## A VIEW OF VAGNARI FROM ACROSS THE BASENTELLO: INITIAL RESULTS FROM THE BVARP SURVEY, 2012

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#### INTRODUCTION

In summer 2012, as part of the Basentello Valley Archaeological Research Project (henceforth, BVARP), a Canadian team initiated a regional archaeological survey to the W of the Basentello River Valley in the territories of Genzano di Lucania, Banzi, and Irsina. This roughly 200 square km survey zone is defined on its S limit by the *Strada Statale* 96 bis, by the Basentello River to the E and N, and by the SS169 to the W (Fig. 1). The geology of this territory is that of the Subappennine Argilaceous datable to the Upper Pleiocene, and the largest watercourses are the Bradano, Basentello, and Fiumarella rivers. At the center of this territory stands the hill of Monte Serico (590 masl), which dominates the zone, to the S of which lies Serra Montavuto and a series of smaller, highly eroded hills. The N part, which is dominated by a fluvial terrace running between the SW bank of the Basentello and the *Strada Provinciale* Marascione-Lamacolma, is the only relatively level part of the survey area.

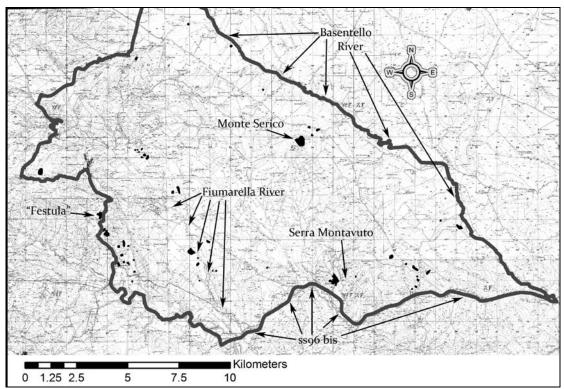


Figure 1. Survey Zone Showing Sites Discovered in 2012.

Interest in this territory stems from excavation of an imperial estate and its associated necropolis at San Felice/Vagnari (Gravina in Puglia),<sup>1</sup> and is linked to

<sup>&</sup>lt;sup>1</sup> McCallum, M. - J. vanderLeest - et al., A Preliminary Report on Field Work at San Felice

<sup>(</sup>Gravina in Puglia, Italy), 2004 – 2010, Mouseion 10.3, forthcoming, 2010; Small, A. et al., Vagnari: il villaggio, l'artigianato, la proprietà imperiale = The village, the industries, the imperial property, Bari, 2011; Prowse T. – J. Barta – T. von Hunnius – A. Small, Stable isotope and mtDNA evidence for geographic origins at the site of Vagnari, South Italy, JRA Suppl. 78, Portsmouth,

BVARP's general research goals, to study and model cultural interaction and change from the 4<sup>th</sup> century BC through the early imperial period, and to assess the role that an imperial estate may have played as a nodal point for cultural change. The regional field survey is designed to examine the change in settlement patterns from the Iron Age to the Late Antique period, to identify possible changes in population, and to put the imperial estate at San Felice/Vagnari into a regional context.

The Basentello Valley is perfectly situated for such research. In the pre-Roman period it represents a liminal zone with respect to a variety of cultural groups (i.e.: Daunians, Lucanians, and Peucetians), and historically it has served as a transport corridor between the Ionic Gulf and the Tavoliere. Moreover, the results from the BVARP settlement survey complement previous regional analyses, including survey work within the Basentello Valley directed by Carola Small in the territories of Gravina and Irsina,<sup>2</sup> which resulted in the discovery and initial documentation of the imperial estate at San Felice/Vagnari, as well as surveys directed by Maria Luisa Marchi (*Ager Venusinus*),<sup>3</sup> Peter Vinson (the route of the Via Appia),<sup>4</sup> and Helena Fracchia (Upper Bradano/Oppido Lucano).<sup>5</sup>

### METHODOLOGY

The survey is part of a multi-scalar approach to examining cultural continuity and change in the Basentello Valley and environs to the W of the river by providing a topdown view of settlement patterns complementing excavation data. The first part of the survey component is an extensive regional survey that seeks to identify sites from all historical and prehistoric periods.<sup>6</sup> The present research is aimed at identifying settlements, settlement densities and hierarchies, site catchments, and differential craft and agricultural production. Particular attention is being paid to continuity from the pre-Roman to the Roman period in order to address potential cultural disruption related to the Roman conquest, the Hannibalic War, the Social Wars, and other similar events.

