

## 4.2 Surface contra subsurface assemblages: Two archaeological case studies from Thesprotia, Greece

### **Authors**

**Björn Forsén<sup>1</sup> and Jeannette Forsén<sup>2</sup>**

1. Department of Philosophy, History, Culture and Art Studies, University of Helsinki, Helsinki, Finland

2. Department of Historical Studies, Göteborg University, Göteborg, Sweden

Contact: bjorn.forsen@helsinki.fi

### **ABSTRACT**

This paper focuses on two archaeological sites in the Kokytos valley in north-western Greece, discovered by the Thesprotia Expedition in 2004. We stress the discrepancies between surface and subsurface assemblages and try to explain these differences. Initially the sites were found and recorded in a surface survey. After this several multiscale datasets were obtained through different methods, e.g. phosphorus sampling, trial excavations and different geophysical techniques. In combining the different datasets it became quite clear that the surface assemblages are biased mainly through erosion and modern landscaping, but also due to so-called ‘walker effects’. Both sites proved to be more extensive in size and have a longer occupational time span when adding multiscale datasets to the surface collections made in the surface survey.

### **KEYWORDS**

*intensive survey, surface contra subsurface, post-deposition, hidden landscape, windows*

### **INTRODUCTION**

Anyone conducting an intensive archaeological field survey has been forced to consider to what degree an adequate picture of the past can be built on the basis of the finds detected on the surface. Or to put it another way: to which extent do surface assemblages concur with subsurface assemblages, and how can

