Preliminary report on Sofiana/mansion Philosophiana in the hinterland of Piazza Armerina

Kim Bowes, Mariaelena Ghisleni,
Gioacchino Francesco La Torre and Emanuele Vaccaro

Introduction

The 4th-c. Villa del Casale outside Piazza Armerina is one of the best-known Roman villas. Justly famous for its extraordinary mosaics and fine architecture, it has also served as the prime exemplar of the Late Roman ‘great estate’, its luxurious living quarters signaling an alleged retreat of élites to the countryside, the growth of the so-called latifundia, and the evolution away from in-house slave labor towards tenancy.\(^1\) New excavations at the villa are beginning to yield a more precise account of its post-Roman chronology,\(^2\) but there has been little systematic research on the surrounding landscape.\(^3\) No systematic field survey has been undertaken to document the farms and other settlements that occupied its agrarian hinterland, and the local road-network that transported its produce to market is understood in only an impressionistic fashion.\(^4\) Assessments of the villa’s economic basis, its managerial and tenurial arrangements have benefitted from little archaeological input, except from the site of Sofiana (figs. 1-2), located c. 6 km to the southwest across the Nociana river and identified as the statio or mansion Philosophiana of the Antonine Itinerary (S82) both on the basis of tiles bearing the FIL-SOF mark found at the site\(^5\) and from its correspondence with the Itinerary’s mileage figures on the cross-island route from Catania to Agrigento. The name with its -iana ending has been read as an adjectival, presumably Philosophiana, modifying praeda (estate).\(^6\) The Villa del Casale has thus been identified as

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1 Among a vast bibliography, fundamental are G. Gentili, La villa imperiale di Piazza Armerina (Rome 1951); B. Pace, Mosaici di Piazza Armerina (Rome 1955); A. Carandini, A. Ricci and M. De Vos, Filosofiana, la villa di Piazza Armerina: immagine di un aristocratico romano al tempo di Costantino (Palermo 1982); R. Wilson, Piazza Armerina (London 1983); G. Rizza and S. Garaffo (edds.), La villa romana del Casale di Piazza Armerina (Catania 1988); G. Gentili, La villa romana di Piazza Armerina. Palazzo Erclito (Oisino 1999); and the comments and summary in C. Sfamari, Ville residenziali nell’Italia tardoantica (Bari 2006) 29-46.


4 G. Uggeri, La viabilità della Sicilia in età romana (Galatina 2004), which is largely based on map analysis, not fieldwork.

5 First published in D. Adameteanu, “Vaso figurato di età cristiana di Sofiana,” BDI 1956, 158-61. No photographs were published; although the early excavation records were stored in the Gela museum, none of us has seen these stamped tiles there or in the field.

6 G. Manganaro, “La Sicilia da Sesto Pompeo a Diocleziano,” ANRW 11.1 (1988) 33; P. Arnaud,
this estate’s center, while Sofiana/Philosophiana is generally, though not universally, identified as a dependent of that estate, possibly a workers’ village.7

Begun in 2009 as a collaboration between Cornell University, the Università di Messina and the Soprintendenza di Caltanissetta, the Philosophiana Project aims to produce a

7 A. Li Gotti, “Topografia antica del ‘Casale’ presso Piazza Armerina,” Regione Siciliana 7 (1953) 26-33; D. Adamo, “Due problemi topografici del re roterra gelesco,” RevLine 10.3-4 (1955) 199-210; Carandini, Ricci and De Vos (supra n.1) 15-26; S. Calderone, “Contesto storico, committenza e cronologia,” in Rizza and Garaffo (supra n.1) 13-37. Cf. R. J. A. Wilson, Sicily under the Roman empire (Warminster 1990) 233, who has dismissed any connection between the two sites on the basis that the FIL-SOF stamps are nowhere found at the Villa del Casale.
landscape history of the territory around the Villa del Casale and the *statio Philosophiana*, focusing particularly on the area around the latter. It seeks to understand the settlement history of the micro-region, the economic and social relationships between villa and *statio*, and by extension, Sicily’s rôle in the late-antique economy. The first season focused on Sofiana/Philosophiana itself. Intra- and extra-site surface survey and geophysical survey have shed new light on the nature of that site and its chronology.

**Previous work at Sofiana**

Sofiana was discovered and first excavated in the 1950-60s by D. Adamesteanu.\(^8\) He revealed a set of baths, a late-antique church with burials, and partially excavated three adjacent necropoleis to the north, west and east. He produced an overall sketch plan of the site, which he estimated to occupy some 15 ha (fig. 3).\(^9\) While his preliminary reports describe levels dating from the Early Bronze Age through the 13th c. A.D., the earliest excavated structures were assigned a general date of the 1st c. A.D., and the baths (the subject of the most extensive excavations) were dated to the early 4th c., Adamesteanu linking the late-antique phase with construction of the monumental Villa del Casale, and concluding that the *statio* had by then become a possession of the villa. Expanding on Adamesteanu’s interpretations, and assuming that the *statio* must have belonged to the villa’s estate (*Philosophiana*), and that the estate was a contiguous piece of property, A. Carandini\(^10\) hypothesized estate boundaries marked by the Porcheria river to the southwest, the Torrente di Pizza Armerina to the northwest, the Torrente Pasco Lasagna and Torrente Gatta to the southeast, and Molino Grande to the northeast (fig. 1). The *statio*, he suggested, was the home of the villa’s workforce, a peasant *vicus* housing the *coloni* who worked the fields of the alleged 15,000 ha estate.

![Fig. 3. Plan of Sofiana (after Adamesteanu 1963).](image)

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9 Wilson (supra n.7) 224 suggested 8 ha.