Our sampling strategy is designed to efficiently identify and date archaeological sites, including sites with materials from multiple periods. The survey is conducted by team members walking parallel transects 15 - 25 m apart, depending on surface visibility. Collections are undertaken when a survey team encounters a minimum of 20 artifacts (including tile and other architectural ceramics) within a quarter hectare. During the summer of 2012, three teams of five people each walked different parts of the survey territory, focusing on high visibility terrain – fields that had been ploughed and wherein the clods had begun to weather. The decision was

<sup>2010, 175-198;</sup> Small, A. – Excavation of the Roman cemetery at Vagnari in the territory of Gravina in Puglia, PBSR 75, 2007, 123-229.

<sup>&</sup>lt;sup>2</sup> Small, A. – C. Small *et al.*, *Field survey in the Basentello Valley on the Basilicata-Puglia border*, Classical Views 17.2, 1998, 321-336.

<sup>&</sup>lt;sup>3</sup> Marchi, M., Ager Venusinus *II*, Florence, 2010.

<sup>&</sup>lt;sup>4</sup> Vinson, P. *Ancient Roads between Venosa and Gravina*. Papers of the British School at Rome, 40, 1972, 58-90.

<sup>&</sup>lt;sup>5</sup> Fracchia, H. – M. Gualtieri, The countryside of Regio II and Regio III (300 B.C. – AD 14) in Colivicchi, F. (ed.), *Local Cultues of South Italy and Sicily in the Late Republican Period: Between Hellenism and Rome*, Supplement to the Journal of Roman Archaeology, Portsmouth, 2011, 11-29; H. Fracchia – T. Mattioli, *Recent Research in the Upper Bradano Valley: the vici of the 2nd c. AD*, Mouseion, 10.2, 2010, 169-192.

<sup>&</sup>lt;sup>6</sup> We have identified sites that merit more detailed investigation in future, including intensive pedestrian survey and geophysical prospection.

made to examine these fields in the hope that fields with low-visibility in 2012 may have higher visibility in subsequent seasons.<sup>7</sup>

Once artifacts are encountered, two types of surface collections, general and systematic, are carried out depending on the relative abundance of remains. General collections are made when artifact densities are equal to or less than 1 artifact/m<sup>2</sup>, whereas densities greater than 1 artifact/m<sup>2</sup> indicate that a systematic collection should be conducted using 3 m diameter circles (7.065 m<sup>2</sup>) in order to standardize artifact-density values.<sup>8</sup> The location of each 3 m circle is chosen arbitrarily to avoid bias and to be representative of the average density of artifacts within an individual collection unit.

Notional sites are divided into 'Collection Units' of 0.25 ha. A site 0.25 ha or smaller would have one Collection Unit, while a site covering 4.0 ha would have 16 Collection Units. These Collection Units, rather than sites, form the basis of subsequent analyses.<sup>9</sup> In the interest of space, however, much of the following discussion will revolve around sites rather than Collection Units.

Our sampling strategy allows us to cover large areas relatively quickly. At the same time, however, resolution with respect to artifact types, datable pottery, and density afforded by this method allows us to compare our findings to other, more intensive surveys conducted in adjacent territories.<sup>10</sup> Since any surface sample is never a truly representative proxy of the subsurface assemblage, this method of sampling is, statistically speaking, as accurate as more intensive collection strategies.<sup>11</sup>

All data is recorded electronically in the field using Trimble Yuma tablets equipped with GPS receivers. Our spatial data is traced in ArcMap (version 10.1) and our forms exist as part of a Microsoft Access database. From this survey-mapping project we possess the identity and location of every collection unit found in the field with an error of 5 m.

