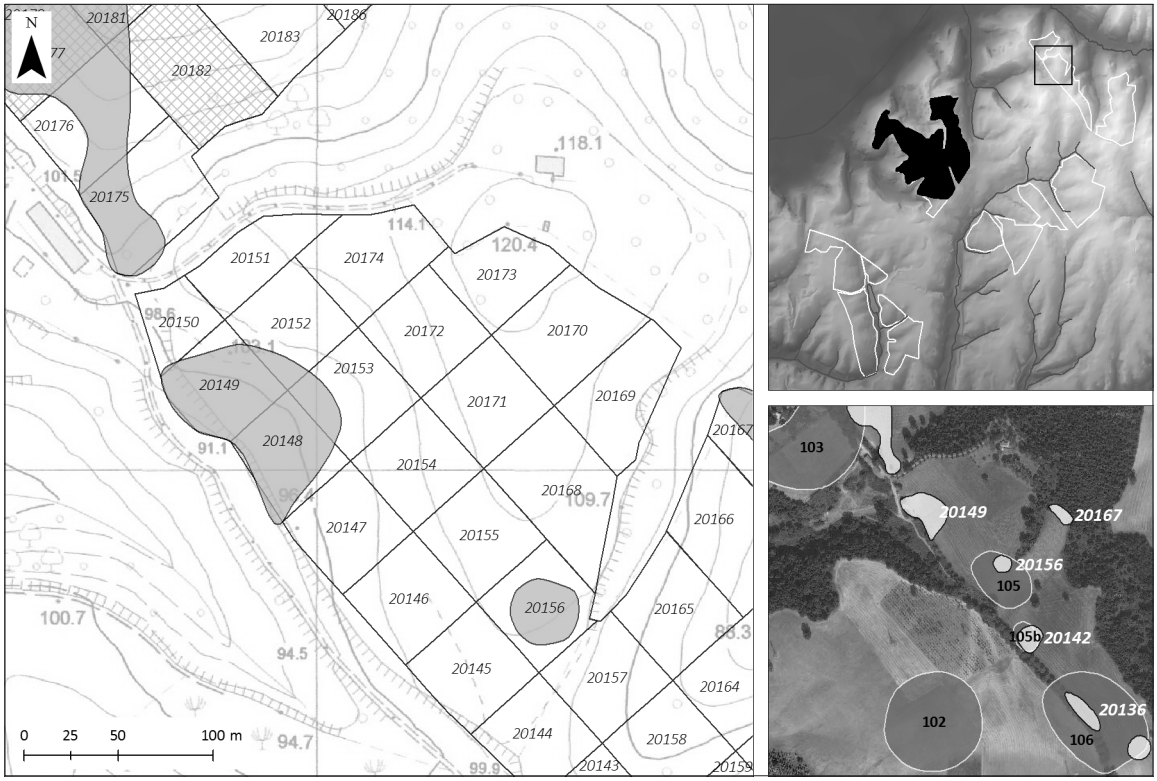
GIA CRUSTUMERIUM SURVEY: CATALOGUE OF RURAL SITES SURVEYED IN 2011-2013

Sample area Northeast



Site name:	**GIA CS 20175**	
Toponym:	Cisterna Grande; Le Grotte	
Coordinates and spatial characteristics:	*X*	2317854,32
	Y	4655732,52
	Z	87,6
	Slope	25
	Extent	12000
Description:	A large find scatter spread out over a steep slope of a hill known as Le Grotte. Visibility was good, but adverse weather conditions in combination with the steep slope may have negatively affected walker performance. The entire area, recognized as a spatial match for LV site 103, was only sampled for diagnostic pottery.	
Samples:	Only a diagnostic sample from the core of the site	
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares; amphora; black-gloss ware; terra sigillata; African red slip ware; glazed ware; loomweight; marble; tesserae	
Remarks:	Very probably part of the erosion and downslope migration of LV103. **Legacy data** report mostly tile fragments in red-brown impasto, ceramic fragments of impasto bruno *chiaro* and black-gloss ware, providing a date between the Archaic and Late Republican period. In the Late Republican and Imperial period there is thought to have been a large villa at this location. Evidence for this was found in architectural remains of tuff, mortar, marble, travertine and black and white tesserae. The land owner (in the 1970's) allegedly also found pieces of marble statues.	
References:	Agro 46; LV 103	
Legacy chronology:	*LV*	Archaic-Imperial
	SUB	-
GIA chronology:	*Possible range*	Early Republican-Late Imperial
	Certain range	Mid Republican-Mid Imperial

GIA CS 20175				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a dolium	Coarse ware	-	-
2.	Rim fragment of a basin	Coarse ware	-	-
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 3A/B	AD 0-125
4.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150
5.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B	AD 0-100
6.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5a	AD 0-200
7.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B = 20346-02	AD 0-100
8.	Rim fragment of a pan	Coarse ware	Olcese (2003), casserole type 1	100 BC-AD 100
9.	Rim fragment of a jar	Coarse ware	Olcese (2003), casserole type 1	100 BC-AD 100
10.	Rim fragment of a pan	Coarse ware	Mejer (2010a), casserole type 3	AD 0-150
11.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 15	200 BC-AD 100
12.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 8	AD 0-150
13.	Rim fragment	Coarse ware	-	-
14.	Rim fragment	Coarse ware	-	-
15.	Rim fragment	Coarse ware	-	-
16.	Rim fragment	Coarse ware	-	-
17.	Rim fragment	Coarse ware	-	-
18.	Rim fragment of a plate	Terra sigillata	*Consp.*, form 3	AD 50-100
19.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 37	AD 25-75
20.	Rim fragment	Terra sigillata	-	-
21.	Decorated body fragment	Terra sigillata	Late Italian mould-made sigillata	-
22.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
23.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
24.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
25.	Loomweight	Coarse ware	Pensabene *et al.*, no. 314; Carandini *et al.* (2007), tav. 21, 169-170.	400-200 BC



Site name: **GIA CS 20149**

Toponym: Cisterna Grande

Coordinates and spatial characteristics:

X	2317968,95
Y	4655526,99
Z	99,2
Slope	18
Extent	4800

Description: A relatively large find concentration, without any previous record, was found on the lower slope of a small hilltop between Le Grotte and Monte della Piscina. The find material consists primarily of Roman building materials and coarse ware pottery. Fine wares in all categories were found in small numbers. Most noticeable were four fragments of bucchero, providing certain evidence for an Archaic date. A coin of the deified Marcus Aurelius provides a date of AD 180-182.

Samples: Full standard sample

Finds: Bucchero; tiles (incl. red augite; chiaro sabbioso); coarse wares; amphora; black-gloss ware; terra sigillata; African red slip ware.

Remarks: No previous records

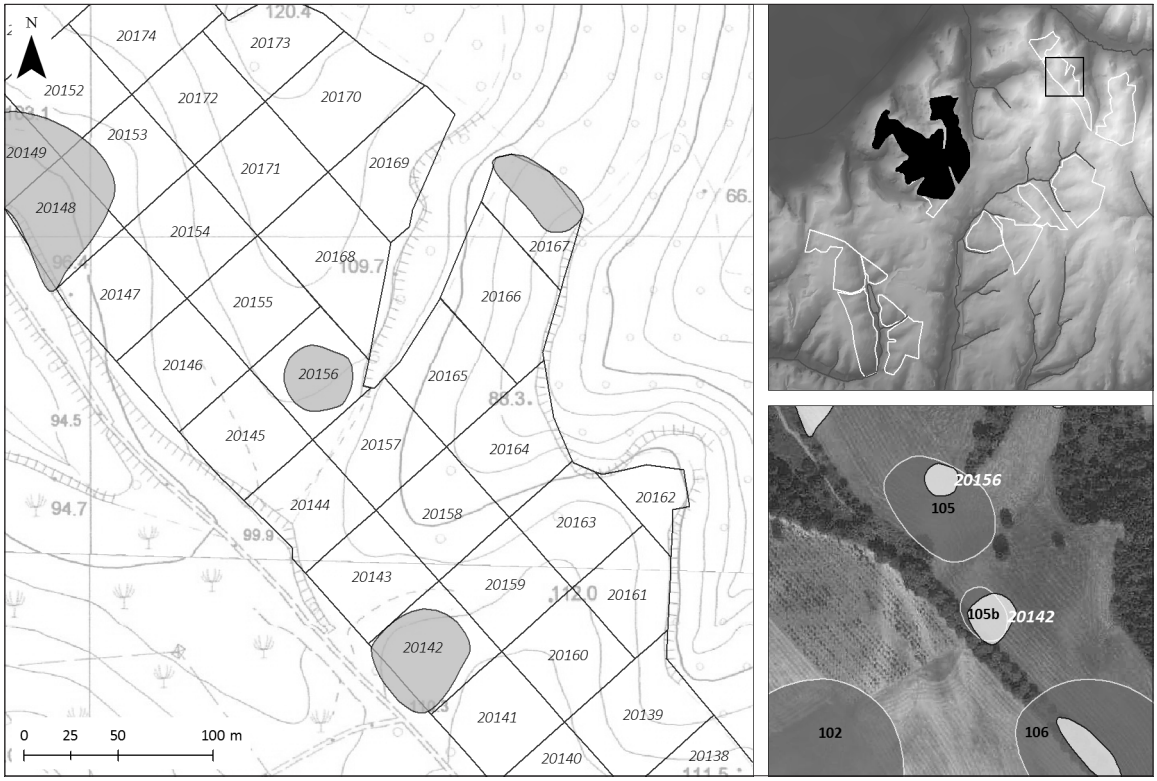
References:

Legacy chronology: *LV*
SUB

GIA chronology:

Possible range	Archaic-Late Imperial
Certain range	Archaic; Mid Republican-Mid Imperial

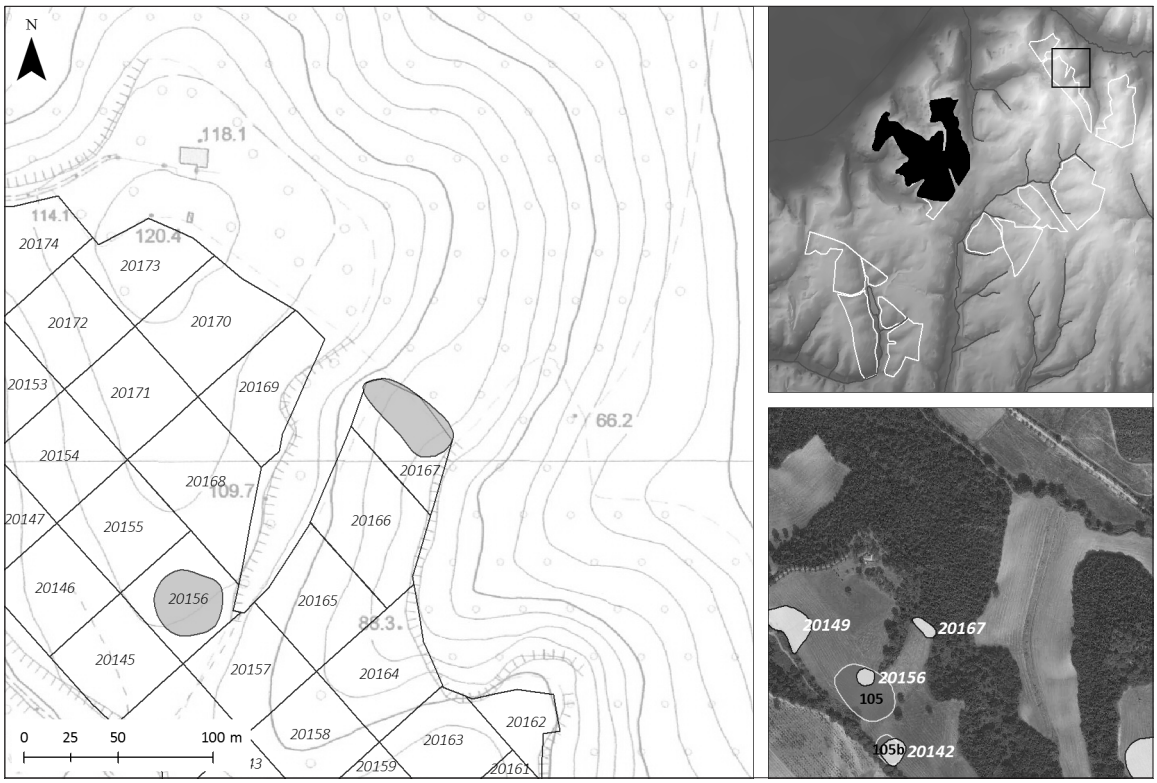
Site 20149				
No.	Shape	**Ware**	**Type**	**Date**
1.	Rim fragment	Bucchero	di Gennaro *et al*. (2009), fig. 21-17; Rasmussen (1979), form 4b.	600-500 BC
2.	Base fragment	Bucchero	Base of chalice or kantharos.	625-500 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2/Bouma 1996: jar type IVc	400-200 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
5.	Rim fragment of a jug	Coarse ware	Olcese (2003), brocca type 4	100 BC-AD 200
6.	Handle fragment of an amphora	Coarse ware	Stamped: M.OCIA	-
7.	Coin	Bronze	Divus Marcus Aurelius sestertius, struck under Commodus. RIC III 662/C 165	AD 180-182



Site name:	**GIA CS 20156**	
Toponym:	Cisterna Grande	
Coordinates and spatial characteristics:	*X*	2318119,64
	Y	4655423,25
	Z	110,2
	Slope	12
	Extent	900
Description:	Unit 20156 contains a small find concentration spatially matching LV105 and Agro 55. The find material is more diverse than the existing record suggests, with rosso-bruno tile fragments and Roman building materials in equal amounts, accompanied by coarse and black-gloss wares.	
Samples:	Full standard sample	
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse wares; amphora; black-gloss ware.	
Remarks:	**Legacy data**: LV105 is described as consisting of two distinct scatters of well-made tiles and pottery of red-brown impasto, providing an Orientalising to Archaic date. LV105 consisted of two find concentrations of a similar chronology, suggesting that we are dealing with a settlement and its necropolis. Both clusters featured in the AGRO and GIA surveys (see CS 20142), but the early date of the material could not be confirmed.	
References:	Agro 55; LV105	
Legacy chronology:	*LV*	Late Iron Age-Archaic
	SUB	
GIA chronology:	*Possible range*	Mid Replican-Mid Imperial
	Certain range	Mid Republican; Early Imperial

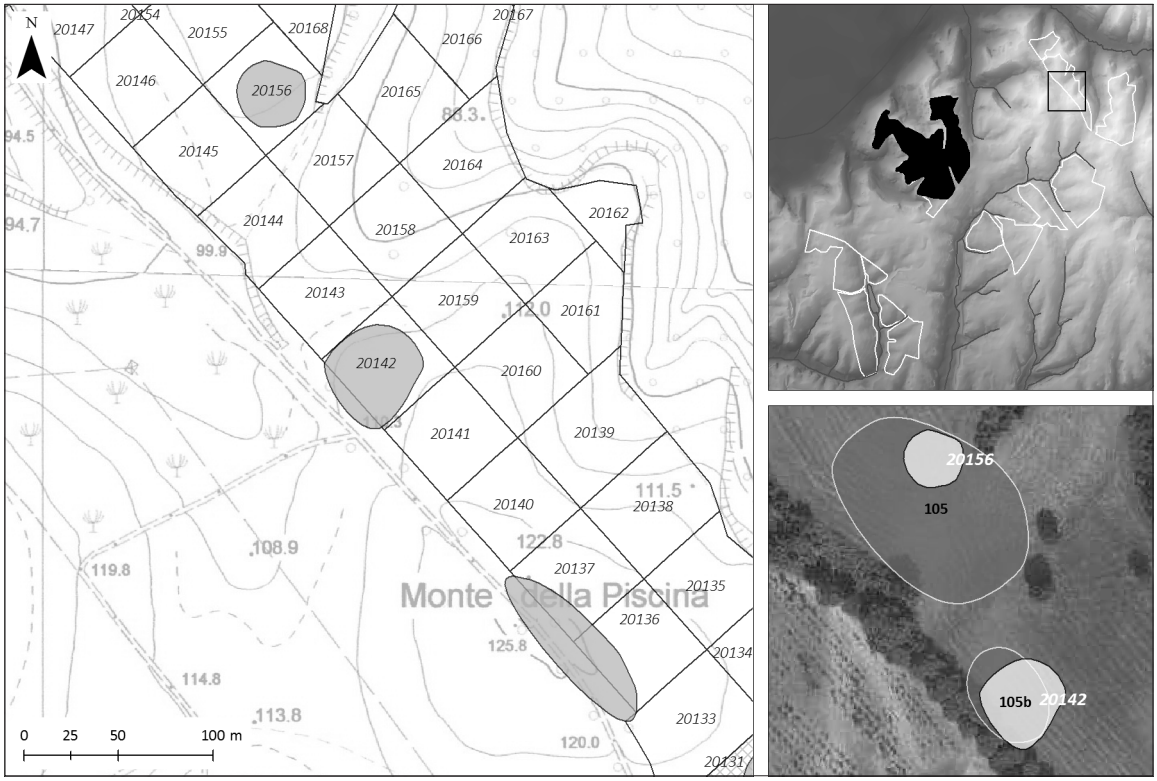
Site 20156				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	Coarse ware	Olcese (2003), bacino type 4	30 BC-AD 70
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 6	AD 0-200
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
5.	Flange of a baking cover	Coarse ware	Olcese (2003), clibane type 2	300-0 BC
6.	Rim fragment	Coarse ware	-	-
7.	Knob fragment of a lid	Coarse ware	-	-
8.	Rim fragment	Coarse ware	-	-

Site 20156				
No.	**Shape**	**Ware**	**Type**	**Date**
9.	Rim fragment	Coarse ware	-	-
10.	Rim fragment	Coarse ware	-	-
11.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
12.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), serie 2520	250-190 BC

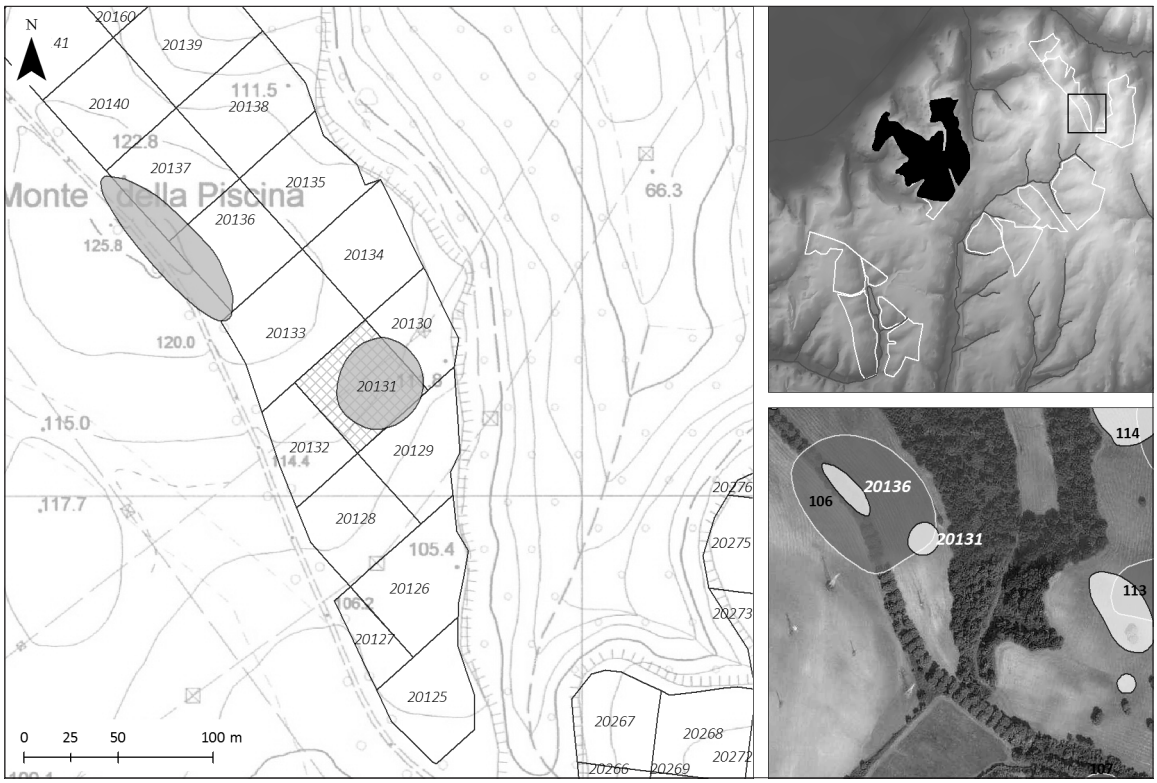


Site name:	**GIA CS 20167**	
Toponym:	Cisterna Grande	
Coordinates and spatial characteristics:	*X*	2318237,11
	Y	4655520,91
	Z	92,7
	Slope	20
	Extent	900
Description:	On the lower part of unit 20167 an accumulation of surface materials was noted, which had not been recorded previously. The concentration is not very dense and consists mostly of Roman building materials with some coarse wares, a single fragment of black-gloss ware and ARSW.	
Samples:	Full standard sample	
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse wares; black-gloss ware; African red slip ware.	
Remarks:		
References:		
Legacy chronology:	*LV*	
	SUB	
GIA chronology:	*Possible range*	Mid Republican-Mid Imperial
	Certain range	Early Imperial-Mid Imperial

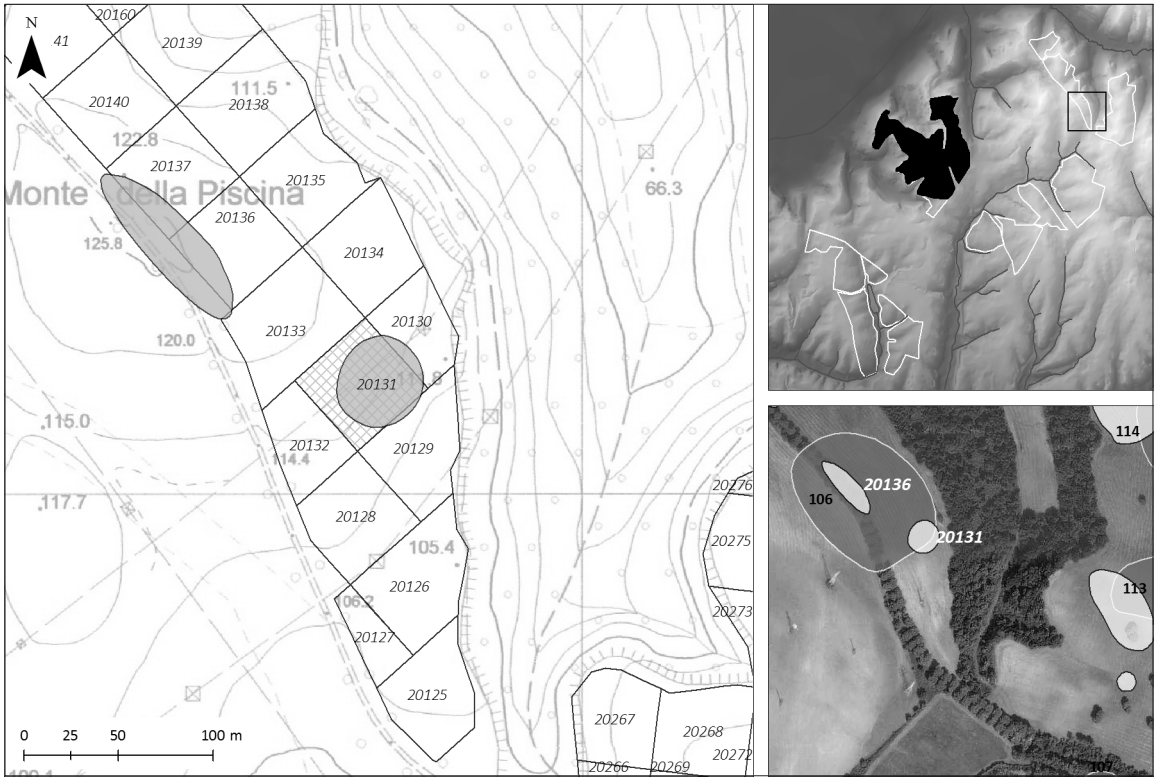
Site 20167				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola 3A	AD 0-125
2.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14B	AD 200-250



Site name:	**GIA CS 20142**	
Toponym:	Cisterna Grande; Monte della Piscina	
Coordinates and spatial characteristics:	*X*	2318176,36
	Y	4655277,17
	Z	111,7
	Slope	13
	Extent	1500
Description:	A small find concentration covering unit 20142 has an exact spatial match to LV105B and Agro 59. The material found in unit 20142 is very fragmented and consists mostly of tiles and coarse wares, in which red impasto wares constitute a minority. Unfortunately no diagnostic fragments were found.	
Samples:	Full standard sample	
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse wares	
Remarks:	For legacy data see CS 20156	
	No diagnostic finds	
References:	Agro 59; LV105b	
Legacy chronology:	*LV*	Late Iron Age-Archaic
	SUB	
GIA chronology:	*Possible range*	Early-Mid Republican (on the basis of tiles)
	Certain range	No diagnostics



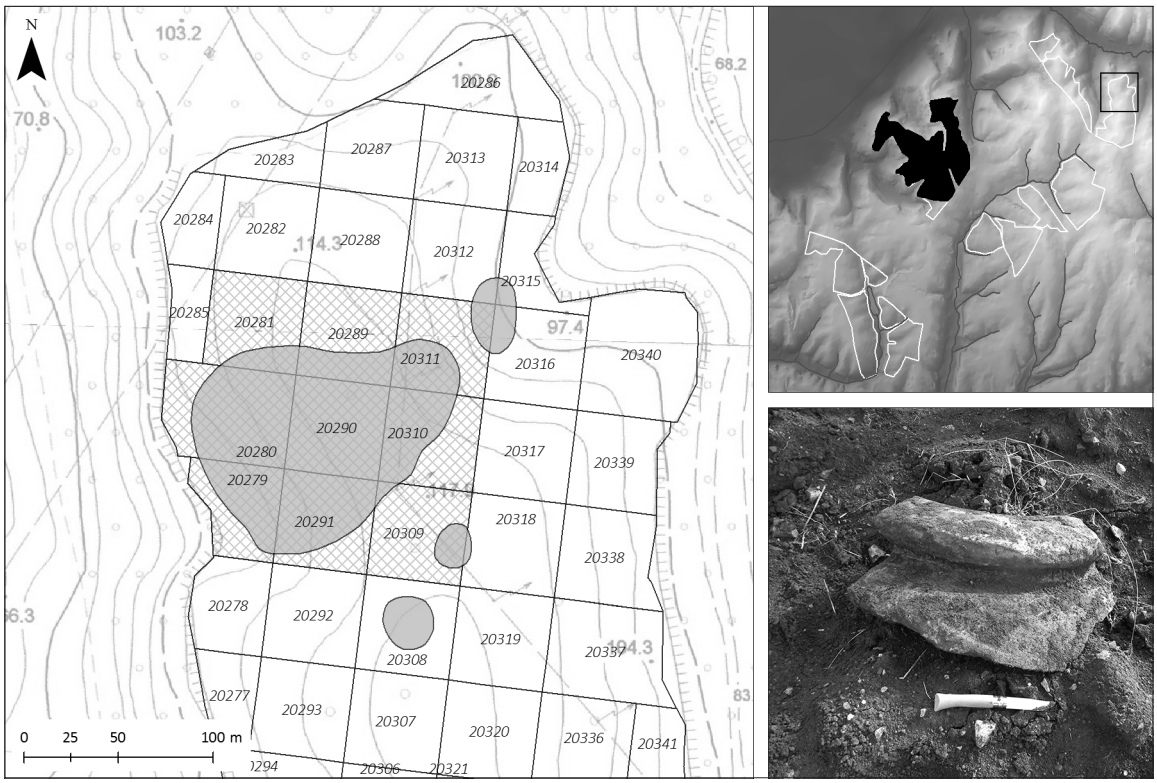
Site name:	**GIA CS 20136**	
Toponym:	Cisterna Grande; Monte della Piscina	
Coordinates and spatial characteristics:	*X*	2318285,75
	Y	4655135,05
	Z	124,6
	Slope	7
	Extent	1000
Description:	During earlier reconnaissance LV site 106 could clearly be distinguished on top of the Monte della Piscina hill. The core of the site appears to be located on the southwest side of the (probably) ancient hollow way that dissects the hilltop and falls just outside our survey area. On the surveyed part of the hilltop we can note that several distinct find concentrations fall within the area of LV106. In the case of CS 20136 we can only note an increased density of building materials and coarse wares on the western edge of the field, without diagnostic material.	
Samples:	Full standard sample	
Finds:	Tiles (incl. chiaro sabbioso); coarse wares.	
Remarks:	**Legacy data**: On LV106 large amounts of tile and vase fragments were found providing a broad date range from the 6th century BC onward. There is also thought to have been an Imperial villa on the hilltop with a concrete cistern from which the toponyms Piscina and Cisterna Grande were derived.	
	No diagnostic finds	
References:	Agro 63; LV106	
Legacy chronology:	*LV*	Archaic-Imperial
	SUB	
GIA chronology:	*Possible range*	Early-Mid Republican (on the basis of tiles)
	Certain range	No diagnostics



Site name:	**GIA CS 20131**	
Toponym:	Cisterna Grande; Monte della Piscina	
Coordinates and spatial characteristics:	*X*	2318390,45
	Y	4655058,67
	Z	115,1
	Slope	14
	Extent	1600
Description:	In the GIA survey a small isolated find concentration could be distinguished in unit 20131, with elevated find densities in adjacent units. The presence of rosso-bruno tile as the primary find type can be confirmed and there is some indication for an early phase of this site in the shape of a chiaro sabbioso bacino and a rosso-bruno dolium rim. However, the strongest chronological basis overall is provided by Republican pottery. There are very few fragments to indicate continuity into Late Republican and Imperial phases.	
Samples:	Only a diagnostic sample from the core of the site	
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); black-gloss ware; terra sigillata; African red slip ware.	
Remarks:	**Legacy data**: The existing record for this find location reports that large amounts of tile and pottery fragments were found especially east and south of the hill. Tile fragments of red-brown impasto are assigned an Archaic to Early Republican date, but all phases up to the 3rd century AD seemed to be present.	
References:	LV106	
Legacy chronology:	*LV*	Archaic-Imperial
	SUB	
GIA chronology:	*Possible range*	Archaic-Late Imperial
	Certain range	Early-Mid Republican; Early Imperial

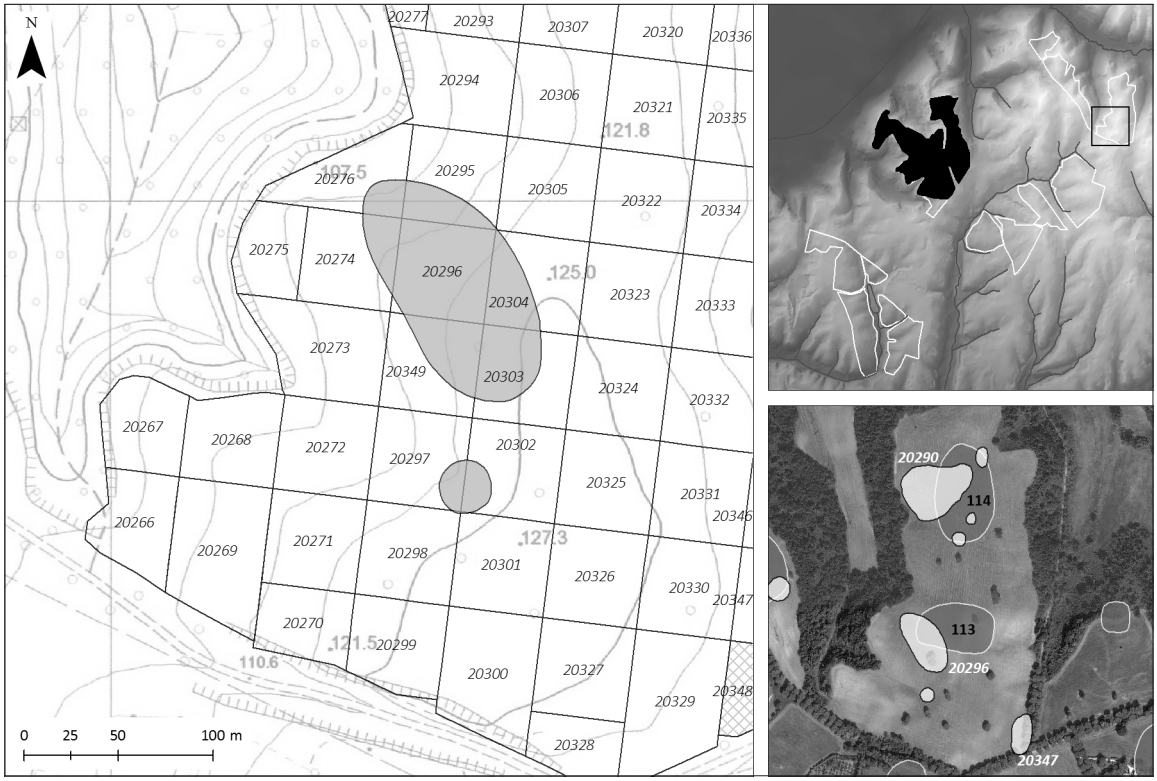
Site 20131				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a dolium	Coarse ware	Carandini *et al.* (2007), tav. 36, no. 320 (with refs); Milletti & Pitzalis (2012), tav. XXII.2	550-350 BC
2.	Rim fragment of a basin	Impasto Chiaro Sabbioso	Olcese (2003), bacino type 2; Rossi Diana and Clementino (1988), type F1	550-200 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC