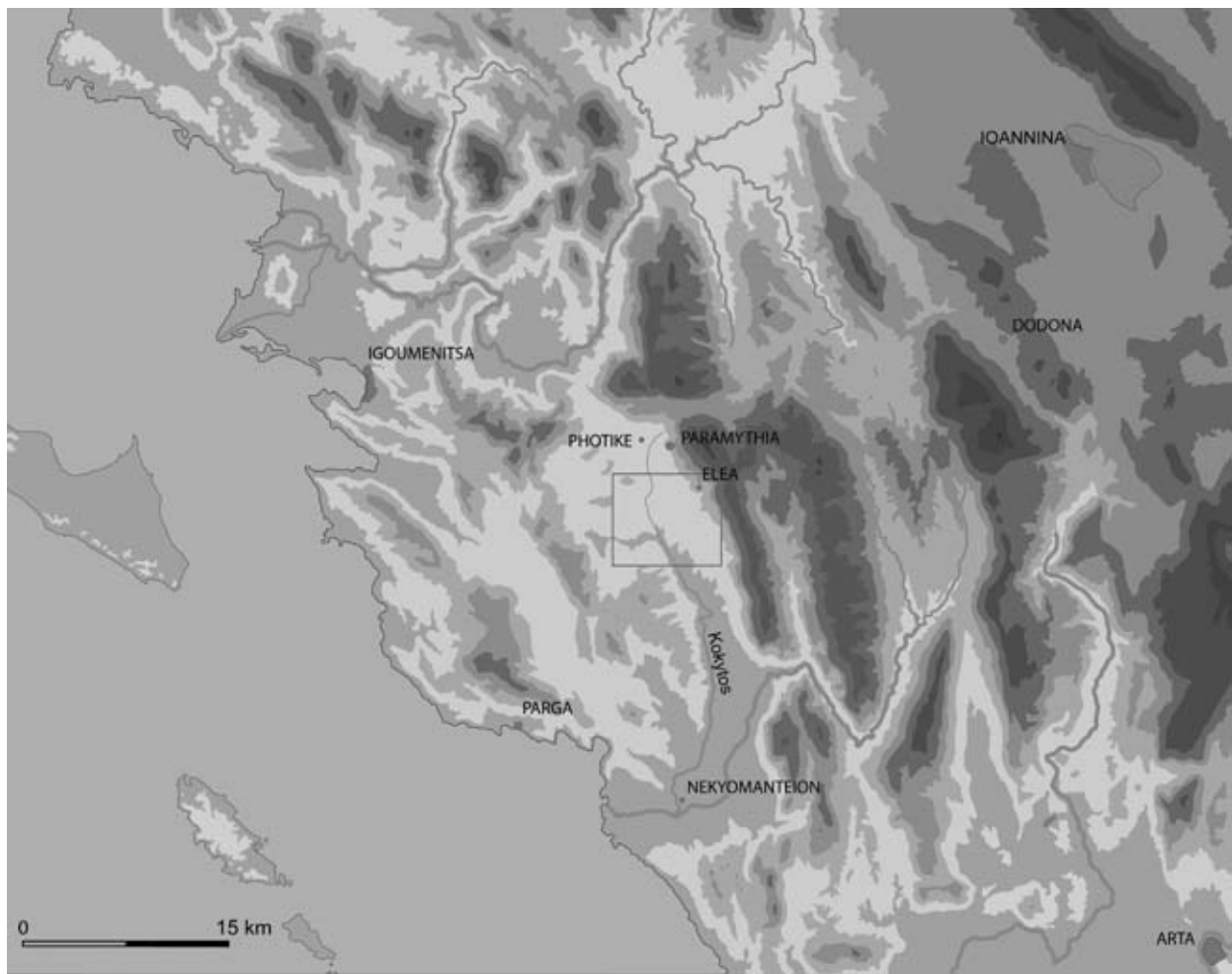


Figure 1. Map over north-western Greece indicating the location of the Kokytos river valley.

possible differences be explained and taken into account? Scholars working in the Aegean have in general believed that developments in the regional history could be constructed on the basis of surface assemblages, although at the same time being aware of the fact that such assemblages to some degree are shaped by post-depositional factors, the most common being erosion.

One of the first scholars to express doubt concerning the reliability of surface assemblages was Jeremy Rutter (1983, 138-139), who coined the expression 'low-visibility ceramic phases' for certain prehistoric periods that produced pottery less likely to be preserved and/or recognised. Bintliff, Howard & Snodgrass (1999, 139-168) brought the discussion further by suggesting that part of the prehistoric sites in Greece are not noted at all in intensive field surveys, thus creating a 'hidden landscape' that can be visualised only by increased attention. However, this explanation may be applicable only to certain regions of Greece, such as Boiotia (Davis 2004, 22-34). Nevertheless intensive field surveys are today often accompanied by other techniques, such as phosphorus sampling, different geophysical methods and occasionally even trial excavations.

We will in this paper focus on two sites discovered by the Thesprotia Expedition in the Kokytos val-

ley in Thesprotia, north-western Greece (fig. 1), with the aim of highlighting discrepancies between surface and subsurface assemblages as well as discussing possible explanations of these discrepancies. At the onset of the Thesprotia Expedition the strategy was to collect surface finds as intensively as possible and to return and focus on sites that seemed to produce finds, however few, from chronological periods previously absent in the archaeological record of the region. This emphasis has proven to be a productive way of opening up windows to the otherwise hidden parts of the past landscape.

## **SITE PS 12**

Site PS 12 was detected in 2004 by our survey team. In a field with a scatter of Middle Palaeolithic chipped stone a small concentration of poorly preserved prehistoric sherds were sampled that were given a preliminary date to the later part of the Neolithic period or the Early Bronze Age. Several revisits to the site produced more abraded sherds and finally also a flint blade of similar date. All these finds were concentrated in a small area along the upper edge of the field, indicating that the site might continue in that direction. The field in question is located at the lowermost eastern slope of the Liminari Hill, separated from the hill by a dirt road. On the other side of the road there is a small sheltered nook which could have been a perfect setting for a prehistoric settlement (fig. 2). Unfortunately this area, abandoned today but at one stage under cultivation, is badly overgrown and used as the setting for some 50 beehives! In order to confirm the existence of a site at this location we decided to open up some trial trenches.

The Liminari Hill consists of limestone, denuded of all soil. Only some prickly oak bushes and mountain tea grow on the slopes today. The situation may however have been different some thousand years ago before the topsoil eroded away, creating an alluvial fan in the nook, where the site is located. It is unknown at which time the erosion took place, but it may have consisted of several different phases, thus covering Neolithic or Bronze Age layers with more recent sterile soil.

Figure 2. The setting of PS 12 at the foot of the Liminari hill with initial findspot of prehistoric artefacts across the dirt road indicated with an arrow.