# RESULTS

During the summer of 2012, we identified 55 sites comprising 233 collection units over ca. 30 square km, of which 40 sites date from the Paleolithic to the Medieval, with an additional 15 dating to more recent historical periods. The scatters at prehistoric and ancient sites range in size from less than 0.10 to 13 ha and are located on all types of terrain. Many of these sites were occupied during or across different prehistoric and historical periods. In keeping with the theme of the

<sup>&</sup>lt;sup>7</sup> During the summer of 2011, team members conducted preliminary survey work in the Basentello Valley to determine the visibility in fields covered with stubble, burned fields, ploughed fields, both those with weathered and unweathered clods. Based on this experience, and advice from colleagues, we determined that transects spaced at 15 - 25 m would yield good results.

<sup>&</sup>lt;sup>8</sup> Drennan, R. *et al.*, *Methods for Archeological Settlement Study*, in C. Zhong Mei (ed.), *Regional Archeology in Eastern Inner Mongolia: A Methodological Exploration*, Beijing, 2003, 122-151; Drennan *et al*, *Approaches to Regional Demographic Reconstruction*, in Zhong Mei (ed.), *Regional Archeology*, 152-165.

<sup>&</sup>lt;sup>9</sup> Drennan, Regional Demographic Reconstruction, 160-165.

<sup>&</sup>lt;sup>10</sup> Prieto, A., *Survey design and field methods*, in J. Coleman and A. Prieto (eds.), *The* Chora of *Metaponto 3: Archaeological Field Survey Bradano to Basento*, vol. 1, Austin, 2011, 85-92, discusses similar issues related to the Metaponto survey data; see also Fentress, E. *The Jerba Survey: Settlement in the Punic and Roman Periods*, Africa Romana 13, 2000, 49-50.

<sup>&</sup>lt;sup>11</sup> Drennan, *Regional Demographic Reconstruction*, 160 – 165; Drennan, R., *Statistics for Archaeologists: A Common Sense Approach*, Dordrecht, 2009, 79-96.

conference proceedings, this paper focuses on survey data from the Iron Age to the Late Antique periods. The chronological divisions used below reflect the preliminary nature and quality of our data, particularly with respect to matt-painted wares and black-gloss pottery. More detailed study of the pottery recovered during the survey will be required to determine the various chronologically distinct subcategories to which examples of these classes of pottery correspond (for example: Geometric vs. Subgeometric, in the case of matt-painted wares). In part as a consequence of this, but also because discussions of Iron Age chronology in many parts of Italy are complicated and contradictory,<sup>12</sup> the discussion below lumps all periods of the Iron Age, from roughly the 9<sup>th</sup> century BC down to the arrival of Italian black-gloss pottery in the 5<sup>th</sup> century BC, together. Similarly, those sites at which Italian blackgloss pottery have been recovered have been lumped together as part of the Classical/Hellenistic/Republican period, which lasts from the end of the 5<sup>th</sup> to the 1<sup>st</sup> century BC. Where more nuanced chronological distinctions of the ceramic material have already been made during our preliminary analysis in the field, it is noted in the discussion and related to possible settlement trends or patterns.

PERIODS	NUMBER OF SITES	<b>RANGE OF SITE SIZE</b>	DIAGNOSTICS
Iron Age	6	0.10 – ca. 13 ha	Matt-Painted Wares,
			Impasto
Classical/Hellenistic/	21	0.15 – ca. 13 ha	Black-gloss, grey-gloss
Republican			
Roman Imperial	25	0.2 – 3.5 ha	ITS, ARS, Amphorae,
			Stamped Tile
Late Antique	15	0.85 – 4.5 ha	ARS, Late Roman Painted
_			Ware, Coins

Table 1. Preliminary Survey Data from 2012

IRON AGE/ARCHAIC (9<sup>TH</sup> TO 5<sup>TH</sup> CENTURIES BC)

We identified six sites with evidence for Iron Age/Archaic occupation and, in every case, the evidence suggests that human settlement and activity during this period was at its peak during the Late Iron Age to the transition to the Classical/Hellenistic/Republican period (from the late 5<sup>th</sup> through early 4<sup>th</sup> centuries BC) (Table 1). Of these six sites, by far the largest is located on a terrace on the E slopes of Monte Serico that has since weathered and eroded. Unfortunately, this site was discovered during the final days of the 2012 season so we were not able to complete our surface collections (we collected from 13 of the 52 Collection Units, although we performed a cursory examination of all Collection Units), so our interpretation is speculative. The site, however, represents what was clearly a sizeable regional center, possibly a continuation of the settlement identified by Ciriello, Sodo, and Cossalter<sup>13</sup> on the lower, W slope of the hill, and so merits discussion here.