10 Carandini, Ricci and De Vos (supra n.1) 15-26.
The excavations at Sofiana by one of us (La Torre) and the Soprintendenza di Agrigento in the 1980s and 1990s produced a more nuanced picture of the site. Investigations inside the settlement, focused on its NE end, revealed the remnants of a possible street grid, large sections of a peristyle domus, and, at the N end of the site, a possible terrace or enclosure wall (fig. 4). The earliest phases of these elements were dated to the 1st c. A.D., with a major phase of abandonment/destruction in the 3rd. These findings led La Torre to suggest that the site was originally a small town of Augustan date, its residents identified as the Gelani stipendiarii by the Elder Pliny (NH 3.89-91), later termed Gela sive Filosoianis/Gelastium Filosofianis in the Antonine Itinerary (88.2). New sondages in the baths supported an early 4th-c. reconstruction of that building. The orientation of the baths, differing from that of the earlier street grid, suggested that the site as a whole may have been reconfigured in that period. A second late-antique phase was assigned to the period after 365, when a major earthquake was thought to have resulted in the partial breakdown of the urban fabric: the re-use of the baths as industrial space and the construction of the Christian basilica were assigned to this period.

12 For the different editions of the Antonine Itinerary, see O. Cuntz (ed.), Itineraria romana I. Itineraria Antonini Augusti et Burdigalenses (Stuttgart 1929); on the possible identification of Gelastium with a city on the Gela river, see E. Manni, Geografia fisica e politica della Sicilia antica (Rome 1981) 217. For other interpretations of the name and/or its location, see E. Bonacini, Il territorio calatino nella Sicilia imperiale e tardoromana (BAR S1694; Oxford 2007) 160-62; G. Mangano, “Note storiche ed epigrafiche per la Villa (praetorium) del Casale di Piazza Armerina,” Sicilia Antiqua 2 (2005) 188.
The Soprintendenza's 1993 and 1995 excavations in the E necropolis and publication of the finds from the other graveyards have added to the picture. Necropoleis surround the site's perimeter on four sides, as would be consistent with an urban entity, but their predominating chronologies vary. The largest necropolis (E) seems to extend from the Early Empire through late antiquity, the N one dates to the 2nd-3rd c., the W one to late antiquity, while the S one around the basilica seems to date principally to the 5th-7th c., with some Mediaeval materials. The ceramics and other grave goods from the later Roman burials include a wide range of objects, from cooking pots to imported eastern wares and gold jewelry. The epigraphic remains attest to both Jewish and Christian communities by the 5th c., somewhat unusual for a rural community but not uncommon in urban entities. The previous findings thus suggest something more than Carandini's peasant village, certainly in the Early Imperial period and perhaps also in late antiquity. The possible street grid and enclosure wall and the necropoleis which surround the area all gave the impression of a planned settlement, possibly of urban character, with origins in the Early Empire.

The first two seasons of the Philosophiana Project therefore set out to test the hypothesis that the statio Philosophiana was an urban-style settlement of Augustan date. We wished also to understand the character of the site in late antiquity when the Villa del Casale saw its greatest phase of expansion. The character of Sofiana in this phase — as peasant vicus or urban-style settlement — would be critical to understanding economic and social relationships between the two. To this end, an intensive intra-site surface survey was carried out: by classing, dating and mapping surface materials (chiefly but not solely ceramics), an overall sense of the site's size, its possible functional zones, and its economic patterns might be obtained. A magnetometry survey, checked by test-pits, was designed to confirm the estimates of size and functional zones deriving from the surface survey and to assess the possibility of a gridded street system and/or circuit wall. The preliminary results of a surface survey beyond Sofiana proper are also mentioned here since they shed light on the longue durée.

Methodologies

Intra-site survey

Modern Sofiana is occupied by three main fields bisected by a modern road: a large field of cereal crops to the south, an olive grove to the east, and a smaller field for cereal crops to the west. To the north lies the fenced area of the previous excavations (fig. 5). An intensive, gridded surface survey was designed to cover the entire area previously identified as belonging to the settlement and at least 50 m beyond. A sampling strategy was developed to survey a percentage of the area, rather than opting for total coverage of a more limited portion. The whole site area was gridded (10 x 10 m)

17 D. Mattingly, "Methods of collection, recording and quantification," in Francovich and
Fig. 5. Intra-site surface survey layout.

'virtually' in ArcGIS on a 1:10,000 digital map. The overlay was downloaded on handheld Trimble GeoExplorer units that have a field accuracy of 1 m. Each corner of the grid square was marked with a red cone for easy visibility. Teams of 2-3 persons collected all surface materials from within each square. The 'virtual' grids have the advantage of being quick to build.\(^{18}\) Sacrificed is precision: the absolute size and relative location of each grid is subject to the unit error of \(c.1\) m but, given that we were collecting plough-soil assemblages subject to post-depositional movement, the error was felt to be acceptable.

Every 30 m (every 3 grid squares) a square was sampled and all finds collected and studied. This gave a total collection of \(c.11\%\) (or 2.31 ha) of what was later determined to be the total area of the site. However, in the center of the site errors led to adjacent or every two grids being collected or to some grids being skipped and then filled in through survey of an adjacent square. In the far south of the site, adjacent squares were surveyed in order to locate the edges of a Medieval extension of the settlement (see below). In other places modern roads or other features forced displacement of the pattern.

To avoid bias towards diagnostic sherds and to accommodate teams of varying experience and abilities, all materials of every date and material (ceramics, glass, bone, metal) were collected (rather than chronotyping).\(^{19}\) A scale, ranging from 0 (no ground visibility) to 4 ('total ground visibility'), served to distinguish different visibilities that would affect the collection results.

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All finds (both diagnostic and non-diagnostic materials) from each grid square were recorded in a database. The vast majority were ceramics. All diagnostic sherds (567 out of a total of c.750) were assigned an inventory number, and their form, fabric, size, decoration, typology, weight, and approximate date noted, along with the grid square. All diagnostic sherds were drawn except for duplicates. Non-diagnostic sherds and tiles were not drawn but were recorded, analyzed by general typology, and weighed. Subsequently, microscopic analysis of sampled fabrics paid particular attention to local amphorae and coarse wares, along with thin-section analysis.