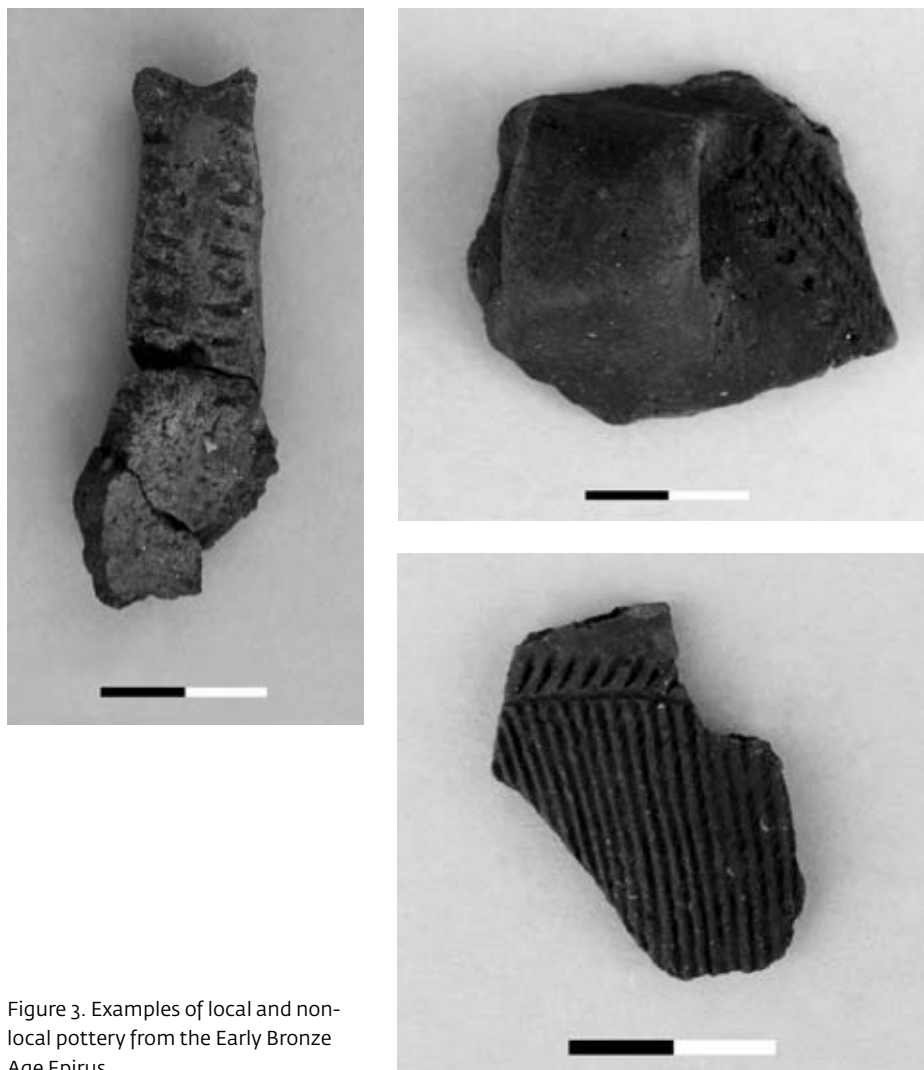


Figure 3. Examples of local and non-local pottery from the Early Bronze Age Epirus.

The initial trial trenches revealed the existence of a clear cultural layer with dark soil, charcoal, burnt mud-brick, pottery, chipped stone and spindle-whorls stretching some 50m higher up than the edge of the field where the first sherds were detected. This cultural layer is covered by a sterile top soil layer ranging in thickness from 30-50cm. In one of the trenches we found a rudimentary wall, which was exposed for a length of nine metres. Most of the pottery from these trial trenches dates to the Early Bronze Age (EBA) (fig. 3), although some pottery of the Middle (MBA) and Late Bronze Age (LBA) also was found next to the wall. Three C-14 samples taken from trenches A and D date to the EBA, whereas two samples taken next to the wall, date to the MBA and LBA. Useful references regarding the material culture of the Bronze Age in Epirus are for instance Wardle (1997), Tartaron (2004), and finally Dousougli & Zachos (2002).

Encouraged by these results we decided to proceed by taking phosphorus samples as well as conducting a magnetometer survey. So far we have the results of fifteen phosphorus samples. According to these results the site stretches at least 100m in north-south direction and has at least two clear concentrations of phosphorus anomalies, one close to trench D and the second one further to the south (fig. 4).