The size and density of the scatter is likely indicative of a substantial Iron Age settlement. This is not surprising since, as was just noted, the remains of an Iron Age settlement and associated necropolis<sup>14</sup> have been found previously within the

<sup>&</sup>lt;sup>12</sup> Horsnaes, H., *Cultural Development in North Western Lucania c. 600 – 273 BC*, Rome, 2002, 10-11; Leighton, R., *Time versus tradition: Iron Age chronologies in Sicily and southern Italy*, in

Ridgway, R. et al. (eds.), Ancient Italy in its Mediterranean Setting, 2000, London, 34 and 44. <sup>13</sup> Ciriello, R. – M. Sodo – L. Cossalter, Ricerche recenti in area mediobradanica. L'insediamento di Monteserico nella prima età del ferro, in Bettelli, M. – C. De Faveri – M. Osanna (eds.), Prima delle colonie: organizzazione territoriale e produzioni ceramiche specializzate in Basilicata e Calabria settentrionale ionica nella prima età del ferro, Venosa, 2007.

<sup>&</sup>lt;sup>14</sup> Ciriello – Sodo – Cossalter, *Ricerche in area mediobradanica*, 309-338.

archaeologically protected zone on a small natural terrace to the W of the level plateau at the top of Monte Serico, which includes the Medieval castle. The settlement itself appears to have been a collection of oval huts founded in the late 9<sup>th</sup> or early 8<sup>th</sup> century BC, with major restructuring, including the construction of stone buildings, in the 6<sup>th</sup> century BC.<sup>15</sup> The settlement was likely similar to other second-order nucleated centers of the same period,<sup>16</sup> such as those identified at Lamiecelle (ca. 9.3 km to the E),<sup>17</sup> Serra San Felice (10 km to the SE),<sup>18</sup> Crocevelina (ca. 18 km to the SE),<sup>20</sup> and Monte Irsi (ca. 20 km to the S),<sup>21</sup> all but one of which is visible from Monte Serico.

The earliest material recovered (matt-painted ware datable from the 9<sup>th</sup> through 6<sup>th</sup> century BC, and Iron Age impasto cookware) is concentrated in the S and W part of the scatter, with black-gloss spread across most of the 13-collection units save the N and E edges, where grey-gloss, ITS, and early ARS–A (Hayes 8) along with late Republican and early Imperial cookwares predominate. The presence of fragments of basalt hand querns, architectural terracottas and roof tiles, loomweights, cookwares, and undecorated finewares nearby is indicative of a settlement.

The settlement represented by the surface remains may increased in dimensions at the end of the Iron Age with the appearance of black-gloss pottery (during the Classical and Hellenistic periods) and the presence of black-grey-gloss pottery throughout many of the central and eastern collection units may indicate a continuous occupation of the site after the 3<sup>rd</sup> century BC and into the Roman period, although closer inspection of the black-gloss might show a gap in occupation during the 3<sup>rd</sup> century BC, as has been noted elsewhere in the Basentello.<sup>22</sup> If the site was abandoned, it was reoccupied during the late Republic or early Imperial period. Collection and study of the pottery next summer will allow us to comment further on these hypotheses.

Three late Iron Age sites (6<sup>th</sup> to 5<sup>th</sup> centuries BC) were also discovered in the vicinity of Monte Serico, at lower elevations, with the largest of these, 0.85 ha, at the W base of the hill. Sedimentological analysis will be undertaken in 2013 to determine whether or not these surface scatters are the result of ploughing or of erosion of an upslope site.

Another two sites with artifacts datable to the late Iron Age are located in the E part of the survey area, between Serra Montavuto and the Basentello to the N of Irsina and the SS 96 bis. These sites, which are relatively small and isolated (ca. 0.15 ha), also have Hellenistic and Roman materials.

Based on our preliminary data, settlement during the Iron Age was dominated by a single, nucleated site located in a defensible position, with very few smaller sites located in the countryside. This may have been a nodal center in a network of occupation throughout the Basentello that includes the aforementioned sites at Serra San Felice and Monte Irsi. At the same time, these are likely second-order sites with

<sup>&</sup>lt;sup>15</sup> Ciriello – Sodo – Cossalter, *Ricerche in area mediobradanica*, 315-318.