Site 20131				
No.	**Shape**	**Ware**	**Type**	**Date**
4.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 3a	AD 0-125
5.	Rim fragment of a lid	Coarse ware	-	-
6.	Rim fragment	Coarse ware	-	-
7.	Rim fragment	Coarse ware	-	-
8.	Decorated body fragment	Coarse ware	-	-
9.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783-88	300-200 BC
10.	Rim fragment of a bowl	Black-gloss ware	-	-
11.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC



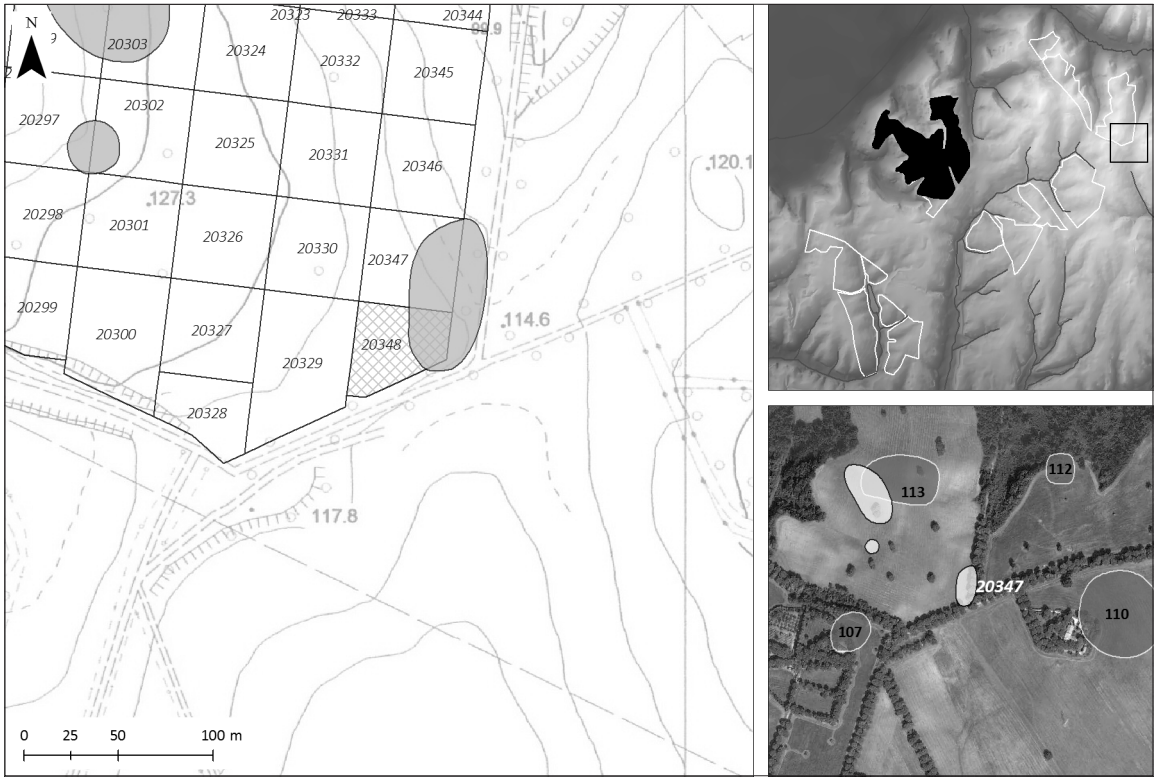
Site name:	**GIA CS 20290**	
Toponym:	Cisterna Grande	
Coordinates and spatial characteristics:	*X*	2318700,95
	Y	4655256,64
	Z	112,1
	Slope	15
	Extent	13000
Description:	Site 20290 is a very large and dense find concentration on the lower part of a ridge opposite the Monte della Piscina hilltop (500 m east of it). The surface materials were already spotted during earlier reconnaissance and can be taken as spatial confirmation for LV site 114 and Agro 60. The presence of the fragmented top of a dolium indicates that *in situ* layers are being disturbed by the plough even to this day. Because of the high find density of Roman building materials the survey aimed only at establishing the dimensions of the site and on acquiring chronological evidence, both from a systematically and randomly acquired sample. During the GIA survey a substantial assemblage of diagnostics could be collected. The site contains a wide repertoire of black-gloss and Late Republican and Imperial ceramica comune combined with terra sigillata. The site and its halo is especially rich in African red slip ware. The core of the site is surrounded by three small and discrete clusters of material with a similar composition, that fall within the area of LV114. The shape of the core of the site suggests the migration of materials down the western slope of the hill.	
Samples:	Only a diagnostic sample from the core of the site and its halo	
Finds:	Tiles (incl. red augite); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares; amphora; black-gloss ware; terra sigillata; African red slip ware; glazed ware; tesserae.	
Remarks:	**Legacy data**: The existing record of the site mention tiles and large ollae of red-brown impasto, buccheroid impasto and brown impasto chiaro, interpreting the site as a small settlement dating from the Orientalising to the Early Republican period. The record also mentions a large Imperial villa at this location with the usual architectural remains and ceramics that can be dated to the 2nd century AD. **No find densities were recorded.**	
References:	Agro 60; LV114	
Legacy chronology:	*LV*	Late Iron Age-Early Republican; Imperial
	SUB	
GIA chronology:	*Possible range*	Early Republican-Late Antique
	Certain range	Mid Republican-Late Antique

Site 20290				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	Coarse ware	-	-
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1a	25 BC-AD 125
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 2A	50 BC-AD 100
4.	Rim fragment of a pan	Coarse ware	Resembles Olcese (2003), pentola type 2A	50 BC-AD 100
5.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 2a	50 BC-AD 100
6.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B	AD 0-100
7.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B similis	AD 0-100
8.	Rim fragment of a pan	Coarse ware	Bertoldi (2011), casserole type 1	AD 0-200
9.	Rim fragment of a casserole	Coarse ware	Olcese (2003), casserole type 2	100-0 BC
10.	Rim fragment of a pan	Coarse ware	Mejer (2010a), casserole type 3; Olcese (2003), pentola type 4	AD 0-150
11.	Rim fragment of a pan	Coarse ware	-	-
12.	Rim fragment of a pan	Coarse ware	-	-
13.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 3	100 BC-AD 100
14.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 6	AD 0-200
15.	Rim fragment of a pan	Coarse ware	Similar to Tol (2012), Pl.IV-XXIX.33 (Olcese (2003), tegame type 7)	200-25 BC
16.	Rim fragment of a pan	Coarse ware	-	-
17.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
18.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2/Bouma (1996), jar type IVc	400-200 BC
19.	Rim fragment of a jar	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
20.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3c	200-0 BC
21.	Rim fragment of a jar	Coarse ware	Similar to Mejer (2010a), p.103.85 (olla form 3)	200-0 BC
22.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 9	AD 0-200
23.	Rim fragment of a jar	Coarse ware	-	-
24.	Rim fragment of a dish	Coarse ware	-	-
25.	Rim fragment of an olpai	Coarse ware	Olcese (2003), olpai type 5	AD 70-100
26.	Rim fragment of an olpai	Coarse ware	Olcese (2003), olpai type 6	AD 100-200
27.	Rim fragment of a bowl	Coarse ware	-	-
28.	Rim fragment	Coarse ware	-	-
29.	Rim fragment	Coarse ware	-	-
30.	Rim fragment	Coarse ware	-	-
31.	Rim fragment	Coarse ware	-	-
32.	Rim fragment	Coarse ware	-	-
33.	Rim fragment	Coarse ware	-	-
34.	Rim fragment	Coarse ware	-	-
35.	Rim fragment	Coarse ware	-	-
36.	Rim fragment of an amphora	Coarse ware	Van der Werff 3	225-175 BC
37.	Rim fragment of an amphora	Coarse ware	Dressel 1A	150-50 BC
38.	Rim fragment	Depurated ware	Dressel 2-4	75 BC-AD 100
39.	Rim fragment of an amphora	Coarse ware	Bertoldi (2011), Ostia III 464	AD 100-300
40.	Rim fragment	Coarse ware	-	-
41.	Base fragment of a skyphos	Black-gloss ware	-	325-250 BC
42.	Base fragment of a skyphos	Black-gloss ware	-	325-250 BC
43.	Rim fragment of a plate	Black-gloss ware	Morel (1981), form 1534	240-220 BC
44.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 8	30-0 BC
45.	Base fragment	Terra sigillata	-	-
46.	Rim fragment of a cup	Terra sigillata	*Consp.,* form 37	AD 25-75
47.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 37	AD 25-75
48.	Rim fragment of a plate	Terra sigillata	*Consp.*, form 3	AD 50-100
49.	Rim fragment of a dish	ARSW	Hayes (1972), form 6	AD 75-200
50.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
51.	Rim fragment of a dish	ARSW	Hayes (1972), form 61B/C	AD 400-500
52.	Rim fragment of a dish	ARSW	Hayes (1972), form 61A	AD 400-450
53.	Rim fragment of a dish	ARSW	Hayes (1972), form 58B	AD 300-375
54.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
55.	Rim fragment of a casserole	African cookware	Hayes (1972), form 194	
56.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
57.	Rim fragment of a casserole	African cookware	Hayes (1972), form 23A	
58.	Rim fragment	Thin-walled ware	Maribini Moevs (1973), type LXI	AD 10-40
59.	Fragment of an oillamp	Depurated ware	-	-



Site name:	**GIA CS 20296**	
Toponym:	Cisterna Grande	
Coordinates and spatial characteristics:	*X*	2318680,83
	Y	4654953,55
	Z	119,2
	Slope	14
	Extent	7500
Description:	About 250 m directly south of 20290 another large find concentration, of much lower density, was encountered. The site may be considered to spatially match LV113. About 50 m south of the core of the site a secondary find cluster matches Agro site 77. The GIA survey established that the assemblage consists mostly of Roman building materials, with some rosso-bruno tile. Coarse wares and transport amphorae were well represented, whereas fine wares were only found in small numbers. Some chiaro sabbioso in association with black-gloss, together with Late Republican almond rim jars and some pieces of ARSW provide a broad date range from 400 BC to AD 150, but offers no evidence for the Archaic date in the legacy record.	
Samples:	Full standard sample	
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (incl. chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; African red slip wares; glazed ware; tesserae.	
Remarks:	**Legacy data**: The existing record reports tile fragments, also of considerable thickness, and many pieces of impasto ollae with a flat base and a thickened lip. The attributed date is Archaic to Early Republican. The smaller cluster to the south was also mentioned and is said to contain mostly Imperial material.	
References:	Agro 77; LV113	
Legacy chronology:	*LV*	Archaic-Imperial
	SUB	
GIA chronology:	*Possible range*	Early Republican-Mid Imperial
	Certain range	Mid Late Republican; Mid Imperial

Site 20296				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	ICS	-	-
2.	Rim fragment of a basin	ICS	Olcese (2003), bacino type 1; Rossi Diana and Clementino (1988), type E1	400-200 BC
3.	Rim fragment	ICS	De Haas, Attema & Tol (2012), Pl.VI, site 10957, no.3	-
4.	Rim fragment	ICS	-	-
5.	Rim fragment of a plate	Black-gloss ware	Morel (1981), form 1443	150-125 BC
6.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2538	275-225 BC
7.	Rim fragment of a dish	ARSW	Hayes (1972), form 3B	AD 75-150

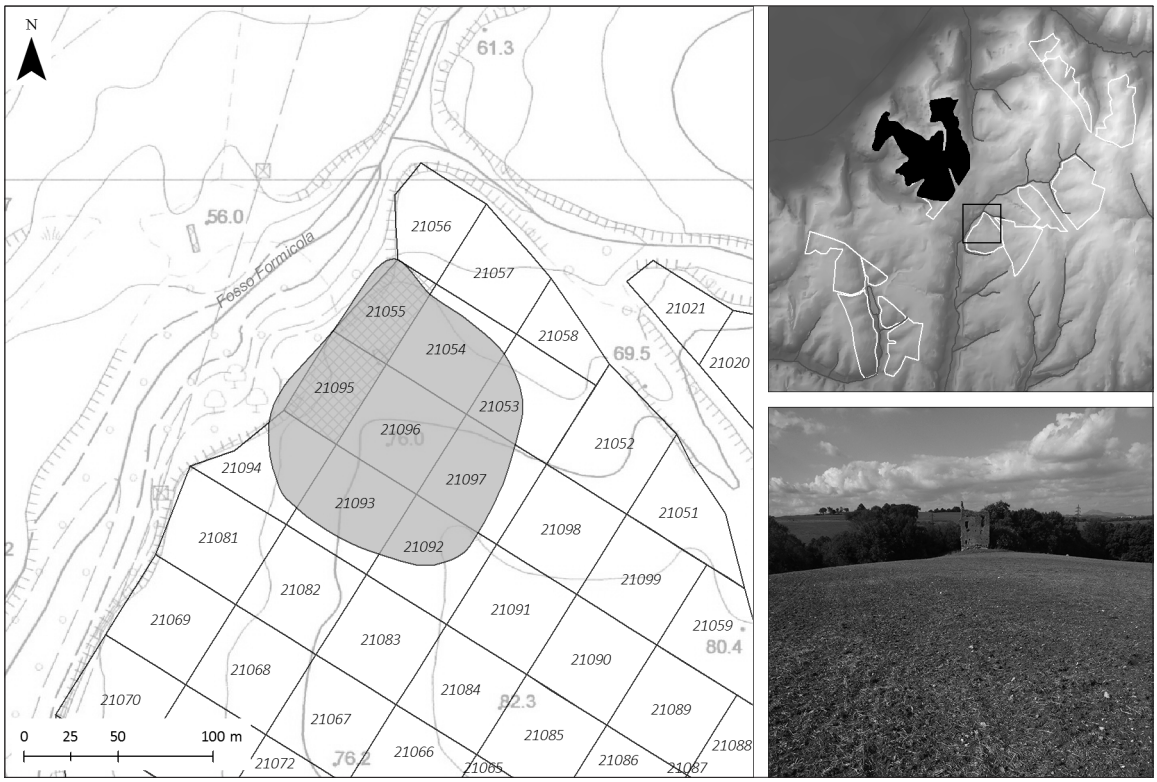


Site name:	**GIA CS 20347**	
Toponym:	Cisterna Grande; Monte Forte	
Coordinates and spatial characteristics:	*X*	2318866,14
	Y	4654770,66
	Z	115
	Slope	10
	Extent	1500
Description:	On the southeast edge of the field where 20290 and 20296 were distinguished another noticeable cluster of finds was recorded, which can possibly be related to Agro 78 (recorded in the adjacent field at about 100 m distance). The finds consists almost entirely of Roman building materials and coarse wares, including some Late Republican and Imperial ceramica comune.	
Samples:	Only a diagnostic sample from the core of the site	
Finds:	Tiles (chiaro sabbioso); dolium (incl. red augite); coarse wares; amphora; black-gloss ware; terra sigillata; African red slip ware.	
Remarks:		
References:	Agro 78 (at 100 m distance)	
Legacy chronology:	*LV*	
	SUB	
GIA chronology:	*Possible range*	Early Republican-Late Imperial
	Certain range	Late Republican-Early-Imperial

Site 20347

No.	Shape	Ware	Type	Date
1.	Rim fragment	ICS	Possibly similar to Carandini *et al.* (2007), TAV. 30.270	450-200 BC
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B	AD 0-100
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 2 similis	200-100 BC
4.	Decorated body fragment of a pan	Coarse ware	Olcese (2003), pentola type 5a/b; an example with similar decoration is in the antiquarium of the Villa of Livia (Rome)	AD 0-200
5.	Rim fragment of a casserole	Coarse ware	Bertoldi (2011), casserole type 1	AD 0-200
6.	Rim fragment	Coarse ware	-	-
7.	Rim fragment	Coarse ware	-	-
8.	Rim fragment of an amphora	Coarse ware	Dressel 20	AD 25-225
9.	Rim fragment of a plate	Terra sigillata	*Consp.*, form 20	AD 10-75

Sample area East



Site name: **GIA CS 21096**

Toponym: Colle del Bufalo; Torretta della Bufalotta

Coordinates and spatial characteristics:

X	2317288,64
Y	4653867,97
Z	73,7
Slope	12
Extent	14000

Description: One of the most prominent find concentrations in the GIA survey was encountered around the ruins of the *Torretta della Bufalotta*, just opposite the Formicola stream, only 450 m southeast of Crustumerium.

The GIA survey, under conditions of good visibility, noted a very dense concentration of surface materials covering about 1,5 hectares and yielding primarily Roman building materials, tiles, bricks, architectural pieces and tesserae, associated with a great variety of transport amphorae, coarse wares and fine wares. Because of the density of material only a diagnostic sample was taken from the entire site, but a string square sample (a full count of a 25 sq m area) in unit 21096 helped in estimating the relative (and very high) find density of the find scatter. The site provided very many diagnostics, among which brick stamps (Trajanic) and several coins. Of particular note is a substantial presence of African red slip ware, which seems to concentrate around unit 21093.

A small piece of a ribbed impasto rosso olla suggests an Archaic frequentation of the site, in line with the evidence from earlier surveys. However, the find does not constitute sufficient evidence to suggest a phase of substantial occupation. It is perhaps more likely that the find derived from the Ciampiglia Del Bufalo burial grounds of Crustumerium.

On the basis of the GIA finds the main occupation phase of this site should be dated from the Middle Republican to the Imperial period, with a strong focus on the 2nd and 3rd centuries AD and continuing up to the 5th century AD. The absence of Medieval pottery is noticeable.

Samples: Full standard sample

Site name: **GIA CS 21096**

Finds: Burnished impasto; impasto rosso; Tiles (incl. red augite; chiaro sabbioso); dolium (chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; terra sigillata; African red slip ware; thin-walled ware; glazed ware; glass; architectonic terracotta's; bricks; tesserae; painted plaster.

Remarks: **Legacy data**: The first survey of this area reported tiles and ceramics of red-brown impasto, coarse ware and a tazza of imitation bucchero. The surface materials were said to mostly consist of medieval debris, but traces of Archaic to Early Republican habitation and an Imperial presence could nonetheless be noted. In the Suburbium survey the site was revisited several times, on the basis of which the chronology of the site was narrowed down to Middle Republican-Imperial.

Roman building materials were obviously re-used for the construction of the *Torretta della Bufalotta* (pieces of marble are incorpotated in its masonry). The surface evidence, however, offers no clue as to the history of the tower itself. We may suppose that a large Roman villa occupied the spot until Late Roman times as nearby there is evidence of the remains of a mausoleum (already reported by Ashby as a 2nd century monument, Quilici and Quilici Gigli 1980, tav. LXXXII) and *a cappuccina* tombs.

No find densities recorded

References: Agro 103; LV54; SUB L8

Legacy chronology: *LV* Archaic-Early Republican; Late Republican-Imperial

SUB Mid Republican-Late Antiquity

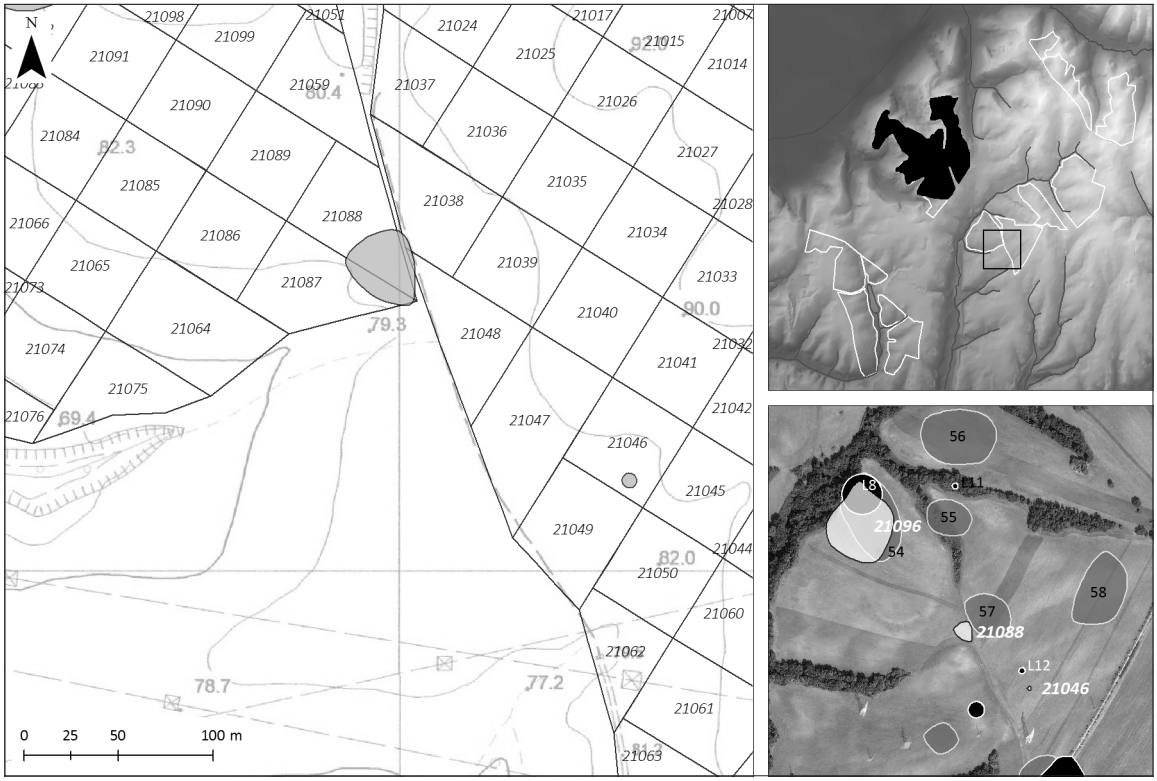
GIA chronology: *Possible range* Archaic-Late Antiquity

Certain range Archaic; Mid Republican-Late Imperial

Site 21096				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Decorated body fragment	Impasto rosso	Carafa (1995), no. 220; Di Sarcina (2012), fig. 5.37	625-500 BC
2.	Rim fragment of a basin	ICS	Olcese (2003), bacino type 1	400-200 BC
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5A	AD 0-200
4.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5A/B	AD 0-200
5.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5	AD 0-200
6.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B	AD 0-100
7.	Rim fragment of a pan	Coarse ware	Similar to Olcese (2003), pentola type 5B	AD 0-100
8.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5b	AD 0-100
9.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1	25 BC-AD 125
10.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 2	200-100 BC
11.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 2	200-100 BC
12.	Rim fragment of a pan	Coarse ware	Similar to Olcese (2003), tegame type 6	AD 0-200
13.	Rim fragment of a pan	Coarse ware	Similar to Olcese (2003), tegame type 6	AD 0-200
14.	Rim fragment of a pan	Coarse ware	-	-
15.	Decorated body fragment of a pan	Coarse ware	Olcese (2003), pentola type 5a/b; an example with similar decoration is in the antiquarium of the Villa of Livia (Rome)	AD 0-200
16.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
17.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
18.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
19.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
20.	Rim fragment of a jar	Coarse ware	Mejer (2010a), olla type 6	Date uncertain
21.	Rim fragment of a basin	Coarse ware	Olcese (2003), basin type 15A	100 BC-AD 200
22.	Rim fragment	Coarse ware	-	-
23.	Rim fragment	Coarse ware	-	-
24.	Rim fragment	Coarse ware	-	-
25.	Rim fragment	Coarse ware	-	-
26.	Rim fragment	Coarse ware	-	-
27.	Rim/flange fragment	Coarse ware	-	-
28.	Rim fragment of a lid	Coarse ware	Duncan (1964), form 48 (no.279); Ricci (1985), TAV. 65.18	Early Imperial?
29.	Rim fragment of a lid	Coarse ware	Olcese (2003), coperchio type 4	25 BC-AD 225
30-.	Base fragment	Coarse ware	-	-
31.	Rim fragment of an amphora	Coarse ware	Van der Werff 3	225-175 BC

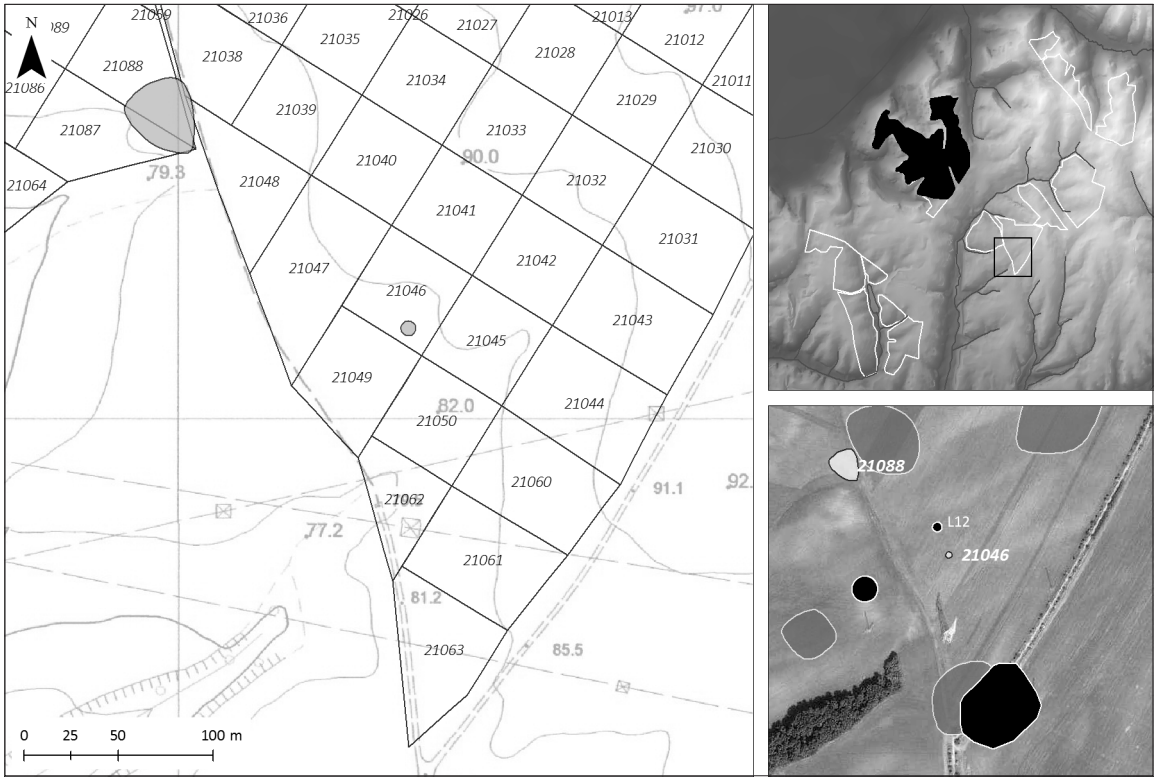
Site 21096				
No.	**Shape**	**Ware**	**Type**	**Date**
32.	Rim fragment of a amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
33.	Handle fragment of an amphora	Depurated	Dressel 20	AD 25-225
34.	Rim fragment of an amphora	Coarse ware	Africano 2A	AD 175-250
35.	Rim fragment of an amphora	Coarse ware	Gauloise 4	AD 50-300
36.	Spike fragment of an amphora	Coarse ware	-	-
37.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
38.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 34	AD 30-100
39.	Rim fragment	Terra sigillata	-	50 BC-AD 150
40.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
41.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
42.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
43.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
44.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
45.	Decorated body fragment	ARSW	Hayes (1972), form 8A/9A	AD 100-200
46.	Rim fragment of a bowl	ARSW	Hayes (1972), form 9A	AD 100-200
47.	Rim fragment of a bowl	ARSW	Hayes (1972), form 9A	AD 100-200
48.	Decorated body fragment	ARSW	Hayes (1972), form 9A	AD 100-200
49.	Decorated body fragment	ARSW	Hayes (1972), form 9A	AD 100-200
50.	Decorated body fragment	ARSW	Hayes (1972), form 9A/B	AD 100-225
51.	Rim fragment of a bowl	ARSW	Hayes (1972), form 9B	AD 150-225
52.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14A	AD 175-225
53.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14A	AD 175-225
54.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14A/B	AD 175-250
55.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14A/B	AD 175-250
56.	Rim fragment of a bowl	ARSW	Hayes (1972), form 14B	AD 200-250
57.	Rim fragment of a dish	ARSW	Hayes (1972), form 27	AD 200-300
58.	Rim fragment of a dish	ARSW	Hayes (1972), form 27	AD 200-300
59.	Rim fragment of a dish	ARSW	Hayes (1972), form 32	AD 200-300
60.	Rim fragment of a bowl	ARSW	Hayes (1972), form 34	AD 175-225
61.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
62.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
63.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
64.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
65.	Rim fragment of a dish	ARSW	Hayes (1972), form 61C	AD 425 -500
66.	Rim fragment of a bowl	ARSW	Hayes (1972), form 91A/B	AD 400-550
67.	Rim fragment of a bowl	ARSW	Hayes (1972), form 91A/B	AD 400-550
68.	Rim fragment of a bowl	ARSW	Hayes (1972), form 91A/B	AD 400-550
69.	Decorated body fragment	ARSW	Hayes (1972), form 91A/B	AD 400-550
70.	Rim fragment of a casserole	African cookware	Hayes (1972), form 23B	AD 150-300
71.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
72.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
73.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
74.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
75.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
76.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
77.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
78.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
79.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
80.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
81.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
82.	Body fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
83.	Body fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
84.	Body fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
85.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
86.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
87.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
88.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
89.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
90.	Base fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
91.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300

Site 21096				
No.	**Shape**	**Ware**	**Type**	**Date**
92.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
93.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
94.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
95.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
96.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
97.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
98.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
99.	Rim fragment of a lid	African cookware	Hayes (1972), form 182	AD 175-300
100.	Stamped brick fragment	Coarse ware	"RTRE" (unframed): CIL XV, 525	AD 110-120
101.	Stamped brick fragment	Coarse ware	"LEX" (mirrored, unframed); CIL XV, 525	AD 110-120
102.	Stamped tile fragment	Depurated	Possibly "FCL" (unframed)	-
103.	Architectural terracotta	Coarse ware	Frova Bertino (Luni) 1973, tav.126-CM 2305 similis	50 BC-AD 100
104.	Terracotta fragment	Coarse ware	Reminiscent of terracotta from Nemi: Moltesen and Poulsen (2010), 652, no. 510	Augustan
105.	Coin	Bronze	Roma Repubblica Denarius (1.96 g, 20.3 mm)	100-0 BC
106.	Coin	Bronze	RRC 342/4	90 BC
107.	Coin	Bronze	RIC III, 344, no. 1631	AD 161-180
108.	Coin	Bronze	Domitian AE As RIC II	AD 81-96
109.	Coin	Bronze	Didius Julianus/Pescennius Nigro??-AE Sestertius (11.84 gr, 35.5 mm)	AD 175-225
110.	Coin	Bronze	RIC AE Sestertius (15.76 gr, 29,7 mm)	AD 0-100
111.	Coin	Bronze	RRC 106/9	210-200 BC



Site name:	**GIA CS 21088**	
Toponym:	Colle del Bufalo	
Coordinates and spatial characteristics:	*X*	2317491,75
	Y	4653658,44
	Z	81,0
	Slope	6
	Extent	900
Description:	An elevated density of finds was noted in unit 21088, with a likely relation to LV 57, which was recorded to the east of the GIA find location. The scant diagnostics provide a Mid Imperial date, matching nearby site CS 21096.	
Samples:		
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; African red slip ware.	
Remarks:	**Legacy data**: The existing record notes especially tile fragments of red-brown or brown impasto coarse ware, limited to an area of 80 x 30 m. The material is interpreted as evidence of a small group of houses dating from the Archaic and Early Republican period.	
References:	LV57	
Legacy chronology:	*LV*	Archaic-Early Republican; Imperial
	SUB	
GIA chronology:	*Possible range*	Early-Republican-Late Imperial
	Certain range	Mid Imperial

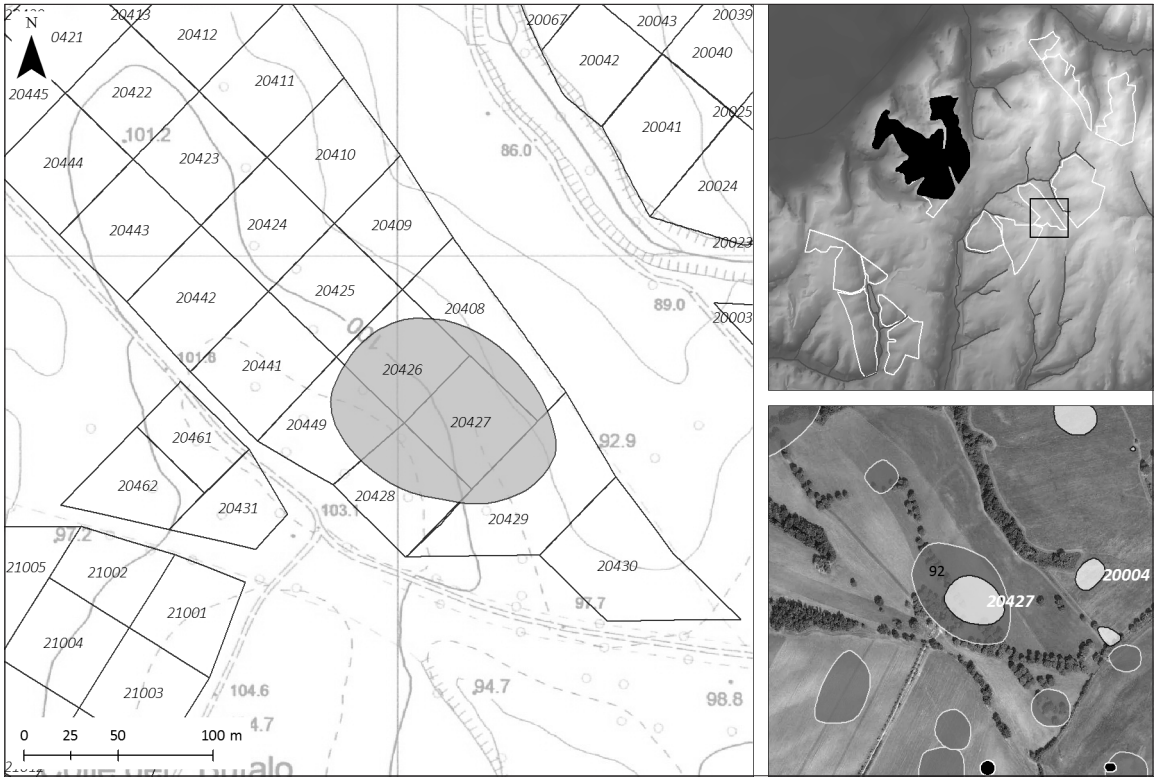
Site 21088				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a lid	Coarse ware	-	-
2.	Rim fragment	Coarse ware	-	-
3.	Rim fragment of a casserole	African cookware	Hayes (1972), form 23B	AD 150-300
4.	Body fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
5.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300



