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## FIELD REPORT

# Pantalica (Sicily) from the Late Bronze Age to the Middle Ages: A New Survey and Interpretation of the Rock-Cut Monuments

ROBERT LEIGHTON

### *Abstract*

The site of Pantalica in eastern Sicily is renowned for thousands of Late Bronze and Early Iron Age rock-cut chamber tombs, which honeycomb the steep slopes of an imposing promontory. Despite the excavations of Orsi between 1895 and 1910 and recent inscription on the UNESCO World Heritage List, however, the site is not well documented by modern standards and until now has lacked an adequate site plan. This article describes new survey work that sheds light on the number and distribution of monuments in relation to topographic features. The author also discusses the absence of prehistoric dwellings and challenges traditional views by suggesting that the so-called medieval villages, or nonfunerary rock-cut chambers, have prehistoric origins and provide an indication of the whereabouts of the original residential areas. Field survey has permitted a better understanding of the site in the context of later Sicilian prehistory and has shown the potential for new investigations of rock-cut tombs and dwellings, which constitute one of the most striking archaeological monuments in Sicily.\*

### INTRODUCTION

The site of Pantalica lies 22 km to the west of Syracuse on a conspicuous promontory, about 2,000 m

long and up to about 1,000 m wide (figs. 1, 2), flanked by the Anapo River and one of its tributaries, the Calcinara (also known as the Bottigliera).<sup>1</sup> The current name of the site, already recorded in 1092 and known to al-Edrisi, the 12th-century geographer, probably dates from the Early Middle Ages or Arab period.<sup>2</sup> The ancient name, however, has long been the subject of speculation and debate. One theory attempts to associate Pantalica with political and territorial negotiations between Greek colonists and indigenous peoples in Sicily during the later eighth century B.C.E. by identifying it as the capital of King Hyblon.<sup>3</sup> Thucydides (6.4.1) recounts that this indigenous, or Sikel, ruler allowed the Greeks to found the new settlement of Megara Hyblaea in his territory. There are other, albeit less impressive, contenders for identification with Hyblon's seat, however, including the site of Villasmundo just 8 km from Megara Hyblaea (see fig. 1).<sup>4</sup> According to another hypothesis, Pantalica could be the site of a battle, known to Thucydides (7.78.5) as the Akraion Lepas, between the Athenian and Syracusan armies at the time of the Athenian expedition to Sicily (415–413 B.C.E.).<sup>5</sup>

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\*I am grateful to Mariella Muti and Lorenzo Guzzardi (Archaeological Superintendency, Syracuse) for permission to undertake survey and mapping at Pantalica. My thanks go to Tertia Barnett (Royal Commission on the Ancient and Historical Monuments of Scotland, Edinburgh), Graham Ritchie, Billy Macrae, and Rosie Pickles (archaeology students, University of Edinburgh) who worked with me in the field; Ruth Whitehouse (University of London), Roger Wilson (University of British Columbia), and Rosa Maria Albanese (University of Catania) for supporting the project; and Editor-in-Chief Naomi J. Norman and the two anonymous reviewers for the *AJA* for their comments on this article. Financial assistance is gratefully acknowledged from the Munro Lectureship Committee, University of Edinburgh (2007); the School of History, Classics and Archaeology, University of Edinburgh (2008); and the Mediterranean Archaeological Trust (2010). The author has sole responsibility for this work, although it stems from a joint project with Albanese aimed at republishing the finds from Orsi's excavations at Pantalica.

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<sup>1</sup> Orsi (1899, 34) and Bernabò Brea (1990, 33) state the length and breadth of the promontory to be only 1,200 x 500 m, while Battaglia and Alliata (1991, 26, table 3) estimate the surface area to be just 66 ha. According to my reckoning, the archaeological zone on the main promontory alone is ca. 170 ha. Pantalica, therefore, is easily the largest of the Late Bronze Age sites in Sicily according to the criteria listed by Battaglia and Alliata 1991.

<sup>2</sup> Orsi 1899, 39, 90; Fallico and Fallico 1978, 148–52; Messina 1979, 104.

<sup>3</sup> Bernabò Brea 1968, 163; 1971. Graham (2001) has cautioned that Hyblon's capital need not have been called Hybla.

<sup>4</sup> See, e.g., Albanese Procelli 2003, 142; De Angelis 2003, 16 (with further references). In Orsi's day, Pantalica tended to be identified with ancient Herbessus, while Hybla was sometimes sought in the area of modern Melilli (Orsi 1899, 39–40; Bernabò Brea 1968).

<sup>5</sup> Palermo 1992.

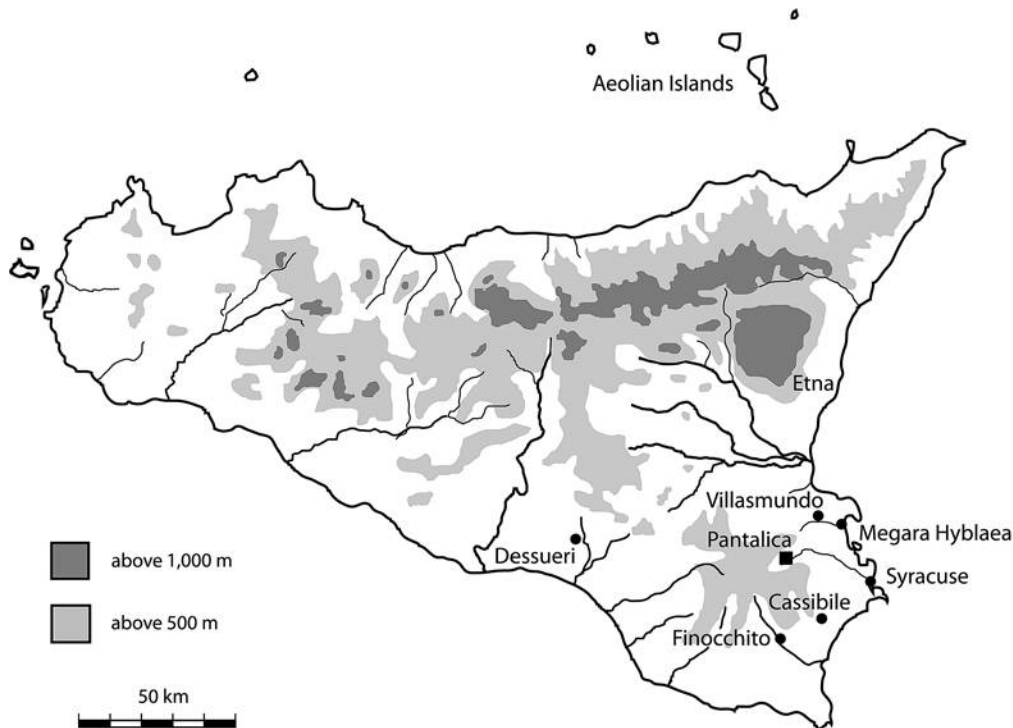


Fig. 1. Location map of Pantalica and sites mentioned in the text.

The site has an interesting place in the history of Italian archaeology, having inspired antiquarian speculation and travelers' tales since the 16th century, and it has featured prominently in guidebooks to Sicily since the mid 19th century.<sup>6</sup> Its wider cultural significance is also indicated in literature about Sicily.<sup>7</sup> Today it attracts numerous visitors on account of its archaeological remains—most notably the enormous number of rock-cut tombs surrounding the promontory—and because of its status as a nature reserve and World Heritage site.

Archaeological work at Pantalica was undertaken mainly by Paolo Orsi, a distinguished pioneer of Italian archaeology, who excavated more than 200 tombs in various campaigns between 1895 and 1910, although most had been looted before his time.<sup>8</sup> The

finds from the tombs constitute an important part of the collections in the Archaeological Museum of Syracuse, and they provided the basis for a subdivision by Bernabò Brea of the Late Bronze and Iron Ages in southern Sicily—sometimes referred to as the “Pantalica culture”—which is still used today.<sup>9</sup> This starts with the Pantalica 1 phase (or North phase, after the North Cemetery) from ca. 1250–1000 B.C.E., which is followed by the Pantalica 2 phase from ca. 1000–850 B.C.E. and the Pantalica 3 phase (or South phase, after the South Cemetery) from ca. 850–730 B.C.E. Only a few small-scale excavations have been undertaken at Pantalica since Orsi's time.<sup>10</sup>

Although almost nothing is known about the pre-historic residential quarters, Pantalica is thought to represent one of a small number of conspicuously

<sup>6</sup>E.g., Fazellus 1560, 106; Dennis 1864, 365–66. Orsi (1899, 39) gives further references.