<sup>&</sup>lt;sup>16</sup> Ciriello – Sodo - Cossalter, *Ricerche in area mediobradanica*, 315-316.

<sup>&</sup>lt;sup>17</sup> Small, A. Introduction, in Vagnari, 14-15.

<sup>&</sup>lt;sup>18</sup> Small, C. – A. Small, *Archaeological field survey at San Felice in Apulia*, Mouseion 7.2, 2007, 113-116.

<sup>&</sup>lt;sup>19</sup> Small, A., *Introduction*, in *Vagnari*, 14-15.

<sup>&</sup>lt;sup>20</sup> Small, A., *Introduction*, in *Vagnari*, 14-15.

<sup>&</sup>lt;sup>21</sup> Small, A. – C. Small – et al., Survey in the Basentello Valley, 351.

<sup>&</sup>lt;sup>22</sup> Small, A. - C. Small - et al., Survey in the Basentello Valley, 351 and 361.

respect to centers such as *Silvium* (on Botromagno, next to Gravina in Puglia) and possibly Iron Age *Bantia*.

# CLASSICAL/HELLENISTIC/REPUBLICAN PERIOD (4<sup>th</sup> to 1<sup>st</sup> Century BC)

It is evident that the situation during the Classical/Hellenistic/Republican period is quite different than that of the Iron Age/Archaic period. Starting in the late 4<sup>th</sup>/early 3<sup>rd</sup> century BC a number of small new sites appear to have been founded. In total, we identified 21 sites with material from this broad chronological period (Table 1), most of them less than 0.25 ha, although two were slightly larger than 1.0 ha, and one, the aforementioned site at Monte Serico, covered up to 13 ha, although this is clearly anomalous with respect to other, contemporaneous sites. Seventeen of these 21 sites appear to have continued into the Roman period, and many of them show evidence for continued occupation or activity into Late Antiquity. They cluster to the S of Genzano di Lucania (near Mattina Piccola), to the W of Genzano, principally along the Fiumarella, and in the SE part of our survey territory near the Basentello.

In general, we can say that there is a more diffuse settlement pattern during the Hellenistic/Republican period, during which there is a 'filling up' of the countryside, a phenomenon seen elsewhere in southern Italy and the peninsula.<sup>23</sup>

The most important work for the future will be to see if we can determine with greater precision the point at which this 'filling up' begins. Is it a phenomenon that begins in the 4<sup>th</sup> century BC and continues with some continuity until the 1<sup>st</sup> century BC, or does it begin after the events of the Hannibalic War?

# IMPERIAL PERIOD (1<sup>ST</sup> CENTURY BC TO 3<sup>RD</sup> CENTURY AD)

We identified 25 sites in the survey territory with evidence for occupation during the Imperial period (Table 1), including, as just noted, 17 that were in existence during the previous period. Of these, five appear to have been abandoned during the late  $1^{st}$  or  $2^{nd}$  century AD, while ten show continuous occupation through to the Late Antique period. There is no evidence to suggest that during the imperial period there was a decrease in population within the survey zone. Indeed, there are more sites during this period and most that continue from the Hellenistic period become larger and exhibit a higher density of pottery.

The Imperial period sites are generally situated in the same locations as those of the Hellenistic/Republican period, which should not be a surprise due to the continued occupation of so many of these sites. They range in size from 0.2 to 3.5 ha, with the smallest sites in the SE. The scatters at five sites are between 2.0 and 3.5 ha in size, which may represent the presence of a villa. At the same time, there are no so-called 'luxury' materials present on the surface of any of these sites (painted plaster, marble, mosaic tesserae, etc), so it is also possible that they may simply be large farms or small agricultural villages, including a site at Masseria Sorgente on a hill to the E of Lago di Serra del Corvo at which we found a tile stamped, "ANNI.POLLION", indicating that it was made in a tile yard owned by a member of the Pollio branch of the *gens* Annia.<sup>24</sup> At the same time, local informants note that at one of these sites, which they identify as part of the village of 'Festula', to the S of

<sup>&</sup>lt;sup>23</sup> A good example of this comes from the nearby territory of Canusium: Goffredo, R., *Persistence and change in settlement patterns in the Ofanto valley near Canusium and Cannae* (*Apulia*) (*late 4*<sup>th</sup> *century BC – 1*<sup>st</sup> *century AD*), JRA 23, 2010, 23-25 and 28-30.

