

# Introduction

## Swedish commitments in the Berbati Valley

The archaeological surface survey conducted on the Mastos Hill (Μεγάλος Μαστός) in 1999 is but one in a series of field projects carried out by Swedish archaeologists in the Berbati (Μπερμπάτι) Valley over more than six decades. To set the scene for the 1999 survey a brief account of previous field-works is presented below, beginning with the preambles in 1934 to what many of us refer to as the old excavations, i.e. those directed by Axel W. Persson on the eastern and southern slopes of the Mastos Hill.<sup>1</sup> The fold-out plan at the back of the volume (*Fold-out 1*) in a way summarizes the long Swedish engagement in the Berbati Valley and illustrates our results so far. The reader should be aware that the fold-out does not encompass the Limnes plateau to the east and northeast where additional survey work has been carried out.<sup>2</sup>

In the summer of 1934, Persson, Gösta Säflund and Erik J. Holmberg made a reconnaissance trip to Berbati in order to locate possible sites for excavation. They spent a day together with Persson's foreman at the Dendra excavations, Kostas Bakakas, prospecting in the valley. Without comparison the most promising location was the eastern slopes of the Mastos Hill (*Figs. 1–2*) strewn with potsherds, but they also sighted what seemed to be a Mycenaean chamber tomb north of the east-west running road through the valley. When Holmberg began his investigations of the tomb in 1935, it turned out to be “robbed”.<sup>3</sup> That same year Persson declared in an interview in a Swedish newspaper that he would find a tholos tomb. He searched for a week and found the so far only such tomb

excavated in the Berbati Valley (*Figs. 3–5*).<sup>4</sup> Persson investigated it in 1935, but had, at his untimely death in 1950, not published it. His unfinished manuscript was located in the 1970s and Åke Åkerström, who had assumed responsibility for the research in Berbati at the time, asked Barbro Santillo Frizell to re-study the material.<sup>5</sup>

The following year, in 1936, Persson began his explorations of the eastern slopes of the Mastos Hill in what later became known as the Potter's Quarter with Åkerström joining him (*Figs. 6, 28, 30*); Säflund at the same time investigated the Western Necropolis on the lower slopes of the Phytesoumia (Φυτεσούμια) spur northwest of the Mastos Hill (*Fig. 7*).<sup>6</sup> On the southern slopes of Mastos he then, in 1937, excavated part of an Early Helladic settlement which also continued into the Middle Helladic period (*Fig. 30*).<sup>7</sup> Åkerström continued work during 1937–1938 in the Potter's Quarter until the Second World War put a stop to all excavations in Greece. He resumed investigations there in 1953 with a short final season in 1959.<sup>8</sup>

In the late 1980s fieldwork on a large scale in the Berbati Valley was initiated by the author. A surface survey of the valley and of the mountainous area to the east around the modern village of Limnes (Λίμνες) was conducted in 1988–1990.

<sup>4</sup> A short report on the 1935 season appeared in the *Illustrated London News* on the 15th of February, 1936. See also *AA* 1935, 200–201. The tholos tomb is situated around 500 meters north of the Mastos Hill. On *Fold-out 1* it is marked as LH Tholos but was in the 1988–1990 survey designated FS 515.

<sup>5</sup> Santillo Frizell 1984. She unfortunately did not have access to the photographs of the tholos investigation included here. I found them years later in the Berbati archive.

<sup>6</sup> Säflund 1965, 13–90. At the time of the survey we located one (FS 526), possible two, of the tombs investigated by Säflund; the others have been completely obliterated through erosion and cultivation.

<sup>7</sup> Säflund 1965, 91–159.

<sup>8</sup> In *AA* 1936, 138–141 Persson published a short preliminary report on the work of 1936 and another report appeared in the *AA* for 1938, 552–557. Åkerström devoted his main efforts to the pottery production in the Potter's Quarter and wrote extensively about it; Åkerström 1940; *idem* 1952; *idem* 1968; *idem* 1987.

<sup>1</sup> For more details see Wells, Runnels & Zangger 1990, 210–211.

<sup>2</sup> Wells 1996a, *passim*.

<sup>3</sup> What a so-called plundered tomb actually signifies is a matter for debate; see Wells 1990, 126. For this particular tomb see Holmberg 1983. The chamber tomb was relocated during the Berbati-Limnes 1988–1990 survey and designated FS 514; Schallin 1996, 144.



Fig. 1. A view of the western part of the Berbati Valley with the Mastos Hill in the centre and the mountains Zara (on the left) and Prophitis Elias (on the right). Behind them lies Mycenae. In the far distance are the mountains of Arcadia. Photograph by B. Wells.