Statistical analysis was based on the raw numbers of diagnostic sherds per type: MNI (Minimum Number of Individuals) analysis was applied only in instances where fresh breaks in sherds of the same fabric/form from the same cell indicated the same vessel. Sherds were classed into 7 ceramic groups each spanning two centuries: Phase 1 (1st c. B.C. - 1st c. A.D.); Phase 2 (2nd-3rd c.); Phase 3 (4th-5th c.); Phase 4 (6th-7th c.); Phase 5 (8th-9th c.); Phase 6 (10th-11th c.); Phase 7 (12th to mid-13th c.) (fig. 7a-g below). Specimens datable to only one phase were assigned a value of 1; those datable to two phases a value of 0.5, while those datable to three phases were assigned a value of 0.33. Absolute values for each cell in each phase were calculated and entered into a GIS database. Spatial density distributions for each phase were calculated in ArcGIS using Kernel Density Estimates (KDE), which has the benefit of producing smoother, more readily interpretable density maps than do traditional circle density maps. For overall chronological patterns, Individual Weighted Means (IWM) analysis was used: the total number of sherds per type was divided by the number of years each typology is thought to have circulated, multiplied by 10 to yield a value per typology per decade (fig. 6). In each method, some calculations were based on very low sherd counts per unit area or unit time. The chronological results are based only on diagnostic sherds (c.75% of the total ceramics collected).

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Magnetometry survey

Owing to a significant slope and high grass over parts of the site, just three areas were selected for geophysical survey: the W field (termed Area A), portions of the S field (Area B), and an area to the south of the S field (Area C) (fig. 8 below), the latter to explore the S extension of the site as judged from Medieval ceramics found in the field survey. A total of c.2.5 ha (35% of the site at its largest extent) was surveyed by magnetometry. Areas A and B were uncultivated fields characterized by the presence of spiny shrubs, while the remnants of milled crops were present in Area C. Areas A and C were level, while Area B sloped N–S with some micro-elevation in the E end. Owing to the vegetation and changes in elevation, a carried (not carted) system, an Overhauser Magnetometer Gem Systems GSM-19GW, was used in walking mode. Grids were laid out by hand as 50 x 50 m squares unless the terrain or other factors required their modification; later their four corners were recorded with centimetric (differential) GPS to give a precise absolute location. Within each grid, a Y transect was walked every meter along an X axis, following a transect line laid out with a cord. Along each Y transect, the instrument recorded data every 0.5 seconds. The irregular topography and vegetation and the ends of each transect caused some minor problems of acquiring data, but these were readily distinguishable from the genuine anomalies. The results were analyzed with Surfer 8, then downloaded into ArcGIS and georeferenced. Finally, 32 test pits (3 x 5 m) were opened over significant anomalies in Area B (see fig. 8).

Extra-site survey

A buffer zone with a radius of 2 km around Sofiana was intensively surveyed. It corresponded to the Nocera river to the north, the hills of Monte Alzacuda and Coste d’Italia to the west, the Vallone del Canicco to the south. To the east the zone was less well defined. Within this zone some 280 ha was surveyed (c.60%), with priority given to recently ploughed fields, the majority lying to the south and east. Visibility was estimated as on the extra-site survey and the distance between walkers adjusted accordingly: for Visibility Levels 1 and 2, walkers were spaced 5 m apart, while for Levels 3 and 4 their spacing was 8 m apart. Scatters were classified as sites or off-sites,23 the circumference of each scatter was mapped with a GeoExplorer GPS, and all diagnostic ceramics (with a sample of c.30% of non-diagnostic fragments) were collected.

Results

The combined results suggest a large, probably planned settlement that reached its apogee in the 4th–6th c. A.D. and had a rich afterlife.

Intra-site survey (fig. 7; Tables 1-2)

At the site itself, virtually no material prior to the 1st c. B.C. was discovered. Surface material relating to the site’s ceramic phase 1 (1st c. B.C. to 1st c. A.D.) was largely concentrated in the northwest around the previous excavation, with isolated nuclei to the south (fig. 7a). The spotty and generally low quantities of this early material may be due to its being buried beneath thick later layers undisturbed by deep ploughing, but its absence to the east, where deep ploughing in an olive grove might have brought such material to the surface, may give reason to think that the results fairly represent the sub-surface archaeology. In ceramic phase 2 (2nd-3rd c.), the quantities of material increase and the site developed to the east, along with a possible expansion to the west and south (fig. 7b), but ceramic numbers remain low and the expansion remains hypothetical.

23 "Off-sites" were defined as very scattered or even isolated finds with no precise limits. Off-sites found around Sofiana were found to lack a consistent association between roof-tiles and domestic ceramics, a possible marker of sites damaged by ploughing (as suggested by Fentress [supra n.16]). We tentatively suggest that most off-sites in this area do not represent plough-damaged sites, but manuring processes which sporadically transported ceramics to the fields. Cf. J. Binliff and A. Snodgrass, "Off-site pottery distribution: a regional and interregional perspective," Curr Anth 29 (1988) 506-13.
### TABLE 1
INTRA-SITE SURVEY: CERAMIC VALUES PER CHRONOLOGICAL PERIOD

<table>
<thead>
<tr>
<th>Phase</th>
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<th>Value 0.5 ceramics</th>
<th>Value 0.33 ceramics</th>
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<td>Phase 3 (4th-5th c.)</td>
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<td>Phase 4 (6th-7th c.)</td>
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<td>97</td>
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<td>Phase 5 (8th-9th c.)</td>
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<td>Phase 6 (10th-11th c.)</td>
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<td>Phase 7 (12th to mid-13th c.)</td>
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<td>44</td>
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### TABLE 2
INTRA-SITE SURVEY: SOURCES OF AMPHORAS (DIAGNOSTIC SHERDS PER PERIOD)

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Fig. 7a. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 1 (1st c. B.C. to 1st c. A.D.).