Site name:	**GIA CS 21046**	
Toponym:	Colle del Bufalo	
Coordinates and spatial characteristics:	*X*	2317622,18
	Y	4653546,28
	Z	84,0
	Slope	6
	Extent	50
Description:	A very small and discrete find concentration was spotted in unit 21046, matching Suburbium record L12. The find assemblage encountered during the GIA survey consists mostly of pottery mixed with a small amount of building materials. Many fragments of black-gloss ware were found in association with coarse wares and specifically almond rim jars. Several bases of skyphoi and an amphora rim provide a Middle Republican date, which can possibly be extended into the Late Republic on the basis of the retrieved coarse ware forms. We interpret this very discrete, but yet diagnostic pottery scatter, as a ploughed out tomb of to the 3rd century BC.	
Samples:		
Finds:	Tiles (incl. red augite); dolium; coarse and depurated wares (incl. red augite); black-gloss ware; terra sigillata; glazed ware; loomweight.	
Remarks:	**Legacy data**: SUB L12 was surveyed under circumstances of poor visibility and interpreted as an Imperial tomb.Quite possibly we can associate this find location with Agro 115, which reportedly lay at 100 m distance.	
References:	Agro 115; SUB L12	
Legacy chronology:	*LV*	
	SUB	Late Republican-Imperial
GIA chronology:	*Possible range*	Early Republican-Early Imperial
	Certain range	Mid Republican-Early Imperial

Site 21046				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
2.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
5.	Knob fragment of a lid	Coarse ware	-	-

Site 21046				
No.	**Shape**	**Ware**	**Type**	**Date**
6.	Rim fragment of an amphora	Coarse ware	Van der Werff 3	225-175 BC
7.	Base fragment of a skyphos	Black-gloss ware	-	325-250 BC
8.	Base fragment of a skyphos	Black-gloss ware	-	325-250 BC



Site name: **GIA CS 20427**

Toponym: Colle del Bufalo

Coordinates and spatial characteristics:

X	2318023,18
Y	4653915,24
Z	99,7
Slope	13
Extent	8400

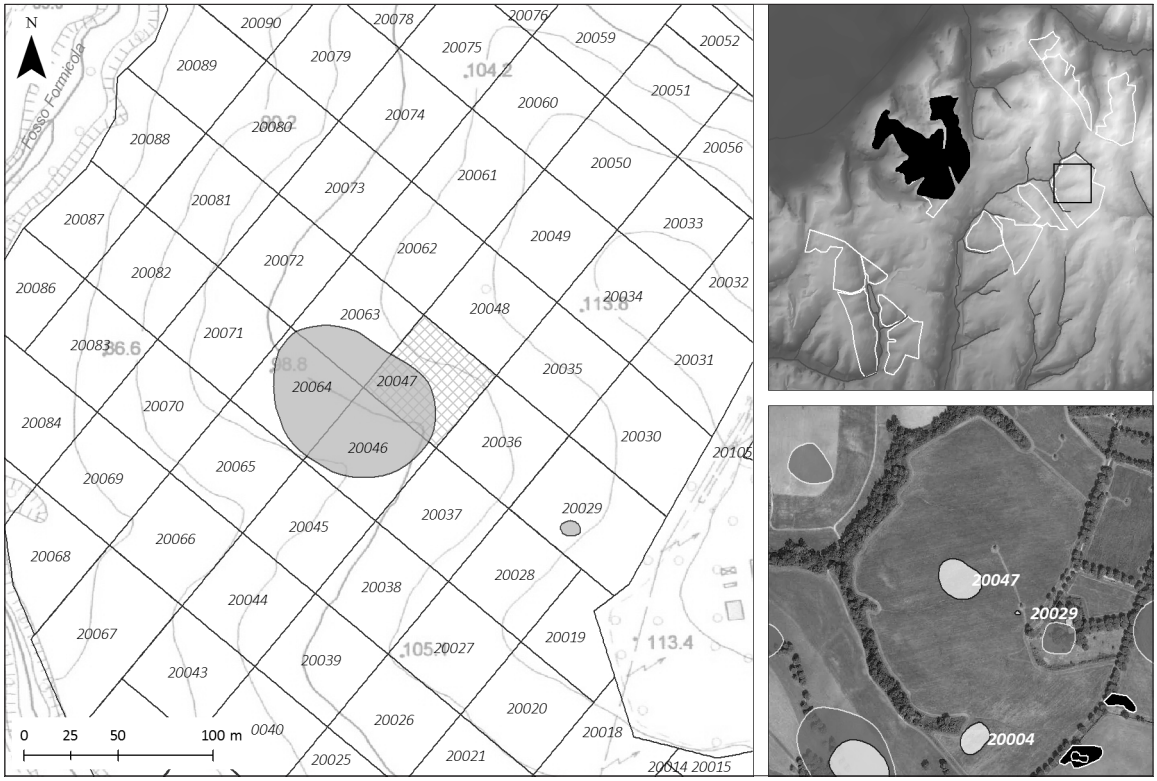
Description: During a reconnaissance survey in the summer of 2011, LV site 92 (Agro 98) was not successfully located. On the basis of the systematic survey under conditions of good visibility, however, the existence of the find concentration could be confirmed.
The surface materials were very fragmented and weathered, providing few diagnostic shapes from the standard sample. As the field recently had only been harrowed the plough zone was not very deep, which could explain the relatively small number of quality surface finds.
The find assemblage mostly consists of Roman building materials with marble and tesserae, coarse wares and transport amphorae. Only few red impasto tile and rosso-bruno wares were found, no chiaro sabbioso or black-gloss ware could be noted and fine wares were very scarce.
The location of the find spot as recorded in the previous survey proved quite accurate, but there is hardly any evidence (now) for occupation of the site before Imperial times.

Samples: After a standard sample was taken the site was revisited (rather unsuccessfully) in search of more diagnostic materials.

Finds: Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite); coarse and depurated wares (incl. red augite); amphora; terra sigillata; African red slip ware; glazed ware; bricks; marble; tesserae.

Site name:	**GIA CS 20427**	
Remarks:	**Legacy data**: The description provided by the LV record reports the existence of separate find scatters with differing chronologies. The core of the site was thought to contain an abundance of Archaic and Early Republican material, mixed with Middle Republican and Late Republican wares. The report mentions the presence of tiles of yellowish impasto and impasto chiaro sabbioso, pottery fragments (mostly jars) and black-gloss ware. Additionally fragments of buccheroid impasto and impasto chiaro would support a starting date of the site in the full Orientalising period. Finally Imperial material too is noted on the northwest side of the hilltop. Overall the material was considered to indicate a presence from the Orientalising to the Imperial period. No diagnostics were published. On the basis of the LV survey it was suggested that a large village secondary to Crustumerium, in relation to the nearby funerary monument (tumulus LV88), once existed on this location.	
References:	Agro 98; LV92	
Legacy chronology:	*LV*	Archaic-Early Republican; Imperial
	SUB	
GIA chronology:	*Possible range*	Early Republican-Late Imperial
	Certain range	Mid Republican; Early Imperial-Mid Imperial

Site 20427				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1A	25 BC-AD 125
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), casseruola type 1	100 BC-AD 100
3.	Body and handle fragment of a jug	Coarse ware	Olcese (2003), brocca type 1	400-200 BC
4.	Rim fragment	Coarse ware	-	-
5.	Rim fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
6.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
7.	Handle fragment of an amphora	Coarse ware	Dressel 2-4 Campanian	75 BC-AD 100
8.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
9.	Rim fragment of an amophora	Coarse ware	Dressel 2-4 Catalan	25 BC-AD 175
10.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
11.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
12.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300



Site name:	**GIA CS 20047**	
Toponym:	Colle del Bufalo	
Coordinates and spatial characteristics:	*X*	2318221,92
	Y	4654283,47
	Z	99,8
	Slope	13
	Extent	5000

Description: The site around units 20047 and 20046 had a very clear spatial definition. The surface assemblage contains some red ceramic building materials, but is dominated by the presence of post-Archaic pale tile. The building materials are associated with coarse ware and relatively large amounts of black-gloss pottery. Many diagnostics could be collected and the majority of the material points towards a Mid to Late Republican date, although there is some evidence suggesting a longer continuation of the site.

The field had been freshly ploughed and the impression that many of the surface materials had been newly ploughed up (because of a low degree of fragmentation) was strengthened by the presence of tuff chunks (from the natural bedrock) in the plough soil. Clearly, any remaining anthropogenic stratigraphy is still in the course of being destroyed. A rather heavy plough seems to have been used (at least 40 cm deep), leaving large chunks of soil.

Samples:

Finds: *Grumo*; tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; terra sigillata; African red slip ware; glazed ware.

Remarks:

References: Agro 94

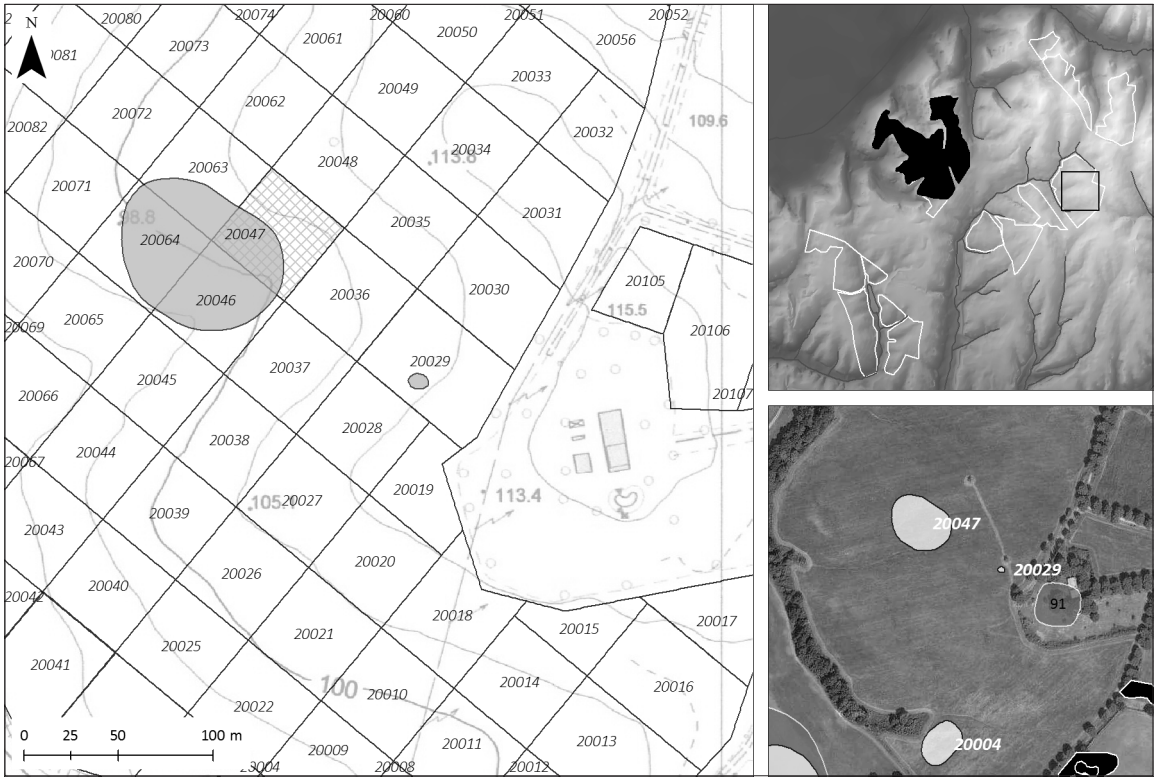
Legacy chronology: LV
SUB

GIA chronology:		
	Possible range	Mid Republican-Late Antique
	Certain range	Mid Republican-Mid Imperial

Site 20047

No.	Shape	Ware	Type	Date
1.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1a	25 BC-AD 100
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150

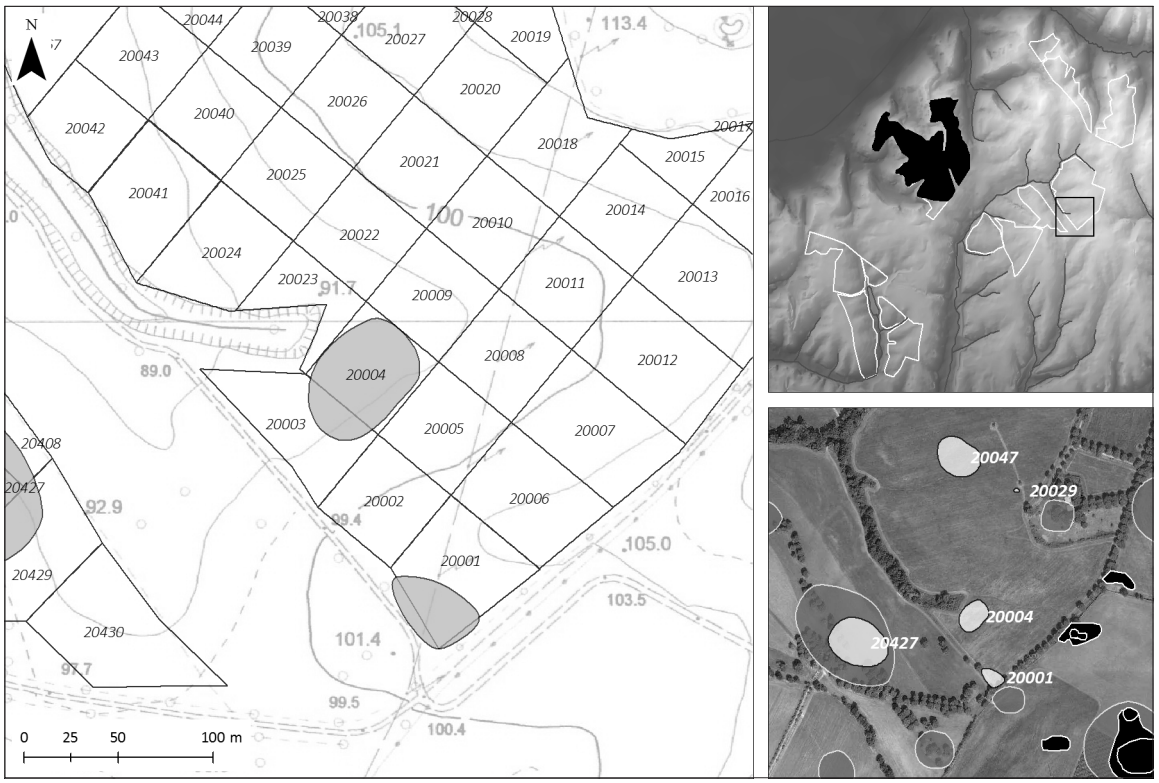
Site 20047				
No.	**Shape**	**Ware**	**Type**	**Date**
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 8	25 BC-AD 100
4.	Rim fragment of a pan	Coarse ware	Tol (2012), Pl.VI-VIII.2 with refs	AD 300-600
5.	Rim fragment of a pan	Coarse ware	-	-
6.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
7.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
8.	Rim fragment of a jar	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
9.	Rim fragment of a jar	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
10.	Rim fragment of a jar	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
11.	Rim fragment of a pan	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
12.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200 -0 BC
13.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
14.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
15.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
16.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
17.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
18.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3c	200-0 BC
19.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 4b	100-0 BC
20.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 8	AD 0-150
21.	Rim fragment of a jar	Coarse ware	-	-
22.	Rim fragment	Coarse ware	-	-
23.	Rim fragment of a baking cover	Coarse ware	Olcese (2003), clibane type 2	300-0 BC
24.	Flange of a baking cover	Coarse ware	Olcese (2003), clibane type 2	300-0 BC
25.	Rim fragment of a baking cover	Coarse ware	Olcese (2003), clibane type 2	300-0 BC
26.	Flange of a baking cover	Coarse ware	Olcese (2003), clibane type 3	300-0 BC
27.	Rim fragment of a lid	Coarse ware	-	-
28.	Knob of a lid	Coarse ware	For similar incised patterns, see Bouma (1996), pl. CXVII; Di Mario (ed.) (2005), TAV. L.113 and LI.117-8.	-
29.	Knob of a lid	Coarse ware	-	-
30.	Rim fragment of an amphora	Coarse ware	Van der Werff 1	150-0 BC
31.	Decorated body fragment	Black-gloss ware sovradipinta	-	350-250 BC
32.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
33.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
34.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
35.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
36.	Stamped base fragment	Black-gloss ware	Stanco (2009), fig.14.126; Bernardini (1986), stamp type 38	280-260 BC
37.	Base fragment	Black-gloss ware	Moltesen and Brandt (1994), 105, no. 133; Tol (2012), Pl. III-VIII.20. CW variant of Morel (1981), form 2987?	300-200 BC
38.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 7.1.2	10 BC-AD 15
39.	Rim fragment	Terra sigillata	-	-
40.	Body fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
41.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
42.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300



Site name:	GIA CS **20029**	
Toponym:	Colle del Bufalo	
Coordinates and spatial characteristics:	*X*	2318337,95
	Y	4654216,59
	Z	109,3
	Slope	9
	Extent	60
Description:	In unit 20029 a very small and discrete patch with a high density of surface finds was noted. The small site is related to site 20047 both spatially and chronologically.	
Samples:		
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; terra sigillata.	
Remarks:	**Legacy data**: The site is relatively close to LV site 91, but does not match the description of "a very scattered concentration of Imperial material".	
References:	Agro 94; LV91?	
Legacy chronology:	*LV*	
	SUB	
GIA chronology:	*Possible range*	Early Republican-Early Imperial
	Certain range	Mid Republican-Early Imperial

Site 20029				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	Coarse ware	Carandini *et al.* (2007), TAV. 13.105.	550-400 BC
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 1	325-200 BC
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 2	200-100 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
5.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
6.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
7.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
8.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
9.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
10.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
11.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
12.	Rim fragment of a lid	Coarse ware	Olcese (2003), coperchio type 3	AD 0-200

Site 20029				
No.	**Shape**	**Ware**	**Type**	**Date**
13.	Knob fragment of a lid	Coarse ware	-	-
14.	Rim fragment of an amphora	Coarse ware	Dressel 1A	150-50 BC
15.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
16.	Stamped base fragment	Black-gloss ware	Bernardini (1986), stamp type 6	265-240 BC



Site name: **GIA CS 20004**

Toponym: Colle del Bufalo

Coordinates and spatial characteristics:

X	2318252,19
Y	4653967,48
Z	93,9
Slope	10
Extent	2500

Description: In units 20004 and 20003 a wide scatter of building materials and coarse wares was found, covering at least an entire unit. The composition of the assemblage is varied, but noticeably lacking diagnostic fragments. No previous record for the site exists.

Samples:

Finds: Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black glazed ware.

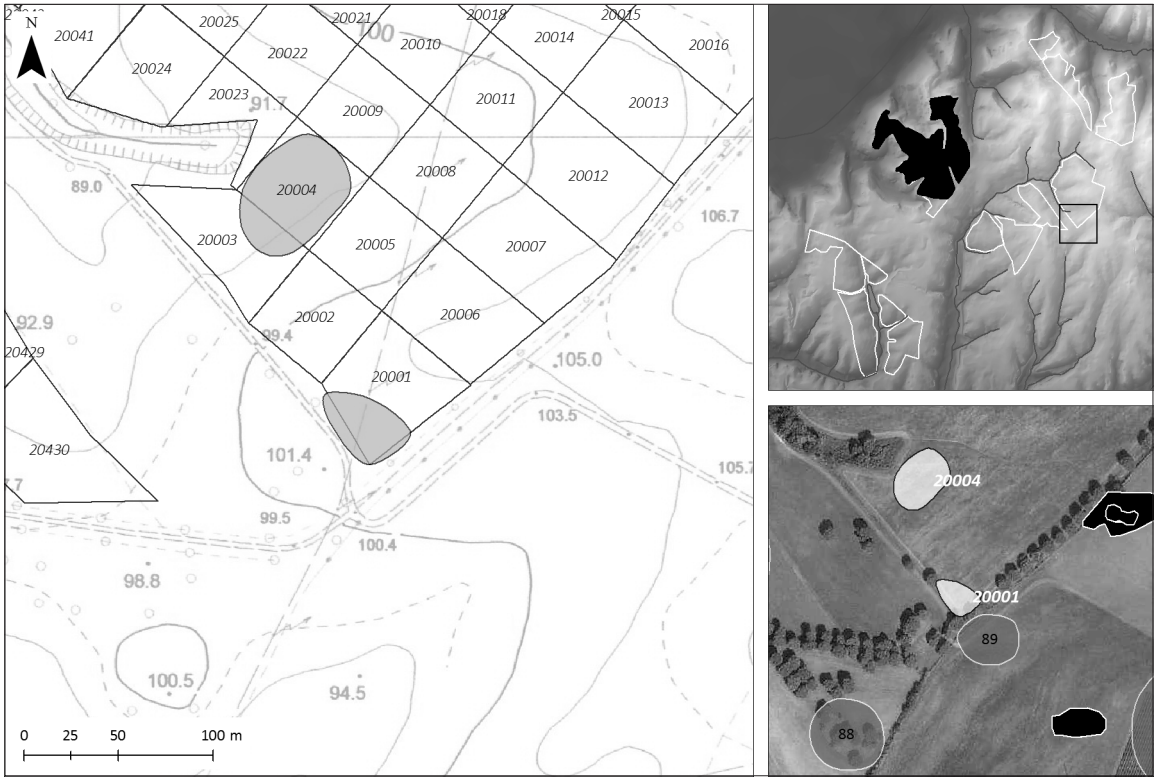
Remarks: **No diagnostic finds**

References:

Legacy chronology: *LV*
SUB

GIA chronology:

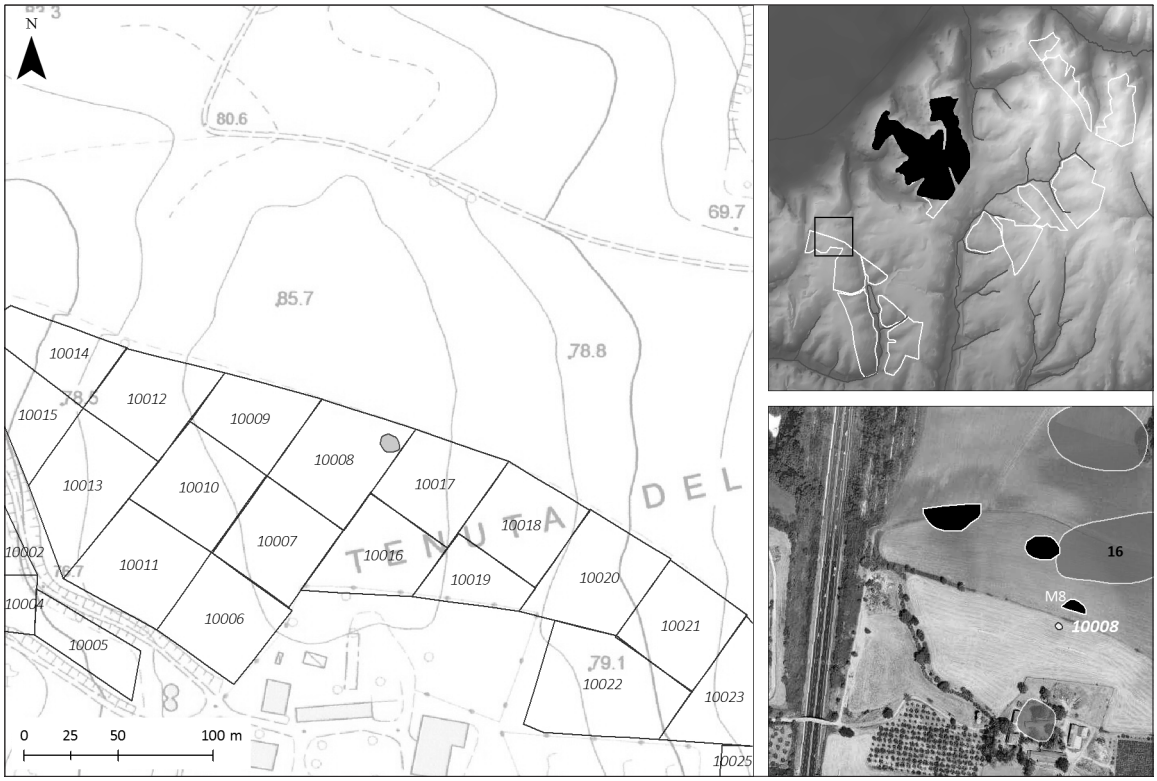
Possible range	Early Republican-Late Republican
Certain range	No diagnostic finds



Site name:	**GIA CS 20001**	
Toponym:	Colle del Bufalo	
Coordinates and spatial characteristics:	*X*	2318292,60
	Y	4653846,97
	Z	103,0
	Slope	6
	Extent	800
Description:	In the southern corner of unit 20001 an elevated concentration of mostly red impasto building materials, coarse wares and transport amphorae was spotted. Just outside the main concentration some tiles seemed to have been recently ploughed up and were found in large pieces. The only diagnostic find in the GIA survey was a Late Republican olla rim.	
Samples:		
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware.	
Remarks:	**Legacy data**: It is likely that the find location (partially) matches LV site 89; reportedly a site with many small fragments of red-brown impasto, assigned a possibly Early Republican date. Over an area of nearly 5 hectares, to the northeast of 20004 and 20001, find densities are above average. The material is very fragmented, but it contains some pottery ranging from the Middle Republican to Imperial phase. AGRO site 106 possibly also refers to this area.	
References:	LV89; AGRO 106?	
Legacy chronology:	*LV*	Early Republican; Imperial
	SUB	
GIA chronology:	*Possible range*	Early Republican-Late Republican
	Certain range	Late Republican

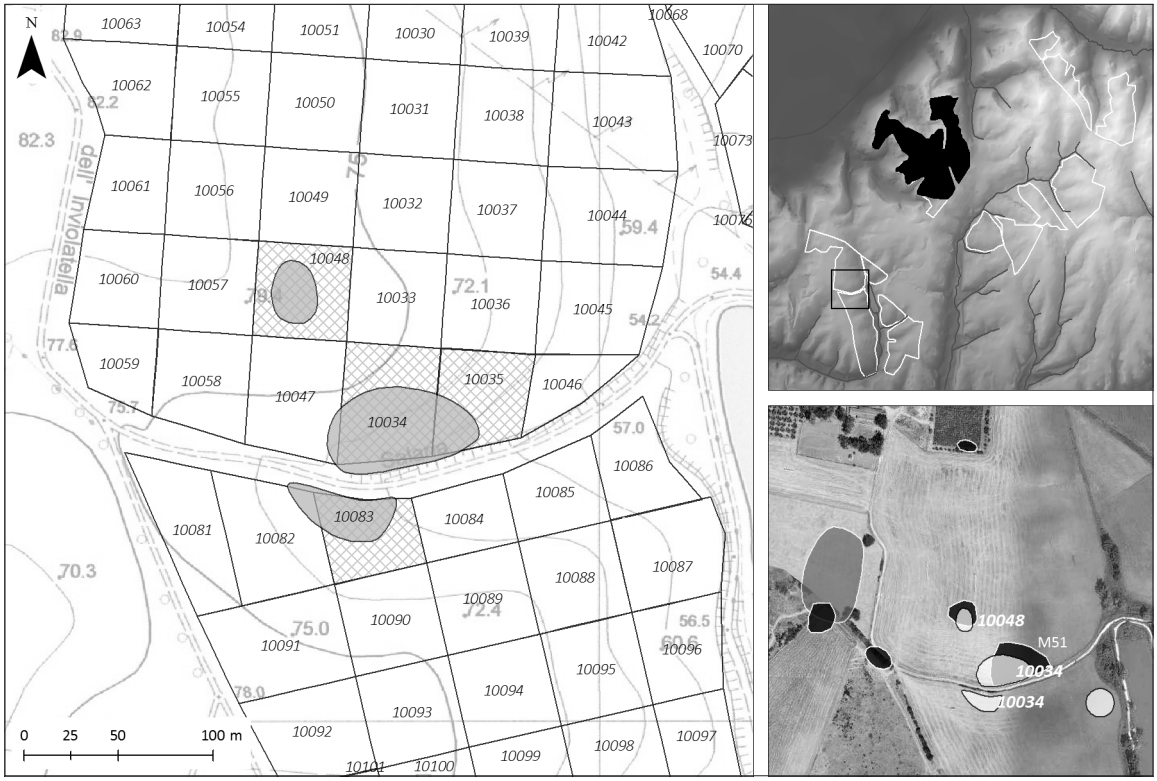
Site 20001				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC

Sample area South



Site name:	**GIA CS 10008**	
Toponym:	Tenuta della Marcigliana	
Coordinates and spatial characteristics:	*X*	2315713,98
	Y	4653708,82
	Z	86,1
	Slope	3
	Extent	70
Description:	A small and low density concentration of surface finds was noted in the north-east of unit 10008. A considerable proportion of red augite tile and coarse ware pottery, especially thick walled storage vessels, was present. Only few diagnostics could be selected from the assemblage, but they support the Early to Mid Republican date provided by the Suburbium survey.	
Samples:	Standard sample and a small diagnostic sample upon revisit.	
Finds:	Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); black-gloss ware; thin-walled ware.	
Remarks:	**Legacy data**: It is very probable that the site is the same as or related to Suburbium site M8 (500-200 BC, 50 BC-AD 130). Even though M8 was mapped in the adjacent field across a hedge row, the composition and dimensions of the two find complexes are similar and they are only some 20 m apart. Alternatively we could be dealing with two parts of the same find concentration that were revealed under different visibility conditions in 1996 and 2011. Only about 100 m north of this small find concentration Agro sites 205 and LV site 16 were recorded (in an area not covered by the GIA survey). **Excavation**: a test trench across site 10008 (2012) yielded a partially intact stratigraphy with traces of walls, many Republican ceramics and architectural terracottas. The finds suggest the presence of a Mid Republican cult place.	
References:	SUB M8 (in adjacent field); see Di Napoli 2016 (area A) for excavation results.	
Legacy chronology:	*LV*	
	SUB	Early Republican-Mid Republican; Imperial
GIA chronology:	*Possible range*	Archaic-Late Republican
	Certain range	Mid Republican-Late Republican

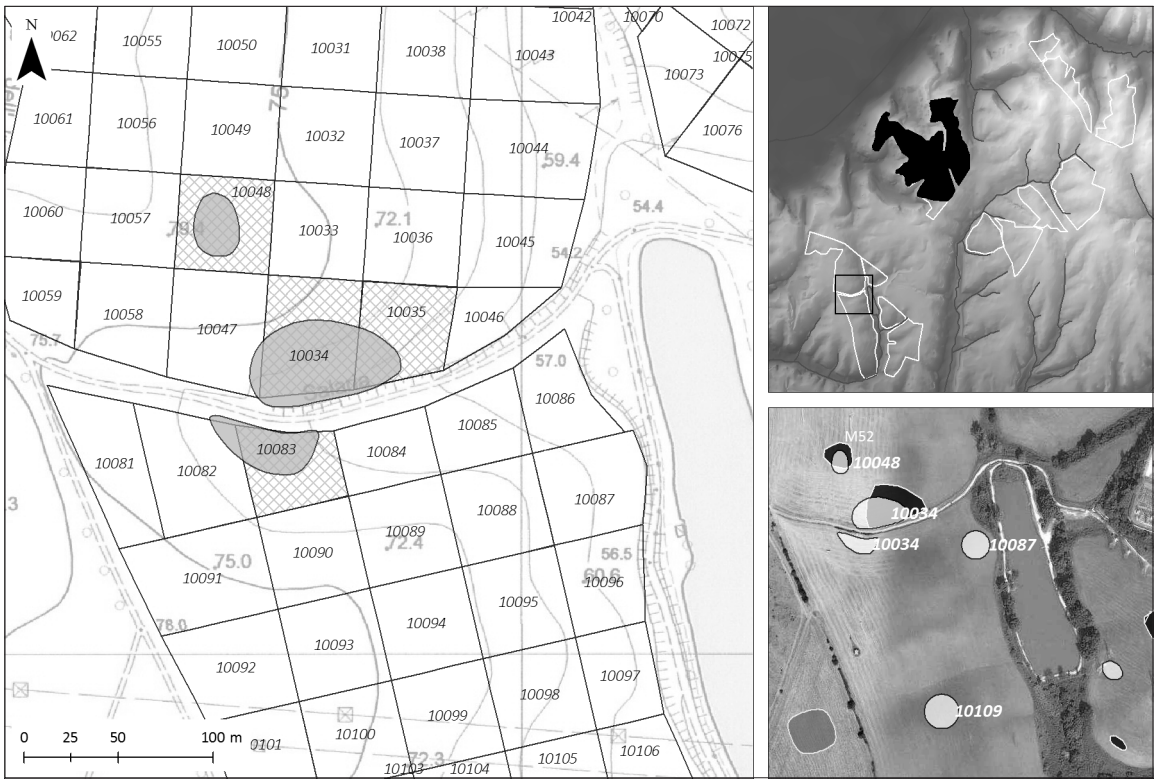
Site 10008				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	ICS	Carafa (1995), no. 676; similar to Carandini *et al.* (2007), Pl. 18.147	550-450 BC
2.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
4.	Flange of a baking cover	Coarse ware	Olcese (2003), Clibane type 3	200-0 BC
5.	Knob of a lid	Coarse ware	-	-
6.	Rim of an amphora	Coarse ware	Dressel 1C	125-75 BC



Site name:	**GIA CS 10048**	
Toponym:	Tenuta della Marcigliana	
Coordinates and spatial characteristics:	*X*	2315838,14
	Y	4653225,46
	Z	78,1
	Slope	5
	Extent	600
Description:	In unit 10048 a discrete concentration of basalt and Roman building materials was noted, which matches Suburbium M52. The site provides very few diagnostics, but might be part of the same context as site M51 only some 50 m to the southeast.	
Samples:		
Finds:	Tiles (incl. chiaro sabbioso); dolium (red augite); coarse and depurated wares; amphora; terra sigillata; African red slip ware; loomweight; glazed pottery.	
Remarks:	**Legacy data**: Suburbium site M52 was dated between 600-400 BC and 300 BC- AD 220. The Archaic dating of the site appears to be based on a small number of non-diagnostic coarse ware fragments.	
References:	SUB M52	
Legacy chronology:	*LV*	
	SUB	Archaic-Early Republican; Middle Republican-Imperial
GIA chronology:	*Possible range*	Early Republican-Mid Republican; Early Imperial-Late Imperial
	Certain range	Early Imperial-Mid Imperial

Site 10048

No.	Shape	Ware	Type	Date
1.	Rim fragment of a bowl	ARSW	Hayes (1972), form 7B	AD 100-150



Site name: **GIA CS 10034**

Toponym: Tenuta della Marcigliana

Coordinates and spatial characteristics:

X	2315892,95
Y	4653152,84
Z	68,5
Slope	19
Extent	2500

Description: The presence of Suburbium site M51 was confirmed in units 10034 and 10035. The density of surface materials is very high and covers an area of nearly a hectare. Over 200 fragments were collected in a diagnostic sample, supporting the date provided by the previous survey. A Mid Republican phase is attested by some black-gloss fragments and Olcese olla type 2. Some coins, a variety of ceramica comune shapes in association with transport amphorae, terra sigillata, parete sottili pottery and ARSW should be attributed to an intensive occupation phase from the Mid Republican to the Late Imperial period. Also of note is a chiaro sabbioso bacino rim already mentioned above, which may spoint to earlier frequentation of the area.
Because of the dense cover of building materials over a large area, from the core of the siteonly diagnostic finds were collected and counted.