<sup>7</sup>E.g., Cronin 1954; Consolo 1988.

<sup>8</sup>Orsi's discoveries were published in articles and two long reports (Orsi 1899, 1912). For an assessment of Orsi's work and career, see Musei Civici di Rovereto 1991.

<sup>9</sup>Bernabò Brea 1957, 149–69. For minor modifications to the basic chronological framework, see Peroni (1956), Müller-

Karpe (1959), and Bietti Sestieri (1979). Several Pantalica South tombs date to the later so-called Finocchito period (late eighth–seventh centuries B.C.E.), which shows that the site was still inhabited after the foundation of Greek colonies in eastern Sicily (Leighton 1993, 274).

<sup>10</sup>The main one by Bernabò Brea (1990) centered not on tombs but on the *anaktoron*.

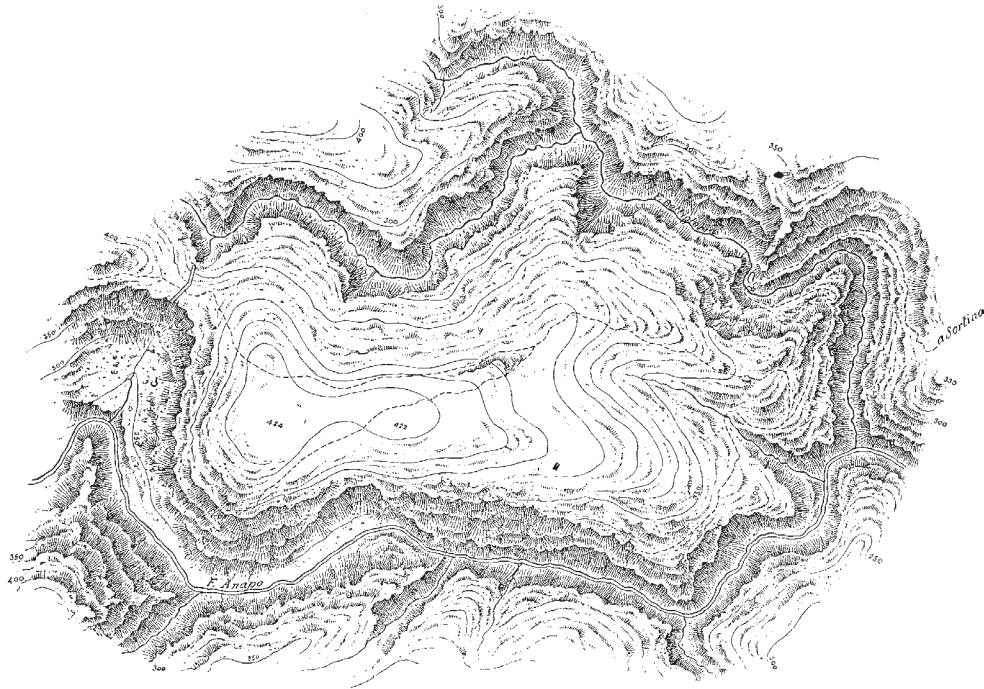


Fig. 2. Orsi's topographic map of the site (Orsi 1899, fig. 1).

large sites in southern Sicily that emerged in the Late Bronze Age on a prominent inland hilltop, probably dominating a large territory including satellite sites.<sup>11</sup> With reference to chiefdom models of social and economic organization, Pantalica has been regarded as a ranked or socially stratified society, as suggested by inequality in burials and the use of prestige goods and trade items to assert status, as well as local specialist craft production under the control of a strong local power.

Pantalica is thought to have been in decline and only sparsely populated after the eighth century B.C.E. A reoccupation of the site is dated broadly to late antiquity or the Early Middle Ages, but there is little evidence for a settled population after the 12th century.<sup>12</sup> In subsequent centuries, the inhabitants of the nearby town of Sortino probably exploited it mainly for common grazing and as a source of potassium nitrate (saltpeter); it was also a place for treasure hunts and tomb robbing.

In the following pages, after a brief synopsis of the main monuments, I provide an account of recent fieldwork and observations on the number and distribution

of tombs in relation to topographic and archaeological features, such as rivers, route ways, and potential residential areas. The subsequent sections discuss the evidence for nonfunerary or domestic rock-cut chambers and suggest new interpretations of the site in the context of later Sicilian prehistory.

#### THE MAIN MONUMENTS: A BRIEF SYNOPSIS

The most striking archaeological feature of Pantalica is the extraordinary number of prehistoric rock-cut tombs. There are said to be more than 5,000 in total, although this figure needs qualification, as discussed below. Their open, quadrangular entrances, leading into hollowed-out chambers of variable size and shape, appear from a distance as black dots against the white limestone, giving a honeycomb effect. Sicily has a long tradition of rock-cut chamber tombs, dating from at least the Copper Age (fourth millennium B.C.E.), and there are other large Late Bronze or Iron Age rock-cut cemeteries on the island, such as Cassibile, Dessucri, and Finocchito (see fig. 1), although perhaps none as impressive as Pantalica.<sup>13</sup> The tombs here form five major groupings around the promontory, known as

<sup>11</sup> E.g., Bietti Sestieri 1997, 484–85; Albanese Procelli 2003, 125; Leighton 2005, 278–79.

<sup>12</sup> Fallico and Fallico 1978, 162.

<sup>13</sup> See Hayden (2007) on the long history of rock-cut tombs in the central Mediterranean.

the Filiporto, Northwest, North, Cavetta, and South Cemeteries (fig. 3).

By contrast, the nonfunerary remains might be described as enigmatic, insofar as they are either unexcavated, poorly documented, or imprecisely dated and have given rise to different interpretations and a good deal of speculation. One conspicuous unexcavated monument is a wide, rock-cut ditch flanked by the remains of a wall, which traverses the promontory at its narrowest point (Filiporto), evidently controlling access to the site (see fig. 3[D]). Orsi and Bernabò Brea suggested that this might be a Late Classical or even Byzantine feature, although it could equally date from the seventh century B.C.E. when indigenous societies in this region were coming under pressure as a result of Syracusan expansion.<sup>14</sup> The only other monument of classical antiquity is a small sanctuary of the late fourth–third centuries B.C.E. excavated by Bernabò Brea (see fig. 3[G]).<sup>15</sup>

The main building on the site is the so-called *anaktoron*, or “princely palace” (see figs. 3[B], 4), emptied out by Orsi in 1895 and further investigated by Bernabò Brea in 1962.<sup>16</sup> This is a substantial structure (ca. 37 x 14 m) associated with a Byzantine phase of occupation (though not closely dated) and characterized by abundant roof tiles, patches of plastered flooring (*cocciopesto*), and mortared masonry. A large hoard with Late Antique gold jewelry and coins, probably deposited in the seventh century C.E., was found buried close by but unfortunately dispersed.<sup>17</sup> Messina has likened the building to an Early Medieval fortified farmstead of about the ninth century C.E., although one might suggest a slightly earlier date roughly contemporary with the hoard.<sup>18</sup>

Orsi believed that the building also had a much earlier phase of use in prehistoric times, serving as the high-status residence of a local ruler, and that the architectural plan was inspired by Mycenaean palatial residences, a rather speculative theory adopted by Bernabò Brea and others.<sup>19</sup> It is not certain, however, that the edifice is prehistoric, at least not in its surviv-

ing form and plan. A few prehistoric finds from the building are reported by Orsi and Bernabò Brea, but clear stratigraphic evidence of an earlier phase of use is lacking. The so-called megalithic style of masonry, which characterizes only the southernmost room and suggested an early date to Orsi, is of limited chronological help.<sup>20</sup> One might also harbor doubts about whether later occupants would have reused a building that was nearly 2,000 years old without at least changing the layout to suit their own needs. Nearby terrace walls uncovered by Bernabò Brea are not easily dated, either, since the associated pottery was mixed in type, as one might expect from hill wash layers, but dominated by Late Antique roof tiles. Nevertheless, scattered finds of prehistoric pottery in the general vicinity, including some Middle Bronze Age sherds, suggest prehistoric settlement on this part of the site, where tombs are absent.