The Mastos Hill had to be excluded from the field permit due to the extensive excavations conducted there in the 1930s and 1950s.<sup>9</sup> The survey aimed at giving a diachronic account of a politically and economically important area in a little-known corner of the Argolid, and was published in 1996. Yet, it was only the first of three surface investigations carried out in the valley and methodologically it differed totally from the two later ones.<sup>10</sup> More will be said about this below. However, let me first say a word about the immediate sequels to the 1988–1990 survey.<sup>11</sup>

Several sites recorded during the 1988–1990 survey were additionally investigated or documented from 1994 onwards. These sites were included in a separate research project (the Berbati Valley Project) to investigate the agrarian economy of the valley. During the survey we had identified an accumulation of pottery (FS 516) whose extension and nature changed with every year of ploughing in an olive grove above the previously mentioned tholos tomb. On the surface the material belonged to a period starting in the late eighth century BC and continued into the Archaic period. We recognized the

spot as being associated with the tholos tomb and wished to investigate it before extinction. We excavated the findspot in 1994. It turned out to be a cult-place intimately connected with the tomb.<sup>12</sup> At the same time we documented two structures on the valley bottom belonging to the fourth century AD *villa rustica*: the Roman bath (FS 500) and the cistern (Standing Monument 10; on *Fold-out 1* designated as Roman Cistern) (Figs. 8–9), which fed the estate with water from at least one spring to the northeast of it. The remains of the bath lie by the modern east-west road through the valley and therefore have been constantly damaged through its widening over the years. Thus the monument is unfortunately much degraded; the cistern is comparatively well preserved.<sup>13</sup>

During the 1988–1990 survey, FS 506 was defined as a Classical–Hellenistic farmstead.<sup>14</sup> Locally called Pyrgouthi (Πυργούδι) due to its well-preserved remains of a Hellenistic tower (Fig. 10), investigations in 1995 and 1997 revealed a much longer and partly very different history of the site. The excavations were published in 2005.<sup>15</sup> Before excavations began, we conducted an intensive surface survey over an area

<sup>9</sup> Wells 1996a.

<sup>10</sup> Wells, Runnels & Zanger 1990, 214–216.

<sup>11</sup> For balanced accounts on survey methodology see Tartaron 2003; Schon 2002.

<sup>12</sup> Wells, Ekroth & Holmgren 1996, 191–201 (by G. Ekroth).

<sup>13</sup> Wells, Ekroth & Holmgren 1996, 201–209 (by K. Holmgren).

<sup>14</sup> Penttinen 1996a, 260–262.

<sup>15</sup> Wells 2005; Penttinen 2005; Hjohlman 2005.





*Fig. 2. The Mastos Hill from the east in 1935. Photograph in the Åke Åkerström Berbati Archive, the Swedish Institute at Athens.*

*Fig. 4. The dromos and stomion of the tholos tomb at Berbati after the 1935 excavation. Photograph in the Åke Åkerström Berbati Archive, the Swedish Institute at Athens.*

of 2600 m<sup>2</sup> to the west, southwest, south and southeast of the tower and south of the main road through the valley. We divided the area into units of 10 × 10 meters, which were walked intensively and all artefacts studied. At this time, visibility diverged dramatically from the earlier survey, as the fields had been recently ploughed. We now discovered masses of Late Antique pottery on the surface, which had previously been cultivated with grain and thus inaccessible for walking in 1990, or covered with vegetation hiding most of the artefacts.



*Fig. 3. The excavation of the dromos of the tholos tomb at Berbati in 1935. On the slope to the left of the dromos stands Åke Åkerström, and to the right Gösta Säflund. Photograph in the Erik Ståhl Berbati Archive, the Swedish Institute at Athens.*

Methodologically and analytically the Pyrgouthi survey was, of course, more refined than the broader surface survey of 1988–1990. Obviously, a matrix of the Pyrgouthi-type covering all of the Berbati Valley and the Limnes plateau would have given different results from what our extensive walking of the large areas of the valley and the highlands did. Our investigations unfolded in a very typical way, beginning with a coarser survey followed up by a fine-grained survey and excavations at Pyrgouthi, producing richer and more nuanced data. There is thus no comparing of the results of different surveys without looking at the objectives of the research and we cannot judge the methodologies employed without



Fig. 5. The tholos tomb at Berbati in 1989. Photograph by B. Wells.

the knowledge of the parameters of each separate survey project.<sup>16</sup> The lesson we learnt at Pyrgouthi was further underscored at the Mastos Hill. Here, as we will see, the intensive sampling involved collection of all material in each unit, which could be seen as yet another step towards as complete a knowledge as will ever be possible to obtain of the history of human activity such as it can be written from a surface survey.

## Communications into and out of the Berbati Valley

As shown in the succeeding contributions, through time the Berbati Valley was drawn into political and economical networks controlled by powers either to the north towards

Corinthia or towards the south and the Argive Plain.<sup>17</sup> Sometimes interaction with surrounding areas was quite marked, e.g. in the Late Helladic period, while at other times the valley was more or less isolated from the outside world, e.g. in the Middle Helladic period, or seemingly desolate as in the Early Iron Age.<sup>18</sup> Until bulldozers were invented, communication followed natural passages through mountainous terrain. Travelling on foot and transport by horse, donkey or mule were normal until modernity. Paths through the landscape generally leave few or no traces. However, in and around the Berbati Valley communication routes have left substantial traces and, in the case of the Mycenaean road in the north-western part of the valley (*Fold-out 1*), even monumental constructions. The so-called Mycenaean highways are prestigious projects and must have involved a great labour force, which only a central, political power could muster.