Samples:

Finds: Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; terra sigillata; African red slip ware; thin-walled ware; tesserae.

Remarks: **Legacy data**: Site M51 dates between 400 BC-AD 300. The early date is provided by coarse ware rims of Olcese olla 2, which were also attested in the GIA survey.
Excavation: a test trench across site 10034 was dug in 2012 and yielded the remains of a pit in *opus coementicium* dated to the 3rd century AD. In another part of the trench, walls were uncovered , in association with ceramics from the 2nd century BC to the 2nd century AD.

References: SUB M51; see Di Napoli 2016 (area H and area B) for excavation results.

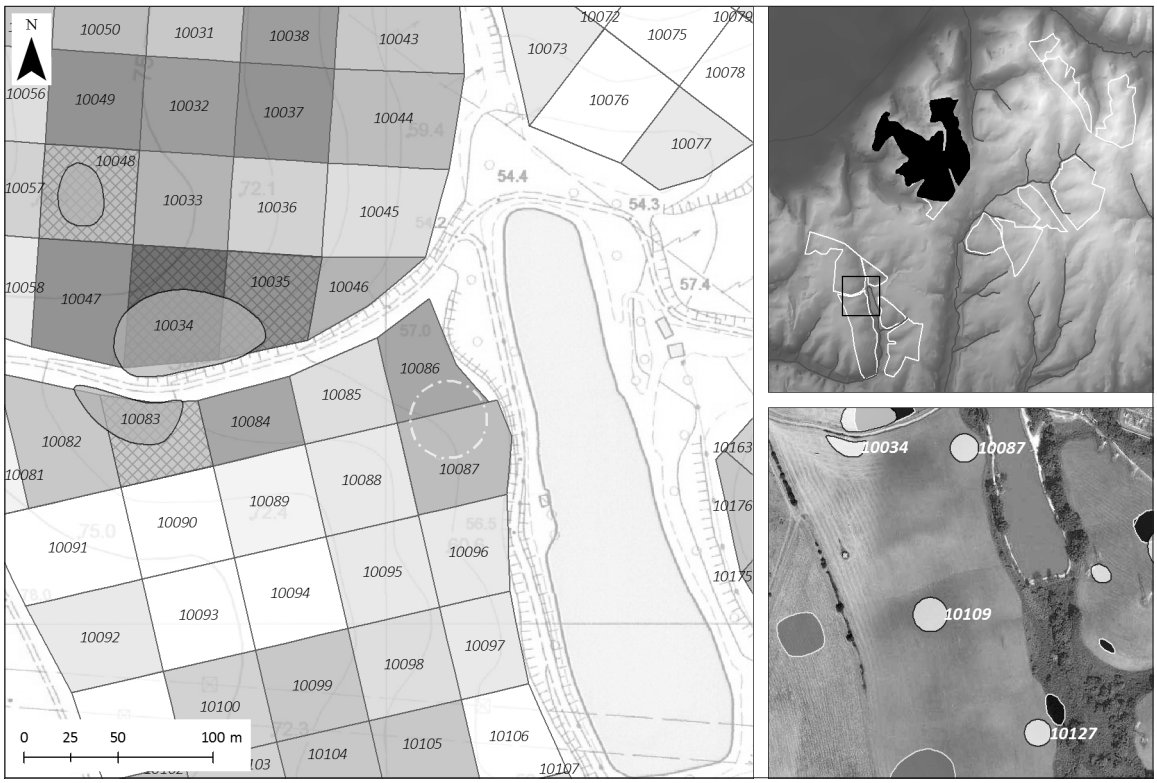
Legacy chronology:

LV	
SUB	Early Republican-Imperial

GIA chronology:

Possible range	Archaic-Late Imperial
Certain range	Mid Republican-Late Imperial

Site 10034				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a basin	ICS	Carandini *et al.* (2007), tav. 31, 273; Rossi Diana and Clementino (1988), type D	600-400 BC
2.	Rim fragment of a basin	Coarse ware	-	-
3.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1a/b	25 BC-AD 125
4.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150
5.	Rim fragment of a pan	Coarse ware	Mejer (2010a), casserole type 3; Olcese (2003), pentola type 4	AD 0-150
6.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 6	AD 0-50
7.	Rim fragment of a pan	Coarse ware	Imitation of Hayes (1972), form 197	AD 150-300
8.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
9.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 7	200-25 BC
10.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
11.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
12.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
13.	Rim fragment of a jar	Coarse ware	Plebani (2014), TAV. III.46; Mejer (2010a), 108, 123-4 (form 11)	AD 0-200
14.	Rim fragment of a jar	Coarse ware	-	-
15.	Rim fragment of a baking cover	Coarse ware	Could be Olcese (2003), clibano type 2	300-0 BC
16.	Rim fragment of a lid	Coarse ware	-	-
17.	Knob of a lid	Coarse ware	-	-
18.	Rim fragment of a jug	Depurated ware	Olcese (2003), brocca type 1	400-200 BC
19.	Rim fragment	Coarse ware	-	-
20.	Rim fragment	Depurated ware	-	-
21.	Handle fragment of an amphora	Coarse ware	Dressel 2-4 Campanian	75 BC-AD 100
22.	Rim fragment of an amphora	Coarse ware	Dressel 2-4 Catalan	25 BC-AD 175
23.	Rim fragment	Black-gloss ware	Morel (1981), form 1161a1	100-0 BC
24.	Rim fragment of a chalice	Terra sigillata	*Consp.,* type R3.1.1	AD 15-40
25.	Rim fragment of a cup	Terra sigillata	Probably *Consp.*, form 37	AD 25-75
26.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 36	30 BC-AD 40
27.	Rim fragment of a plate	Terra sigillata	*Consp.*, form 3	AD 50-100
28.	Rim fragment	Terra sigillata	-	-
29.	Decorated body fragment	Terra sigillata	Mold-made Late Italian TS	-
30.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
31.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
32.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), no. 165	25 BC-AD 15
33.	Coin	Bronze	RRC 174/1	169-158 BC
34.	Coin	Bronze	RIC V,I, 233, no. 259 ss.	AD 268-270



Site name: **GIA CS 10087**

Toponym: Tenuta di S. Antonio

Coordinates and spatial characteristics:

X	2316034,44
Y	4653091,44
Z	60,6
Slope	8
Extent	Unclear

Description: In unit 10086 and 10087 an elevated density of finds was noted, with a conspicuous amount of diagnostic black-gloss fragments in unit 10087. The scatter of black-gloss fragments was very discrete, and yielded almost exclusively diagnostic fragments (which were all the diagnostic finds collected). Unfortunately, because all fragments appear to have been collected in the standard sample (during the first survey), we could not pinpoint the exact location of these finds within the survey unit. It seems likely that we are dealing with a ploughed-out tomb from the beginning of the 3rd century BC.

Samples: A high intensity resurvey of the find location (full coverage) yielded no diagnostic finds in addition to the standard sample.

Finds: Tiles (incl. red augite; chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware.

Remarks: No previous surveys made note of this site.

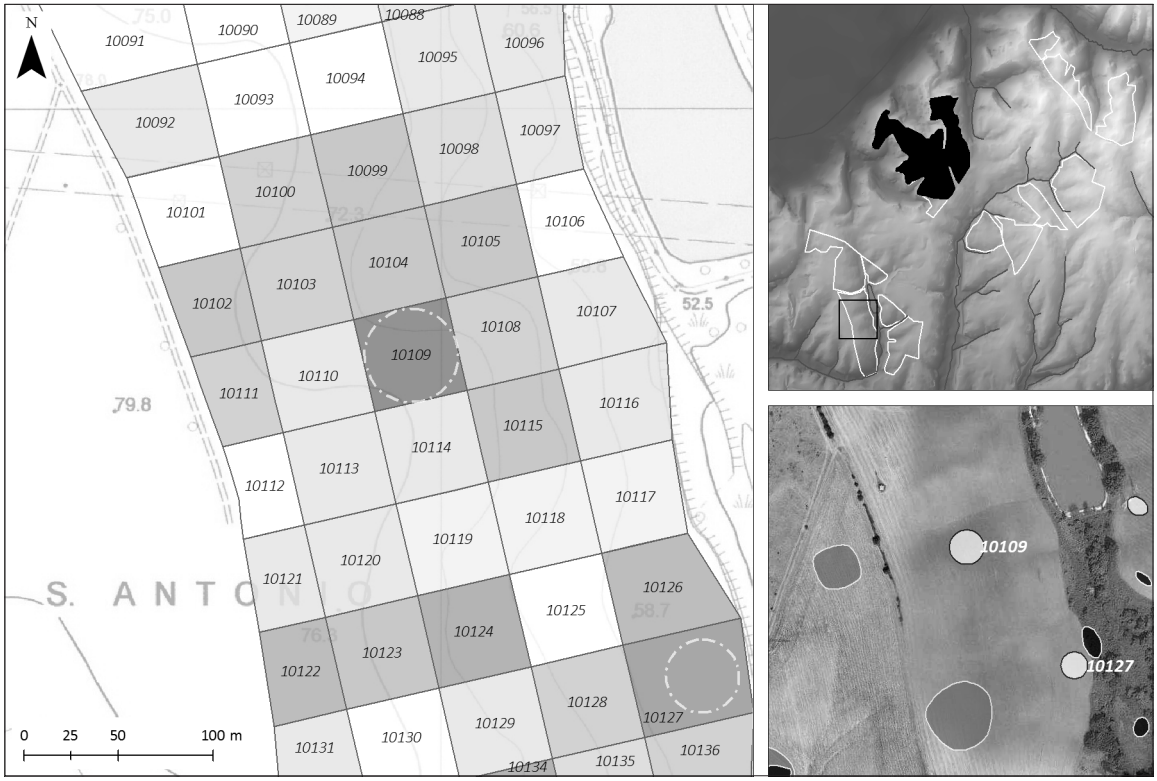
References: none

Legacy chronology: *LV*
SUB

GIA chronology:

Possible range	Early Republican-Mid Republican
Certain range	Mid Republican

Site 10087				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a plate	Black-gloss ware	Morel (1981), form 1110	330-270 BC
2.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
3.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
4.	Rim fragment a bowl	Black-gloss ware	Morel (1981), serie 2730/40	300-200 BC



Site name: **GIA CS 10109**

Toponym: Tenuta di S. Antonio

Coordinates and spatial characteristics:

X	2315981,52
Y	4652870,25
Z	70,2
Slope	23
Extent	Unclear

Description: In unit 10109 a concentration of surface finds was recorded, with elevated densities in surrounding units as well. The absence of a clearly recognizable core of the site indicates that we may be dealing with the dispersed remains of a small archaeological feature at this location. The only diagnostic fragment from this unit is a ICS bacino rim.

Samples:

Finds: Tiles (incl. chiaro sabbioso); dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora.

Remarks: No previous records for this find location exist; the closest observation is LV23, lying 150 m directly to the west.

References:

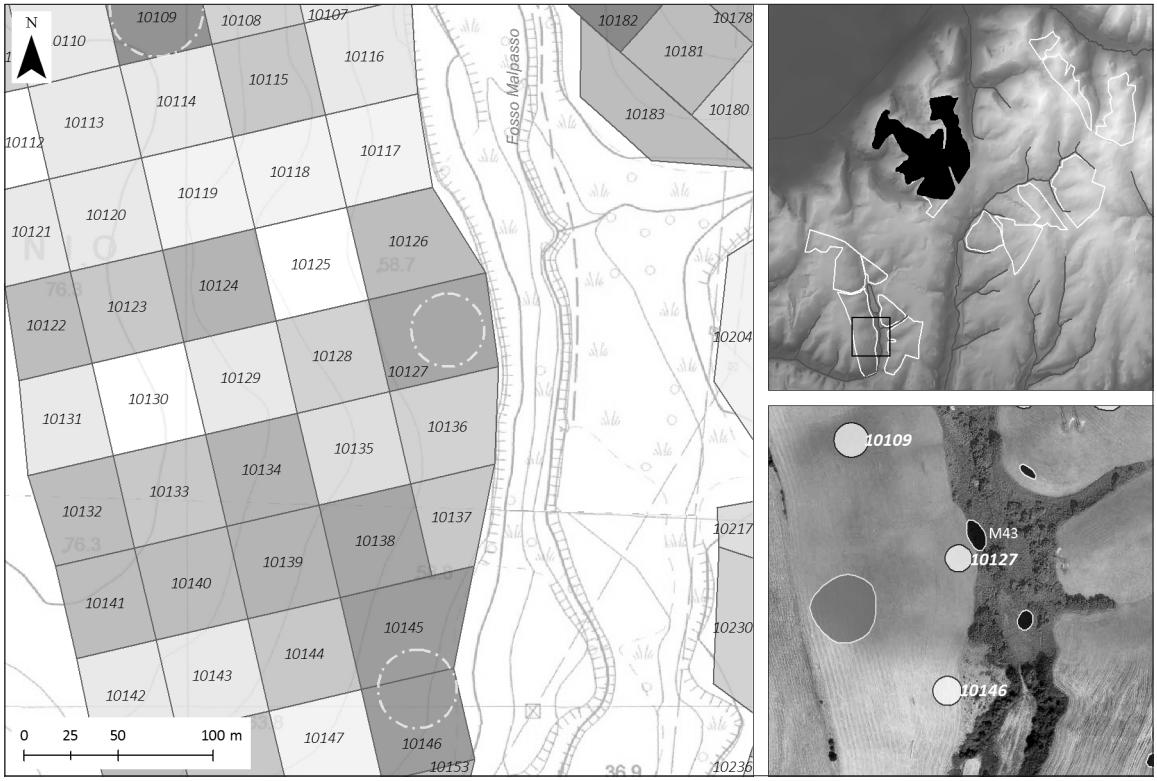
Legacy chronology: *LV*
SUB

GIA chronology:

Possible range	Early Republican-Mid Republican
Certain range	Mid Republican

Site 10109

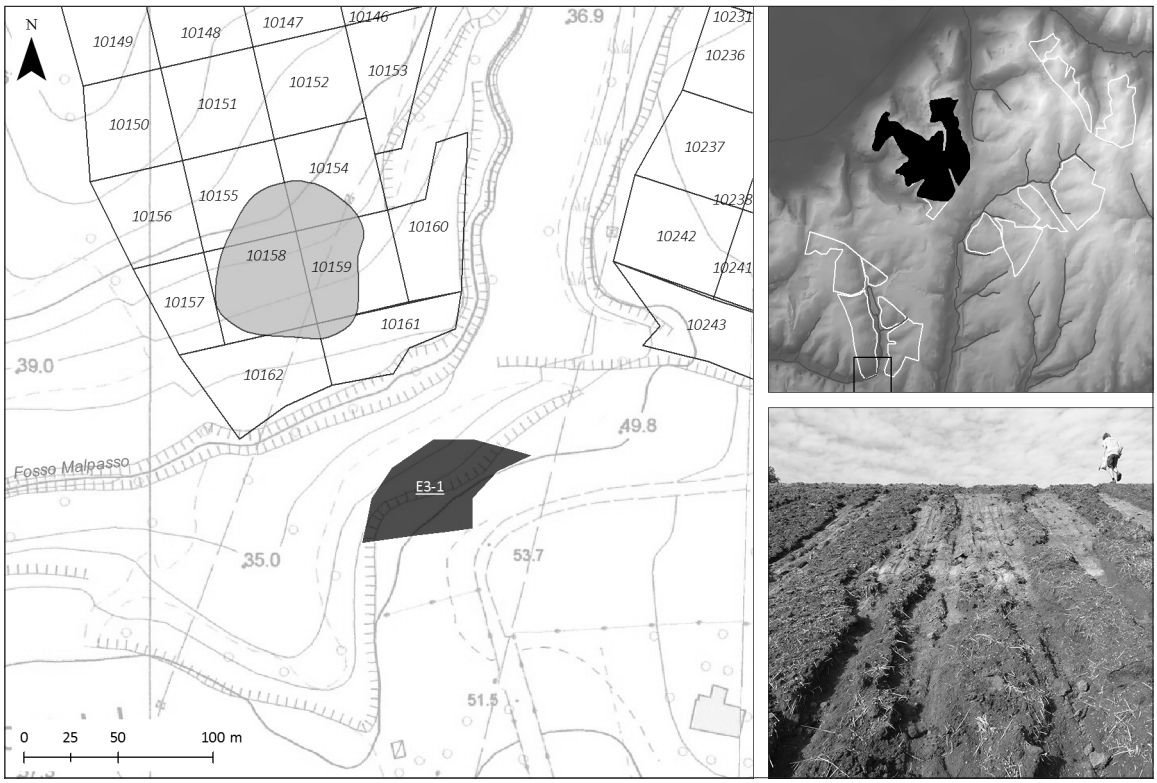
No.	Shape	Ware	Type	Date
1.	Rim fragment of a basin	ICS	Olcese (2003), basin type	400-200 BC



Site name:	**GIA CS 10127**	
Toponym:	Tenuta di S. Antonio	
Coordinates and spatial characteristics:	*X*	2316134,98
	Y	4652699,86
	Z	56,7
	Slope	5
	Extent	Unclear
Description:	An elevated find density in units 10126 and 10127 is probably related to Suburbium site M43. In the GIA survey a total of 59 pieces were collected from the mentioned units, yielding an assemblage characterized by Roman building materials like *cocciopesto*, gray and white tesserae and small tuff stones. Pieces of amphora were found, but only very few diagnostic fragments. The position of the finds on the lower slope of the ridge on the edge of the field indicates that we are very probably dealing with migrating surface finds that are spilling down the ridge towards the Malpasso stream as sediments wash down with erosion.	
Samples:		
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; terra sigillata.	
Remarks:	**Legacy data**: M43 is reported as a low-density find concentration lying on the edge of a field, from which a small collection of finds was taken. An Early Republican date of this assemblage was suggested on the basis of a coarse-ware rim (dated 500-300 BC), resulting in an overall date of 500 BC-AD 79 (the later date provided by an amphora from Pompeii).	
References:	SUB M43	
Legacy chronology:	*LV*	
	SUB	Early Republican-Imperial
GIA chronology:	*Possible range*	Early Republican-Early Imperial
	Certain range	Mid Republican; Early Imperial

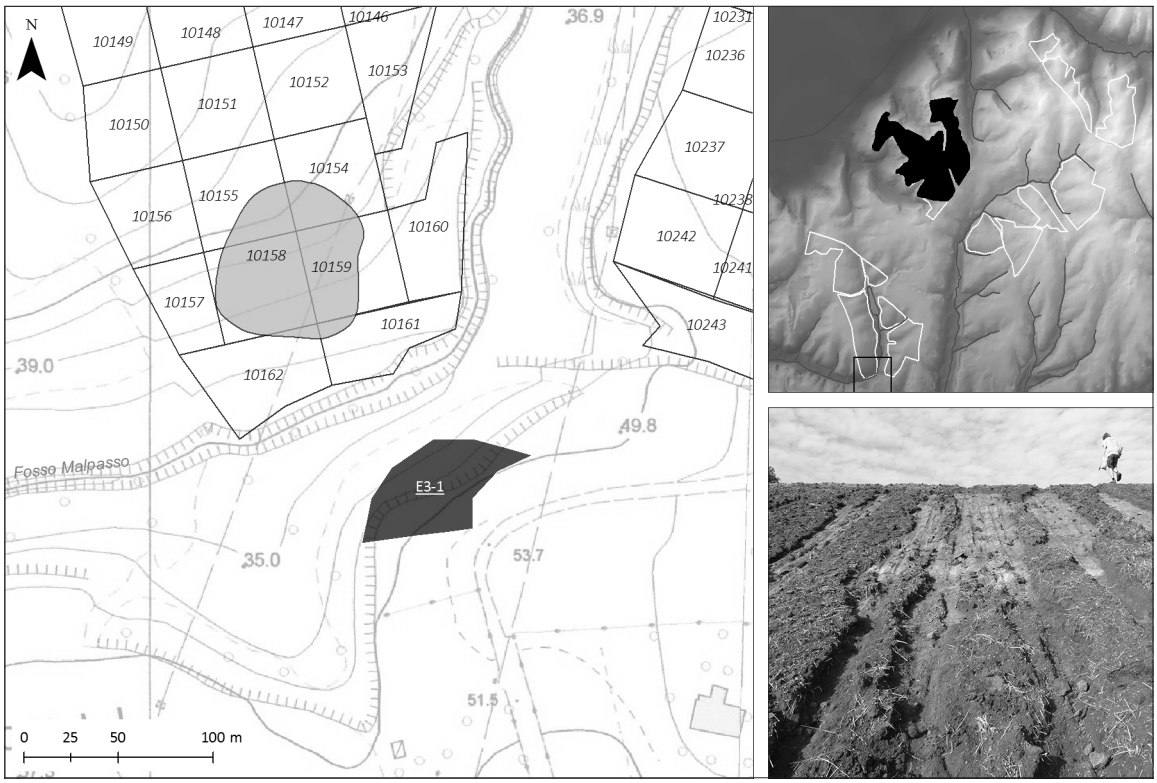
Site 10127

No.	Shape	Ware	Type	Date
1.	Rim fragment of an incense burner	Coarse ware	Olcese (2003), incensiere type 2; Johannsen (2010), 223.5-6	Unknown
2.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
3.	Coin	Bronze	Stato Pontificio	AD 1592-1605



Site name:	**GIA CS 10145**	
Toponym:	Tenuta di S. Antonio	
Coordinates and spatial characteristics:	*X*	2316129,16
	Y	4652542,16
	Z	57,6
	Slope	6
	Extent	Unclear
Description:	In units 10145 and 10146 an elevated density of finds with a number of diagnostic fragments was noted. The total scatter possibly covers an area up to 2 hectares and hence lies in the range of Latium Vetus site 24. This possibly indicates a continuous downslope migration of materials over the years. The finds suggest a Middle to Late Republican date, partially matching the chronology of a much more pronounced find concentration 150 m to the southwest (around unit 10158).	
Samples:		
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; loomweight.	
Remarks:	**Legacy data**: The nearest site reported in the vicinity is LV24. For that site a lot of vase fragments and the absence of tiles are reported. The pottery is of red-brown and white or ivory-yellowish impasto and was dated from the Archaic to the Middle Republican period. The early date could not be confirmed by the GIA survey.	
References:	LV24?	
Legacy chronology:	*LV*	Archaic-Mid Republican
	SUB	
GIA chronology:	*Possible range*	Early Republican-Early Imperial
	Certain range	Mid Republican-Late Republican

Site 10145				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 7	200-25 BC
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 7	200-25 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
4.	Rim fragment of an amphora	Coarse ware	Dressel 1C	125-75 BC
5.	Loomweight	Coarse ware	Pensabene *et al.* (2001); no. 314; Carandini *et al.* (2007), TAV. 21.169-170.	400-200 BC



Site name: **GIA CS 10158**

Toponym: Tenuta di S. Antonio

Coordinates and spatial characteristics:

X	2316075,71
Y	4652335,03
Z	43,4
Slope	19
Extent	5000

Description: After heavy rain the previous day, a find concentration with a very high density of red augite building materials was encountered on the southern edge of our research area, just above the Malpasso stream. The find location on the top and lope of a steep hill is clearly subject to severe rill erosion, leaving only a few cm of topsoil on the slope. The find location matches Suburbium site M44 and Agro 267.

The site yields several fragments of pottery with a date range matching that of Crustumerium-most noticeably, a fragment of impasto with incised decoration, which could date to the 8th century BC or even somewhat earlier. A second fragment of possibly italo-geometric ware provides an Archaic date. Chiaro sabbioso fragments cover the gap to the Mid Republican period.

The presence of another find concentration on the opposite bank of the Malpasso stream (site E3) indicates that we may be dealing with sites that lie on an ancient route to the south , crossing the Malpasso stream at this point.

Samples: Full standard sample. All building materials collected was well.

Finds: impasto rosso; impasto bruno; tiles (incl. red augite; chiaro sabbioso); bricks; dolium (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; terra sigillata; African red slip ware; thin-walled ware; loomweight.

Remarks: **Legacy data**: The material evidence acquired during the GIA survey is very similar to that of the Suburbium records, which report occupation phases of 700-500 BC and 250 BC-AD 220. As in the GIA sample, the phase of the earliest frequentation of the site is represented by only a few diagnostic fragments, and the largest amount of chronological evidence is provided by numerous black-gloss fragments and associated coarse wares and building materials.

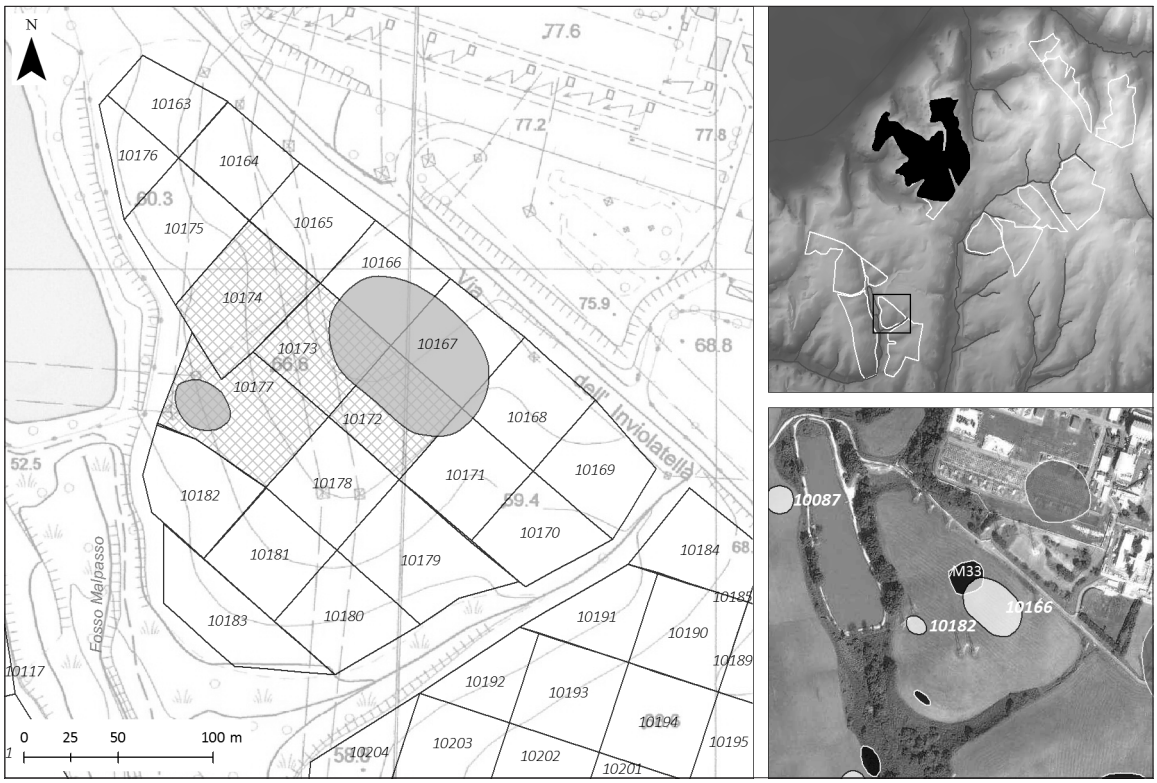
Given the dimensions and density of the surface scatter, the absence of a Latium Vetus record for the site is noticeable.

Excavation: a test trench across site 10158 was dug in 2012 and uncovered traces of a rectangular structure associated with primarily Mid Republican (3rd century BC) ceramics.

References: Agro 267; SUB M44; see Di Napoli 2016 (area C) for excavation results.

Site name:	**GIA CS 10158**	
Legacy chronology:	*LV*	
	SUB	Late Iron Age-Archaic; Mid Republican-Imperial
GIA chronology:	*Possible range*	Iron Age-Late Imperial
	Certain range	Iron Age-Mid Republican; Early Imperial

Site 10158				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Decorated body fragment	Impasto	Early Iron Age incised decoration, Latial IIB2/IIIA di Gennaro *et al.* (2009), fig. 11-6 similis	850-725 BC
2.	Rim fragment	Italo-Geometric pottery	di Gennaro *et al.* (2009), fig. 22-7 similis	625-500 BC
3.	Rim fragment of a basin	ICS	Carafa (1995), no. 668; Rossi Diana and Clementino (1988), type B2; Bouma (1996), T46, type IV	525-400 BC
4.	Rim fragment of a basin	ICS	Olcese (2003), basin type 1	400-200 BC
5.	Rim fragment of a basin	Coarse ware	Olcese (2003), basin type 1	400-200 BC
6.	Rim fragment of a basin	ICS	Olcese (2003), basin type 1; di Gennaro *et al.* (2009), fig. 20-3; Rossi Diana and Clementino 1988, type E2	400-200 BC
7.	Rim fragment of a basin	ICS	Olcese (2003), basin type 1; Rossi Diana and Clementino (1988), type E3	400-200 BC
8.	Rim fragment	ICS	Similar to Carandini *et al.* (2007), tav. 32.283/284	450-300 BC
9.	Rim fragment	ICS	-	-
10.	Base fragment	Coarse ware	No certain parallel	400-200 BC
11.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 1	325-200 BC
12.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegami type 7	200-25 BC
13.	Rim fragment of a pan	Coarse ware	-	-
14.	Rim fragment of a jar	Coarse ware	di Gennaro (2009) *et al.*, fig. 16; similar to Carafa (1995), no. 301	600-500 BC
15.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
16.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
17.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
18.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
19.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
20.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
21.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
22.	Rim fragment of a lid	Coarse ware	Olcese (2003), coperchio type 1	300-0 BC
23.	Rim fragment of a bowl	Depurated ware	See Lavinium II (1975), fig. 499.1-7 for similar small examples. Similar to Morel (1981), form 2621	350-250 BC
24.	Rim fragment of an amphora	Coarse ware	-	-
25.	Rim fragment of a skyphos	Black-gloss ware	Rossi (2009), 220; also attested at Segni (Stanco 1988), CXLIX-CLI. For a large collection of similar vases, see also Jehasse and Jehasse (1973).	350-250 BC
26.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
27.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
28.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2783/84	300-200 BC
29.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), series 2650	350-200 BC
30.	Rim fragment	Black-gloss ware	-	350-0 BC
31.	Stamped base fragment	Black-gloss ware	Stanco (2009), fig.13.14 (GPS phase 1)	320-275 BC
32.	Stamped base fragment	Black-gloss ware	Tol (2012), Pl.V-XXIX.262-3 with refs; Bernardini (1986), stamp type 45	265-240 BC
33.	Body fragment of a bowl?	Black-gloss ware	Morel (1981), serie 2650	300-200 BC



Site name: **GIA CS 10166**

Toponym: Tenuta di S. Antonio

Coordinates and spatial characteristics:

X	2316338,34
Y	4652953,57
Z	69,3
Slope	9
Extent	4700

Description: A dispersed find scatter partially covering unit 10166 and spreading southeast matches SUB M33. The finds consists of building materials, coarse wares and different types of amphora. The diagnostics are generic coarse ware shapes and amphorae, by and large confirming the chronology given by the previous survey. Because of the wide spread of building materials over the entire field, only diagnostic finds were collected and counted.