Medieval remains comprise three tiny rock-cut chapels with painted frescoes (San Micidiario, San Nicolichio, and Grotta del Crocefisso) (see fig. 3 [K, M, H]) variously dated from the seventh to 14th centuries, as discussed below. In addition, apart from several natural caves, Orsi noted various clusters of large rock-cut chambers that resembled dwellings rather than tombs. Unexcavated and largely ignored in the literature, these are always assigned to a Byzantine or medieval phase of occupation and are popularly known as the *villaggi trogloditici* or *case rupestri* of Pantalica.

The surviving monuments at Pantalica raise several questions, therefore, not least because we have an extraordinary abundance of prehistoric burials (rock-cut tombs) without any obviously contemporary dwellings and numerous supposedly Byzantine or medieval dwellings (the rock-cut villages) without any contemporary burials. One explanation sometimes ventured for this paradox is that the prehistoric habitations were originally on top of the headland and have been destroyed by erosion.<sup>21</sup> Erosion is certainly a problem at Pantalica, but here I discuss new evidence about the distribution and location of rock-cut chambers and suggest that the

<sup>14</sup> Orsi 1899, 85–8; 1912, 345; Bernabò Brea 1990, 65. La Rosa (2004) gives more information about the ditch from Orsi’s notes of 1889.

<sup>15</sup> Bernabò Brea 1990, 64.

<sup>16</sup> Orsi 1899, 47–57; Bernabò Brea 1990.

<sup>17</sup> Orsi (1910, 64) describes this discovery by a farmer in 1903 as within the courtyard (*cortile*), although this is not precisely identified. Presumably, it was close to, but not within, the walls. See also Fallico (1975) and La Rosa (2004, 389) for further details.

<sup>18</sup> Messina 1993, 61.

<sup>19</sup> Bernabò Brea 1990. Tanasi (2004) and Tomasello (2004)

also insist on a Mycenaean connection for the structure, but this idea rests partly on somewhat generic similarities between quadrangular buildings and masonry styles. For a more cautious view, see Leighton (1999, 155–57) and Albanese Procelli (2003, 41–3).

<sup>20</sup> Large stone masonry in a so-called cyclopean style occurs sporadically in Sicilian buildings or defensive walls of the Classical period but also in later Roman times (e.g., Di Stefano 1986, 268 [with further references]; Messina 1993, 65 n. 3 [with further references]). For Byzantine houses at nearby Giarranauti, see *infra* n. 50.

<sup>21</sup> Orsi 1899, 41; Bernabò Brea 1990, 69.

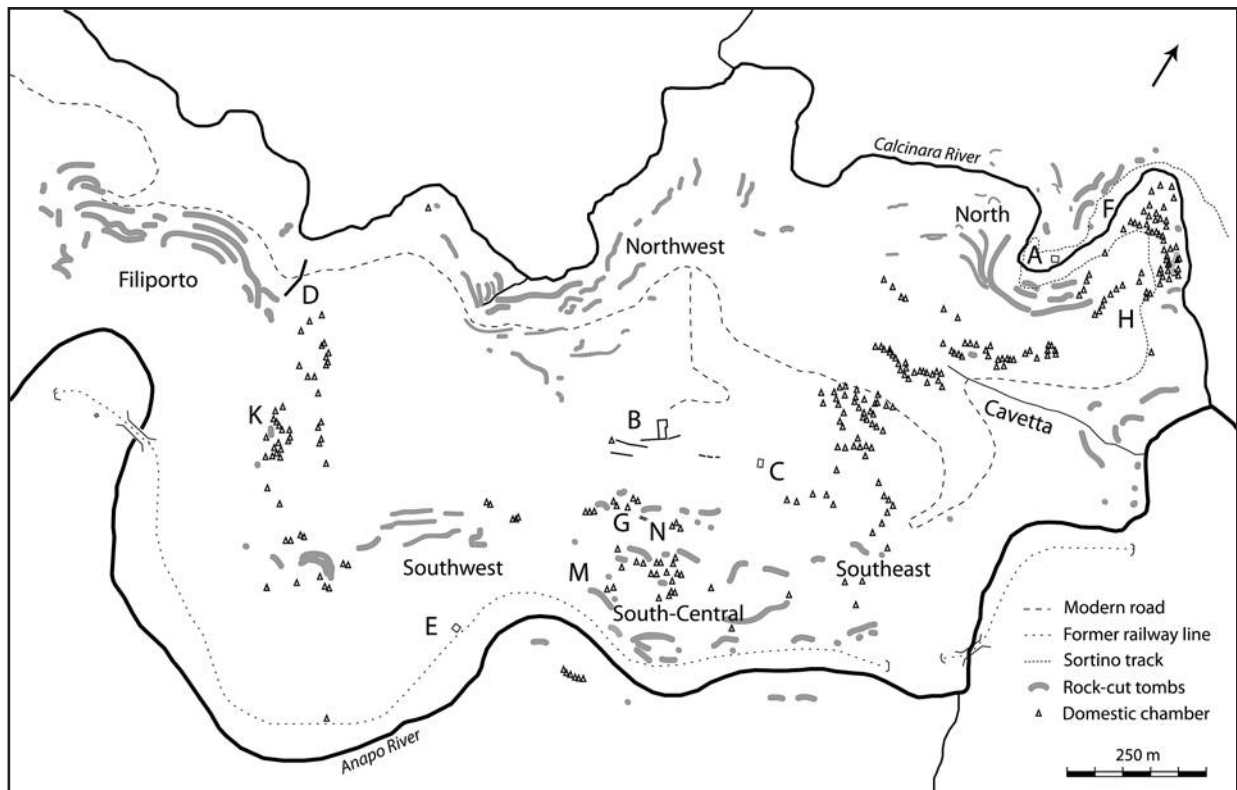


Fig. 3. Simplified site map showing main burial areas and features: A, mill; B, *anaktoron*; C, farmhouse; D, Filiporto ditch; E, old rail station; F, Pipistrello cave; G, Hellenistic sanctuary; H, Grotta del Crocefisso; K, San Micidiario oratory; M, San Nicolichchio oratory; N, Black Madonna cave.

so-called medieval villages provide an indication of the whereabouts of the prehistoric residential areas.

#### RECENT FIELDWORK

One problem with all publications about Pantalica is the lack of an adequate site plan. The two maps published by Orsi and frequently reproduced give a good impression of the ravine surrounding the promontory (see fig. 2) but do not show the location of archaeological features.<sup>22</sup> The 1:25,000-scale map by the Istituto Geografico Militare (IGM) is also of limited use.<sup>23</sup> The topography of the site is currently better viewed on aerial or satellite images (such as those available on Google Earth). The new site plans presented here (see figs. 3, 5) are based on the IGM map, which has been slightly altered with reference to satellite and aerial photographs, most notably around the North and Northwest Cemeteries.

The limited visibility of the remains is the main challenge for creating an archaeological plan. Photographs taken during Orsi's campaigns show that many parts of Pantalica, except for the rather bare summit, are more overgrown now because of fire-prevention measures and protection of the site as a recreational area and nature reserve.<sup>24</sup> Vegetation sometimes conceals tombs from view. The denuded promontory apparent in old photographs, taken when Pantalica was regularly used for grazing, may also be a better reflection of the situation in antiquity. Moreover, while most tombs can be seen from the promontory or from opposite sides of the gorge, gaining access to many of them has always been difficult or dangerous because of their location on very steep slopes or the edge of a precipice. Visitors generally observe the Northwest, North, and Cavetta Cemeteries from the road or from designated pathways and viewing platforms with safety barriers.

<sup>22</sup> Orsi 1899, figs. 1, 2.

<sup>23</sup> Istituto Geografico Militare 1968.