The main modern road from the Argive Plain through the valley was built in the 1960s. It runs diagonally from the southwest through the Klisoura (Κλεισούρα) ravine towards the northeast towards Limnes, passing by the village of Prosymna, formerly Berbati (*Fold-out 1*). Prosymna (Πρόσυμνα) is the official name of the village; the locals call it Prosimni (Προσύμνη) or even Berbati.<sup>19</sup> The 1988–1990 archaeological survey showed with all clarity that a section of this route,<sup>20</sup> as well as routes connecting the Limnes plateau both with the Argive plain in the south close to Midea and in the north the Corinthia over the Stephani (Στεφάνι) plateau, was of great importance in prehistory tying our survey area to the regions beyond. The 1988–1990 site maps illustrate how important these mountain passes were for communication including the trade of artefacts through the Palaeolithic, the Neolithic and into the Early Helladic period. In some cases the sites may have been fairly small, but FS 12 (Kathili/Καθιλή in the Miyio Valley northeast of Limnes) and FSS 39–40 (Vigliza/Βίγλιζα south of Limnes) were settlements of some size with a beginning at the end of the Neolithic and substantial activity in the Early Helladic period.<sup>21</sup> Their location on heights overlooking the mountain passes manifest their importance for guarding the communication routes, which is further un-

<sup>17</sup> Cf. Pikoulas 1995.

<sup>18</sup> Wells 1996a.

<sup>19</sup> Asterton 1979, 9; Wells 1996b, 10.

<sup>20</sup> The map in *Fold-out 1* does not include the outer end of the Klisoura ravine with the sites FSS 200 and 201, which in the 1988–1990 survey were identified as Mesolithic (Runnels 1996, fig. 1); nor does it show the Final Neolithic sites FSS 201, 202, 204 and 207, which underscore the importance of the Klisoura ravine as an important route of communication.

<sup>21</sup> Runnels 1996, 27–30 and figs. 1, 5; Johnson 1996a, 59–63 and fig. 2; Forsén 1996, 90–109 and fig. 1. The Klisoura ravine has now been further investigated and excavation in the caves has revealed a much longer sequence than our survey did of the slopes, Koumouzelis *et al.* 2001.

<sup>16</sup> Penttinen 2005. Cf. Tartaron 2003, 23–45.





Fig. 6. Excavations in the Potter's Quarter in the late 1930s. Photograph in the Åke Åkerström Berbati Archive, the Swedish Institute at Athens.



Fig. 7. A view towards the mountain of Euboea from the Phytesoumia spur during Gösta Sjöflund's excavations in the Western Necropolis. Photograph in the Åke Åkerström Berbati Archive, the Swedish Institute at Athens.





Fig. 8. The ruins of the Roman bath by the east-west road through the Berbati Valley. Photograph by B. Wells.

Fig. 9. The cistern that fed the Roman villa rustica with water, situated to the north of the bath. Photograph by B. Wells.

Fig. 10. The tower of early Hellenistic date, with press beds and other installations of Late Antique date, after the 1995 and 1997 excavations, seen from the north with the Klisoura ravine in the background. Photograph by B. Wells.

derlined by the guard post FS 40. These routes continued to play a role in later periods, even into modern times. As late as a generation ago the *kalderimia* (καλντερίμια) connecting Limnes both to the north and to the south functioned as transport routes. During a walk along the route from Limnes to Midea in 1990, we noticed further Early and Late Helladic material on the slope south of our 1988–1990 survey area towards Midea.

It is, on the other hand, noteworthy that most Bronze Age and historic sites in the Berbati Valley lie at some distance from the Klisoura, predominantly in the western part of the valley (*Fold-out 1*). Other routes of communication with the valley became important. One such route began on the northern side of the citadel of Mycenae, passed by the Perseia spring and the Drakonera (Δρακονέρα) bridge on the Mycenae side and emerged into the Berbati Valley over the saddle between the mountains Zara (Σάρα) and Kondovouni (Κοντοβούνι) or Agrilovounaki (Αγριλοβουνάκι) as it is also named (*Fig. 11*). This route was first mapped by Bernhard Steffen and





Fig. 11. A view of the western part of the Berbati Valley towards the mountain Propheetis Elias by Mycenae. Kondovouni can be made out in front of the mountain. On its left flank a thin grey line represents the Mycenaean road, where it is well preserved on the hard limestone bedrock; on its right flank only dense vegetation marks its course, as the road bank has eroded away on the softer flysch. Right of the centre of the photograph the well-preserved wall of the mill-race of the water mill, Standing Monument 15, can be seen. The tholos tomb lies slightly to the east. Photograph by B. Wells.

named “Erste Hochstrasse” or the first highway.<sup>22</sup> We have assumed, as has indeed Richard Hope Simpson, *contra* Anton Jansen, that the rulers of Mycenae incorporated the Berbati Valley into their realm in the Late Helladic IIIA2 period.<sup>23</sup> The first highway, by which a large settlement was identified during the 1988–1990 survey (FS 14), was undoubtedly constructed as a means of connecting dependencies with the Mycenae citadel. It is highly likely that the Stephani plateau, as argued also by Hope Simpson, was drawn into the Mycenaean ruler’s sphere of interest at the same time, as the first highway continues north in the direction of the Kephalaria (Κεφαλάρι) spring on this plateau.