Fig. 7b. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 2 (2nd-3rd c.).

Fig. 7c. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 3 (4th-5th c.).
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The site was most extensively occupied during the third ceramic phase (4th-5th c.), when surface materials suggest an occupied area of c.21 ha (fig. 7c), not including the cemeteries. It is worth noting that, while overall quantities of material rise dramatically from the early 4th c., it is the mid- to late-5th c. that produced the highest volume. To interpret the relationship between surface spread and occupied area again requires some caution. Late-antique towns are characterized by intra-mural rubbish and high volumes of ceramics inside urban areas where the area of occupation has actually shrunk or become more highly concentrated. However, the consistently high densities and quantities, along with two necropoleis (to west and east), here suggest a genuine expansion of the settlement. At the E and W edges a distinct dearth of material fixed the site’s boundaries (fig. 5).

While diminishing, the surface material from ceramic phase 4 (6th-7th c.) was still robust (fig. 7d), with c.70% of the surface area of Sofiana producing material. However, because we combined the relatively more common 6th c. wares with the sparser productions of the 7th c., we cannot rule out a caesura in the 7th c. The basilica and most of its necropolis probably date to the 6th c. More surprising were the relatively large quantities and wide dispersion of material of the 8th-9th c. (fig. 7e). The chronology of Early Mediaeval ceramics in Sicily is still in its infancy, but progress has been made recently and the wares that date this phase are assigned broadly to the 8th-9th c. Their concentration, covering c.10 ha, suggests a shift in settlement to the southwest in the direction of the basilica, said to have a second construction phase in this period. During ceramic phases 6 (10th-11th c.) and 7 (12th to mid-13th c.) (figs. 7f-g), the site seems to have been markedly reduced in size and occupation density. The settled area is concentrated along the S edge of the site, and the intensity of occupation of other sectors seems to have been very low. A further nucleus is suggested by Adamesteaneu’s work in the baths, which revealed stone buildings in use during the 11th-13th c. Settlement in this period seems to consist of discontinuous nuclei.

Magnetometry (figs. 8-11)

While Area C produced no discernible patterns, Areas A and B produced significant linear anomalies in a perpendicular arrangement (fig. 9). In Area A they ran at c.270º, almost paralleling a line visible in an aerial photograph of 1938 and identified by Adamesteaneu as the ancient Agrigento-Catania road (fig. 10). A less visible set of anomalies runs perpendicular, suggesting a series of structures aligned along the road. Two major dipoles to the NW and SE of the zone are probably caused by modern metallic rubbish.

27 Adamesteaneu in Rizza and Garraffo (supra n.1) 77.
Fig. 7d. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 4 (6th-7th c.).

Fig. 7e. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 5 (8th-9th c.).

Fig. 7f. KDE (Kernel Density Estimates) maps of surface ceramics. Phase 6 (10th-11th c.).
In Area B, two different alignments of perpendicular lines were noted. In the western and west-central area they ran at 290°/20°, while in the eastern and east-central they shift to 320°/50°. They were confirmed by 32 test-pits, thirteen of which produced walls with orientations that conformed to three slightly different wall typologies (fig. 11). A short section of wall (US 3402) with a different orientation (270°) and construction (Type 4) was located
Fig. 9. Magnetometry survey results, interpreted.

Fig. 10. Aerial photograph (1938) of Sofiana, with grid orientations and possible Roman road indicated. The arrow indicates the area of Adamesteanu's subsequent excavations (photo: IGM 1938: St. 8A, 13.1).
Fig. 11. Wall typologies from test-pits and their orientations: (a) Type 1; (b) Type 2; (c) Type 3; (d) Type 4.

in the southeast. The test pits confirmed that the strong dipoles in the gridded alignment represent roof collapse and verified the presence of two kilns, one in the east which probably made tiles (to judge from surface wasters) and a second to the southeast.28

The length of the linear alignments discovered in areas A and B and their orthogonal patterning point to a gridded arrangement of buildings, probably divided by streets. Given the slight difference in the southern (Area B) alignments, and the slope there from W to E, it is possible that these are variations within a single alignment system, although the different wall typologies for the two orientations may suggest otherwise. In any case, the paved streets revealed in excavation in the 1990s follow the 290° orientation (see fig. 4). Thus it is possible that one gridded arrangement extended from the NE through the SW portions of the site. The excavated streets in the north were dated stratigraphically to the 1st c. B.C./1st c. A.D., and the 290° alignment may date to that period.

28 Two long anomalies, one in the west running NW/SE and a second to the south of the possible kiln area, were shown by test-pits to be geomorphological in nature, following micro-slopes formed by seasonal run-off. Anomalies in the far W part of the survey were very low or non-existent and probably indicate the edge of the settlement.
The 270° orientation in the site's NW corner is not only consistent with the alignment of the possible Roman road seen in the aerial photograph, but also roughly similar to the c.270° orientation of the early 4th-c. baths (cf. fig. 4).29 The northern sector of the site may thus have been re-planned in the early 4th c. Similarly oriented walls to the south may relate to the extent of such a re-planning.

No trace was found of a boundary wall around the site. We expected to find such a wall in the far southern reaches of Area B, where a sharp drop suggested a boundary to earlier excavators (cf. figs. 3-4), but it was impossible to survey there. In the west the survey revealed no trace of anomalies suggesting a perimeter wall.

Extra-site survey (figs. 12-13)

With respect to settlements around Sofiana, of the 38 sites and 26 off-site scatters detected only one site each from the 1st c. B.C.-1st c. A.D. and 2nd-3rd c. were found (apart from 3 sites of general Roman date). Only in the 4th-5th c. does a real network of sites appear around Sofiana, the majority located within about 1 km. Mainly these are represented by small concentrations of building materials and pottery, often associated with dolia. They are likely to correspond to small farmsteads or peasant houses. One exception was a large (2.6 ha), discrete nucleus (UT1) only 20-30 m from Sofiana, with a high concentration of materials dating to the late 4th-6th c.