Samples:

Finds: Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite; chiaro sabbioso); amphora; black-gloss ware; African red slip ware; glass.

Remarks: **Legacy data**: Suburbium site M33 was recorded as a slightly smaller find scatter at the same location. The finds were dated between 175-150 BC and 50 BC-AD 300 and the assemblage was of a varied composition, matching the GIA observations. Given the recovery of several diagnostic ARSW fragments, the date range provided by the previous survey extends into the Late Imperial period. In its turn the GIA survey yielded some evidence for occupation before the 2nd century BC, which was not previously noted.

Excavation: a test trench across site 10166 was dug in 2012 and only yielded part of a cuniculus (for drainage). The excavators presume that the surface finds belong to a completely eroded feature.

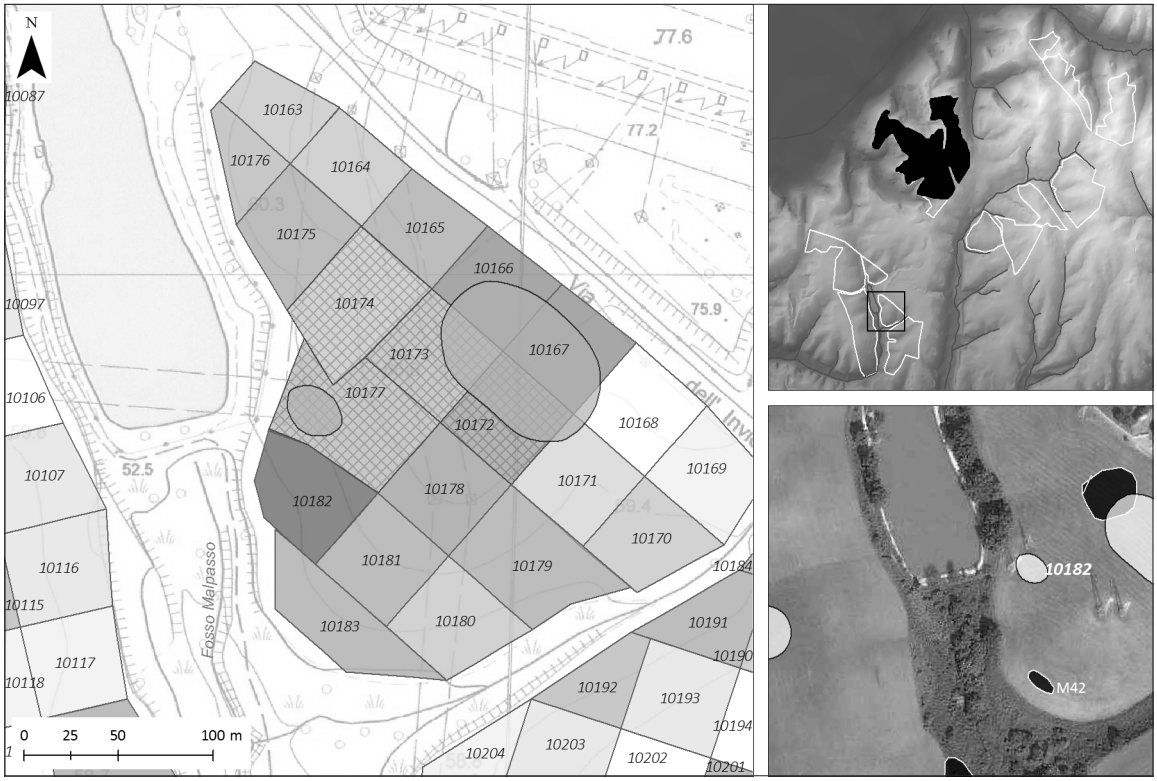
References: SUB M33; see Di Napoli 2016 (fig. 12) for excavation results.

Legacy chronology: *LV*

GIA chronology:

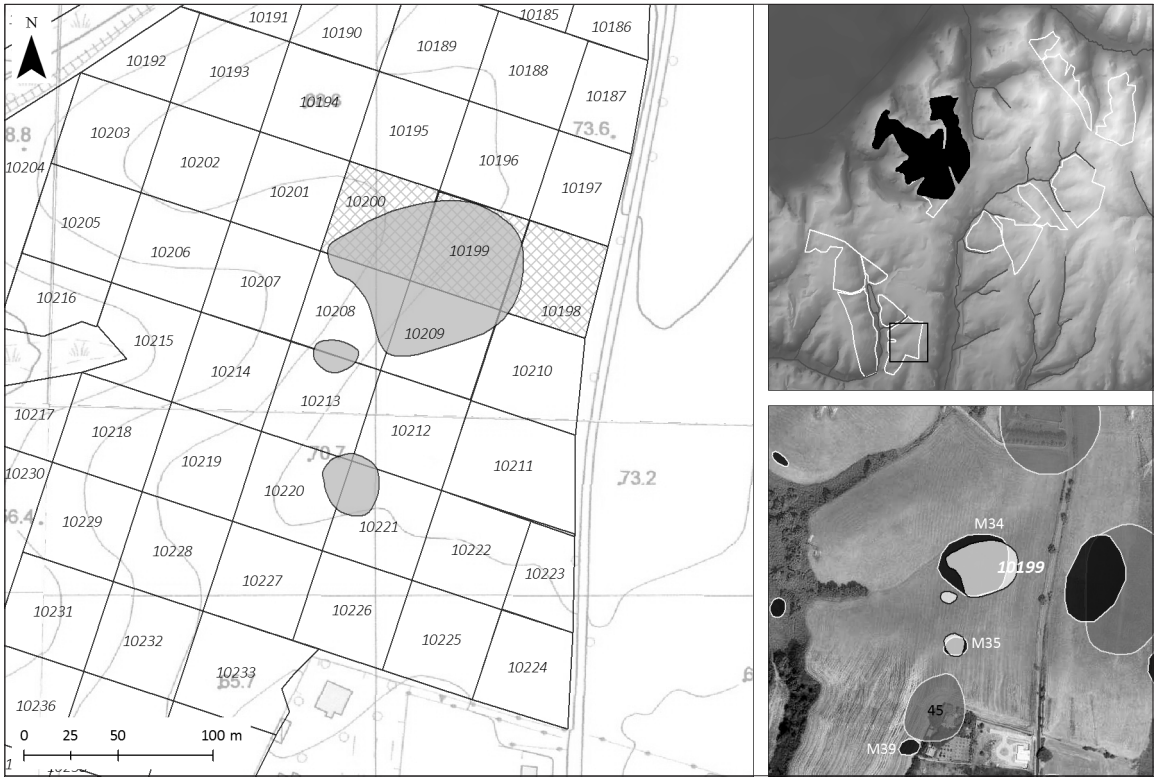
SUB	Late Republican-Imperial
Possible range	Early Republican-Late Imperial
Certain range	Mid Republican-Early Imperial

Site 10166				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
2.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
5.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
6.	Knob of a lid	Coarse ware	Olcese (2003), coperchio type 1/2	300-0 BC
7.	Rim fragment of an amphora	Coarse ware	Van der Werff 2	150-0 BC
8.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
9.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100



Site name:	**GIA CS 10182**	
Toponym:	Tenuta di S. Antonio	
Coordinates and spatial characteristics:	*X*	2316228,55
	Y	4652927,23
	Z	60,1
	Slope	16
	Extent	500
Description:	A small concentration of finds was spotted near the lake, downslope from site 10166. Elevated find densities all over the slope west of 10166 suggest that finds are migrating downward and that we are dealing with an accumulation of dislocated finds on the edge of the field. The find concentration was located outside our research grid and was only surveyed for diagnostic material. A third of the material is made up of pale tile with augite inclusions. The few diagnostics suggest a Middle Republican to Early Imperial date, providing a chronological relationship with the larger uphill site. Given the downslope spread of materials, especially over the eastern part of this plot (towards the lake) we may even be dealing with two parts of the same conglomerate.	
Samples:	No find density was recorded for unit 10177, but we did collect all material from adjacent unit 10182.	
Finds:	Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; terra sigillata.	
Remarks:	**Legacy data**: Considering the size and type of material it appears likely that the site matches Suburbium M42, even though its position was mapped some 100 m further south. The appearance and disappearance of small pockets of finds on the lower slopes on the edge of this field fits the hypothesis that we are dealing with migrating surface finds. Their visibility in different locations may depend on a variety of factors, like ploughing direction or weather conditions (e.g. recent rainfall).	
References:	SUB M42 (at 100 m distance)	
Legacy chronology:	*LV*	
	SUB	Imperial
GIA chronology:	*Possible range*	Early Republican-Early Imperial
	Certain range	Mid Republican-Early Imperial

Site 10182				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
2.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
3.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
4.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
5.	Knob of a lid	Coarse ware	Olcese (2003), coperchio type 1/2	300-0 BC



Site name: **GIA CS 10199**

Toponym: Tenuta di S. Antonio

Coordinates and spatial characteristics:

X	2316529,97
Y	4652668,84
Z	68,8
Slope	10
Extent	6000

Description: One of the largest and densest concentrations of surface finds in the Inviolatella area was found across units 10199 and 10221. The scatter of finds covers nearly a hectare and consists of a large core with two smaller clusters, 20 and 80 m to the south. The findspots exactly match Suburbium sites M34 and M35.

The density of building materials was very high and the contours of the separate findspots were very clear under conditions of optimal visibility. Most noticeable in the surface assemblage were large amounts of gray and white tesserae, different amphora types, coarse wares and building materials, mixed with some black-gloss and terra sigillata fine wares. The assemblage suggests the former presence of a large villa/farm complex with a considerable life span, at least from the Mid Republican to Mid Imperial period.

Samples:

Finds: Tiles (incl. red augite; chiaro sabbioso); coarse and depurated wares (incl. red augite); amphora; black-gloss ware; terra sigillata; African red slip ware; thin-walled ware; glazed ware; marble; tesserae; painted plaster.

Remarks: **Legacy data**: The Suburbium survey reports a long life span for site M34 (the core of the site) of between 600 BC and AD 420. A much shorter life span is suggested for M35 (50 BC-AD 130). The early date is provided by the presence of a very small number of specific coarse wares, which led previous researchers to suggest the presence of a farm [?serving] Crustumerium (in the 6th-5th century BC), apart from the emergence of a later agricultural complex for which the evidence is much more clear.

The substantial diagnostic sample of the GIA survey contains no evidence to support the hypothesis of an Archaic farm at this location.

Excavation: a test trench across site 10199 over an area of 900 sq m was dug in 2012 and uncovered remains of a large villa complex with several phases of construction, possibly starting as early as the Early Republican period, and with an arrangement into a pars rustica and pars dominica dated to the Late Imperial period. Excavation: a test trench across site 10199 over an area of 900 sq m was dug in 2012 and uncovered remains of a large villa complex with several phases of construction, possibly starting as early as the Early Republican period, and with an arrangement into a pars rustica and pars dominica dated to the Late Imperial period.

Site name: **GIA CS 10199**

References: SUB M34; see Di Napoli 2016 (area D) for excavation results.

Legacy chronology: *LV*

SUB Archaic-Imperial

GIA chronology: *Possible range* Early Republican-Late Imperial

Certain range Mid Republican-Mid Imperial

Site 10199				
No.	**Shape**	**Ware**	**Type**	**Date**
1.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 1	25 BC-AD 125
2.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150
3.	Rim fragment of a pan	Coarse ware	Carandini *et al.* (2007), tav. 43, 402	AD 0-200
4.	Rim fragment of a lid	Coarse ware	Olcese (2003), tegame type 6	AD 0-200
5.	Rim fragment of a pan	Coarse ware	Olcese (2003), tegame type 7	200-25 BC
6.	Rim fragment of a pan	Coarse ware	-	-
7.	Rim fragment of a pan	Coarse ware	-	-
8.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2; Bouma (1996), jar type IVc	400-200 BC
9.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
10.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
11.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
12.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
13.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
14.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
15.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
16.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3b	100-0 BC
17.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 8	AD 0-150
18.	Rim fragment of a jar	Depurated ware	Possibly Olcese (2003), olla type 12	AD 0 -200
19.	Rim fragment of a jar	Coarse ware	-	-
20.	Rim fragment of a jar	Coarse ware	-	-
21.	Rim fragment of a lid	Coarse ware	Olcese (2003), coperchio type 1	300-0 BC
22.	Rim fragment of a basin	Coarse ware	Olcese (2003), basin type 15a	100 BC-AD 200
23.	Rim fragment of a jug	Coarse ware	-	-
24.	Rim fragment	Coarse ware	-	-
25.	Rim fragment	Coarse ware	-	-
26.	Rim fragment of an amphora	Coarse ware	Van der Werff 1	200-100 BC
27.	Handle fragment of an amphora	Coarse ware	Dressel 1A	150-50 BC
28.	Rim fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
29.	Rim fragment of a plate	Black-gloss ware	Morel (1981), serie 2280	300-200 BC
30.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), serie 2650	200-50 BC
31.	Rim fragment	Terra sigillata	-	-
32.	Rim fragment of a cup	Terra sigillata	*Consp.*, form 37	AD 25-75
33.	Base fragment of a cup	Terra sigillata	*Consp.*, form 34	AD 30-100
34.	Flange of a cup	Terra sigillata	*Consp.*, form 34	AD 30-100
35.	Decorated body fragment	Terra sigillata	Late Italian mold-made sigillata	-
36.	Rim fragment of a dish	ARSW	Hayes (1972), form 31	AD 200-300
37.	Rim fragment of a casserole	African cookware	Hayes (1972), form 23B	AD 150-300
38.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
39.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
40.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
41.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
42.	Rim fragment of a mug	Thin-walled ware	Mejer (2010b), form 2; also Gualtieri *et al.* (2012), 70, 14	Early Imperial?
43.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), Early period bowl no.6	175-150 BC
44.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), no. 81	75-25 BC
45.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), nos 260-263	25 BC-AD 15
46.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), no .472	AD 40-70
47.	Decorated body fragment	Thin-walled ware	Maribini Moevs (1973), similar to no. 472	AD 40-70

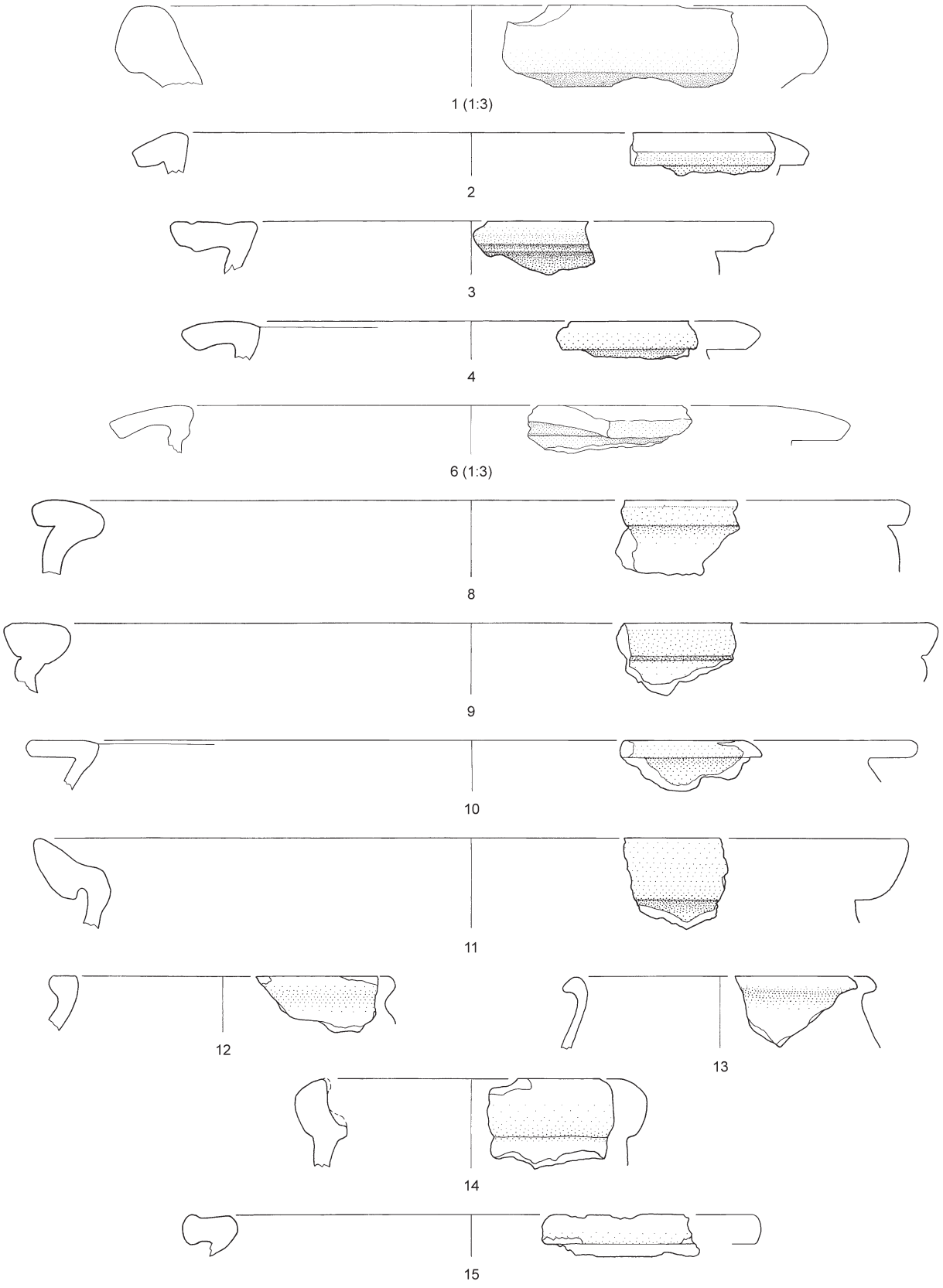
Off-site

No.	Shape	Ware	Type	Date
Sample area Northeast				
1.	Rim fragment of a bowl	Black-gloss ware	Morel (1981), form 2621	350-250 BC
2.	Rim fragment	Depurated ware	Bouma (1996), J365, type IV-19	450-400 BC
3.	Rim fragment of a jar	Coarse ware	Bertoldi (2011), olla type 4	250-100 BC
4.	Rim fragment of a lid	Coarse ware	Olcese (2003), coperchio type 1	300-100 BC
5.	Rim fragment	Coarse ware	-	-
6.	Rim fragment of a dish	ARSW	Hayes (1972), form 64?	AD 375-425
7.	Stamped base fragment	Black-gloss ware	Stanco (2009), fig. 5.4-6	280-260 BC
8.	Rim fragment	Terra sigillata	-	-
9.	Rim fragment of a casserole	Coarse ware	Bertoldi (2011), casserole type 1	AD 0 -200
10.	Rim fragment of an amphora	Depurated ware	Dressel 1A	150-50 BC
11.	Rim fragment of a closed vessel	Impasto Chiaro Sabbioso	-	-
12.	Neck fragment of an amphora	Coarse ware	Dressel 1A	150-50 BC
13.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola 1a/b	25 BC-AD 125
14.	Rim fragment of a bowl	ARSW	Hayes (1972), form 61B	AD 400-475
15.	Rim fragment of a dolium	Coarse ware	Carandini *et al.* (2007), tav. 36.320 with refs; Milletti & Pitzalis (2012), tav. XXII.2	550-350 BC
16.	Rim fragment of a jug	Coarse ware	-	-
17.	Rim fragment	Bucchero	di Gennaro *et al*. (2009), fig. 21-18	625-500 BC
18.	Rim fragment of a pan	Coarse ware	Resembles Olcese (2003), tegame type 1	325-200 BC
19.	Rim fragment	Coarse ware	di Sarcina (2012), fig. 5.39, 29.E156	630-500 BC
20.	Rim fragment of a basin	ICS	di Gennaro *et al*. (2009), fig. 20-4; Carafa (1995), 676; Rossi Diana and Clementino (1988), type B1	550-450 BC
21.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
22.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 5B	AD 0-100
23.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
24.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
25.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
26.	Handle fragment of an amphora	Coarse ware	Dressel 2-4	75 BC-AD 100
27.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
Sample area East				
28.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
29.	Handle fragment of an amphora	Coarse ware	Gauloise 4	AD 50-300
30.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
31.	Rim fragment of a basin	ICS	Olcese (2003), bacino type 1	400-200 BC
32.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
33.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
34.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
35.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
36.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
37.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
38.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
39.	Rim fragment of a pan	Coarse ware	Tol (2012), Pl.VI.VIII.3; Fogagnolo (2004), TAV. IX.71	AD 475-600
40.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
41.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
42.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 4b	100-0 BC
43.	Rim fragment of a lid	Coarse ware	Tol (2012), Pl.V-VII.77; Olcese (2003), coperchio type 4	25 BC-AD 225
44.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 1	400-200 BC
45.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
46.	Rim fragment	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
47.	Rim fragment of a pan/basin	Coarse ware	-	-
48.	Rim fragment of an amphora	Coarse ware	Dressel 2-4 Catalan	25 BC-AD 175
49.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
50.	Rim fragment	Coarse ware	-	-
51.	Decorated body fragment of an oillamp	Depurated ware	-	-
52.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
53.	Body fragment of a bowl	ARSW	Hayes (1972), form 8A/9A	AD 100-200
54.	Rim fragment of an amphora	Coarse ware	Dressel 1	150-50 BC

Off-site

No.	Shape	Ware	Type	Date
55.	Rim fragment of a bowl	ARSW	Hayes (1972), form 8A	AD 100-200
56.	Base fragment of a dice cup?	Coarse ware	For similar example see Johannsen (2010), 241.219	AD 0-100
57.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
58.	Decorated body fragment	African cookware	Hayes (1972), form 197	AD 150-300
59.	Rim fragment of a bowl	ARSW	Hayes (1972), form 50A	AD 230-325
60.	Rim fragment of an amphora	Coarse ware	Gauloise 4	AD 50-300
61.	Rim fragment of a basin	Coarse ware	Olcese (2003), bacino type 15A	100 BC-AD 200
62.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
63.	Rim fragment of a basin	Coarse ware	Tol (2012), pl. VI-VI-2a; Bonifay (2004), 256, fig. 139	AD 400-500
64.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150
65.	Rim fragment of a lid	African cookware	Hayes (1972), form 196	AD 150-300
Sample area South				
66.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
67.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
68.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
69.	Rim fragment of an amphora	Coarse ware	Dressel 1A	150-50 BC
70.	Rim fragment of a mug	Thin-walled ware	Maribini Moevs (1973), type XLVII	25 BC-AD 75
71.	Rim fragment of a basin	Coarse ware	Olcese (2003), basin type 8	300-50 BC
72.		Lithic	-	-
73.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
74.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
75.	Lug fragment of a basin	Coarse ware	Pensabene *et al.* (2001), tav. 42-175; Bouma (1996), teglia type 1; Di Mario (ed.) (2005), Bacini type 1	700-300 BC
76.	Rim fragment	Coarse ware	di Gennaro *et al.* (2009), fig. 16-7; similar to Carafa (1995), nos. 356/374/380; Bouma (1996), J603, type 49	600-300 BC
77.	Rim fragment of a casserole	African cookware	Hayes (1972), form 197	AD 150-300
78.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
79.	Rim fragment of an amphora	Coarse ware	Dressel 2-4 Catalan	25 BC-AD 175
80.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
81.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
82.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
83.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
84.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
85.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
86.	Rim fragment	ICS	Carandini *et al.* (2007), tav. 33.287	500-400 BC
87.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC
88.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
89.	Knob fragment of a lid	Coarse ware	-	-
90.	Rim fragment of a pan	Coarse ware	Olcese (2003), pentola type 4	AD 0-150
91.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 2	400-200 BC
92.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 4b	100-0 BC
93.	Rim fragment of a lid	Coarse ware	-	-
94.	Rim fragment of a jar	Coarse ware	Olcese (2003), olla type 3a	200-0 BC

Crustumerium survey Plate I
Site 20175



Crustumerium survey Plate II

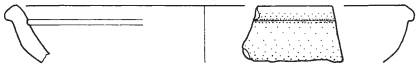
Site 20175 cont.