When Swedish archaeologists took up fieldwork at the Mastos in 1935, they entered the valley from the northwest

via the saddle between the Zara and the Kondovouni on what is today a dirt road but was then probably a track. Persson and his team crossed the Asterion (Ἀστερίων) stream probably very close to the Mastos Hill and then climbed the slopes of the Euboia range to the Panayia chapel, where they built their camp close to a rich spring (Fig. 12).<sup>24</sup> This is even today very popular locally for its clean and tasty water. The route that the Swedes used down the slope from the mentioned saddle had, as will be argued below, a very long history as a by-road to the built Mycenaean road, whose road bank was constructed from local stone. A quarry is in evidence by the Lykotroupi (Λυκοτρούπι) bridge on the slope of Koutzoyanni (Κουτσογιάννη) (Fig. 13) and large portions of the road are still preserved with its large and small culverts along the 300 m-contour on the Kondovouni and on the Koutzoyanni (Figs. 14–16), west of the Kephalaria Rema turning towards

<sup>22</sup> Steffen 1884, 8.

<sup>23</sup> Schallin 1996, 173; Wells 1996a, 456 f.; Jansen 1997 prefers a small Mycenae, but Hope Simpson 1998 and Hope Simpson and Hagel 2006, 144–156 forcefully argues against this. I believe the archaeological evidence underscores our arguments (see below).

<sup>24</sup> Åkerström 1952, 32. The spring lies by FS 422, see Hahn 1996, figs. 27 and 125.





Fig. 12. The Panayia Chapel on the northern slopes of Euboea with the harnessed waters of the rich spring. As can be seen, this is where the potsherds were washed during the 1930s excavations at Berbati. Photograph in the Erik Ståhl Archive, the Swedish Institute at Athens.

the north in the direction of the Stephani highlands above Psili Rachi (Ψηλή Πάχη).<sup>25</sup>

There is no archaeological evidence for the suggested by-road branching off the built Mycenaean so-called highway 1, but communication between Mycenae and the settlement at the Mastos is inconceivable without it. The gentle slope from the saddle between the Zara and the Kondovouni and down to the valley bottom would not have required a built road bank. Besides, extensive cultivation on the extremely eroded marl slope would have obliterated any traces that may once have existed of such a road. This is the very area where Säflund excavated what he called the Western Necropolis, whose Mycenaean tombs have, with one exception, disappeared in precisely this way.<sup>26</sup> A comparison should be made with the built

Mycenaean road, where perfect preservation is conspicuous precisely where it was constructed on hard limestone and is totally gone, without a trace, on the eroded flysch, both west of the Lykotroupi bridge (Fig. 11; see also *Fold-out 1*) and between the Drakonera bridge and the saddle between the Zara and the Kondovouni. Moreover, on the Mycenae side there are few traces of the first highway from the citadel to the Drakonera bridge.

Our proposed by-road runs a slightly different course than what J. Lavery has suggested for his m5, which would have taken off close to the Perseia spring up the slope of Vorino Diaselo (Βορινό Διάσελο), a spur on the northern side of the Zara, and thereafter run towards the southeast in much the same way as our suggested route.<sup>27</sup> Whichever course is the correct one, the overwhelming evidence shows that our valley communicated with Mycenae and was drawn into its sphere of influence around 1400 BC or during pottery phase LH IIIA.<sup>28</sup> A one-period site (FS 428) was registered during the 1988–1990 survey, whose location overlooking the whole Berbati Valley (*Fold-out 1*) below the saddle between the Zara and the Kondovouni can be used as an argument for our proposed route.

The fact that, from the Late Bronze Age onwards, most documented sites in the valley are located either in the central part of it or towards the northwest (*Fold-out 1*) shows, as noted previously, changes in communication patterns compared to earlier times. It is as if settlers avoided the lower part of the valley bottom, retracting from the Klisoura. Perhaps they did so for defensive reasons, hugging the lower slopes of the Psili Rachi the better to be warned of and to control whatever emerged from the ravine. This could explain the choice to settle in the northwest, even further away from what could have been perceived as a dangerous gateway between the valley and the Argive plain. Once settlers in the post-Mycenaean period enter the valley again in any numbers to leave permanent traces of their activities, whatever they carried with them in the way of household goods or votives for deposition at the tholos tomb, finds their closest affinities on the other side of the mountains in the west, i.e. at Mycenae and the Heraion.<sup>29</sup> We have therefore concluded that they came from the northwest using the roads and tracks in use since the Late Bronze Age. The newcomers were thus already familiar with the monumental remains of their ancestors beyond the mountains and showed reverence through various rituals to those buried in the Berbati tholos through their deposits of figurines and drinking vessels at FS 516.<sup>30</sup>

<sup>27</sup> Lavery 1990, 168 f., 171 (map).

<sup>28</sup> Schallin 1996, 173; Wells & Runnels 1996, 456 f.

<sup>29</sup> Ekroth 1996, 219–221.

<sup>30</sup> Wells, Ekroth & Holmgren 1996, 191–201 (by G. Ekroth).