<sup>24</sup> See, e.g., Orsi 1912, pls. 1–4.

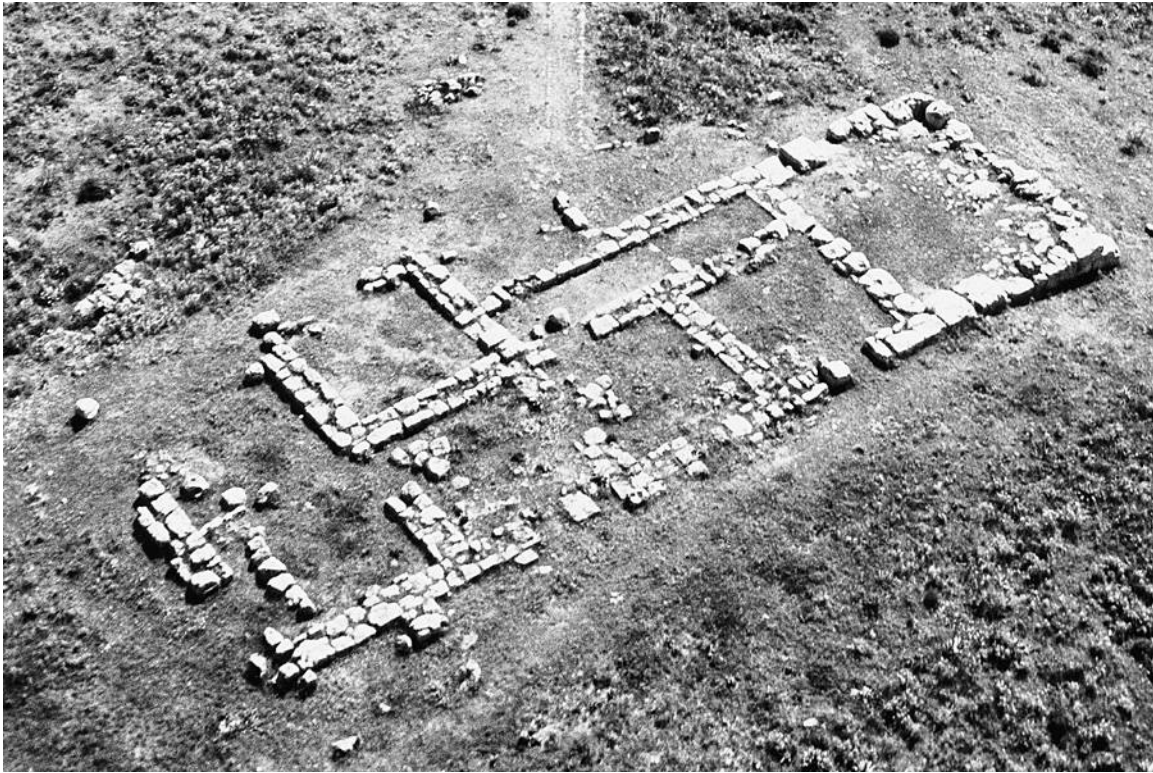


Fig. 4. Air view of the *anaktoron* in 2006 (courtesy L. Nifosi).

Despite problems of visibility and access, the production of an archaeological site plan (see fig. 5) has been facilitated by the use of GPS devices and satellite or aerial imagery. A total of 1,015 rock-cut tombs and 316 nonfunerary or domestic rock-cut chambers all over the site were accessed by fieldwalking and were individually recorded with GPS reference points.<sup>25</sup> In more precipitous areas, especially in the North, North-west, and Cavetta Cemeteries, tombs were counted, located on aerial photographs, and mapped with the help of reference points nearby.

Table 1 lists three categories of tomb numbers for each cemetery area as follows: (1) those accessed directly and recorded individually on the ground with GPS; (2) those observed and counted, usually from a short distance away or with the help of old photographs, and then located on aerial photographs; (3) additional numbers estimated for areas, usually adjacent to the former, where visibility was poor or almost nonexistent because of dense vegetation or landslips. This last category was obviously the most problematic and involved increasing the overall number by an addi-

tional percentage (usually 10–40%, depending on the terrain). The last two columns show the total number of tombs calculated for each area compared with the number given by Orsi.

How faithfully these data reflect the original numbers of tombs is open to discussion, of course, since much depends on visibility and the numbers of tombs that have vanished or been hidden as a result of human or natural agencies. However, the figures presented below for each cemetery area provide a more objective basis for evaluation than those given in the past. They indicate that the numbers of tombs commonly ascribed to the various cemeteries and to the site as a whole need to be adjusted. In addition, fieldwork showed that the large domestic chambers, which have been mostly ignored in the literature, are more numerous and widespread than is generally known (see fig. 5).

#### *The Filiporto Cemetery*

This is the first major cemetery encountered on approaching the site from the west, where the promontory of Pantalica narrows to join the adjacent hill with

<sup>25</sup> In 2007 and 2008, we used a basic navigation-grade GPS, which usually registered an error of 3–10 m; in 2010, we checked various points with more sensitive equipment (Magellan MobileMapper CX).



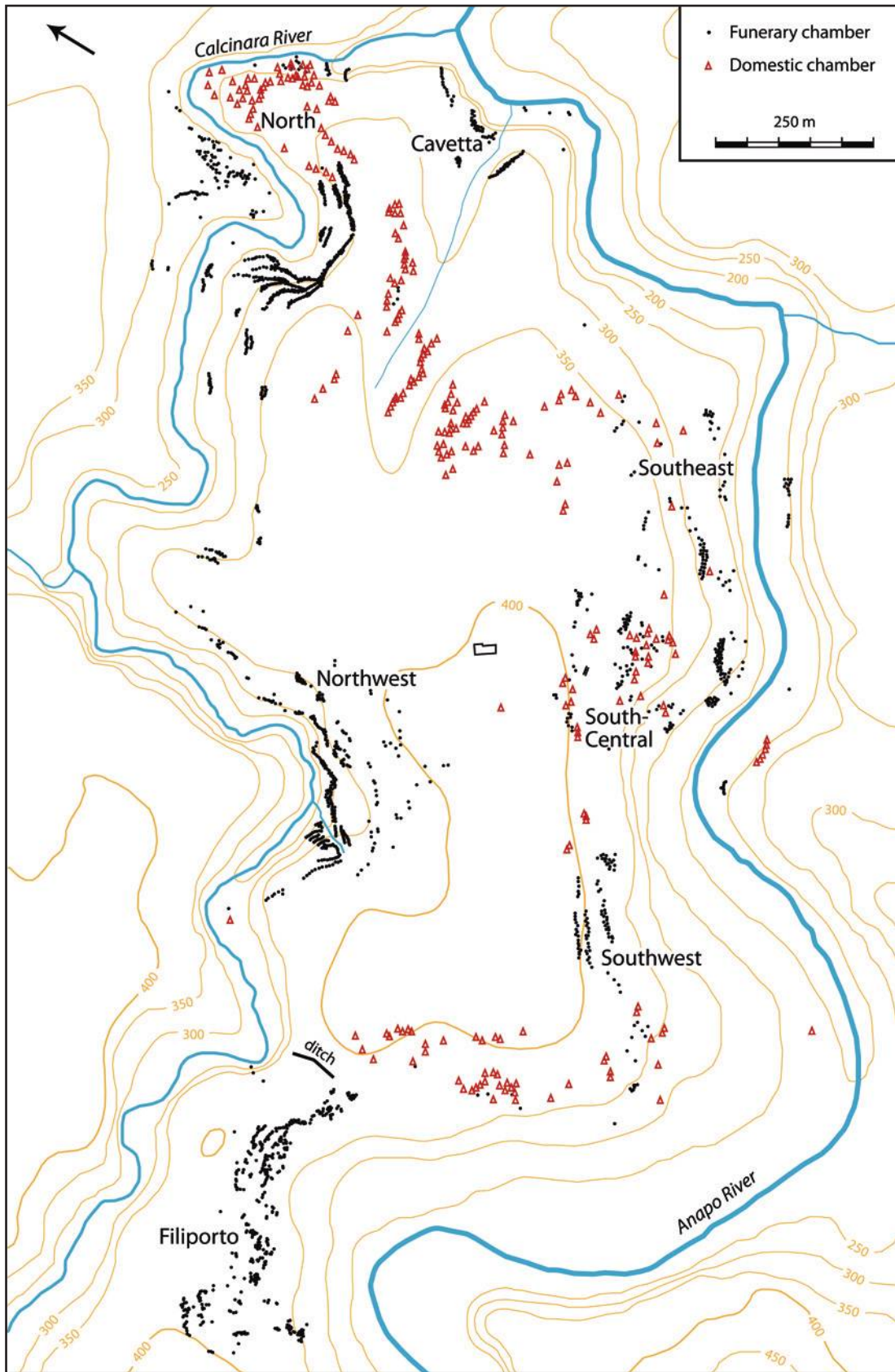


Fig. 5. Site map showing rock-cut funerary and domestic chambers.