16

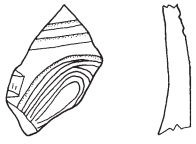
17

18

19



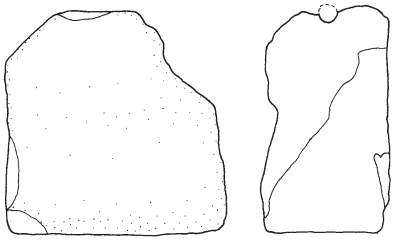
20



21

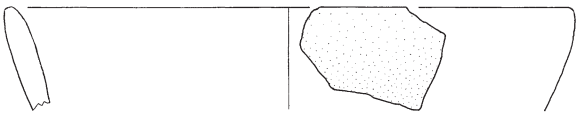
22

24



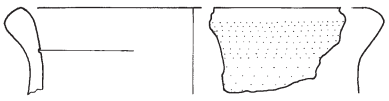
25

Site 20149

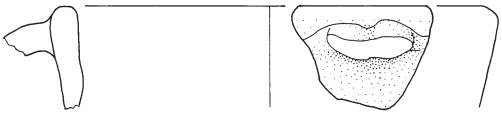


1

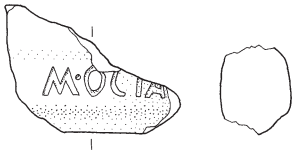
2



3



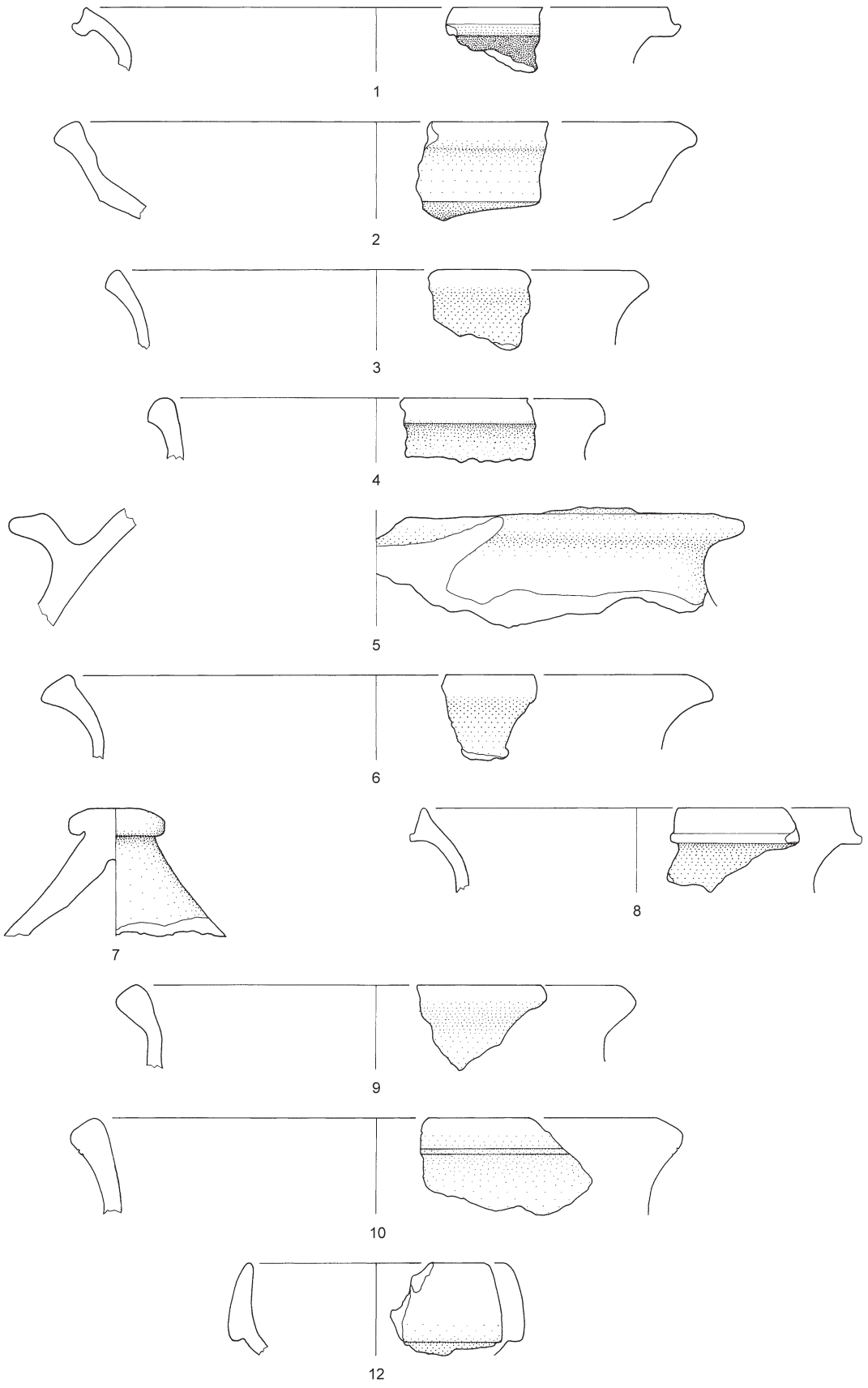
5



6

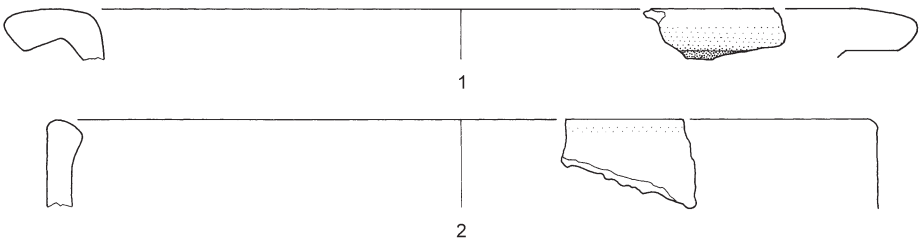
Crustumerium survey
Site 20156

Plate III

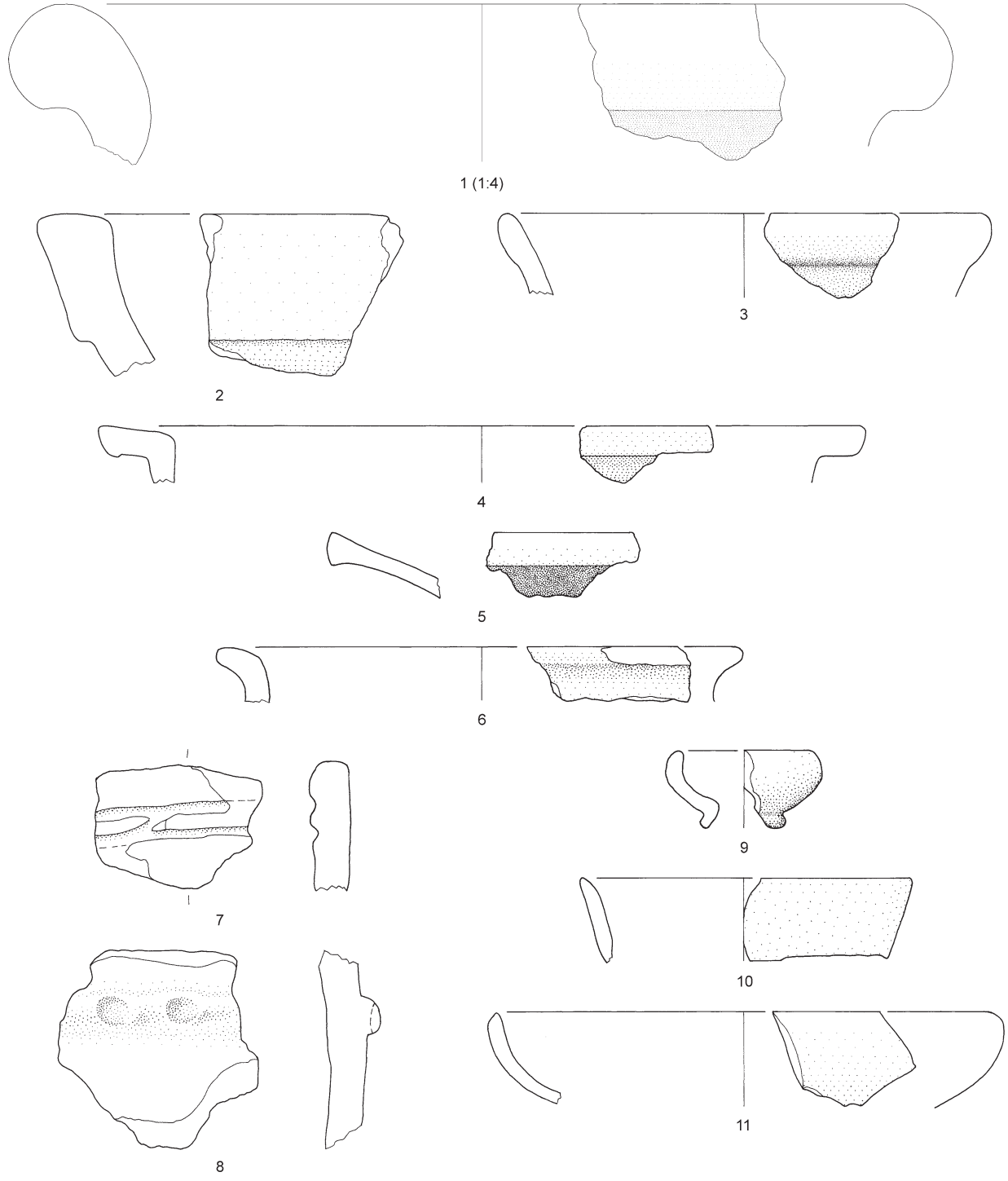


Crustumerium survey Plate IV

Site 20167

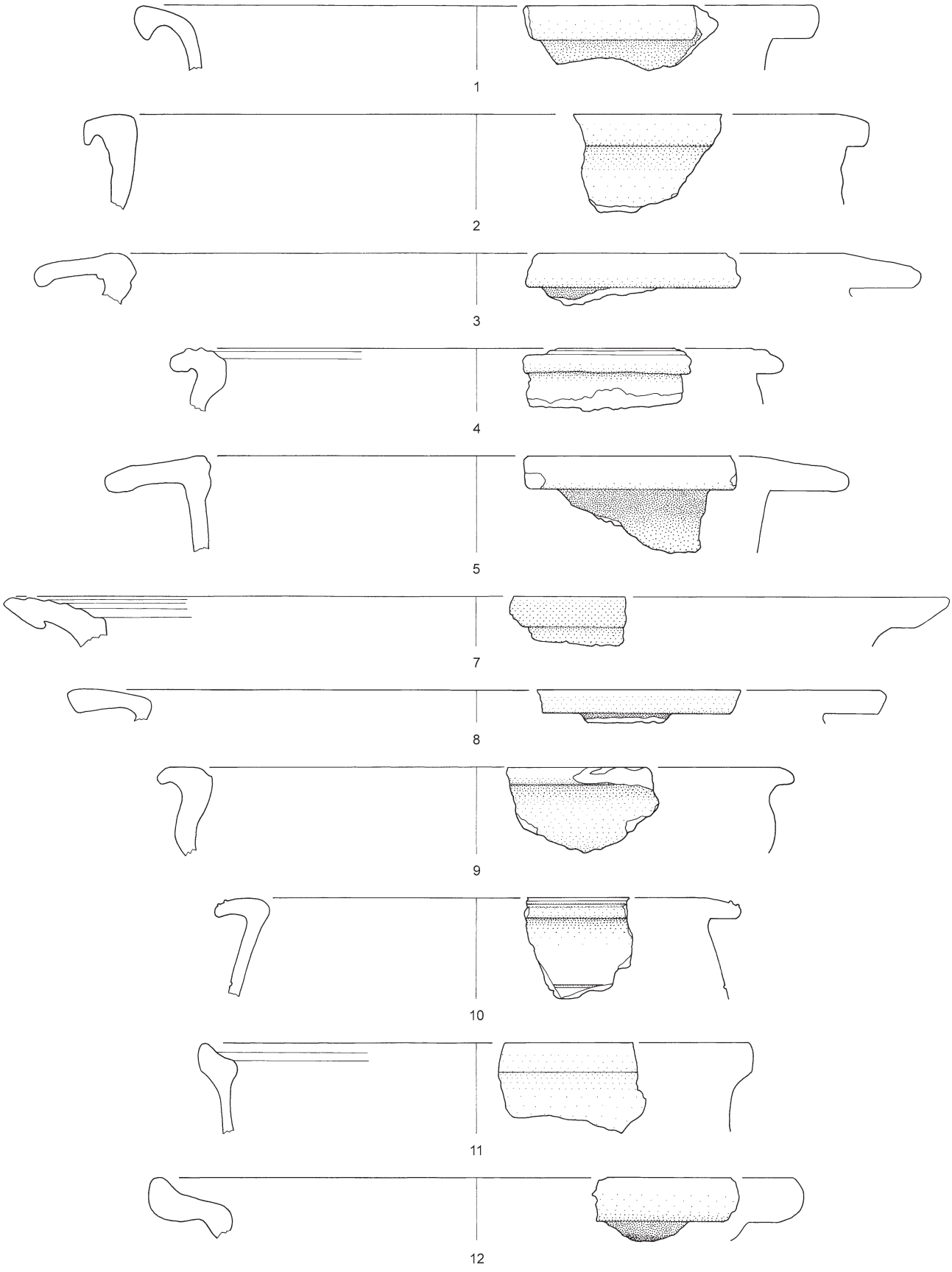


Site 20131

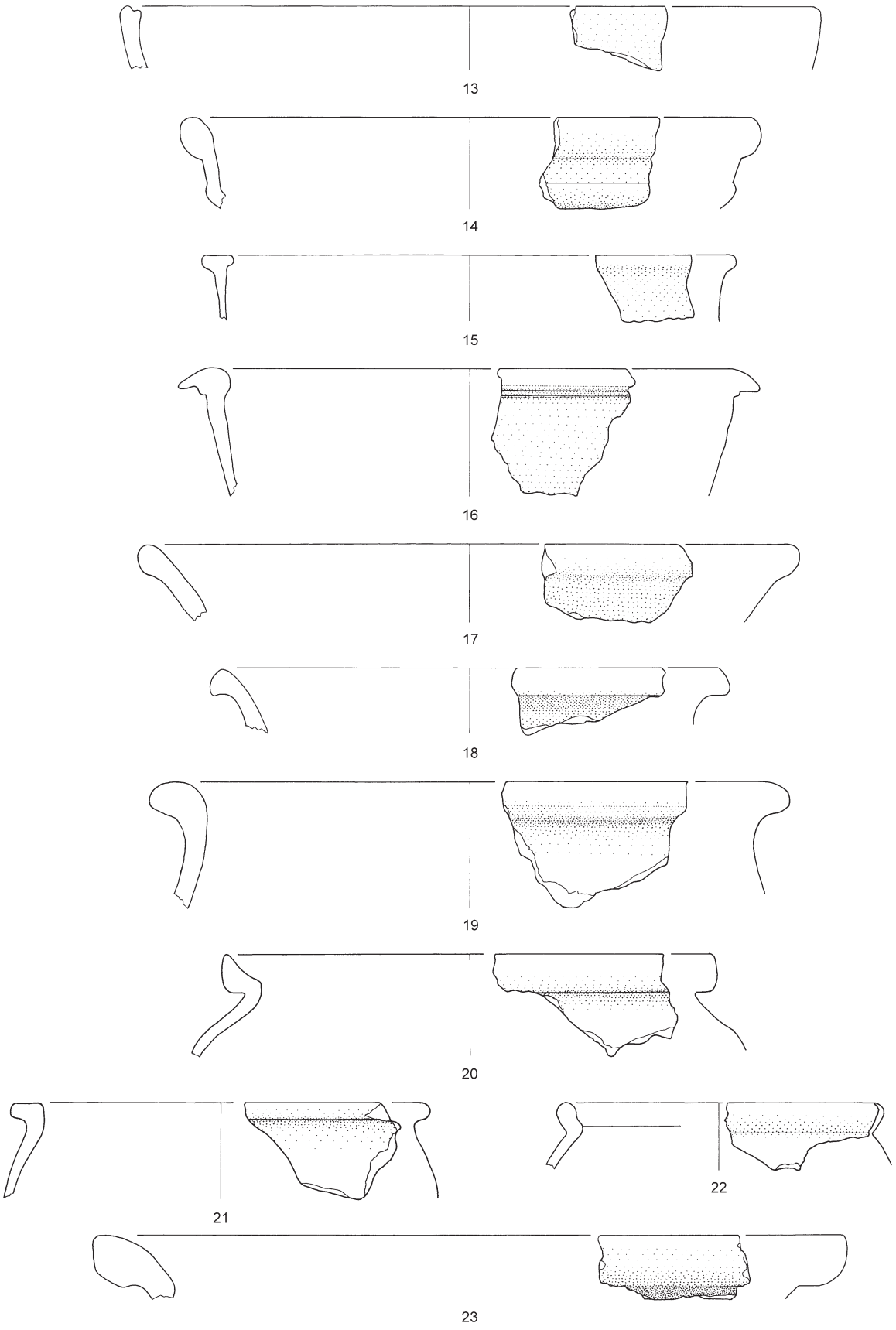


Crustumerium survey
Site 20290

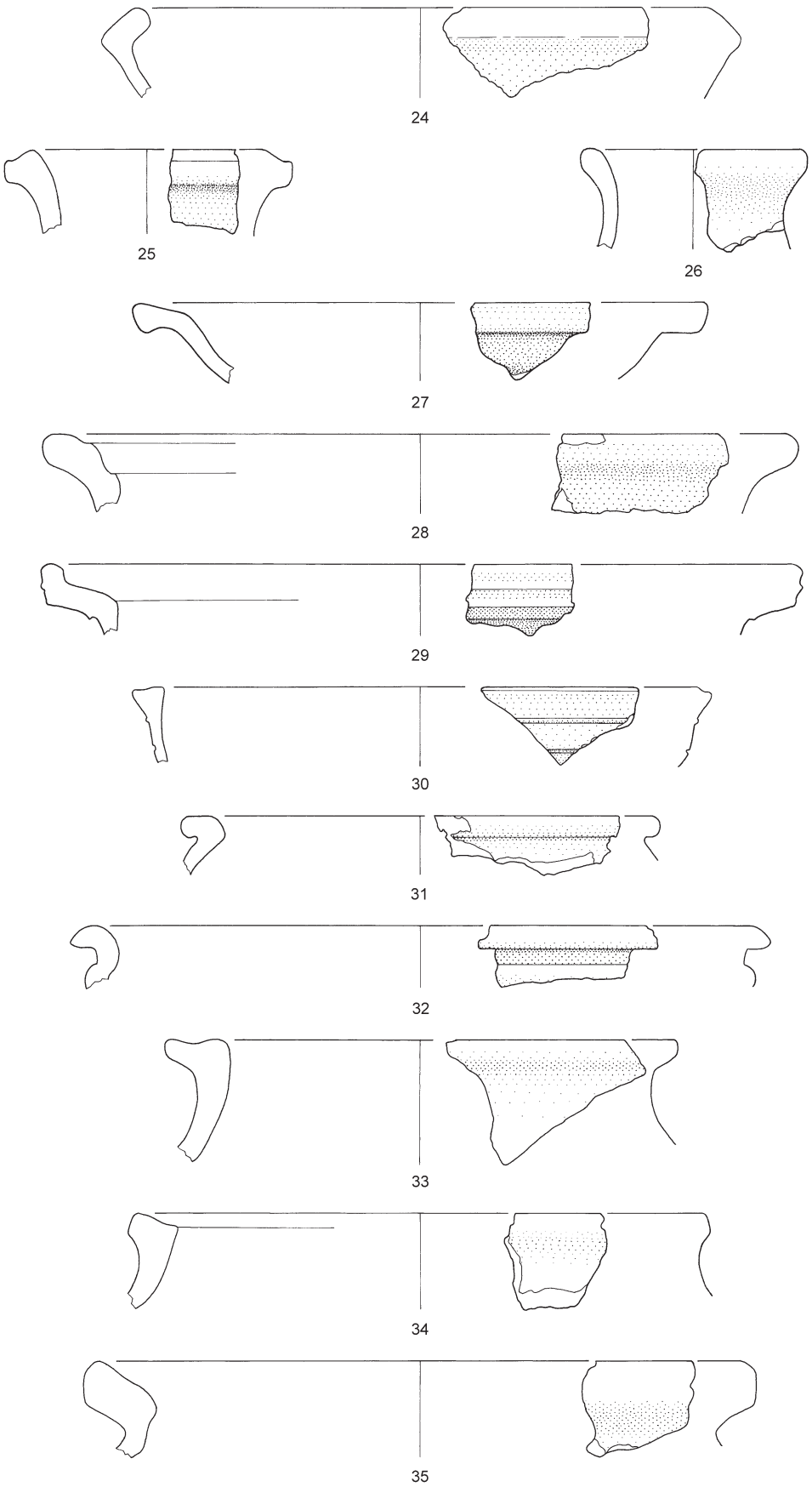
Plate V



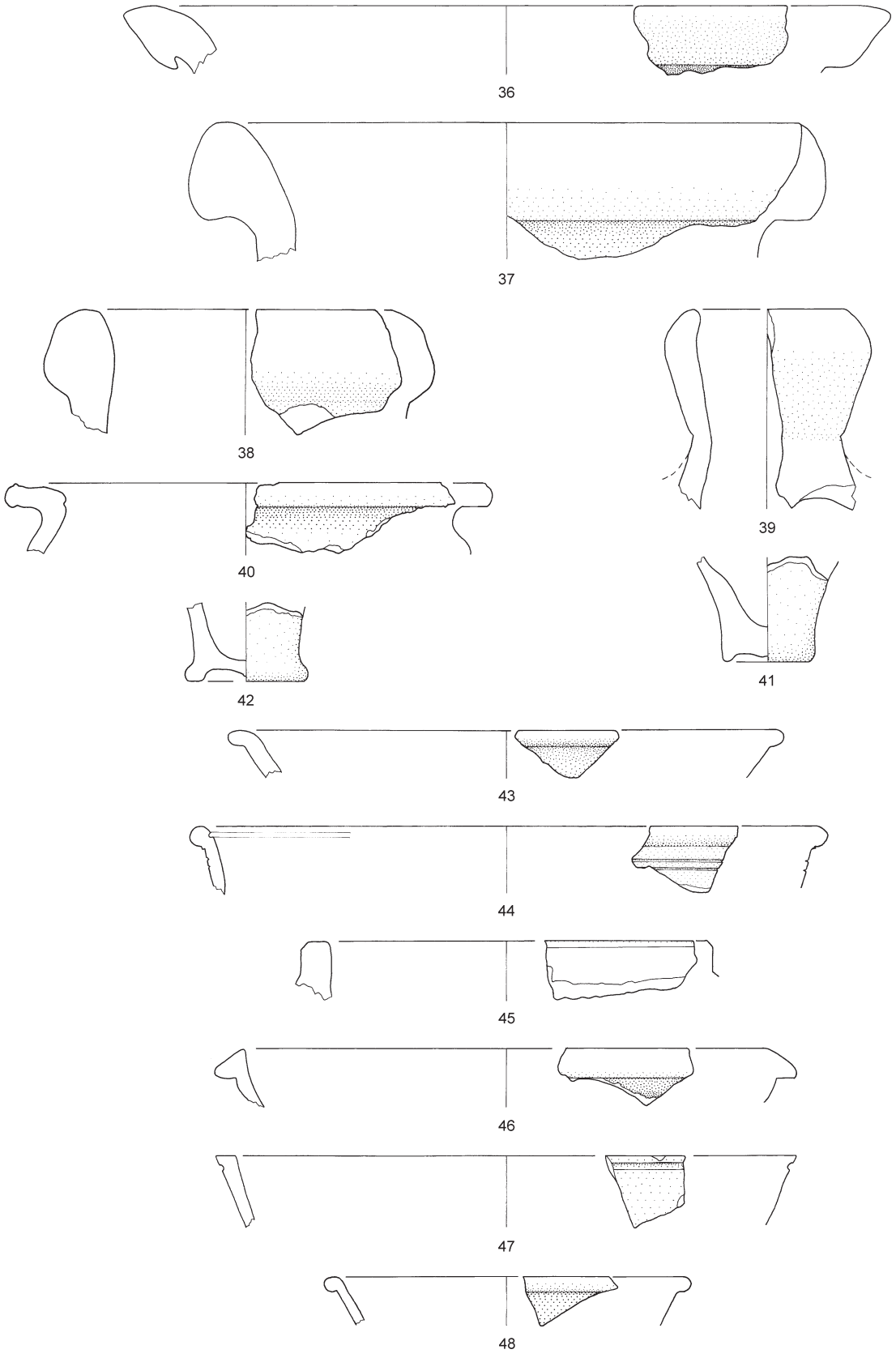
Crustumerium survey Plate VI
Site 20290 cont.



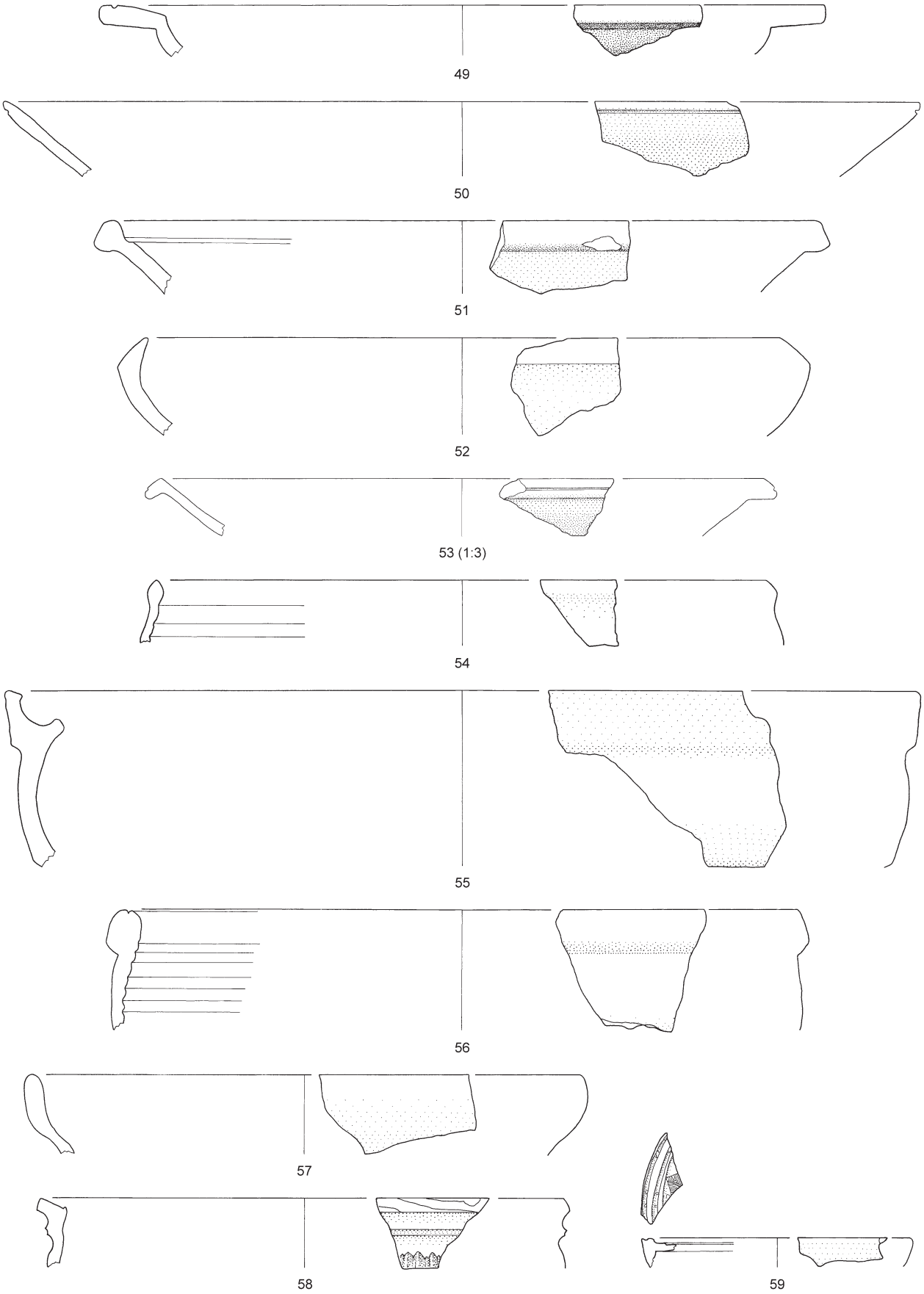
Crustumerium survey Plate VII
Site 20290 cont.



Crustumerium survey Plate VIII
Site 20290 cont.

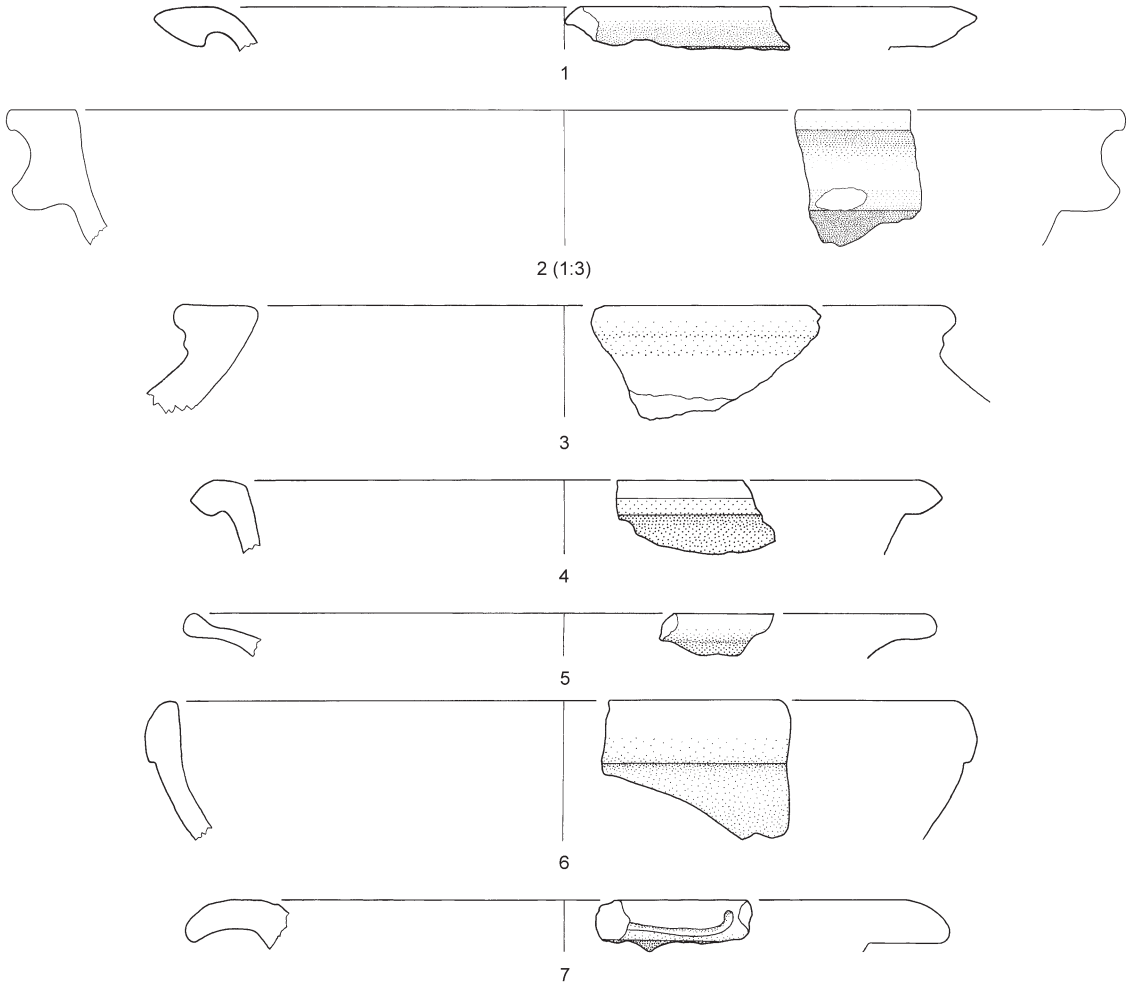


Crustumerium survey Plate IX
Site 20290 cont.

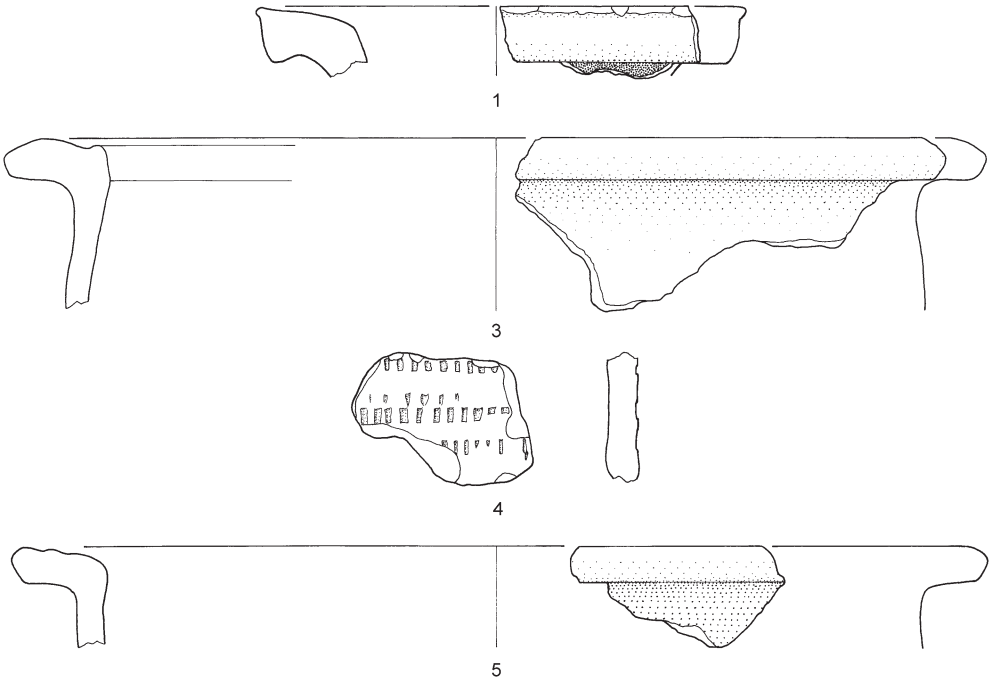


Crustumerium survey Plate X

Site 20296

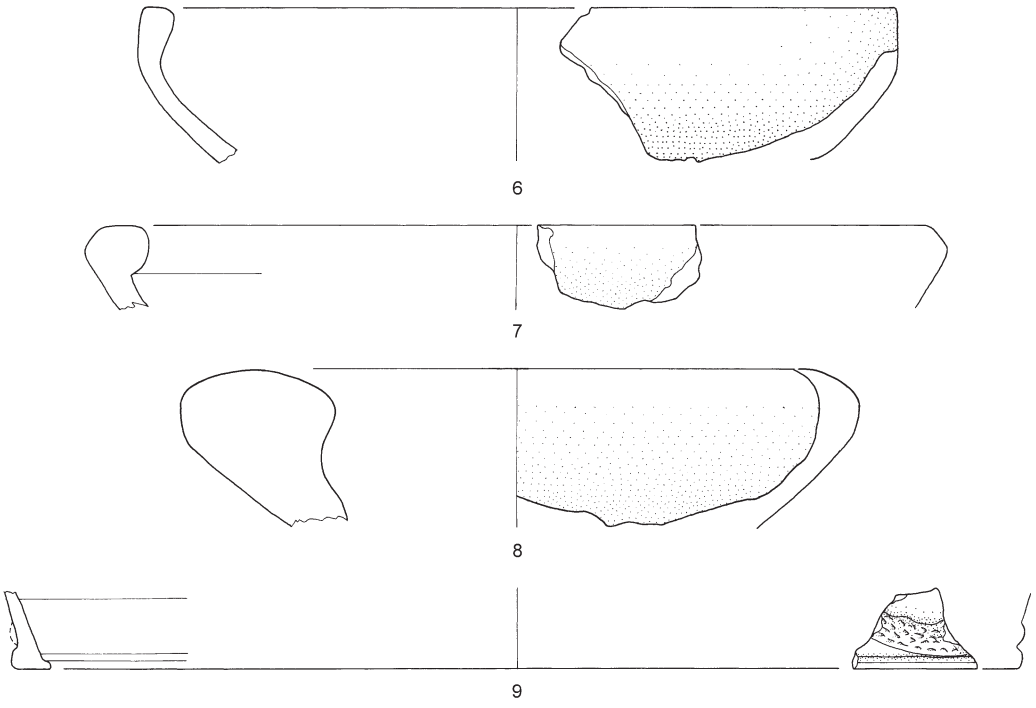


Site 20347



Crustumerium survey Plate XI

Site 20347 cont.



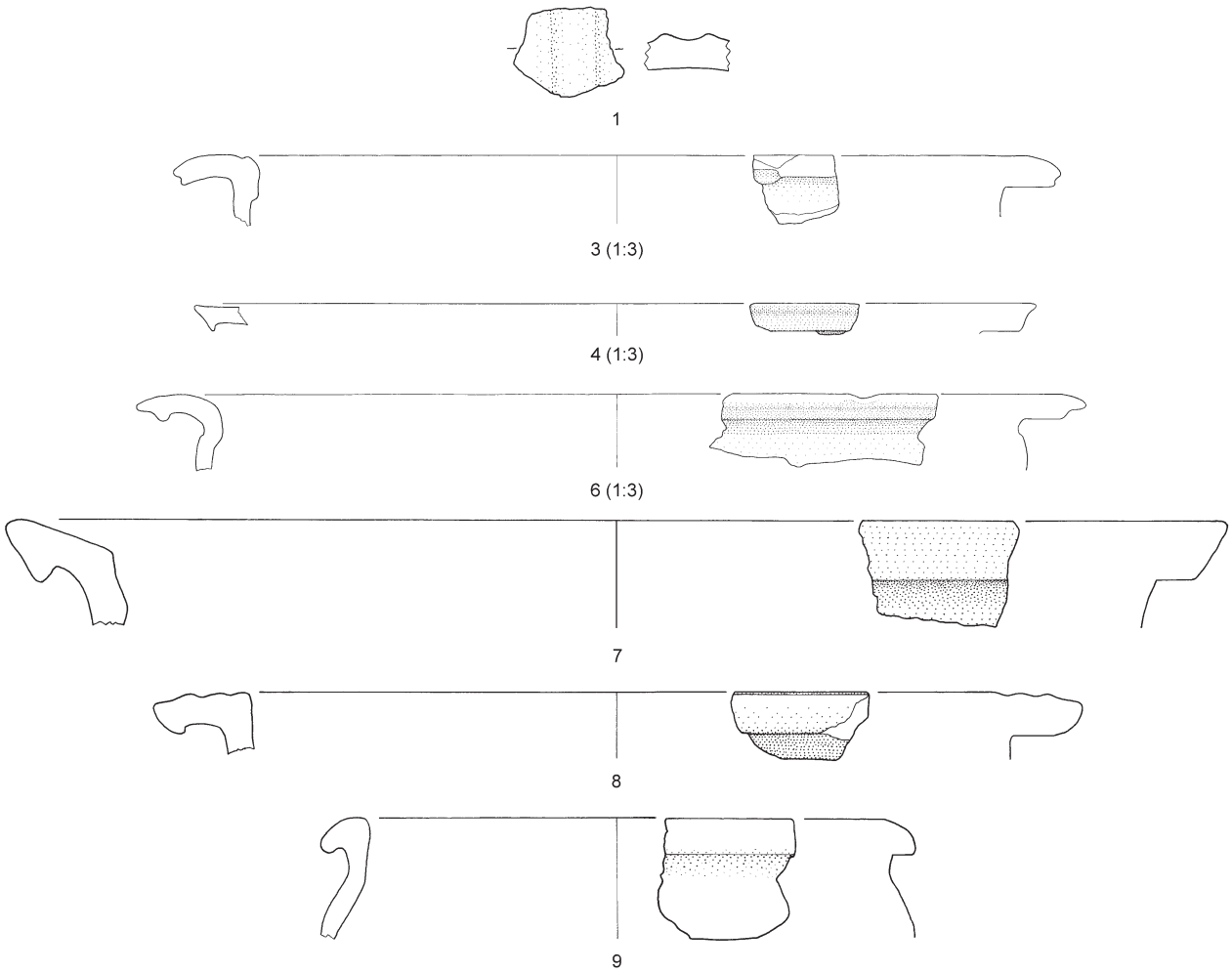
6

7

8

9

Site 21096



1

3 (1:3)

4 (1:3)

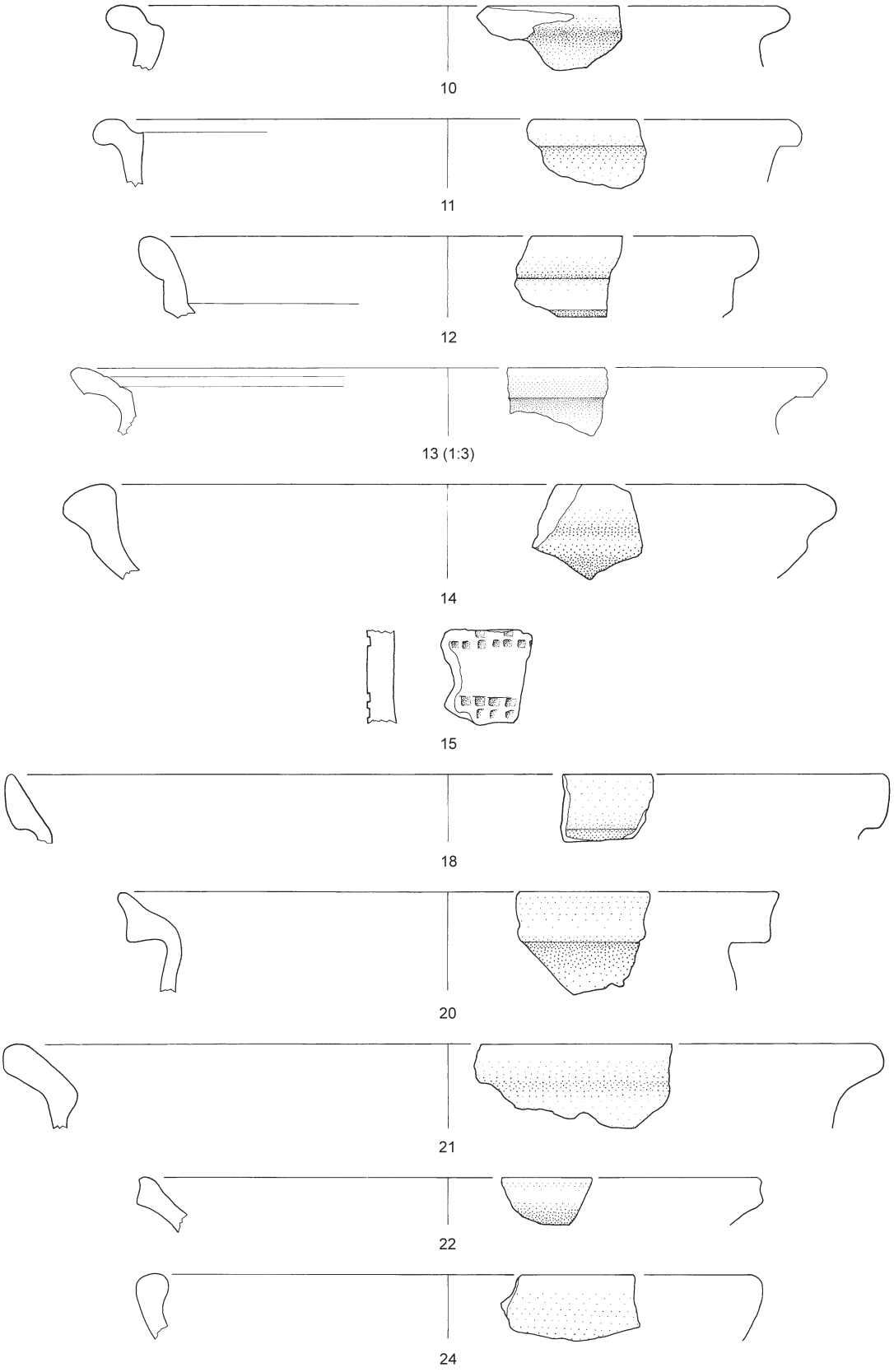
6 (1:3)