<sup>25</sup> Schallin 1996, 131–133, 172 f.; Wells & Runnels 1996, 457.

<sup>26</sup> Säflund 1965, 15–81; Schallin 1996, 142 (FS 526).





Fig. 13. Stone for the Mycenaean road was obviously quarried locally. On the slope of Koutzoyanni, to the east of the Lykotroupi Bridge (an unusually large culvert), one such quarry was identified. This watercolour by Attila Tóth depicts Mycenaean workers extracting the blocks and building the road.

Between the Euboia and the Zaira another passage may have offered a route of communication from prehistoric times to the present day. A watchtower at Mourteza (Μουρτέζα) (Fig. 17), probably datable to the fourth century BC, lies in a mountain pass from the Argive Heraion to the Berbati Valley. Here may be another ancient route of communication. It has been mapped by both Steffen and Lavery.<sup>31</sup>

Several passes across the mountains bordering the Berbati Valley in the north would in ancient times have served well as routes of communication with the Corinthia and areas beyond. The one passing by the Kephalari spring would have

been the continuation of the built Mycenaean road already mentioned, although we cannot follow its complete course. This is not the time and place to discuss the Mycenaean road network in detail; suffice it to say that at least three possibilities offer themselves for more or less strenuous travels. One of these is the modern kondoporia (κοντοπορεία) in the north-east, which was the most direct route of communication in modern times between the Berbati Valley and the Corinthia (Figs. 18–20). It can still be walked from Prosimni to Ayionori (Αγιονόρι). It has a long history and is also mentioned in our ancient sources as the *kontoporeia*.<sup>32</sup>

<sup>31</sup> Steffen 1888, fold-out map (Grundmauerreste einer antiken Passbefestigung east of Ruinen von Sklaveika; Lavery 1990, 171. See also Penttinen 2005, 114–116; Pikoulas 1995, 332–346.

<sup>32</sup> Wiseman 1978; Wells 1996b, 10; Wells 2002a, 69–76 (the *kontoporeia*).





Fig. 14. Preserved road bank of the Mycenaean road on Kondovouni during the 1988–1990 survey. Photograph by B. Wells.

Fig. 15. Two of the many culverts or weep-holes through the Mycenaean road bank on Kondovouni in 1988. Photograph by B. Wells.

Fig. 16 (right column). The large Lykotroupi culvert or bridge at the head of a ravine between Kondovouni and Koutzoyanni. To the left of this culvert, on the flysch, the road bank has totally disappeared, while it is fairly well preserved on its right on the hard limestone (see Fold-out 1). Photograph by B. Wells.



## The 1999 survey on the Mastos Hill

The excavations in the 1930s and the 1950s on the Mastos had revealed a long prehistoric sequence of habitation from the Neolithic to the Late Helladic, with activities also in Medieval times, but we felt that in order to better understand the relationship between the Mastos settlement and the entire valley we needed not only to publish the old excavation material but also to collect more information on activities on the hill itself.<sup>33</sup>

Mastos takes its name from its likeness to a female breast (Fig. 21). The hard limestone formation, whose top raises to 246 masl, lies in a geological landscape of marl and flysch fans of fertile soil.<sup>34</sup> On the northeastern side of the hill runs the deeply eroded ravine of the Kephalaria rema with the previously perennial stream of the Asterion.<sup>35</sup> Its origins lie at the spring of Kephalaria to the north (Fig. 22), in the mountainous divide between the Corinthia and the Argolid. As late as 1978 the spring was described by James Wiseman in graphic detail: “The water, ..., springs from the living rock in a copi-

<sup>33</sup> The bulk of Late Helladic sherd material from the Potter’s Quarter remains unpublished. Ann-Louise Schallin (1997; 2002) with co-workers (Weiberg 2009; Petrović 2009) are working to rectify the situation. The Middle Helladic cemetery in the same area will be published by Michael Lindblom. Sherd material from the excavations by Säflund and/or Åkerström have also been studied by Mats Johnson (Neolithic), Jeanette Forsén (Early Helladic), Michael Lindblom (Middle Helladic) and Jenni Hjöhlman (Late Antique/Medieval).

<sup>34</sup> Wells, Runnels & Zangger 1990, 212–214 and fig. 4.

<sup>35</sup> Paus. 2.17.2 mentions that a stream by the name of Asterion flows above the Heraion. This is a vague enough location of the stream to have been identified with the stream running through the Kephalaria Rema. In any case, Asterion had three daughters, one of which was Euboia, who gave her name to the mountain range dividing the Berbati Valley from the Argive plain.