Table 1. Recorded and Estimated Numbers of Tombs at Pantalica.

| Cemetery Area | No. Tombs Recorded with GPS | No. Tombs Counted | Estimated Additional No. Tombs | Estimated Total No. Tombs | Orsi's Estimate <sup>a</sup> |
|---------------|-----------------------------|-------------------|--------------------------------|---------------------------|------------------------------|
| Filiporto     | 479                         | 230               | 70                             | 779                       | 500                          |
| Northwest     | 164                         | 425               | 293                            | 882                       | 600                          |
| North         | 155                         | 664               | 384                            | 1,203                     | 1,500                        |
| Cavetta       | 4                           | 100               | 100                            | 204                       | 350                          |
| South         | 213                         | 251               | 184                            | 648                       | 1,000                        |
| Totals        | 1,015                       | 1,670             | 1,031                          | 3,716                     | 3,950                        |

<sup>a</sup> Orsi 1899, 1912

little change in gradient (see figs. 3, 5). It is one of the easiest points of entry and the only one passable today with a vehicle. Orsi said little about this necropolis, where he found only eight tombs preserving contents, mainly of relatively late, or Iron Age, date.<sup>26</sup> The burial area largely precedes the promontory and is partly omitted from old plans, but it is an important part of the site. Most of the tombs are spread over about 400 m in a broad south-facing arc and take advantage of horizontal bedding planes in the rock, which results in a tiered or shelf-like arrangement.

Access to the tombs is comparatively easy despite patches of vegetation, since the terrain is steep but rarely precipitous. Were it not for the vegetation, it would be quite easy to descend for about 150 m to the Anapo River below, through the center of the necropolis. The tombs surround what was probably once a route into the site. The other side of Filiporto, north of the road, is more precipitous and has fewer than a dozen tombs. A small number of tombs lie east of the ditch around the so-called medieval village, which is characterized by large rock-cut chambers of probable domestic use, discussed below; 49 of the latter are shown on the plan (see fig. 5).

Orsi estimated the number of Filiporto tombs at about 500, but this figure is too low, since 709 were located in the survey (see table 1; this is the number plotted on fig. 5 with black dots).<sup>27</sup> Visibility is fairly good, despite some areas of scree and hill wash. An additional 70 tombs, equal to 10% of the verifiable number, have been estimated to account for any that might have been obscured over time, giving an overall total of 779 (see table 1).

#### *The Northwest Cemetery*

This group of tombs extends mainly in a broad arc, facing north, with some smaller outlying clusters approaching the North Cemetery (see figs. 3, 5). Several groups are located on conspicuous rock outcrops or follow a sloping plane in the rock, but the main concentrations are easier to see from the hillside opposite, across the river, since they lie farther down the slope around the cliff edges overlooking the gorge (fig. 6). A narrow gully has numerous tombs on either side as if it were a focal point of the cemetery. This now looks too precipitous and overgrown as a point of access to the site, although it might have been viable in the distant past. Some larger chambers, which may not be funerary, are located south of the road farther up the slope, but visibility is poor there.

Orsi's estimate of 600 tombs in this group seems a little low (see table 1).<sup>28</sup> We recorded 164 and identified another 425 with the help of photographs, giving a total of 589. An additional estimated 146 tombs around the edges of the existing outcrops, partially obscured by vegetation, raises the total to 735 tombs, which are shown on the plan (see fig. 5). There are also signs of slope detritus beneath the road, possibly covering a good number of tombs, notably west of the gully. Although one has to make a guess, an additional estimate of 147 tombs, equal to 20% of the previous total, seems justifiable for this necropolis, giving an overall estimated total of 882 (see table 1).

#### *The North Cemetery*

This is the most famous of the Pantalica cemeteries, where tier upon tier of tombs present a spectacular

<sup>26</sup> Orsi 1899, 68–71.

<sup>27</sup> Orsi 1899, 68. Orsi was evidently not exaggerating the

tomb numbers.

<sup>28</sup> Orsi 1899, 43.



Fig. 6. Northwest Cemetery, with major tomb clusters highlighted.

facade about 100 m high to anyone approaching the site from the Sortino road to the northeast (fig. 7). The great North Cemetery comprises at least two distinct areas: the main one, in which the tombs hug the contours of a broad natural concavity in the headland overlooking the stream valley below, with additional chambers located, often precipitously, around the gorge toward Cavetta; and a second scatter on the opposite side of the river, along the path from Sortino (see fig. 5).

Orsi estimated 1,500 tombs in this area, although we were not able to verify such a large number (see table 1).<sup>29</sup> Given the precipitous location of many tombs, only 155 were recorded directly with GPS, mainly north of the river. Another 664 were observed and counted on the main facade and gorge, while thick undergrowth around the edges of some outcrops led me to estimate an additional 184 tombs nearby, bringing the tally to 1,003.<sup>30</sup> Again, however, to allow for some lack of visibility due to hill wash, notably around the western slopes, a figure of 200 was added on, equal to 20% of the previous total, giving an overall total of 1,203 (see table 1).

Whereas the tombs cluster around the steeper slopes of the promontory, the gentler slopes, enclosed by a bend in the river, have numerous large domestic



Fig. 7. North Cemetery, partial view.

<sup>29</sup> Orsi 1899, 53.

<sup>30</sup> This is the number shown on the plan (see fig. 5).

chambers, discussed below, 74 of which have been mapped (see fig. 5). This area is also traversed by a well-worn rock-cut path that winds down to the river, where there is a ruined mill (see fig. 3[A]), and then joins the old Sortino mule track. This was undoubtedly an important and ancient route into Pantalica.

#### *The Cavetta Cemetery*

East of the North Cemetery are smaller groups of tombs associated with the little Cavetta valley, which first descends gently and then drops steeply down to the Anapo River (see figs. 3, 5). Nearly all the tombs are located on precipitous slopes and near vertical rock faces on either side of this gully, which is now overgrown and slightly altered by landslips. Nevertheless, it was probably another access route to the site in antiquity. Orsi reckoned there were about 350 tombs in this area, which is much higher than our verifiable number of 104 (see table 1).<sup>31</sup> Visibility is very poor in the gully, however, which leads me to estimate as many as 100 additional tombs, although this number is rather speculative and still well below that given by Orsi.

Only four tombs were identified in the upper valley, where the most striking feature is a wide scatter of large rock-cut chambers, which Orsi regarded as a Byzantine settlement (fig. 8). We located 105 of these chambers (see fig. 5), although landslips and vegetation have undoubtedly hidden others. They extend up the hill on both sides of the valley and toward the South Cemetery, well beyond the area mentioned by Orsi.

#### *The South Cemetery*

These tombs extend for more than a kilometer along the southern flank of Pantalica facing the Anapo River. Orsi subdivided them into a Southeast, South-Central, and Southwest Group, the last of which is more readily distinguishable from the other two (see figs. 3, 5). There are at least three additional clusters and one or two isolated tombs on the adjacent hillside south of the river. Apart from the cliffs behind the old railway station (see fig. 3[E]), the southern side of Pantalica is not very precipitous, and two paths lead down to the river, one from the *anaktorion* and one from the hairpin bend near Cavetta. These paths have been improved to aid visitor access, although they may be of ancient origin as suggested by rock cuttings in

places. Some tombs follow natural horizontal steps in the limestone, while others are in tiers on steep outcrops near the valley bottom.