In the 6th-7th c., while Sofiana itself seems to retain most of its size, the number of sites in its hinterland shrinks. However, the 8th-9th c. saw another resurgence in both dispersed and nucleated, village-like sites but, unlike the Late Roman pattern, these are no longer clustered near Sofiana but exhibit a more diffuse arrangement, perhaps suggesting that Sofiana's pull as a central place had diminished. One site just 35 m east of Sofiana may have been an artisanal settlement: production of Early Mediaeval coarsewares is suggested by ceramic wasters mainly from small amphorae and jugs with characteristic grooved handle,30 by evidence for a kiln (a red burned ceramic layer 3-4 m in length is visible in a section of a country lane at UT 36), and by a possible kiln dump (UT 37).

Discussion

The site and its chronology

The combined results of the intensive surface and magnetometry survey support the hypothesis that Sofiana/Philosophiana was a planned entity at least during late antiquity and possibly from the 1st c. A.D. The occupied area detected in the surface survey was confirmed by the geophysics, and the W limit of the site was confirmed by the discontinuation of surface materials and magnetic anomalies. With an occupied area of 21 ha in late antiquity, Sofiana seems to be only slightly smaller than second-order towns of inland Sicily, such as Ragusa/Hybla, Halaesa and Montagna di Marzo.31 Its two (possibly successive) gridded arrangements suggests a planned entity rather than an ad hoc settlement. The location of the necropoleis outside the inhabited area is consistent with the extra-mural burial traditions of an urban entity, although the same pattern is found in other kinds of settlements.

29 See also La Torre 1994 (supra n.11) fig. 12.
30 A minimum number of 5 wasters of small amphorae and jugs was collected in TU 37 and 38, while 1 waster of a basin and 1 over-fired basin fragment were found in TU 38.
31 Wilson (supra n.7) 143-54.
Fig. 12a. Extra-site survey, preliminary results by period: 1st c. B.C.-1st c. A.D.

Fig. 12b. Extra-site survey, preliminary results by period: 2nd-3rd c.
Fig. 12c. Extra-site survey, preliminary results by period: 4th-5th c.

Fig. 12d. Extra-site survey, preliminary results by period: 6th-7th c.
Fig. 12e. Extra-site survey, preliminary results by period: 8th-9th c.

Fig. 13. Extra-site survey: histogram showing sites by phase ("off-sites" not included).
But was Sofiana an urban foundation? The question goes to the heart of definitions of Roman urbanism and to the rôles that administrative status (derived from textual evidence) and morphology (derived from archaeology) ought to play. If this site could be identified with Pliny’s Gela, its urban identification might be clinched on the former grounds. However, as one of us has previously noted, there are problems with the Gela identification (the possibility that Gela refers to the coastal city of that name rather than a town on the eponymous river, and the fact that it is mentioned nowhere else). If the textual evidence is not decisive, we are reliant on an archaeological definition of urbanism, which recent work on small towns and rural agglomerations has made more complicated. Vicī, very large rural settlements and other agglomerations which lack an urban designation but show the signs of urbanism (planned arrangements, fora, temples, etc.) have all muddied an urban/non-urban distinction based on material culture alone. Since our surface and geophysical surveys have yet to provide evidence for a monumental apparatus, it is probably prudent to describe Sofiana’s archaeology as “urban-like”.

In what period did Sofiana obtain this urban-like character? The intra- and extra-site surface and geophysical surveys produce conflicting evidence. The limited dispersion (focused in the north) and small quantities of Early Imperial ceramics from the site itself, coupled with the small numbers of hinterland farm sites, suggest that the site assumed its larger size and urban character only in late antiquity. The correspondence of the main geophysical alignments with the streets of the 1st c. A.D. unearthed in earlier excavations, on the other hand, points to a planned arrangement over most, if not all, of the site’s 21 ha from that era. The geophysical evidence and the possibility that the early ceramics in the S sector are covered by late antique/medieval overburden tentatively point to a fairly large settlement of the Early Imperial era. The low numbers of surrounding farms at least in the buffer zone is still troubling to this hypothesis but echoes the results of other field surveys in central Sicily where Late Republican/Imperial-era settlement numbers are generally low, even around vibrant cities such as Catania. If Sofiana did witness a major planned expansion in this period, it may have taken the place of the nearby Montagna di Marzo, a hilltop city of Greek foundation located c.15 km as the crow flies from Sofiana and which may have been definitively abandoned at about the same time.

Continuity of the site through the 2nd-3rd c. seems certain: the increase in the total numbers of surface ceramics, their spread to the east, and the foundation of the N necropolis point to a steady, possibly expanding, occupation. The decline in late 3rd-c. surface ceramics is matched by abandonment levels in the domus dating to the third quarter of the 3rd c., reinforcing the notion of a hiatus.

The richest period is the 4th through 5th c., when the explosion in both raw and weighted ceramic numbers, their dispersal throughout the entire 21 ha, and the ring of necropoleis

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32 La Torre 1994 (supra n.11) 127-31.
34 E.g., areas north and south of Catania: Bonacini (supra n.12); F. Valenti, “Note preliminari per lo studio degli insediamenti di età romana a sud della piana di Catania,” Kokalos 43-44 (1997-98) 233-73.
35 La Torre 1994 (supra n.11) 111-12.
to the south, east and west all point to a sizeable population and a large, urban-like settlement. The increase of small farms in the territory points in the same direction. A possible re-orientation, indicated by the geophysical anomalies at 270°, and the new baths, point not simply to intensive occupation but perhaps to an administrative presence powerful enough to undertake a new planning effort. The fact that the new axis follows the possible line of the Roman road might indicate that the re-planning was related to the site's roadside function, i.e., its rôle as a *mansio/statio*, but the exact date at which it achieved this status is unclear, much depending on the date of *Philosophiana*’s inclusion in the Antonine Itinerary (variably dated to the itinerary’s first redaction in the later 3rd c., or to a second one of about the early to mid-4th c.). If it is of early 4th-c. date, as most scholars prefer, then the site’s re-configuration may have been related to its status as an imperial logistics center. But that need not mean that it lost any previous urban designation. While the term *statio* is most commonly associated with non-urban settlements, cities might house *stationes* or *mansiones*: Agrigento and Catania are named as *mansiones/stationes* in the same section of the Antonine Itinerary.