Fig. 17. The tower at Mourteza. This probably fourth-century structure lies close to a spring above the head of the Plesia ravine at the northwestern tip of Euboea in the saddle between this mountain and Zara. Photograph by B. Wells.

ous stream ...".<sup>36</sup> However, as irrigation became the rule, the waters of the spring were diverted for irrigation and nowadays the streambed carries water only after heavy winter rains.<sup>37</sup> The remains of five or perhaps as many as eight water mills along the rema testify to its past importance as a source of water.<sup>38</sup> The mills were documented during the 1988–1990 survey.<sup>39</sup>

Seasonally in the past, the Asterion undoubtedly turned into a torrential stream on its way down the ravine towards the Klisoura, which connects the valley with the Argive plain (*Fold-out 1*). The area of the stream consists of flysch, which was easily eroded by the running waters creating the present



Fig. 18. The modern kondoporia diagonally traversed the Berbati Valley from the Klisoura ravine in the southwest to the slopes northwest of the modern village of Prosymna. There, this bridge, locally referred to as *Tourkoyefira* (Τουρκογέφυρα), carried the road across a ravine. The bridge does not look Ottoman; it may be substantially earlier. The modern road probably ran essentially the same course as an ancient road, of which stretches are preserved south of the bridge. Probably this ancient road can be identified with the kontoporeia in the ancient written sources. Photograph by B. Wells.

ravine and adding material to the alluvial fans outside it. The Asterion was also fed by the waters from the Panayia spring on the lower north slope of the Euboeia. The water mill just north of the Mastos Hill (SM 11) was still operable in the 1930s during the Swedish excavations (*Figs. 23–24*) but, alas, now several of the mills are in such a ruinous state as to be on the verge of obliteration (*Figs. 25–26*).

The Mastos Hill is most accessible from the north, where degraded terraces bear witness to advanced erosion, which does not seem to have set in until the recent past. This north side of the hill was, as we shall see, not heavily utilized in prehistoric times for any kind of activity leaving traces in the archaeological material; only in the late Byzantine period and to a certain extent in modern times does it seem to have been

<sup>36</sup> Wiseman 1978, 118. He goes on to relate how the local people came to the spring to collect water and in the summer the children of Stephani came for a swim in the pool below it. Large flocks of goats and sheep drank from its water every day.

<sup>37</sup> In 1991 when I visited the Kephalaria, not a drop of water issued from the rock.

<sup>38</sup> Hahn 1996, 363 f.; 367 f.; 374; 388 f.; 394 f. To these may be added mills higher up in the ravine mentioned by Mylonas 1966, 86.

<sup>39</sup> Hahn 1996, 437. The identified mills are Standing Monuments 4, 11, 12, 15 and FS 33; a probable one is FS 6 and the two possible ones are SM 14 and FS 517. Hahn estimates them to be around 300 years or as old as the village of Prosimni. I might add that a possible Late Roman mill (FS 420) was registered in the Kephalaria Rema below the Mastos Hill (Forsell 1996, 295, 341 with *figs. 11, 55, 60*).



Fig. 19. A walk together with friends from Prosymna along the kondoporia in 1989. These preserved stretches of the kalderimi towards Ayionori lie on the slopes of the Psili Rachi in the northeast. Photograph by B. Wells.



Fig. 20. This stretch of the kondoporia attests to the route being well-travelled until modern times. Photograph by B. Wells.

utilized. Moreover, the terraces on the northern slope have not been maintained to the same degree as the ones on the other slopes (Fig. 27). They may simply not have been of such great importance either for habitation or perhaps for widespread cultivation in view of the fact that the sun did not reach them in the same way that it did the other sides of the hill; in later history we know that settlements looking north were considered unhealthy. Nauplion is a case in point.

While working at the Mastos in 1999, we noted that the shepherd grazing his flock on the slopes of the Euboia to the south, always led his sheep along the southern slopes of the Mastos Hill, as he returned to the pens on the valley bottom. The slopes offered good grazing on terraces that possibly date back to the late fourth millennium BC to judge from Final Neolithic *in situ* material discovered in the survey (see Johnson in this volume). The Early Helladic and later prehistoric remains in the same area attest to stable conditions in the

landscape.<sup>40</sup> Without terracing to keep the soils in place, and maintenance of the terraces over time, this would hardly have been the case. This is partly true also for the west side of the hill (Fig. 27) and certainly for the eastern slopes, where a few years ago cultivation still occurred and where the remains of the excavated Potter's Quarter can still be seen, although in a sad state of preservation (Fig. 28).<sup>41</sup> Before the old excavations began in 1935, the Mastos Hill (Fig. 2) was well utilized for cultivation and nothing much had changed in the 1950s, when Åkerström carried out his last campaigns.

Fieldwork was carried out on the hill for six weeks in August–September of 1999 (24 August–29 September) and the collected material was studied in the summer of 2000 in the

<sup>40</sup> Säflund 1965.

<sup>41</sup> Åkerström 1952; *idem* 1987.





*Fig. 21. View of the northern slopes of the Mastos Hill in 1999. A comparison with Figure 27, a photograph from 1935, reveals the degradation of the terraces in the intervening years. Photograph by B. Wells.*



*Fig. 22. The source of the Kephalaria spring in 1991. A view towards the south. The ancient remains on the right are of historical date. Photograph by B. Wells.*



Fig. 23. This water mill by the Asterion (designated Standing Monument 11 in the 1988–1990 survey) was still in use in 1935, when the photograph was taken. Note also the women washing clothes in the stream. In the background the ridge of Psili Rachi. Photograph in the Åke Åkerström Archive, the Swedish Institute at Athens.