Orsi estimated more than 1,000 tombs in the South Cemetery, but it was not possible to confirm such a large number (see table 1).<sup>32</sup> We directly recorded 213 and counted another 251, giving a total of 464, which is well short of Orsi's figure. Once again, of course, some allowance must be made for tombs hidden by vegetation and landslips. A few tombs might also have been destroyed along the bottom of the valley by the former railway (see fig. 3), which was built after Orsi's campaigns and used from 1923 to 1956, when it was dismantled. Old photographs of the South Cemetery show that the area was formerly less overgrown and that Orsi must have had a clearer view of it.<sup>33</sup> Nevertheless, Orsi's very high estimate remains puzzling, and it is difficult to believe that more than half of the tombs in this necropolis have disappeared from view since his time. I propose adding no more than 184 tombs (equivalent to 40% of the verifiable total) to account for poor visibility, which gives an overall total of 648 tombs in the South Cemetery. In addition, 87 domestic chambers were recorded in this area.

#### CEMETERY SIZE, DEVELOPMENT, AND LOCATION

As regards the overall number of tombs at Pantalica, summarized in table 1, the figure verified by reconnaissance is 2,685, to which an estimated 1,031 tombs no longer visible has been added, giving a total of 3,716 tombs. This is not far short of a figure of about 3,950 tombs (see table 1), which can be deduced from Orsi's two main reports.<sup>34</sup> The idea that the site has more than 5,000 tombs, as stated in all the academic and tourist literature, is hard to justify.<sup>35</sup>

The survey also showed that while differences in size between the four main cemeteries, excluding Cavetta, are not very great, the South Cemetery can no longer be regarded as the second largest cemetery. This is relevant to site development, since the various cemeteries are sometimes assigned to different time periods. The Pantalica 1 phase (1250–1000 B.C.E.) is generally associated with the North Cemetery and the Pantalica 3 phase (850–730 B.C.E.) with the South Cemetery. This needs to be treated with caution, however, since the number of tombs with recorded finds is very small

<sup>31</sup> Orsi 1899, 71.

<sup>32</sup> Orsi 1912, 301.

<sup>33</sup> Orsi 1912, pls. 2, 3.

<sup>34</sup> Orsi 1899, 1912. In earlier articles, however, Orsi gave contrasting figures, from 1,000 (Orsi 1889, 169) to 5,000 tombs (Orsi 1895, 268). He does not appear to have been concerned with making detailed or accurate counts of tomb

numbers.

<sup>35</sup> E.g., Bernabò Brea 1957, 163; UNESCO World Heritage Centre (1992–2011, <http://whc.unesco.org/en/list/1200>). This high figure may explain why some visitors are perplexed by Pantalica. In reality, one would be hard-pressed to see more than about 1,500 tombs in the course of a single visit.



Fig. 8. Cavetta valley, north side, domestic chambers with broad open entrances.

as a proportion of the total number in each cemetery (table 2). Overall, we have finds from only about 5% of the Pantalica tombs.

Tomb typology might also shed light on temporal development. For example, circular or oven-shaped tombs, which often contained Late Bronze Age finds, seem to be earlier than quadrangular forms, more often associated with Iron Age material. This is why Orsi thought that the Filiporto cemetery was relatively late in date.<sup>36</sup> Yet we also observed tombs of earlier type at Filiporto. More information about tomb types, therefore, is still required.

The paucity of grave goods assignable to phase 2 (1000–850 B.C.E.) has encouraged the view that Pantalica was eclipsed at this time by sites such as Cassibile, but this is also uncertain.<sup>37</sup> There are many tombs in the Filiporto Cemetery with a quadrangular plan, flat ceiling, and raised bench, which resemble the typical tombs of Cassibile and might therefore date to this period.

One conclusion stemming from these observations is that the Pantalica cemeteries cannot be dated to different phases in a mutually exclusive way, even if they expanded at slightly different rates. It is more likely that there were several burial zones around the prom-

Table 2. Numbers and Percentages of Tombs with Datable Finds.

| Cemetery Area | Estimated No. Tombs | No. Tombs with Datable Finds (% Total) <sup>a</sup> |
|---------------|---------------------|-----------------------------------------------------|
| Filiporto     | 779                 | 8 (1%)                                              |
| Northwest     | 882                 | 19 (2.1%)                                           |
| North         | 1,203               | 48 (3.9%)                                           |
| Cavetta       | 204                 | 7 (3.4%)                                            |
| South         | 648                 | 111 (17.1%)                                         |
| Totals        | 3,716               | 193 (5.1%)                                          |

<sup>a</sup>Orsi 1899, 1912

ontory used concurrently throughout the prehistoric occupation of the site.

The location of the cemeteries shows that the tomb makers generally avoided the hilltop in favor of steeper but more sheltered slopes. Each cemetery faced in a different direction so that all points of the compass were covered, without preference for any particular alignment. Nevertheless, one may infer a strategic and

<sup>36</sup>Orsi 1899, 68–9, 91.

<sup>37</sup>E.g., Bernabò Brea 1990, 49.

symbolic value in placing the dead at key locations overlooking important pathways, gullies, the river, and points of entry around the site. The settlement was demarcated mainly by the gorge, as emphasized by placing tombs on both sides of it, rather than by the river alone. Proximity to water and a good view was perhaps regarded as beneficial for the dead, as well as for the living. At the same time, the preference for very steep slopes suggests a desire to confine the dead to places that were complementary to those for the living community, as discussed below.

#### ROCK-CUT DOMESTIC CHAMBERS: FORM, DISTRIBUTION, AND DATE

The other kind of monument, which is abundantly represented at Pantalica, comprises what may be called rock-cut habitation chambers or chambers for domestic use (see figs. 3, 5). These are usually referred to as the Byzantine or medieval “troglodytic” houses (*cameroni bizantini* in Orsi’s terminology), or *villaggi rupes-tri*, and are sometimes speculatively associated with a reoccupation of the site by refugees fleeing Arab incursions in the seventh–ninth centuries.<sup>38</sup>

Very little information is recorded about these structures, and, with one exception, their dating is not securely based on any contextual evidence or finds. While many are overgrown or partially filled with soil and rubble, others are empty and accessible (figs. 8, 9). They vary greatly in size and shape from about 3 to 10 m in diameter, although most are between 4 and 6 m. Many are roughly rectangular or trapezoidal, with a flat ceiling high enough to allow one to stand upright and a much larger entrance than a tomb. Several have small niches cut in the walls and small boreholes in the rock, possibly for tethering animals or hanging items (such as baskets or lamps?) from the ceiling. A few have two or three interconnecting chambers, giving a total floor space of up to about 100 m<sup>2</sup>, which is more than ample for a dwelling.

The only published example, however, is atypical, being unusually elaborate, well-cut, and modular in plan, with two separate entrances and a window (fig. 10).<sup>39</sup> In the Cavetta group, by contrast, the walls are roughly hewn and the chambers curvilinear in plan, resembling small caverns or open rock shelters. In parts of the Northwest and South Cemeteries, there

is a risk of confusing some of them with the large so-called princely tombs, which were rectangular. However, the latter tend to have a smaller raised doorway and a short access corridor.<sup>40</sup>

The distribution of these domestic chambers is frequently complementary to that of the cemeteries (see figs. 3, 5). There are four major clusters as well as scattered examples. Orsi regarded the Filiporto group as the biggest, with about 150 chambers.<sup>41</sup> We identified only 49 here, which should not be regarded as the original total, since vegetation impedes visibility in this area, although Orsi’s very high estimate is puzzling (table 3). This was clearly a residential zone, however, located on gentle slopes and natural rock terraces, with paths providing easy access to the chambers, which sometimes overlook a communal open space.

The group beside the North Cemetery comprises at least 74 chambers (see fig. 5; table 3) on the gentler slopes and terraces of the headland (fig. 11). The Cavetta group proved to be extensive, with 105 examples still identifiable, despite problems of visibility (see figs. 3, 5, 8). Once again, the location of domestic chambers complements that of the tombs on the steeper sides of the gully. In the South-Central Zone, the rock-cut dwellings are more often interspersed with tombs, although the main tomb groups are on steeper slopes (see figs. 3, 5). In the Northwest Cemetery, some possible habitation chambers are located south of the road, whereas the main tomb groups are north of the road nearer the precipice.