The earlier excavators posited a mid-4th c. decline following the earthquake of 365, but the ceramic profile shows no real downturn but rather a second peak in c.400-480. Neither the surface nor geophysical survey can indicate the nature of occupation in this period, only that it was extensive and marked by intensive long-distance connections, particularly with Vandal N Africa. The Vandal raids over the island and brief period of Vandal rule seem to have had no obvious effect on supply to the site. Equally worthy of note is the strong continuity in the 6th c.: while the ceramics are somewhat less numerous, at least through the 560/580s they remain as high as for the 4th c., and appear over most of the site. The rich grave goods, particularly the gold earrings of Constantinopolitans workmanship from a large double-grave in the E necropolis, likewise suggest continued wealth.

Just as notable as the late antique florescence is the Early Mediaeval continuity. Many S Italian cities witness major decline after the 6th c. while many second-rank cities and in many areas (particularly in the lowlands) rural settlements disappear. The continuation of a sizeable settlement at Sofiana with a thriving hinterland is thus cause for comment.

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36 Cf. R. J. A. Wilson, “Piazza Armerina and the senatorial aristocracy in Late Roman Sicily,” in Rizza and Garraffo (supra n.1) 178; Uggeri (supra n.4) 298; A. Ragona. Il proprietario della villa romana di Piazza Armerina (Caltagirone 1962) 21-25.
37 RE III.2, 2210-13.
38 Contrary to many studies which posit a 5th-c. decline, typically associated either with the Vandal invasions or the weight of taxation, see D. Vera, “Sulla (ri)organizzazione agraria dell’Italia meridionale in età imperiale,” in E. Le Cascio and D. S. Marino (edd.), *Modità insediatrici e strutture agrarie nell’Italia meridionale in età romana* (Bari 2001) 628-31; Manganaro (supra n.6).
39 Cf. Wilson (supra n.7) 333-35. For similar, albeit impressionistic, evidence of 5th-c. continuity from the adjacent territory to the east, see Bonacini (supra n.12).
40 Bonacasa Carra, “Sofiana”; Lauricella, “I materiali” (both cited supra n.14).
The weighted ceramic numbers from the 8th-9th c. are roughly equivalent to those from the 2nd-3rd c. These ceramics are found in c.10 ha of the settlement proper, while the extra-site survey revealed some 14 sites, even more than during its heyday of the 4th-5th c. One area inside the site yielded a concentration of tile wasters with apparently Mediaeval fabrics, pointing to possible roof-tile manufacture (a technology for which limited evidence exists in Early Mediaeval Italy\(^{42}\)), while UT 36-37-38 seem to represent an industrial 'suburb' for the production of coarse wares. Sites of some 10 ha with production facilities and thriving rural hinterlands are rare in this period: even large coastal cities like Naples had shrunk to sizes not much greater, while inland comparisions are almost non-existent.\(^{43}\) While the Early Mediaeval wares of this phase are still only broadly assigned, Sofiana began its Early Mediaeval florescence before the Arab conquest, which ran from the 820s until the 950s. By the time of the Arab emirate, the site again seems to have been in decline, so Early Mediaeval Sofiana is principally a Byzantine site, its Byzantine connections indicated by a few fragments of globular amphoras of the late 7th and 8th c., whose circulation is concentrated in central and S Italy and has been associated with papal estates.\(^{44}\) The early 8th-c. Life of the 6th-c. Gregory of Agrigento describes a papal "exarch" working ad Philosophiani nos to arrange ships for transport (presumably of grain) to Rome.\(^{45}\) Despite often tense relations, Rome was under the control of a Byzantine dux during the later half of the 7th and first half of the 8th c., and many of its 8th-c. popes were of Byzantine extraction. Until 731 the much-desired Sicilian revenues were paid into the Roman church; afterwards they went directly into the coffers at Constantinople.\(^{46}\) The loss of Egypt to the Arabs in 641 left Sicily as the chief grain supplier to Constantinople, and its strategic importance to the Byzantine empire in the 7th-8th c. is reflected in the spread of Sicilian coinage as far away as the Black Sea and Norway.\(^{47}\) The large and robust site at Sofiana was thus probably due to the continuity of Byzantine influence in the W Mediterranean and to the supply of grain from central Sicily to both Rome and Constantinople.

**Statio Philosophiana and the Villa del Casale**

The question of the relationship between the famous villa and Sofiana hinges on the name of statio Philosophiana, Sofiana's urban status, and the still- vexed chronologies of the villa.

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The toponym statio Philosophiana has typically been interpreted to mean that the statio was either a dependency of an estate called Philosophiana or at least that it lay within its lands, the head of that estate being the Villa del Casale. A similar interpretation has been applied to the other "-iana" stationes in Sicily (Corcomiana, Petiliana, Calvisiana, to name a few), also often assumed to be dependencies or properties of the estates in question, a presumed manifestation of the growth of latifundia in late antiquity.48 This interpretation may be correct, but it involves a series of assumptions. The estate-derived toponym only securely indicates the proximity of an estate with the name Philosophiana, from which the statio probably derived its name; it need not indicate that the statio belonged to, or even lay within, those estate lands.49 Nor is there any certainty that the Villa del Casale was the chief residence of the Philosophiana estate, although, if such a residence existed, the Villa seems the most likely candidate.50 Thus, while the mansio of Philosophiana probably derived its name from an estate whose residence may have been located at the Villa del Casale, the nomenclature reveals nothing of proprietary relationships.