Nauplion Museum storerooms.<sup>42</sup> The target area of the survey comprised roughly 3.7 ha, of which 26 percent were inaccessible, being rocks, terrace walls or very dense vegetation (see Savini in this volume). As the Mastos is a heavily terraced hill, and the terraces are not very large, it lent itself to a division into reasonably small units (1–64) with natural boundaries (*Fold-out 2*). Only in a few cases were terraces and fields on the lower slopes divided into smaller units.

The strategy was one of intensive sampling where the field walkers literally walked shoulder to shoulder and collected all artefacts visible on the surface of each unit. After a unit had been investigated in this way, all ceramic material was broadly classified into major archaeological periods.<sup>43</sup> Lack of time and often only broad classificatory traits of the sherds

prevented us from pursuing any finer chronological phasing during this initial processing. The sherds were thus not broken down into sub-phases such as LH IIIA1 and LH IIIA2 in the field. All heavily worn sherds as well as those smaller than the size of a thumbnail were counted but put into a separate group of unidentifiable pieces. Relative proportions in fabric, manufacturing technique, surface treatment and possible decoration of the sherds from each period were not systematically noted. Among the roughly 97,000 pottery fragments collected and counted, a sample of sherds from each period were bagged and brought into the museum for further study. While some poorly attested fabrics and/or shapes may have been overlooked in the process, the combined experience and continuous discussion among the walkers in the field suggest that the samples represent reasonably well the entire collected and counted material. It is perhaps worth stressing that most of the contributors to this volume also did the walking, initial classification and sampling in the field.

After the study samples had been removed the remaining material was spread out in a random fashion within the origi-

<sup>42</sup> Jenni Hjothlman, Lena Klintberg, Michael Lindblom, Arto Penttinen, Nikos Roumelis and Berit Wells walked the fields, Emanuel Savini did the topographical survey and the computer work, Göran Söderberg photographed and assisted in the topographical work.

<sup>43</sup> Cf. Tartaron 2003, 31–33. Our strategy was different in the respect that we collected every single artefact.





*Fig. 24. The water mill, Standing Monument 11, in 1999. Photograph by B. Wells.*



*Fig. 25. The water mill, Standing Monument 15. As in Standing Monument 12 (Fig. 26), the mill-race is fairly well preserved while the associated structure lies in ruins. Photograph by B. Wells.*



*Fig. 26. The water mill, Standing Monument 12, situated south of the Mastos Hill, in the 1990s. Only the mill-race is preserved. Photograph by B. Wells.*





*Fig. 27. View of the western side of the Mastos Hill in 1935. Note the well-preserved terracing on the slopes. Photograph in the Åke Åkerström Archive, the Swedish Institute at Athens.*



*Fig. 28. The Potter's Quarter from the south in 1999. The kiln is still identifiable. Photograph by B. Wells.*





Fig. 29. Ploughed fields at the base of the northeast of the Mastos Hill in 1999. Photograph by B. Wells.

nal unit, thus largely restoring the original contexts of the artefacts. Our rationale for this was that the terraces in this stable landscape, and the fields at the foot of the hill, if not all still cultivated, had been so as late as two generations ago (Fig. 29) and for generations ploughs and harrows had transported the surface material back and forth plenty of times. Therefore, our interventions into a kind of blanket of archaeological material were no greater than agriculture or nature itself had caused over hundreds of years.

One of the problematic issues in every archaeological survey is how to compensate for the masking effects of vegetation on the counted material. Several factors such as land use, vegetation and erosion affect visibility. Usually the problem is solved with the implementation of a visibility parameter with values from 0.1 to 1, which is multiplied with the raw data.<sup>44</sup> If the visibility parameters are not grounded in anything but subjective estimates, this is a potentially misleading method. Instead we defined three different types of land use: cultivated fields and terraces where visibility was optimal to the grazed and uncultivated areas where the surface was partly obscured by vegetation (*Fold-out 2*). Because of the intensity of the investigation and the problems mentioned above in the enforcement of any visibility parameter, no corrections were

made to the collected and counted material; the distribution maps presented below thus reflect the raw data.<sup>45</sup> In hindsight, it might have been worth to intensively reinvestigate selected areas of different land use and vegetation at the Mastos. One approach would have been to study fractions of the area by removing the cover and using a stratified random sample.<sup>46</sup> The results could help define visibility values either discretely or in probable intervals. The uncertainty can, at least partly, be handled and the results improved by the application of fuzzy logic in the calculation of the visibility corrections.<sup>47</sup> This means that instead of using one specific visibility value for every land use division, a different value can be used, randomly picked from a probable interval.

There is some correlation between distribution and densities of artefacts on the one hand and land use and cultivation on the other. For instance, at the time of the survey some of the terraces in the southeast and the northeast (Units 49, 50 and 61) had been ploughed recently (*Fold-out 2*), which shows up in the densities of material, while the fields in the southwest (Units 25–27), although under cultivation, had

<sup>44</sup> Cf. Gillings & Sbonias 1999, 36. See also Lock *et al.* 1999, 59.

<sup>45</sup> For a discussion of how parameters such as ground visibility, background disturbance, artefact size and walker swath width influence the data collection, see Schon 2002.

<sup>46</sup> Renfrew & Bahn 1991, 66 f.

<sup>47</sup> Fisher 1999, 7.