7

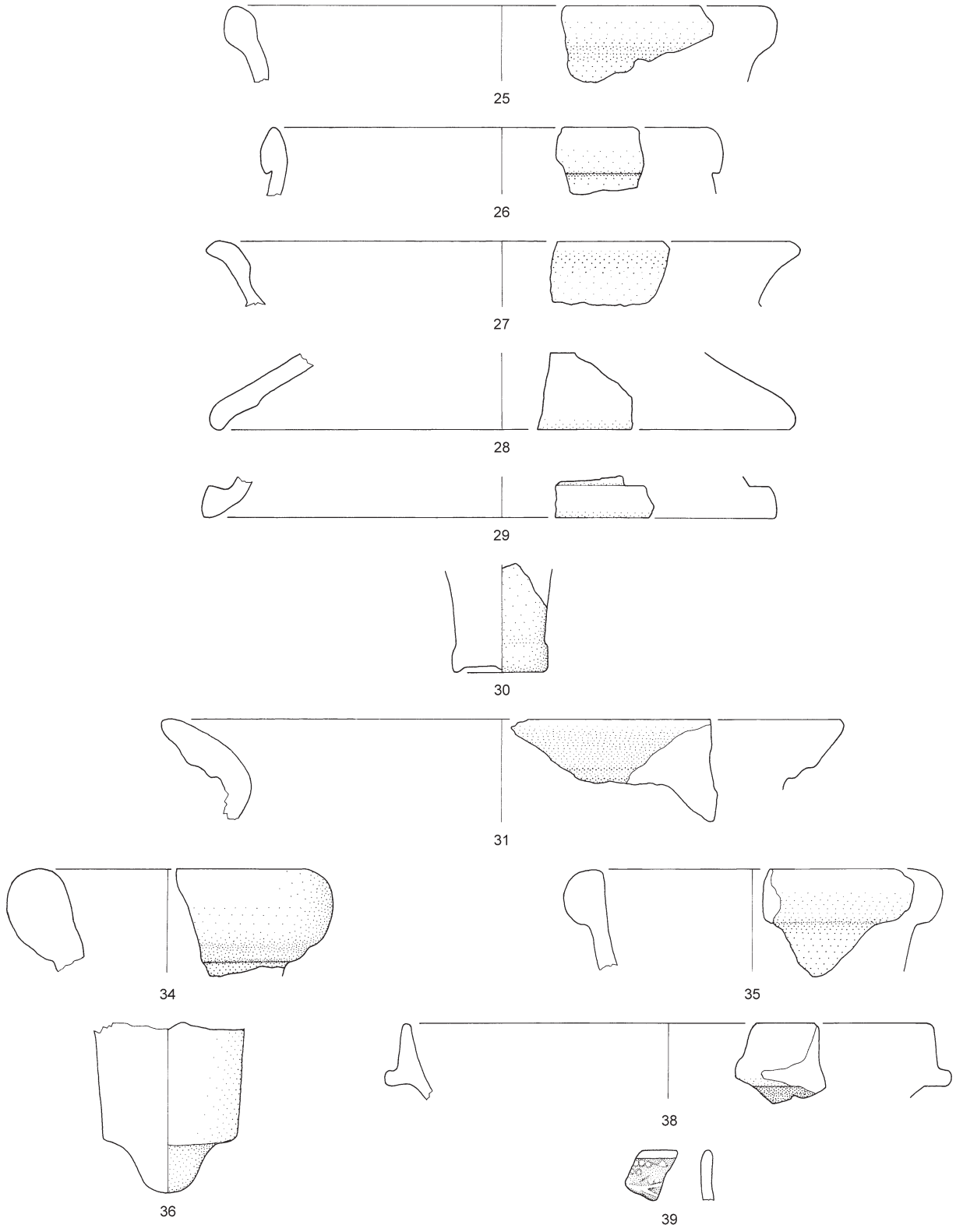
8

9

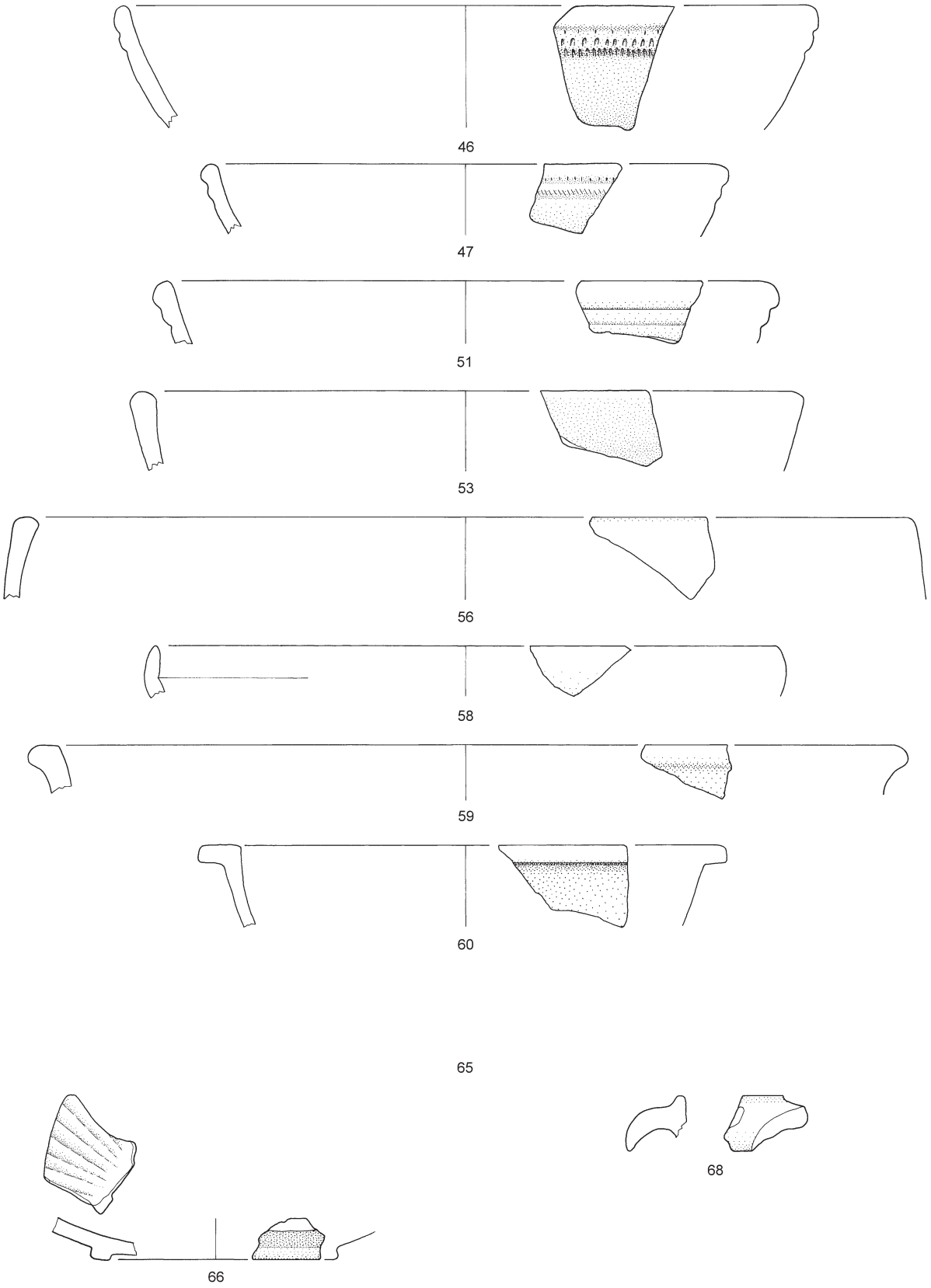
Crustumerium survey Plate XII
Site 21096 cont.



Crustumerium survey Plate XIII
Site 21096 cont.

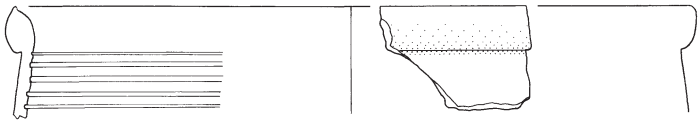


Crustumerium survey Plate XIV
Site 21096 cont.

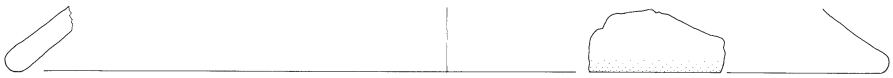


Crustumerium survey Plate XV
Site 21096 cont.

70

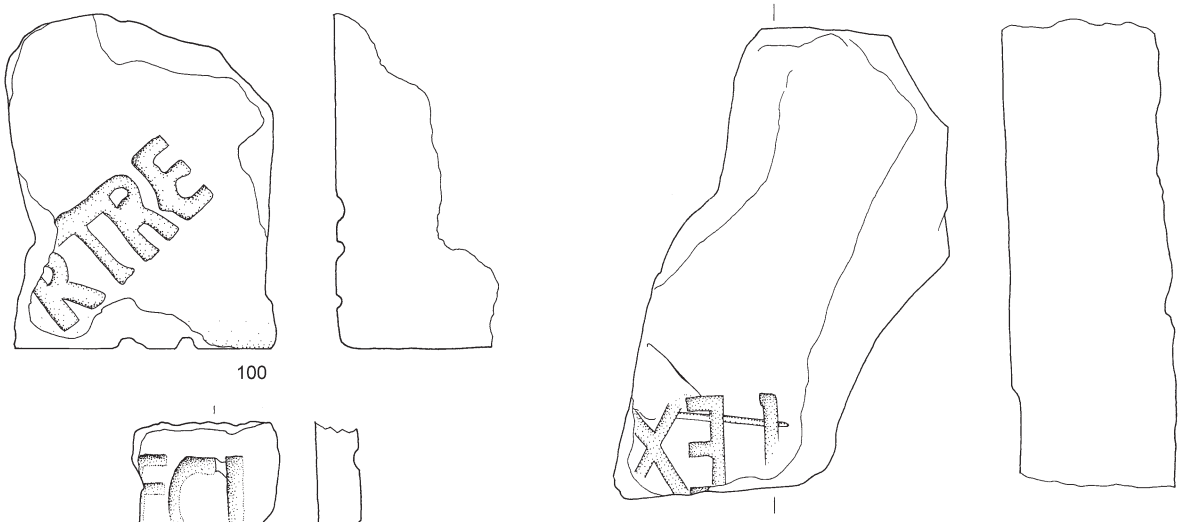


77



93 (1:3)

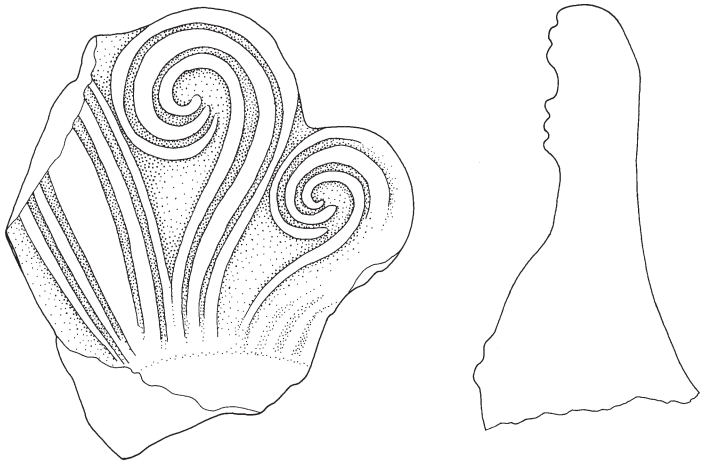
99 (1:3)



100

101

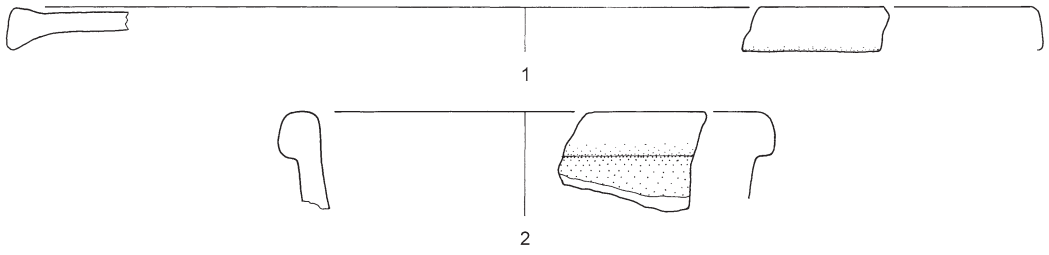
102



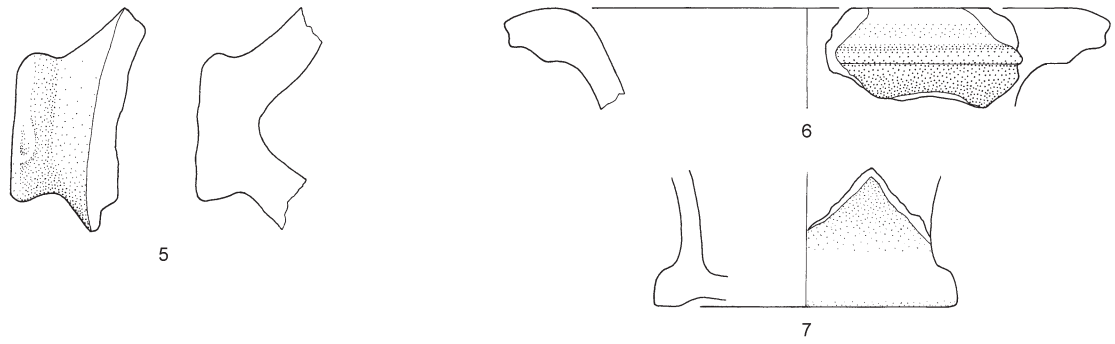
103

Crustumerium survey Plate XVI

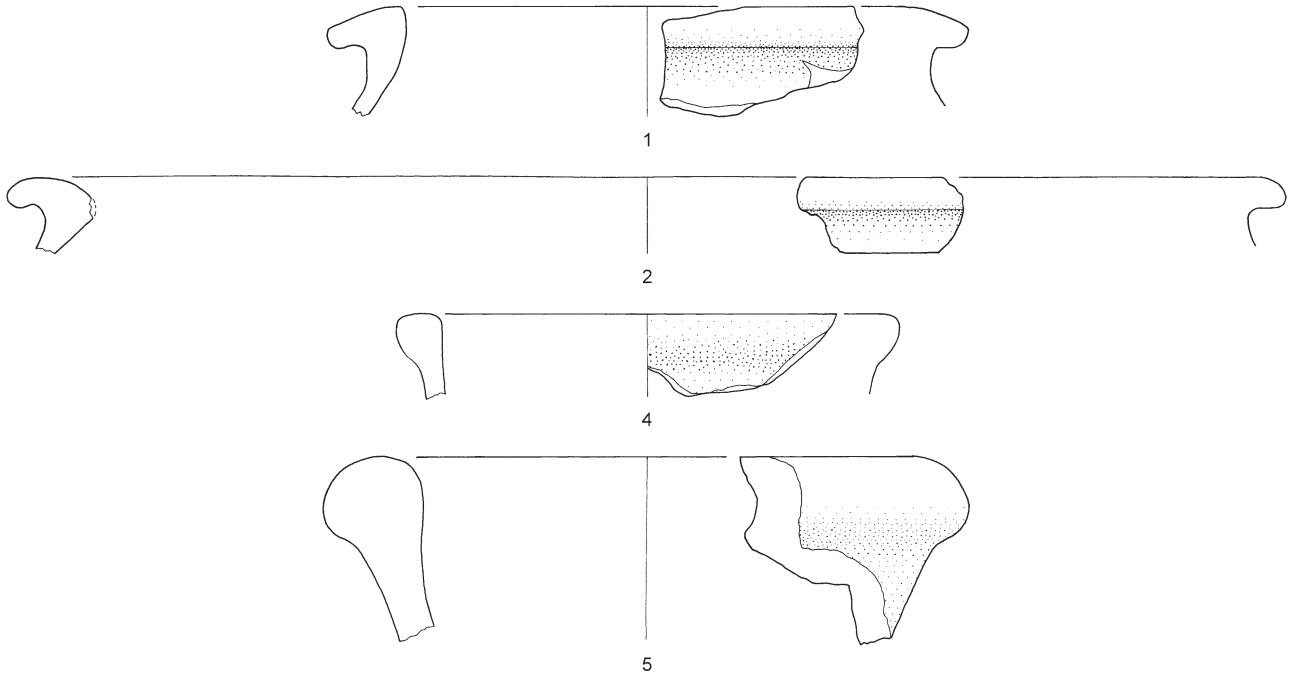
Site 21088



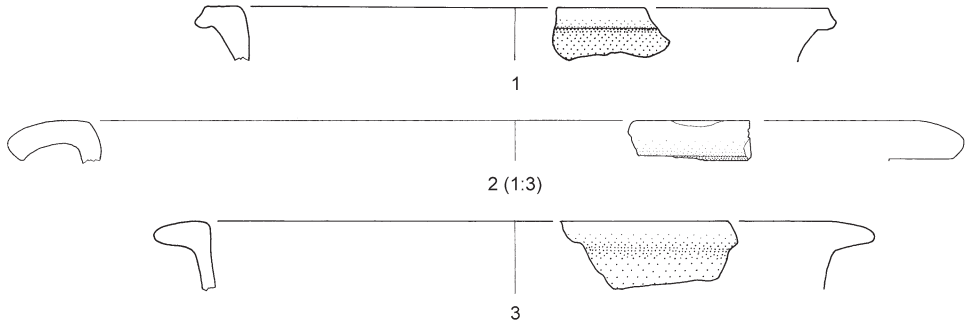
Site 21046



Site 20427

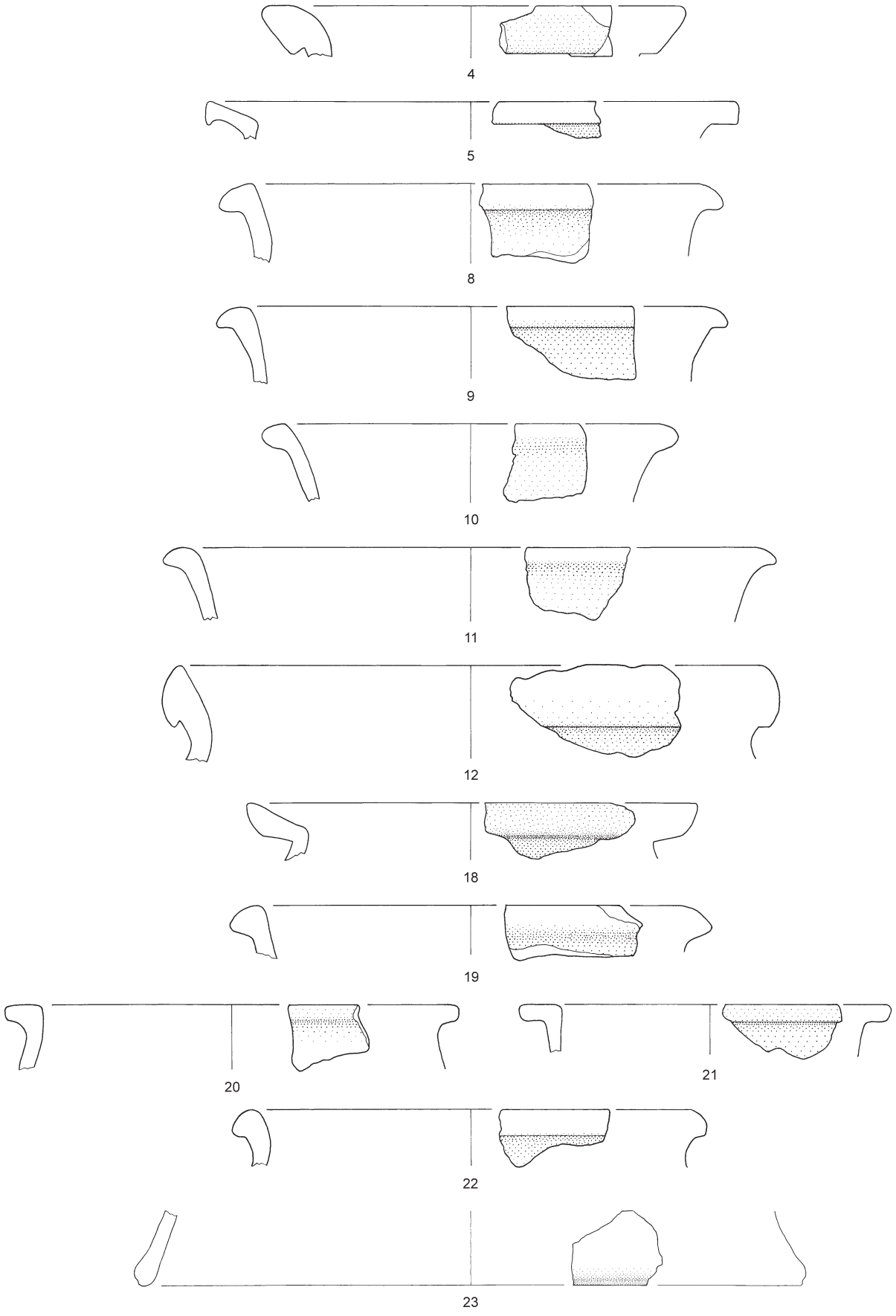


Site 20047



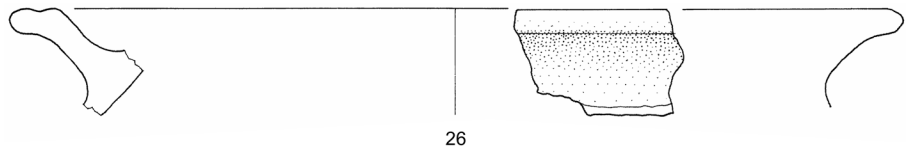
Crustumerium survey
Site 20047

Plate XVII

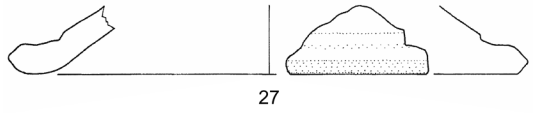


Crustumerium survey Plate XVIII

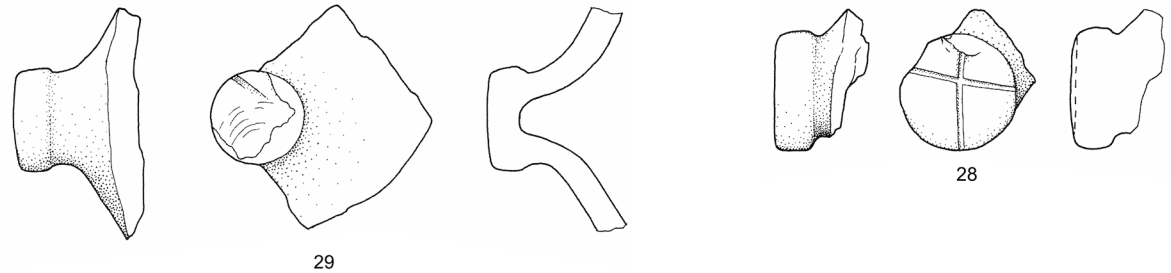
Site 20047 cont.



26

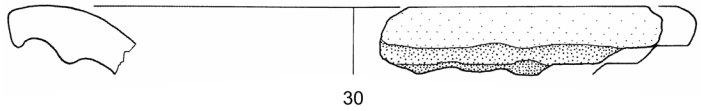


27

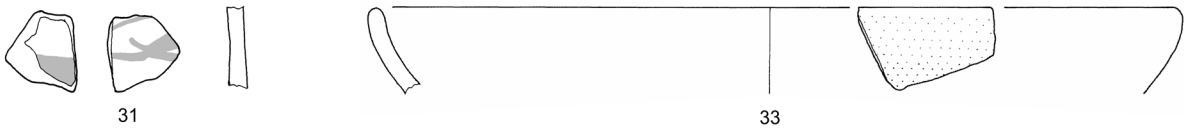


28

29

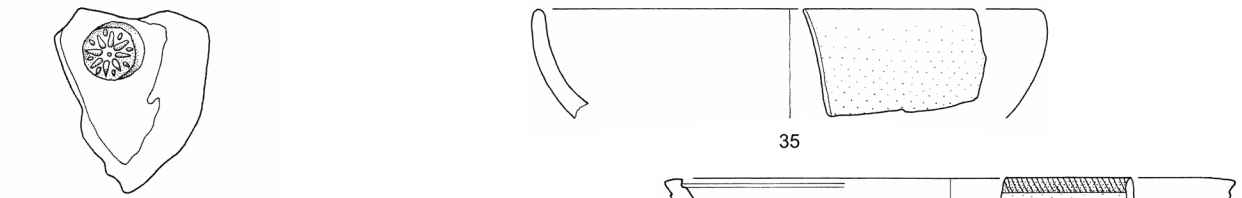


30



31

33

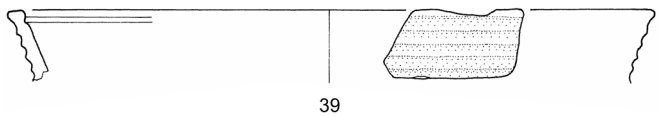


35

36

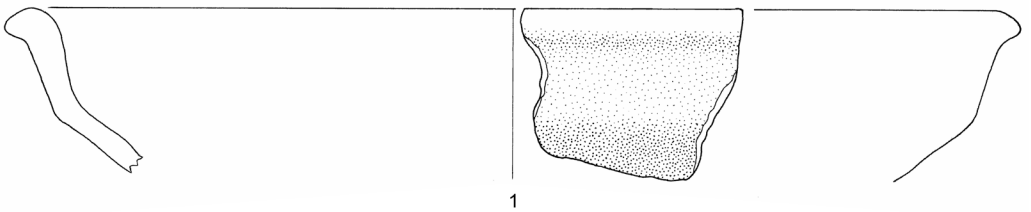
37

38

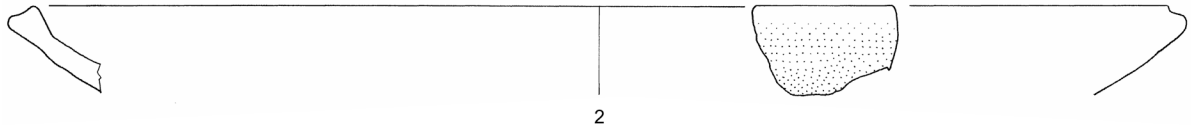


39

Site 20029



1

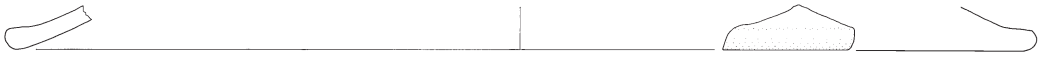


2

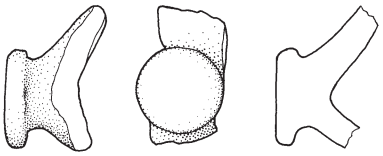
Crustumerium survey Plate XIX

Site 20029 cont.

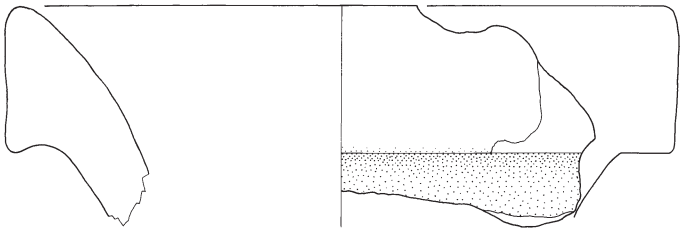
10



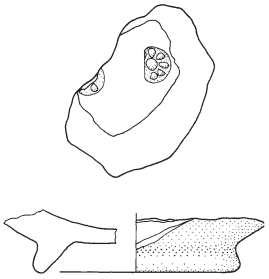
12



13



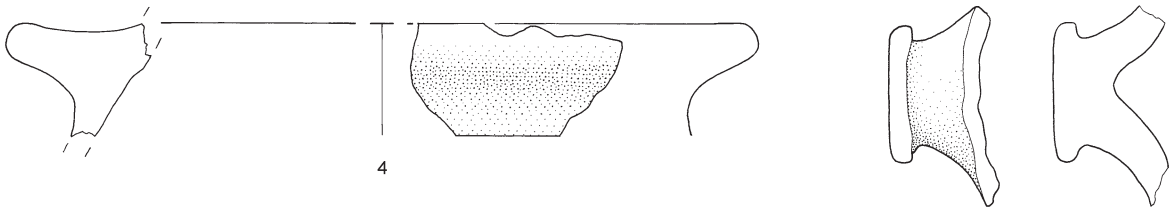
14



16

Site 10008

1 (1:4)



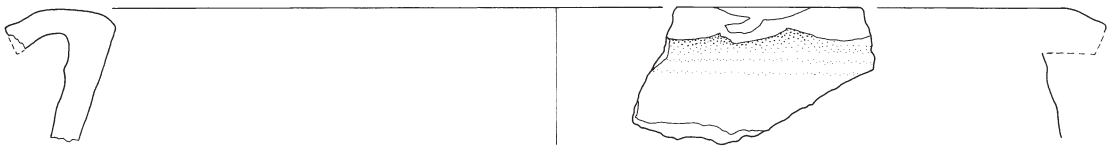
4

5

Site 10034

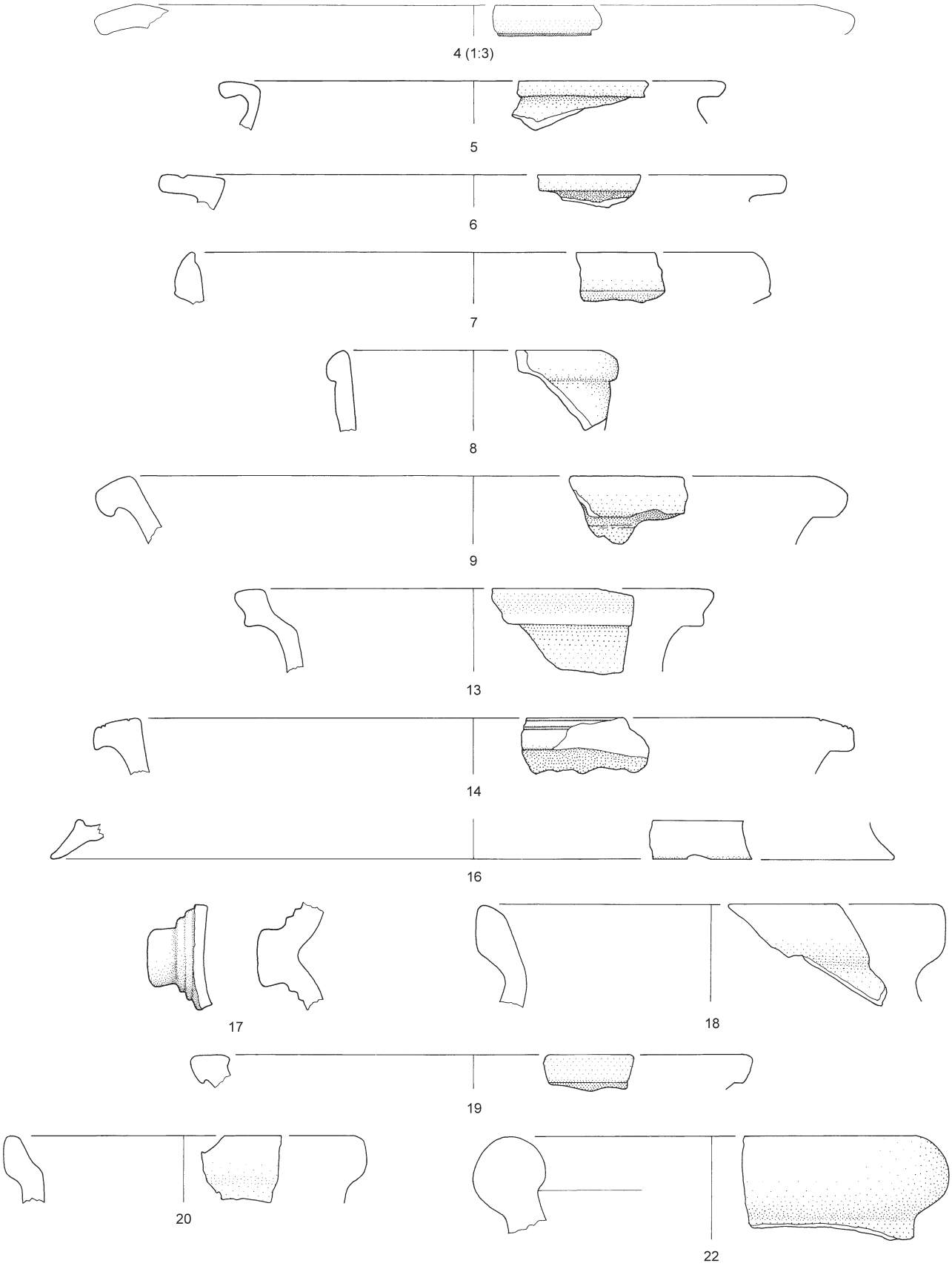
1 (1:3)

2 (1:3)



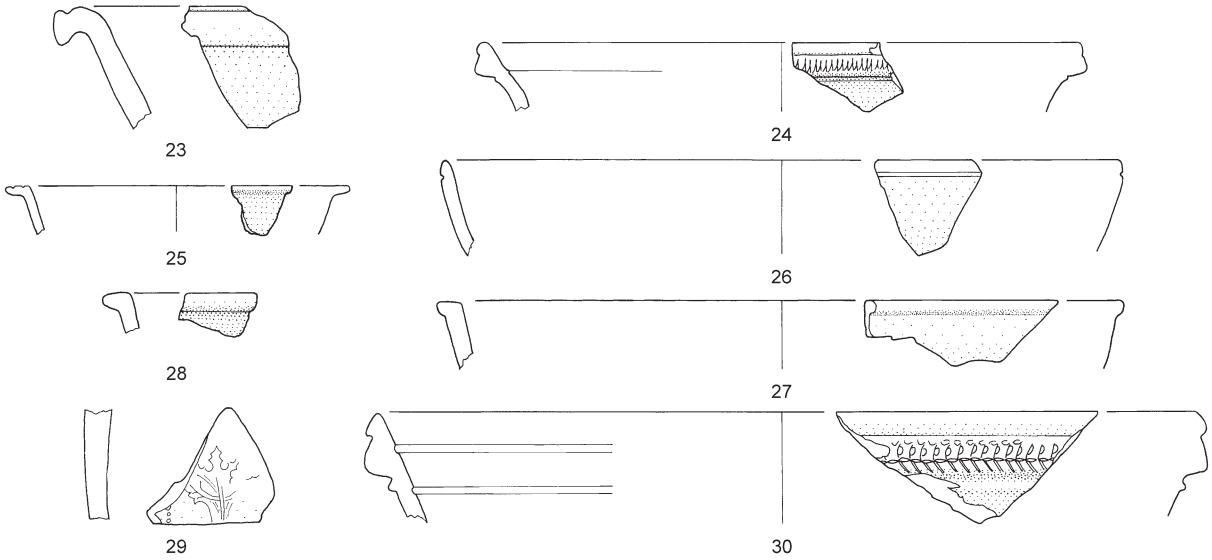
3

Crustumerium survey Plate XX
Site 20034 cont.