As noted, all the domestic chambers at Pantalica are deemed to be Byzantine or medieval in origin. However, this dating rests partly on faulty assumptions. One is that people in later prehistory never lived in rock-cut dwellings. This seems to be one reason Orsi felt obliged to dissociate them from the tombs.<sup>42</sup> Today, however, we know of Late Bronze Age sites with rock-cut dwellings in central and southern Italy. One is Sorgenti della Nova, where the chambers in question were until recently regarded as medieval.<sup>43</sup> In fact, they date from the same period as the adjacent prehistoric longhouses and vary greatly in form and size, serving both residential and ancillary domestic functions such as storage, cooking, and possibly ritual activities. It is not surprising that they were often re-used in later periods as well, since rock-cut chambers

<sup>38</sup> E.g., Bernabò Brea 1990, 65. See Blake (2003, 212–15) for a discussion of the broader historical context and the shortcomings of this theory.

<sup>39</sup> Orsi (1898, 17, fig. 11) called this one the *palazzo*, which seems to incorporate preexisting chambers, including a tomb (in Room D). He also used a chamber of this kind as his excavation headquarters (Orsi 1912, 302). I noted two chambers

with bedding, a wardrobe, and cooking equipment, evidently still used occasionally by transient occupants.

<sup>40</sup> Orsi 1899, 45–6, fig. 5.

<sup>41</sup> Orsi 1898, 16; 1899, 89.

<sup>42</sup> Orsi 1899, 40.

<sup>43</sup> Domanico 1995; Domanico et al. 1999.



Fig. 9. A large rock-cut dwelling near the North Cemetery.

can remain serviceable almost indefinitely. The date of creation is likely to be much earlier than that of last occupation or use.

Several authors have commented on the general lack of a secure chronology for rock-cut dwellings in Italy and Sicily, not least in southeastern Sicily, where there is a high concentration of such monuments with a potentially broad chronological range.<sup>44</sup> Although some may be assigned roughly to the Middle Ages, others could be earlier. Examples that have been dated to classical antiquity are represented at Lentini and elsewhere.<sup>45</sup>

Another assumption is that all the rock-cut domestic chambers at Pantalica date to the same period as the three rock-cut chapels, which served as places of worship for a resident medieval community. This theory is problematic, however. Several scholars suggest that most of these little oratories in Sicily, although they contain frescoes done in a somewhat archaic Byzantine style, date to the Norman period or perhaps as late as the 12th–14th centuries. This is a more credible dating for the San Nicolicchio and San Micidiario oratories, according to Giglio, while Messina now regards the

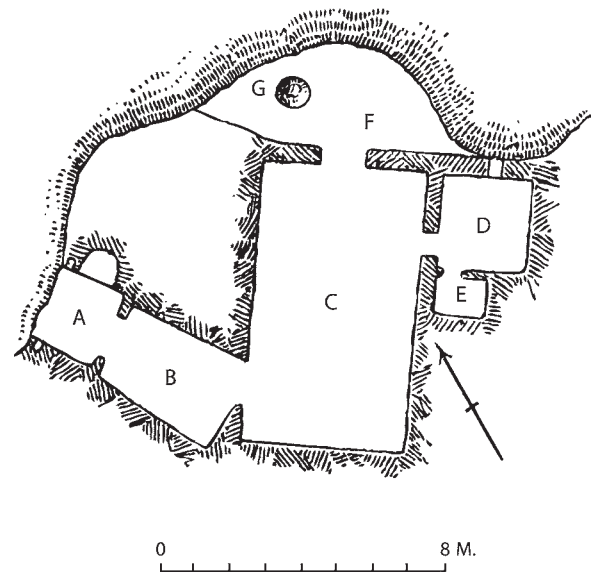


Fig. 10. An elaborate rock-cut dwelling at Filiporto (Rooms A–E, Platform F, Concavity G) (Orsi 1898, fig. 11).

<sup>44</sup>See, e.g., Uggeri 1974; Di Stefano 1986; Messina 1986.

<sup>45</sup>Spigo 1986.

Table 3. Numbers of Domestic Chambers at Pantalica.

| Cemetery Area | GPS Record | Orsi's Estimate <sup>a</sup> |
|---------------|------------|------------------------------|
| Filipporto    | 49         | 150                          |
| Northwest     | 1          | n/a                          |
| North         | 74         | n/a                          |
| Cavetta       | 105        | n/a                          |
| South         | 87         | n/a                          |
| Totals        | 316        | —                            |

<sup>a</sup>Orsi 1899

former as Norman and not earlier, as once suggested.<sup>46</sup> Using the chapels to date the domestic chambers would make the latter Norman or later.

This is unsatisfactory, however, since the association is not direct. Moreover, little oratories are common in the Hyblaean hills of southeastern Sicily and may represent fairly isolated rural shrines occupied by hermits or small monastic communities. In fact, even San Micidiario, the largest of the three Pantalica oratories, can scarcely accommodate 10 people. It is also noteworthy that San Micidiario and San Nicolichio are located on the edge of the gorge, whereas the domestic chambers are set against the gentler slopes, and the tiny Grotta del Crocefisso is peripheral to the concentration of nearby habitation chambers (see fig. 3). It is not clear, therefore, whether these little oratories served a large resident population or whether the site was largely deserted by this time.

Another problem is the lack of medieval burials at Pantalica, with the exception of a few trench graves such as those located on the floor of the San Micidiario chapel. Byzantine rock-cut tombs, generally resembling large hypogea with multiple trench graves, are well known in this region and are easy to distinguish from prehistoric chamber tombs.<sup>47</sup> Likewise, there are only limited records of medieval surface finds at the site. Instead, Orsi reports scattered pottery of Hellenistic date, which matches our own observations of prevalently Late Classical and Hellenistic wares on

the surface, often in the general areas where domestic chambers are encountered.<sup>48</sup> This is surprising in view of the considerable number of supposedly medieval dwellings, which would imply a large medieval population.

Also significant are excavations at the nearby Byzantine site of Giarranauti on the adjacent headland just 2 km to the northwest.<sup>49</sup> This settlement has several freestanding stone-built houses from about the seventh century C.E., some of which are not entirely different in conception from the Pantalica *anaktoron*, albeit smaller and with fewer rooms.<sup>50</sup> There are no rock-cut houses here, however, even though the geology is similar to that of Pantalica. One can only conclude that this Byzantine community had different ideas about what constituted a so-called normal house than did their troglodyte neighbors at Pantalica.

Last but not least, doubts about the medieval origins of the Pantalica domestic chambers stem from an excavation by Bernabò Brea of a small rock-cut structure, which was certainly Iron Age in date.<sup>51</sup> This roughly cut cavity (diam. 3.5–3.8 m, ht. 2.7 m) lay not far from the *anaktoron* and contained no human bones, only Iron Age (Finocchito) pottery, several spindlewhorls, a loomweight, and fragments of a Protocorinthian cup (seventh century B.C.E.). It should be noted that while human bones survive well in the Pantalica tombs, loomweights were not typical grave goods at this site and are generally more common in habitation contexts of this period. Since this chamber bears little resemblance to an Iron Age tomb and there were no other tombs in the vicinity, it is much more likely to have had a domestic rather than a funerary function.

#### REUSE OF PREHISTORIC TOMBS

It is often said that Pantalica provides good examples of the later reuse of prehistoric tombs.<sup>52</sup> This is observable in a few cases, but its extent is hard to gauge and even harder to date. The San Micidiario and San Nicolichio chapels may well have exploited preexisting tombs, since each has a small tomb entrance nearby, although their forms are no longer visible. The Grotta del Crocefisso, which lacks the more specifically

<sup>46</sup>Messina 1979, 111; 2008, 51; Giglio 2002, 87, 103.

<sup>47</sup> Good examples have been excavated at *contrada* Lardia, about 4 km to the north of Pantalica (Basile 1993–1994, 1322–33).