<sup>&</sup>lt;sup>24</sup> Helga Di Giuseppe has transliterated and provided a provisional identification of the this stamp, of which there are apparently other unpublished examples in northern Lucania (pers. comm.).

Genzano di Lucania, fragments of marble and indeed a rather large statue of the goddess Ceres have been recovered over the course of the last two centuries.<sup>25</sup> It is possible, then, that a villa, a *vicus*, or a Roman period sanctuary (or potentially all three) existed here.

The smaller sites may correspond to farms or storage structures, although geophysical prospection at a sample of such sites, planned for the summer of 2013, will be necessary to test this hypothesis.

# LATE ANTIQUE PERIOD (4<sup>TH</sup> TO 8<sup>TH</sup> CENTURIES AD)

There is a reduction in the number of sites during this period from 25 to 15 (Table 1). Those settlements which continue, however, demonstrate a substantial increase in dimensions and density of artifacts. For example, the scatters of late antique pottery, including identifiable sherds of ARS C and D and Late Roman Painted Ware, at most sites where there is evidence for occupation during the Imperial period, cover from two to three times the area and show a higher density. This may indicate an increase in activity and population at these settlements. It is also evident that the largest of the Imperial period sites are the ones that continue into Late Antiquity. Clearly, there is no good evidence for a local crisis during the Late Antique period.<sup>26</sup>

All of these sites demonstrate evidence for agricultural activity, with fragments of millstone and dolium on the surface. There are also many more examples of transport amphorae from these sites, including abundant sherds of African Amphora, which may indicate an increased level of commercial contact with the broader Mediterranean.

## INTERPRETATION

Our results are clearly preliminary, but they are suggestive of settlement and demographic trends. The territory to the immediate W of the Basentello in the SE corner of our survey zone produced the fewest ancient sites, and those sites identified were among the smallest in our survey territory. This is also the part of the survey territory that is most isolated from larger centers during all periods, so this isolation may be a factor in the site density. This also corresponds roughly to the results generated by the Smalls in their survey of the territory to the E of the Basentello.<sup>27</sup>

There is evidence for nucleated settlement within our survey territory at Monte Serico starting in the Iron Age. There is little evidence for dispersed settlement during this same period, although such settlement increases in the 4<sup>th</sup> and 3<sup>rd</sup> centuries BC. What happens after the 3<sup>rd</sup> century BC is unclear: there may be a reduction in the number of sites; alternatively, many of the sites from this period may have continued to be occupied into the Roman period; or there may be an under-representation of pottery datable from the late 3<sup>rd</sup> through the 2<sup>nd</sup> century BC at sites in our survey zone. Based on the presence of grey-gloss alongside 2<sup>nd</sup> and 1<sup>st</sup> century BC black-gloss at many 'Roman' sites, we suggest that it is likely that there was a slight reduction in the number of sites from the late 3<sup>rd</sup> through 2<sup>nd</sup> centuries BC, which may be related to changes in the aftermath of the Hannibalic War. There is also evidence, however, for the continued use of settlements into the 1<sup>st</sup> century BC and the imperial period, and a general increase in the number of sites, particularly in the Fiumarella

<sup>&</sup>lt;sup>25</sup> Battaglino, M., *Ipotesi sulle origini di Genzano*, Venosa, 2010, 23-26.

<sup>&</sup>lt;sup>26</sup> This corresponds generally to the findings in: Small, A. – C. Small *et al.*, *Survey in the Basentello Valley*, 353-354 and 362.

<sup>&</sup>lt;sup>27</sup> Small, A. – C. Small, *Survey in the Basentello Valley*, 355-356.

valley, from the 3<sup>rd</sup> to 1<sup>st</sup> centuries BC, a finding which is different from the results of the Small's Basentello valley survey in the territory of Gravina in Puglia,<sup>28</sup> but generally similar to their survey results in the territory of Irsina<sup>29</sup> and to the results of Fracchia's survey of the upper Bradano in the territory of Oppido Lucano.<sup>30</sup> It will be interesting to see if this trend can be discerned in the territory across the Basentello from the imperial estate at San Felice/Vagnari.