Then there is the complicated material evidence over the long history of the two sites. During the Early Imperial period, the villa was a small affair with a bath complex. If Sofiana was an urban entity, or even just an 'urban-style' entity of 21 ha, the villa would have been one of the agricultural establishments in its hinterland.51 The break at Sofiana in the final quarter of the 3rd c. is paralleled by mid- to late 3rd-c. destruction levels at the villa, suggesting that the fate of the two was in some way tied.52 In the 4th c., both saw major periods of expansion. Whatever Sofiana’s urban status, at 21 ha it was still much larger than the villa, although it seems to have had none of the villa’s material wealth. The chronology of the villa is still too uncertain to be certain which developed first. G. V. Gentili, the principal excavator, dated the villa’s elaboration to 305, assuming that the villa was the country retreat of Maximian; G. Manganaro has also supported an early date but with a provincial governor or procurator as proprietor. Others have favored a date in the 320s-340s, based on the mosaics’ iconography and style, and other hypothetical patrons, including Claudius Mamertinus, the Valerii or Caisonii. A third group of scholars favors a post-367 date based on the iconography of the Great Circus mosaic with its images of a second, allegedly Constantinian, obelisk.53 The limited soundings below the late-antique levels have produced insufficient material to yield a definitive date: the excavations of the 1970s seemed to support a date in the 320s, but soundings outside and beneath the S apse

48 Carandini, Ricci and De Vos (supra n.1) 22; Uggeri (supra n.4) 297.
49 Arnaud (supra n.6).
50 Wilson (supra n.7) 233.
51 On the early phases at the Villa del Casale, see E. De Miro, "La Villa del Casale di Piazza Armerina. Nuove ricerche," in Rizza and Garaffo (supra n.1) 58-73, and now Pensabene et al. 2009 (supra n.2).
52 De Miro ibid.
53 First group: Gentili 1999 (supra n.1); G. Manganaro, "Villa von Piazza Armerina, Residenz des kaiserlichen Prokurators, und ein mit ihr verbundenes Emporium von Herina," in D. Papenfuss and V. M. Strocka (edd.), Palast und Hütte. Bauen und Wohnen im Altertum (Mainz 1982) 493-513; Manganaro (supra n.6) 173-91. Second group: S. Settis, "Per l’interpretazione di Piazza Armerina," MEFRA 87 (1975) 873-994; Carandini, Ricci and De Vos (supra n.1) 28-51; Calderone (supra n.7); Ragona (supra n.36); Wilson (supra n.1). A useful summary of the various arguments can be found in Sfamani (supra n.1) 29-46.
of the triclinium (which Pensabene suggests is a later addition) and the mosaics beneath the quadrangular peristyle produced coins of Constantius II and some Hayes ARS 67 and 91 forms, pointing towards a date in the second half of the 4th c. in light of M. Bonifay’s recent dating of these forms. At Sofiana, the surface ceramics and the sondages in the baths point consistently to a florescence beginning in the first two decades of the 4th c. Thus, while the weight of the evidence might be thought to tip slightly in favor of Sofiana’s precedence, in the absence of secure dates from the villa it is impossible to be certain, and in all probability both sites developed more or less contemporaneously.

Whatever the chronological relationship between the two, Sofiana’s great size, orthogonal plan, and collection of imported ceramics challenge Carandini’s notion of a peasant vicus. Indeed, its size and complexity make it hard to read Sofiana as a simple dependency of the villa. It is possible that the site served as a transportation hub for the villa’s produce, but one must then explain how an urban-style entity that long predated the monumental villa became chiefly a warehousing point. The recent discovery of the second of two large storage buildings or barns at the villa suggests that the villa itself also served this function. The confirmation of Sofiana’s size and organization, both in the Early Empire and in the early 4th c., may indicate that the decision to rebuild and monumentalize an earlier villa at Casale may have been inspired, at least in part, by the proximity of a major center, one that may already have achieved status as an imperial logistics statio.

After this first late-antique phase, however, the two sites seem to decouple. The surface ceramics at Sofiana indicate a second period of intensive occupation in the mid- to late 5th c. At the villa, we are again hampered by the dearth of scientific excavation of late-antique levels and a lack of comparative studies of the late-antique material, but no contemporaneous major reinvestment can be identified from the architecture or the mosaics. Similarly, while the new excavations at the villa have revealed a large 10th-13th c. village, so far there is very little evidence of 8th-9th c. occupation. Sofiana, on the other hand, reveals a relatively rich 8th- to 9th-c. phase, with occupation tailing off during the 10th c. These divergent histories again argue against Sofiana being a simple villa dependency. Rather, Sofiana emerges as a central place with its own life history, one that converges with that of the villa in the late 3rd through 4th c., but is otherwise quite distinct.

54 C. Ampolo, A. Carandini, C. Pucci and P. Pensabene, “La villa del Casale a Piazza Armerina. Saggi stratigrafici ed altre ricerche,” MÉFRA 83 (1971) 141-281; Carandini, Ricci and De Vos (supra n.1) 54; De Miro (supra n.51). For the possible later date of the peristyle, see Pensabene (supra n.2); cf. K. M. D. Dunbabin, The mosaics of Roman North Africa: studies in iconography and patronage (Oxford 1978) 196-212, 243-45, who argued that the triclinium/peristyle complex was contemporary with the rest of the villa, based on stylistic similarities of the mosaics. For the late 4th-early 5th c. date of the early variants of Hayes 67 and 91, see now M. Bonifay, Études sur la céramique romaine tardive d’Afrique (BAR S1301; Oxford 2004) 79.
55 Cf. Wilson (supra n.7) 233; id. (supra n.36).
56 Guzzardi (supra n.2).
57 The ongoing work has identified a much richer succession of repairs and changes, but nothing large in scale after the addition of the ovoid peristyle: see Pensabene et al. 2009 (supra n.2) and Pensabene (supra n.3) 12-14.
58 Pensabene and Sfamani (supra n.2); Pensabene 2010 (supra n.2). Ceramics of this date are virtually absent from the new excavations, while some possible coins are indicated in the earlier reports: Gentili 1999 (supra n.1).
Late Roman economic contexts