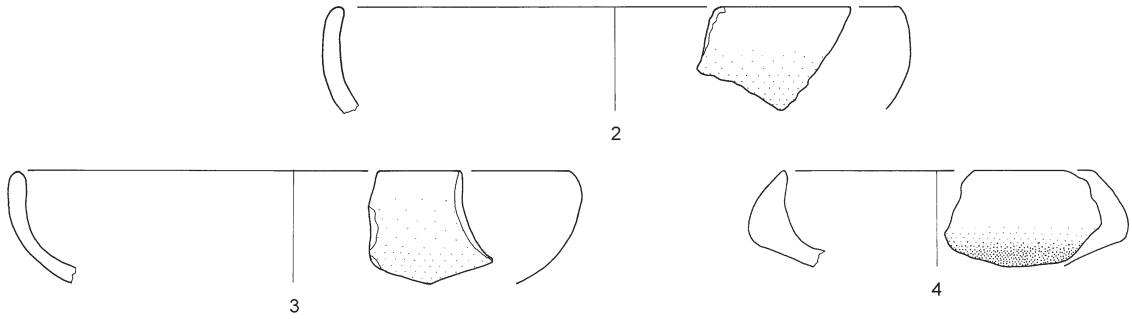


Crustumerium survey Plate XXI

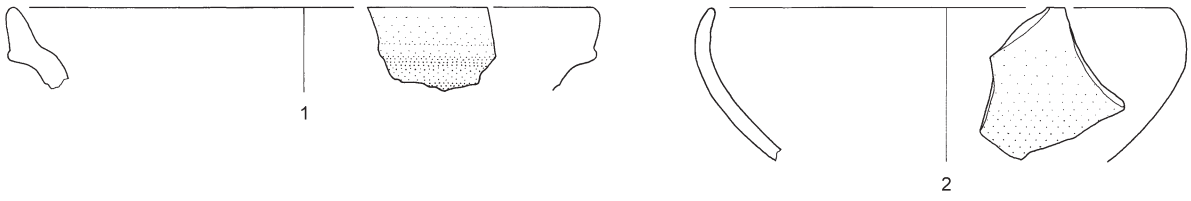
Site 10034 cont.



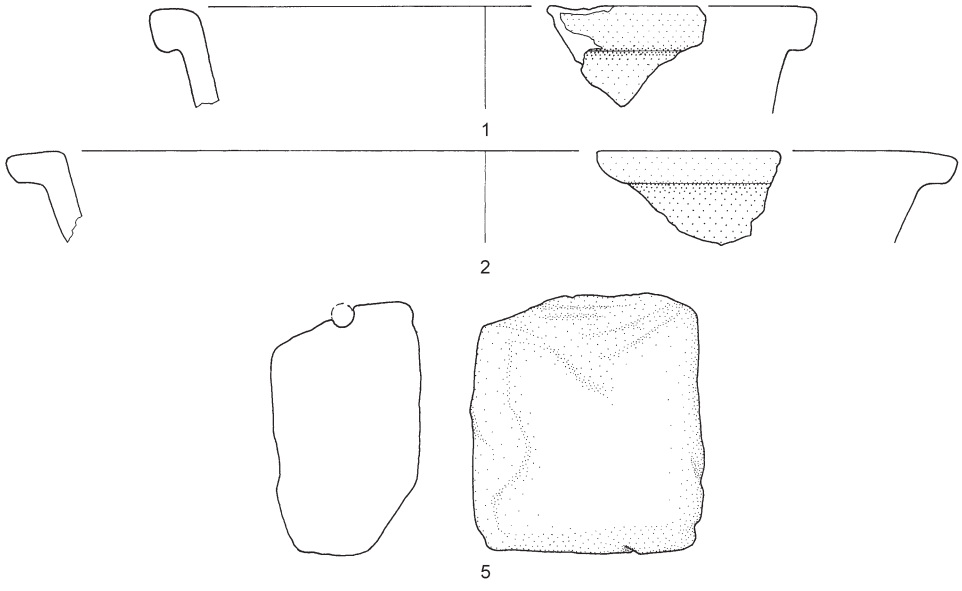
Site 10087



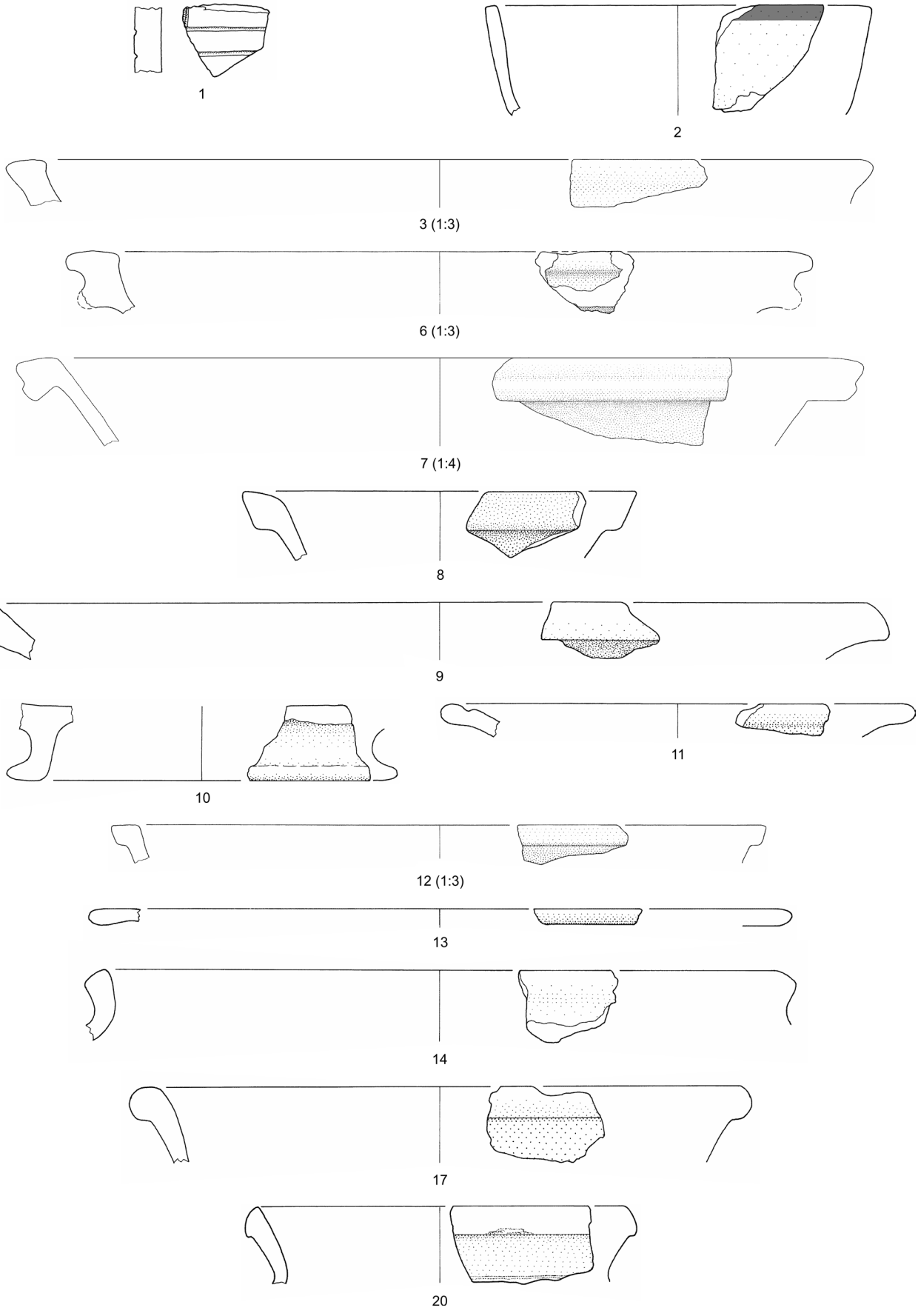
Site 10127



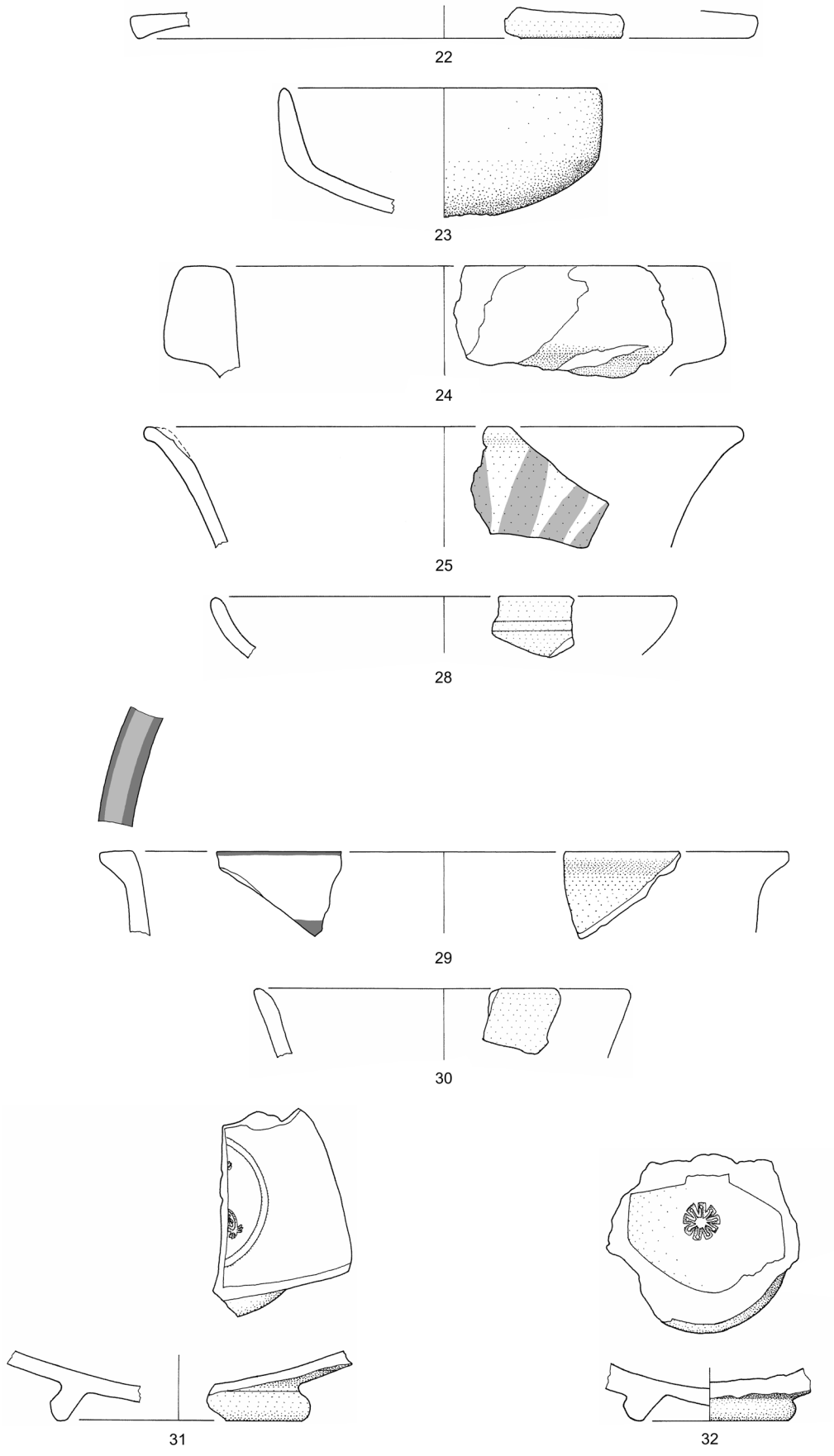
Site 10145



Crustumerium survey Plate XXII
Site 10158

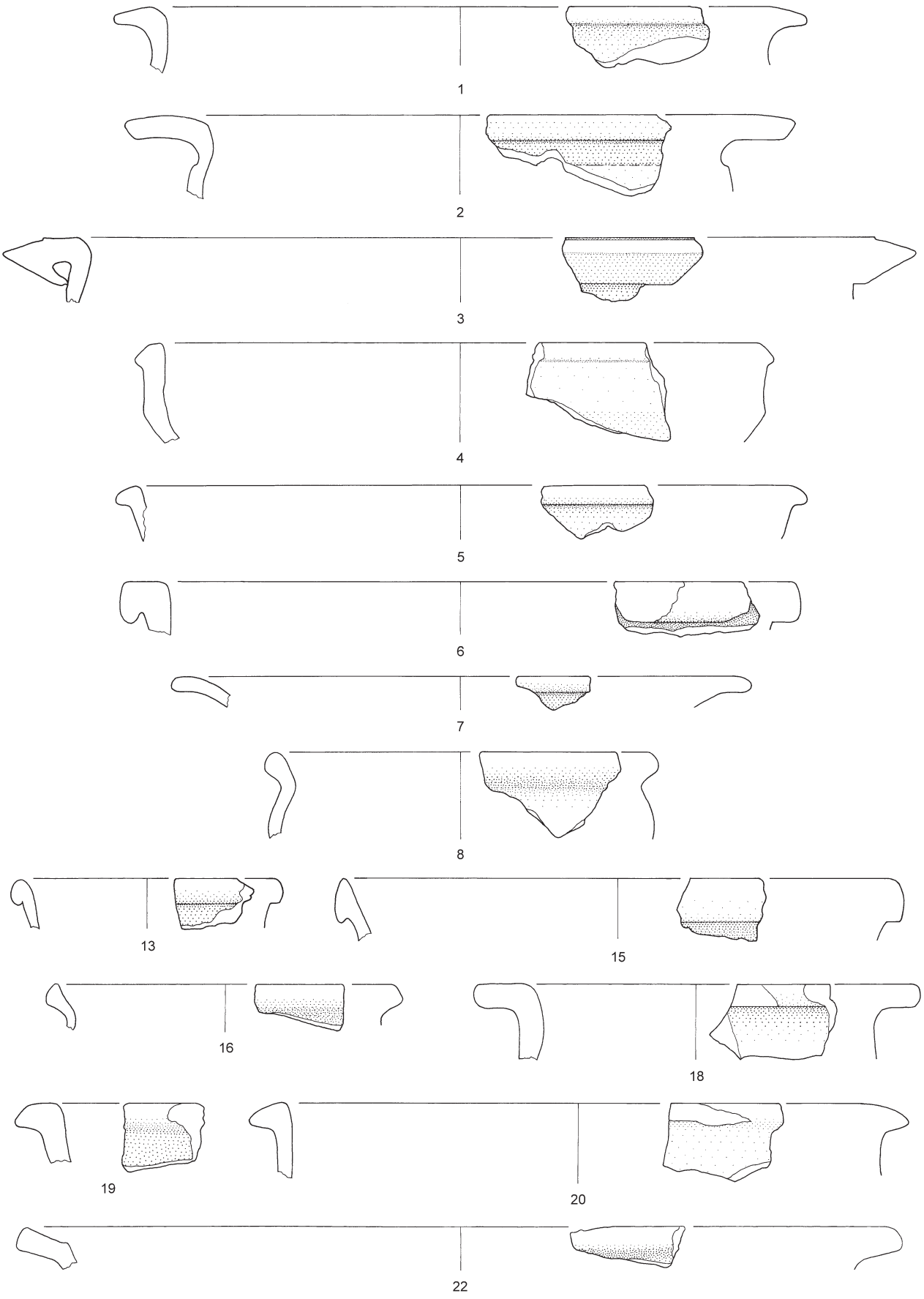


Crustumerium survey Plate XXIII
Site 10158 cont.



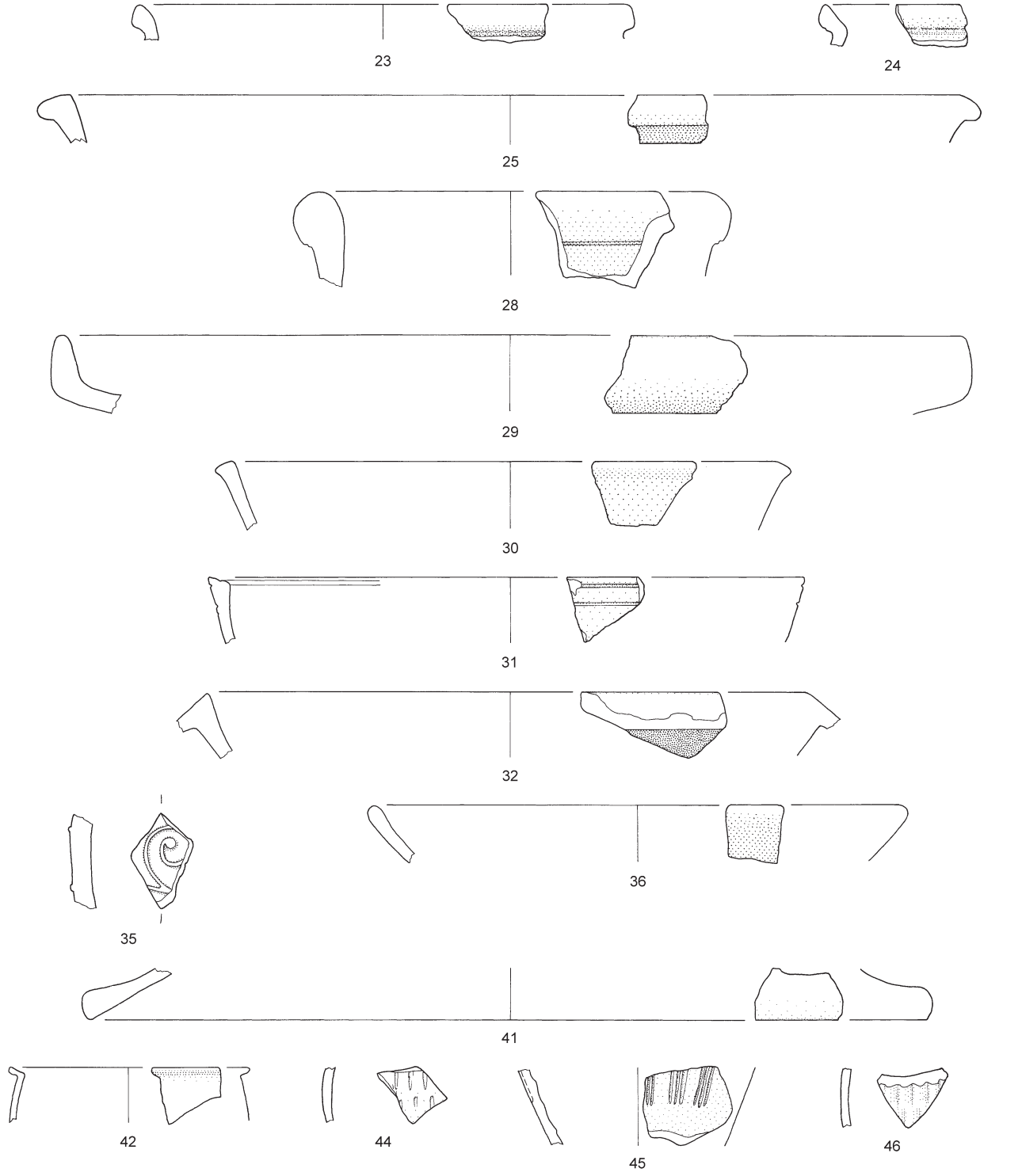
Crustumerium survey
Site 10199

Plate XXIV

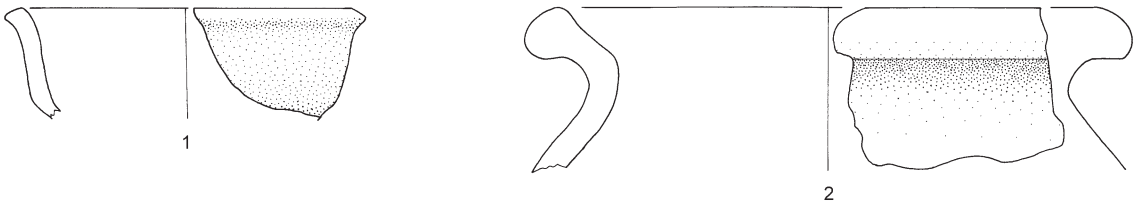


Crustumerium survey Plate XXV

Site 10199 cont.

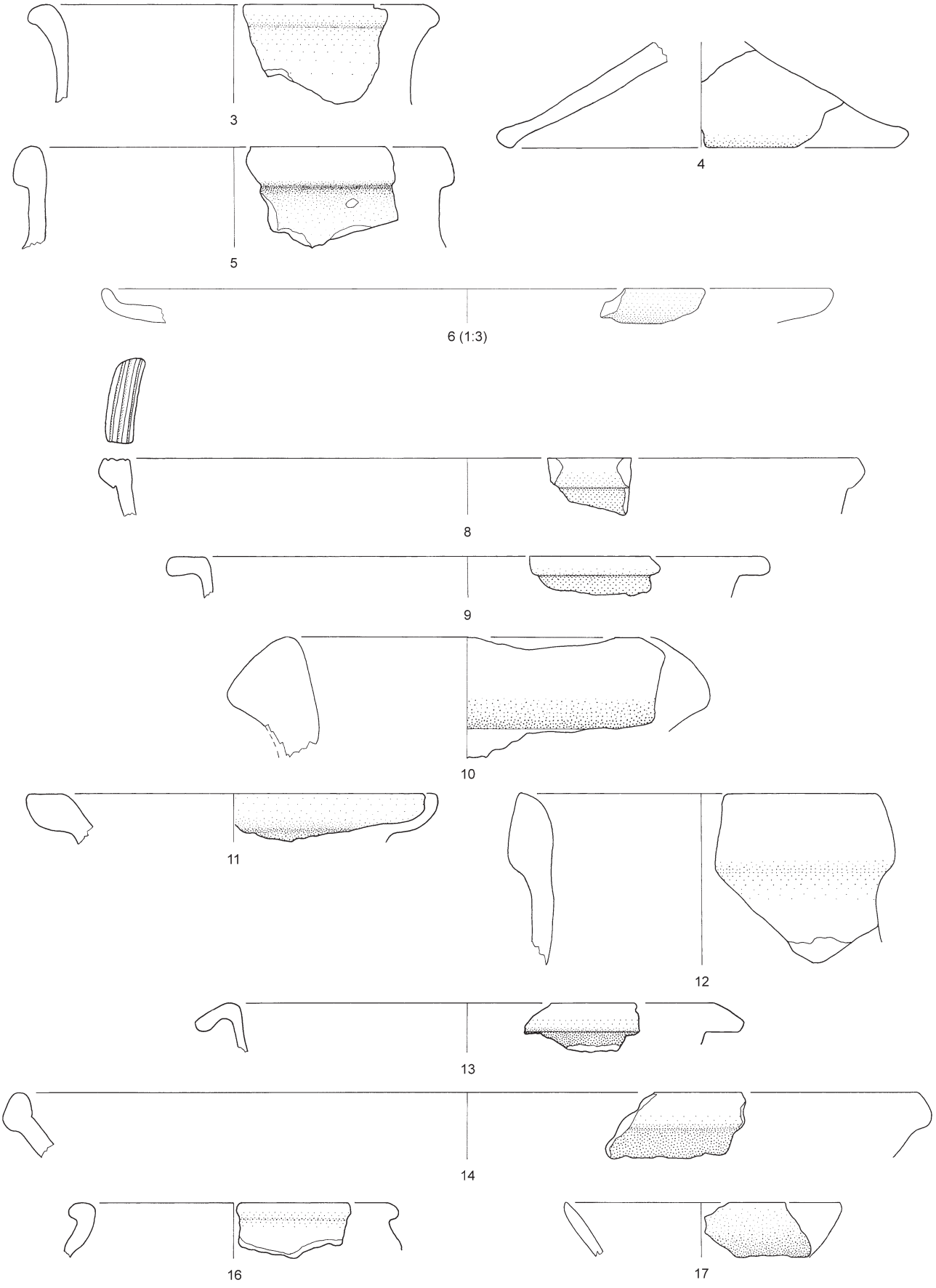


Off-site, *Sample area Northeast*



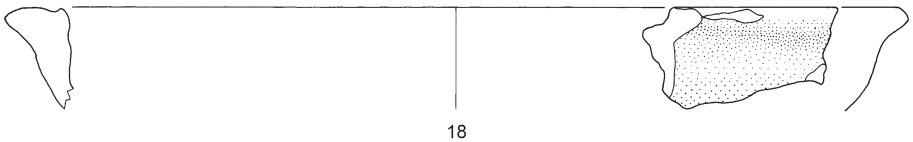
Crustumerium survey Plate XXVI

Off-site, *Sample area Northeast* cont.

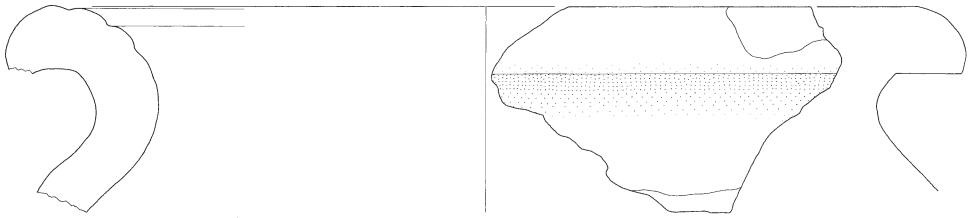


Crustumerium survey Plate XXVII

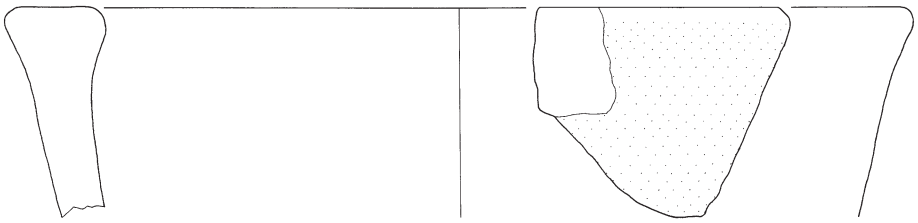
Off-site, *Sample area Northeast* cont.



18

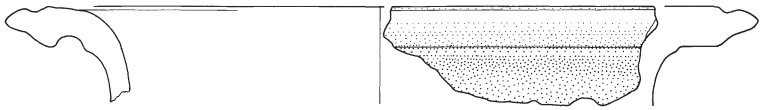


19 (1:3)



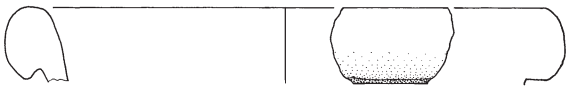
20

21



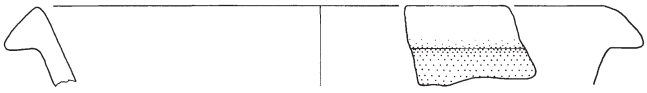
22

Off-site, *Sample area East*



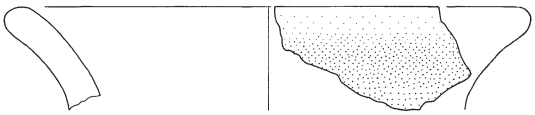
39

41



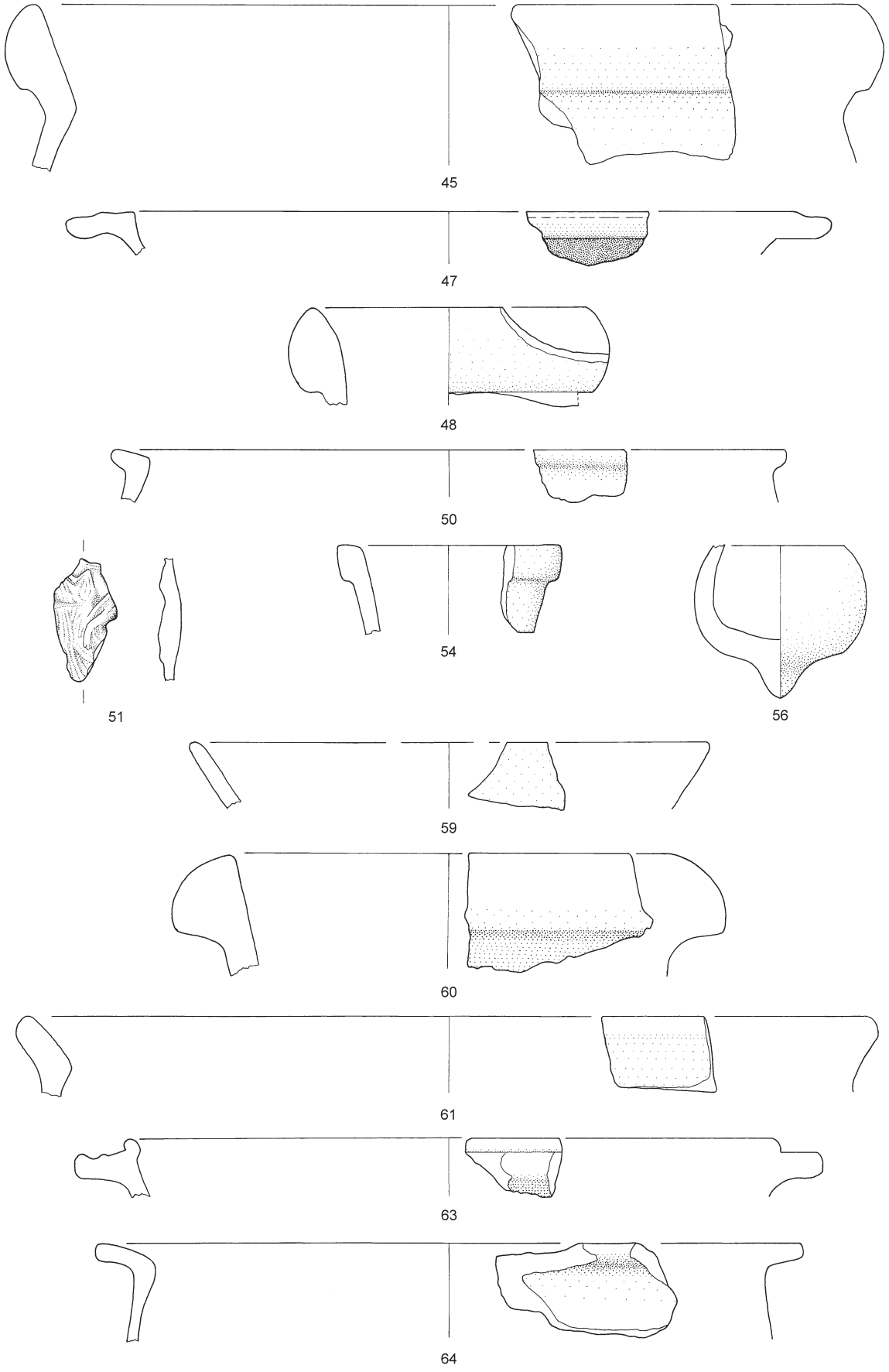
42

43



44

Crustumerium survey Plate XXVIII
Off-site, *Sample area East* cont.



Crustumerium survey Plate XXIX
Off-site, *Sample area South*