<sup>48</sup> Orsi 1899, 87. No surface collection has been made at Pantalica, although this would obviously be desirable.

<sup>49</sup> Basile 1993–1994, 1333–42.

<sup>50</sup> See House 6 with a narrow chamber (Room 3) flanking two square rooms in the manner of Rooms B, C, and D of

the *anaktoron* (Bernabò Brea 1990, pl. 36; Basile 1993–1994, fig. 12). An abundance of ash, animal bone, and burnt material due to the presence of ovens in the Giarranauti houses, covered by collapsed roof tiles, also recalls Orsi's description of the deposits inside the *anaktoron* (Orsi 1899, 78–9; Basile 1993–1994, 1335–38).

<sup>51</sup> Bernabò Brea 1990, 92, 95, 99.

<sup>52</sup> E.g., Blake 2003.





Fig. 11. Northeast corner of Pantalica, with terraced slopes and North Cemetery to the right (west).

religious architecture of the other two oratories, may have reused an older domestic chamber of the kind abundantly represented in this part of the site. In addition, the unusually complex dwelling in the Filiporto village, noted above (see fig. 10), seems to have incorporated a prehistoric tomb into its structure.<sup>53</sup>

In the case of the South Cemetery, Orsi thought that some tombs had been turned into medieval habitations, which is quite possible, although it is not always easy to distinguish a converted tomb from what may originally have been a domestic or ancillary structure, such as a storage room.<sup>54</sup> The South Cemetery also has two chambers with olive presses, obviously added to a preexisting tomb in one case, although the date of this alteration is hard to fix and might go back to classical antiquity. Moreover, Orsi mentions medieval finds in only two prehistoric tombs, which is even less than those in which finds of the fifth–third centuries B.C.E. occur (four tombs).<sup>55</sup> This still leaves us with more than 300 domestic chambers for which there is no direct dating evidence at all.

The essentially complementary locations of tombs and dwellings (see figs. 3, 5) merit further comment. If the rock-cut houses were merely enlarged tombs,

one would expect to find them in the former cemetery areas among the concentrations of tombs, but this is generally not the case. For example, any medieval occupants of Filiporto could have reused the main tomb groups near the road but chose instead to go farther round the hill, where there is only limited evidence for tombs. Elsewhere, with the exception of parts of the South Cemetery, the location of prehistoric tombs seems generally too steep for residential purposes.

Whether much time would have been saved by trying to reuse prehistoric tombs as dwellings is also questionable. A great deal of additional rock cutting would still have been required. The only exceptions would have been provided by unusually large tombs, but these were a minority and could not always have been in convenient locations for domestic reuse. If a Byzantine date for all the domestic chambers were correct, rather than reusing old tombs, it would seem more likely that the inhabitants of this period mostly created rock-cut houses afresh and in considerable numbers, almost as if they had been inspired to do so by the presence of so many prehistoric rock-cut tombs. This is essentially what the conventional view implies, but it is not a very convincing theory.

<sup>53</sup> *Supra* n. 39.

<sup>54</sup> Orsi 1912, 318–19.

<sup>55</sup> Orsi 1899, 58; Orsi 1912, 327.

## CONCLUSIONS

An alternative view is that the rock-cut villages of Pantalica are not Byzantine or medieval in origin but prehistoric and represent habitations or ancillary structures first used by the people buried in the adjacent cemeteries. This hypothesis fits with the complementary distribution of these monuments and with the local topography. Some proportional correspondences could also be suggested between the numbers of domestic and funerary chambers in proximal groupings. For example, the large North Cemetery is associated with a sizeable agglomeration of nearby domestic chambers, as is the Filiporto Cemetery, while the Cavetta Cemetery can be related to the habitation chambers farther up the valley (see figs. 3, 5). Only the Northwest Cemetery is harder to link with any conspicuous cluster of domestic chambers.

Undoubtedly, there also would have been built dwellings of masonry or perishable materials at the site. Late Bronze Age houses in Sicily, as elsewhere in Italy, were normally freestanding structures of stone or timber and other materials, sometimes set into the slopes of a hillside.<sup>56</sup> The rock-cut domestic chambers at Pantalica could serve as an indication of their whereabouts, following the example of Sorgenti della Nova, where both types of structures are in close proximity.<sup>57</sup>

The distribution of tombs in major groupings around the promontory of Pantalica is reminiscent of some contemporary settlements in Italy, which are better known from cemeteries than residential quarters. For example, the big Villanovan sites of Tarquinia and Veii also occupy large promontories bounded by stream valleys. Here, too, there is some debate about the location and organization of the residential quarters, which may have formed separate groups with a corresponding cemetery nearby.<sup>58</sup>

A similar arrangement can be suggested for some contemporary sites in southeast Sicily characterized by concentrations of rock-cut tombs. One example is Casibile, where the tombs, estimated to be about 2,000 in number, form several clusters up to 4 km apart.<sup>59</sup> In this case, the settlement most likely consisted of several nuclei. The Iron Age rock-cut cemeteries of Finocchito and the Noto area may also have been associated with various residential units.<sup>60</sup> One is not obliged, therefore, to think in terms of a single residential quarter on the summit of Pantalica.<sup>61</sup>

My preferred hypothesis is that there were several concentrations of dwellings at the site coinciding with the areas of the rock-cut domestic chambers recorded on the plan (see fig. 5). There was probably also a looser sprawl of dwellings, however, extending up from the Cavetta valley around the eastern end of the promontory, where we found nonfunerary chambers scattered on the upper slopes. There may be others, buried under slope detritus, continuing around the southern slopes of the promontory toward the *anaktoron*.

One can think of practical advantages in placing houses on the gentler slopes beneath the summit. These are more sheltered locations, and they are more convenient for accessing the river and routes into the site, while the upper slopes near Cavetta also benefit from more extensive views toward the coastal zone. Elsewhere, the view is more often impeded by surrounding hills. The complementary location of burials and residential zones would have allowed the living and the dead to watch over each other, as it were, but preserve their respective spaces. By contrast, the top of the hill, which is more exposed to the wind and rain, could have had different uses, such as for gatherings, pasture, or cultivation. According to this model, the residential zone would have been somewhat segmented but also interconnected and integrated over the full extent of the promontory. While kinship affiliations to certain burial or residential zones may have existed, the community could still have been unified from a sociopolitical and organizational perspective.

The theory of a prehistoric origin for the domestic chambers does not exclude reuse in later periods, which may well have involved modification and enlargement. Indeed, this is a complex phenomenon that extends more widely in time than the Byzantine or Early Medieval periods. Apart from our own observations of the continuing use of some of these structures for modern agricultural purposes and transient occupancy, there are records of rock-cut dwellings on the outskirts of the nearby town of Sortino being used in the 16th and 17th centuries and in relatively recent periods of crisis, such as earthquakes.<sup>62</sup> An earlier reuse of these monuments in the Classical and Hellenistic periods cannot be ruled out either. Clearly, the evidence at present does not warrant overly dogmatic assertions about chronology, since so little has been excavated.

In conclusion, the topographic research described in this article has shed new light on Pantalica while

<sup>56</sup>E.g., Leighton (forthcoming).

<sup>57</sup>Supra n. 43.

<sup>58</sup>E.g., Pacciarelli 2000, 115–79 (with further references).

<sup>59</sup>Orsi 1899, 92; Turco 1990, 2000.

<sup>60</sup>E.g., Albanese Procetti 2003, 48.

<sup>61</sup>Orsi (1898, 16) also thought that there might have been several habitation nuclei associated with each cemetery area.

<sup>62</sup>E.g., Dennis 1864, 366 (quoting C. Lyell); Fallico and Fallico 1978, 159.

exposing the weaknesses of old theories and the need for new work at this site and at others with similar features. The great size of several rock-cut cemeteries of the later prehistoric periods on the island, the general absence of adequate site plans for them, and the work undertaken long ago by Orsi should not deter modern scholarship but prompt reassessments, starting with observations and recording on the ground followed by more targeted work. I hope to have shown the potential for new investigations and studies of rock-cut tombs and dwellings, which are one of the most striking, but also neglected, types of archaeological monuments in Sicily.

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