Sofiana and its proximate great estate should also be considered in the context of the regional Sicilian economy in late antiquity. Both impressionistic and systematic field surveys, as well as limited (and often badly published) excavations, have made it clear that the central Sicilian countryside experienced a period of prosperity and growth during the 4th-5th c. Site survey numbers either rebound (Himera, Eraclea Minoa, Alesa) or continue an upward trend (Caltagirone, Lentini); farms and villages are re-occupied or expanded; some ancient Greek coastal cities such as Eraclea Minoa and Megara Hyblaea see the construction of villages or agro-industrial complexes in their ruins; and some rural villas, such as Patti Marina and Cadeddii, not to mention the Villa del Casale, witness monumental expansion.59

Roadside sites like Philosophiana also experienced prosperity. Near the possible site of the statio Pirama (Palermo) a massive Late Roman necropolis has been found; the statio Capitonia has been re-located near Condrada Favara (Catania), where possible late-antique columns, tomb inscriptions and baths have been found; and one likely site of the statio Calvisiana (Caltanissetta) produced 3rd-6th c. ceramics and a sizeable Roman to Byzantine necropolis.60 Other sites identified as stationes, such as Naxos, Acium (Santa Venera al Pozzo), Calactae (Caronia) and Agathyrnum (Capo d’Orlando), have kilns that produced Late Roman amphoras.61 Recent excavations at Carabollace (Sciacca) on the coast road connecting Agrigento and Marsala uncovered a series of late 4th- to late 6th-c. warehouses, possibly connected to the statio Ad Aquas.62 Since most of these sites have not been systematically explored, it is difficult to compare their size and material wealth to that of Sofiana. Yet although most only appear in the itineraries and thus are often assumed to be late-antique foundations,63 many, like Sofiana, show signs of earlier origins.

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60 See C. Greco, “Un sito tardoromano sulla via Agrigentum-Panormum: scavi nella necropoli in contrada S. Agata,” Kokalos 39-40 (1993-94) 1143-58; Bonacini ( supra n.12) 150-53; Adamesteanu ( supra n.7) 205-9, respectively.


63 Uggeri ( supra n.4) 297.
This rural expansion is often attributed to an increased demand for Sicilian grain. With the assignment of Egyptian grain to Constantinople, and the loss of N Africa to the Vandals, Sicily again became a breadbasket for Rome and for the western and, later, the Byzantine armies. The church’s contribution to Rome’s grain supply was heavily reliant on Sicily. The *massa Gelas* mentioned in the correspondence of Gregory the Great may correspond to the *mansio Gela sive Filosofianis* or to properties in the general area. A dominant model for Sicilian agriculture also claims that this period witnessed major changes in land tenure: the increasing predominance of tenancy beginning in the 3rd c. prompted *domini* to settle permanently on their estates in luxury residences that now served as rent collection centers, while “colonate” labor now clustered in nearby *vici*. The Villa del Casale and Sofiana have been used as support for that kind of villa with its so-called colonate *vices*. According to this model, tenurial changes were not tied to demand for Sicilian grain but rather to changes in the modes of production (i.e., from slave to “colonate” labor). Indeed, the model claims that such external demands had a depressive effect on Sicilian agriculture, which ceased to expand after it regained its place as a Roman supply hub.

The evidence from Sofiana sheds new light on this problem. The data from the grain heartland of central Sicily points to expansion in agriculture beginning in the first decades of the 4th c., continuing through the 5th c. It coincides first with the Diodetianic/Constantinian re-organization that pressed Sicily and all of suburban Italy into *annona* production, and later with the loss of Vandal N Africa, which made Sicilian grain ever more crucial. Agricultural stagnation is nowhere in evidence. That Sofiana became a logistics station, combined with the evidence for long-distance traded goods passing through, suggests that its expansion was in some way tied to Sicily’s new tax obligations and perhaps also to the reliance by the Rome church on Sicilian grain.

While the discovery of two large barns at the Villa del Casale may indicate that the villa served as a collection hub, Sofiana’s urban-like qualities and size in the 4th-5th c. suggest that it did not serve simply as the villa’s peasant *vices*. On the contrary, the preliminary survey data suggest that it had its own hinterland of small farms. The expansion of small sites around Sofiana can be read in a variety of ways: either as evidence for the increase in tenants renting lands on the *Philosophiana* estate, or as the expansion of all kinds of farms, both colonate and belonging to free proprietors, who were being pressed to meet increased taxation demands and were attracted by the convenience of a local transport hub. The

64 Wilson (supra n.7) 336; Bonacini (supra n.12) 146; Valenti (supra n.34); Pensabene (supra n.3) 9-11.
66 Vera (supra n.38); id., “Forme e funzioni della rendita fondiaria nell’età antichità,” in A. Giardina (ed.), *Società romana e impero tardantico 1: istituzioni, eti, economie* (Rome 1986) 367-447, especially 441; C. Wickham (supra n.47) tacks between these two models, positing managerial “intensification” that was particularly pronounced in regions such as Sicily with major export markets.
68 A. Giardina, “Le due Italia nella forma tarda dell’impero,” in id. (supra n.66) 1-36.
expansion of our survey towards the villa may help clarify the questions and shed further light on the relative importance of labor relationships, or taxes and trade, as engines of economic activity in the Late Roman period.

kbowes@sas.upenn.edu
gflatorre@unime.it
ev259@cam.ac.uk
ghisleni@lapetlab.it

University of Pennsylvania
Università di Messina
Cambridge University
Università di Grosseto

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