There is an abundance of Roman sites throughout much of the survey zone, with sites of various sizes suggesting the presence of small structures, possibly farmsteads or even larger villas. No Roman site so far identified approximates that of Vagnari, but one site along the banks of the Fiumarella and the site identified as 'Festula' may be *vici* (agricultural villages) or possibly *latifundia*, although it is difficult to imagine how surface remains might be used to identify larger sites with such precision.

A significant number of these Roman sites show evidence of increased population density and expansion starting in the mid- to late 3<sup>rd</sup> century AD. This phenomenon is also evident in the survey data generated by the Smalls in the late 1990s, and is consistent with the excavation data from Vagnari, Masseria Ciccotti, and San Gilio. It has been suggested that the expansion of rural sites in the south at this time can be explained by the region's increased importance with respect to supplying the city of Rome and the Roman military, a phenomenon that gained steam particularly after the loss of the African provinces.<sup>31</sup> During this period, the surplus production of a variety of foodstuffs was required, which would have seen an increase in capital investment on the part of landowners and their tenants, and possibly a centralization of agricultural processing facilities and the creation or expansion of agricultural villages in the region.<sup>32</sup>

Finally, in all periods discussed save the Iron Age, there are concentrations of sites along the Fiumarella, near Serra Montavuto, and to the S of Genzano on the lower hills below the massif on which the modern city stands. With regard to the Fiumarella, the sites here may indicate the presence of an ancient road winding up the river valley from the Bradano towards ancient Bantia. The sites next to Serra Montavuto and to the S of Genzano are all principally Roman sites, among the larger settlements within the survey zone, and are situated on terraces lining the N edge of the Bradano valley. This arrangement echoes that on the S side of this valley within the territory of Oppido Lucano (at San Giglio and Masseria Ciccotti).<sup>33</sup> The

<sup>&</sup>lt;sup>28</sup> Small, A. – C. Small, *Survey in the Basentello Valley*, 361.

<sup>&</sup>lt;sup>29</sup> Small, A. – C. Small, *Survey in the Basentello Valley*, 351.

<sup>&</sup>lt;sup>30</sup> Gualtieri, M., Lucanian landscapes in the age of 'Romanization' (third to first centuries BC): two case studies, in: de Ligt, L. and S. Northwood (eds.), People, Land, and Politics: Demographic Developments and the Transformation of Roman Italy 300 BC-AD 14, Leiden; Boston, 2008, 387-416.

<sup>&</sup>lt;sup>31</sup> Small, A., Introduction, in Vagnari, 31-32; Fracchia, H., Il paesaggio rurale dell'Alto Bradano fra IV e V secolo d.C., in G. Volpe – M. Turchiano (eds.), Paessaggi e insediamenti rurali in Italia meridionale fra tardoantico e altomedioevo, Bari, 2004, 132-137; Fracchia, H., Recent Research in the Upper Bradano Valley, Mouseion 10.2, 2010, 172-174.

<sup>&</sup>lt;sup>32</sup> Vera, D. Dalla 'villa perfecta' alla villa di Palladio: sulle trasformazioni del sistema agrario in Italia fra principato e dominato, Athenaeum 83, fasc. 1, 1995, 203-205; Vera, Villa perfecta, fasc. 2, 1995, 335-337.

<sup>&</sup>lt;sup>33</sup> Di Giuseppe, H., La villa romana di San Gilio di Oppido Lucano: Tra élites urbane e locali, in A. Russo – H. Di Giuseppe (eds.), Felicitas Temporum. Dalla terra alle genti: la Basilicata settentrionale tra archeologia e storia, Potenza, 2008, 305-354; Fracchia, H., Rinvenimenti ceramici e trasformazioni dell'assetto insediativo nell'alta valle del Bradano, in A. Russo – H. Di

significance of this arrangement is not immediately evident, although there does appear to be a difference in landownership and usage patterns between the Upper Bradano and the Basentello, which may become more marked during the 3<sup>rd</sup> century AD.

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