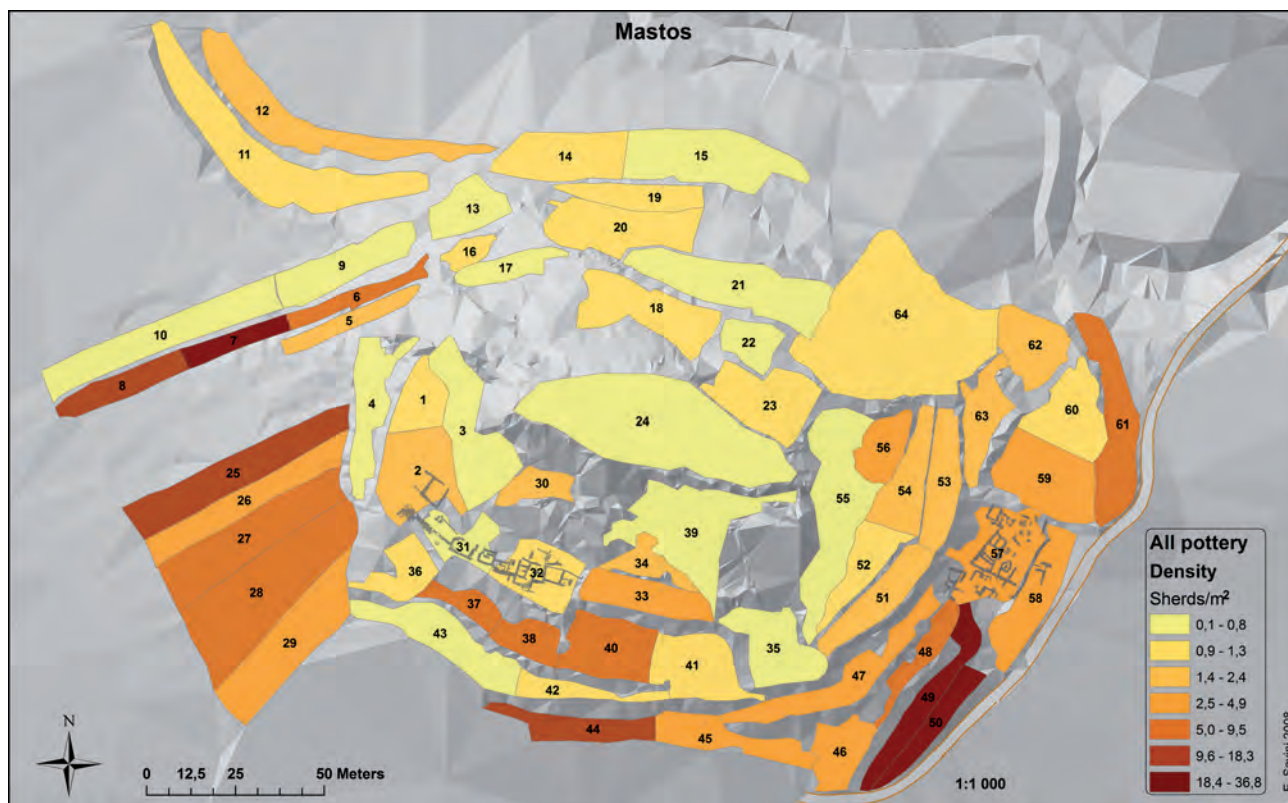


Fig. 30. The Mastos Hill intensive surface survey in 1999: Overall pottery densities. The locations of the excavation of the Early Bronze Age settlement on the southern slopes of the hill and the Late Bronze Age Potter's Quarter on the eastern slopes are indicated. Illustration by E. Savini.

not been ploughed. Nevertheless, artefact densities are high and surprisingly similar in both areas (Fig. 30), in particular if we look at the Late Helladic period (see Klintberg in this volume). The same is true for Units 37, 38, 40 and 44. On the grazed terraces Units 31 and 32, which is the location of Säflund's Early Helladic settlement, overall artefact densities are lower than in Units 37, 38 and 40 below, which were cultivated. We have the same situation in the east in Unit 57 with the Potter's Quarter, where the material is denser to the south in Units 49 and 50. In the latter case a remaining wall obviously hindered ploughs or harrows from turning up masses of pot sherds; perhaps this also holds true for the area of the Early Helladic settlement, although here no walls are visible.

The intensive surface survey on the Mastos Hill thus is the third survey carried out by our team in the valley. The methodology employed is divergent from that employed both in the

1988–1990 project and that around Pyrgouthi. This time the landscape lent itself to total collection of all artefacts lying on the surface and likewise to randomizing them within the basically original areas except for those sampled and brought to the Nauplion Museum for further study. Such a procedure would not have been possible in the two first surveys, where terraces did not bound the survey units keeping the material in place. Our results are presented in detail period by period in the following chapters. What is striking is that the hill was mainly settled in prehistory with the exception of a small fortified stronghold in Medieval times on the top terrace of the hill. This is not to say that there were no activities on its slopes during intervening periods. As in the recent past, the slopes could have been used for pasture in periods when they were not inhabited and it is highly likely that when they were, the inhabitants also cultivated the slopes where they did not live.