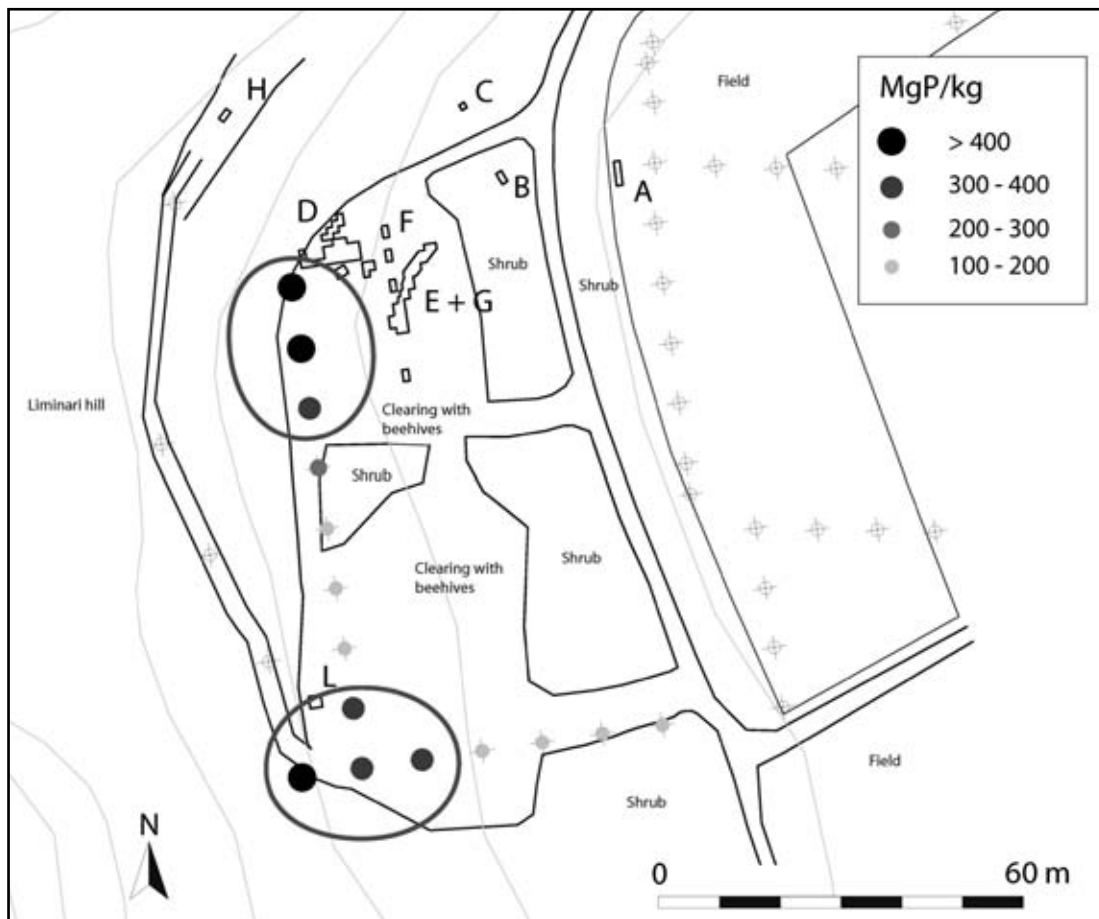


Figure 4. Phosphorous samples from PS 12 obtained and analysed by M. Lavento, Helsinki, indicating two clear anomalies in concentrations.

Due to magnetic disturbances caused by the beehives, the magnetometer could be used only in the northern part of the site. The resulting magnetometer map indicates that the rudimentary wall continues for at least another 15m. As it follows a contour line it is most likely a terrace wall. Indications of other walls were visible close to trench D, accompanied by one of our concentrations of phosphorus anomalies.

Guided by these results we decided in 2009 to open trial trenches near the terrace wall and at the two concentrations of phosphorus anomalies in the hope of finding remains of prehistoric houses. To our great surprise the walls close to trench D, faintly visible on the magnetometer map, turned out to be part of a grave tumulus with a diameter of ca. nine metres and with a central cist grave dating to the very end of the Middle Bronze Age (fig. 5). Below the tumulus a thick cultural layer of Early Bronze Age was found, with large quantities of pottery and chipped-stone, as well as numerous spindle-whorls (fig. 6) and pieces of daub. For similar tumuli in the general area of north-western Greece and Albania as well as discussions concerning their origin see for instance, Prendi (1993, 17-28), Papadopoulos (1999, 141) and most recently Kilian-Dirlmeier (2005, 5-46, 82-89).

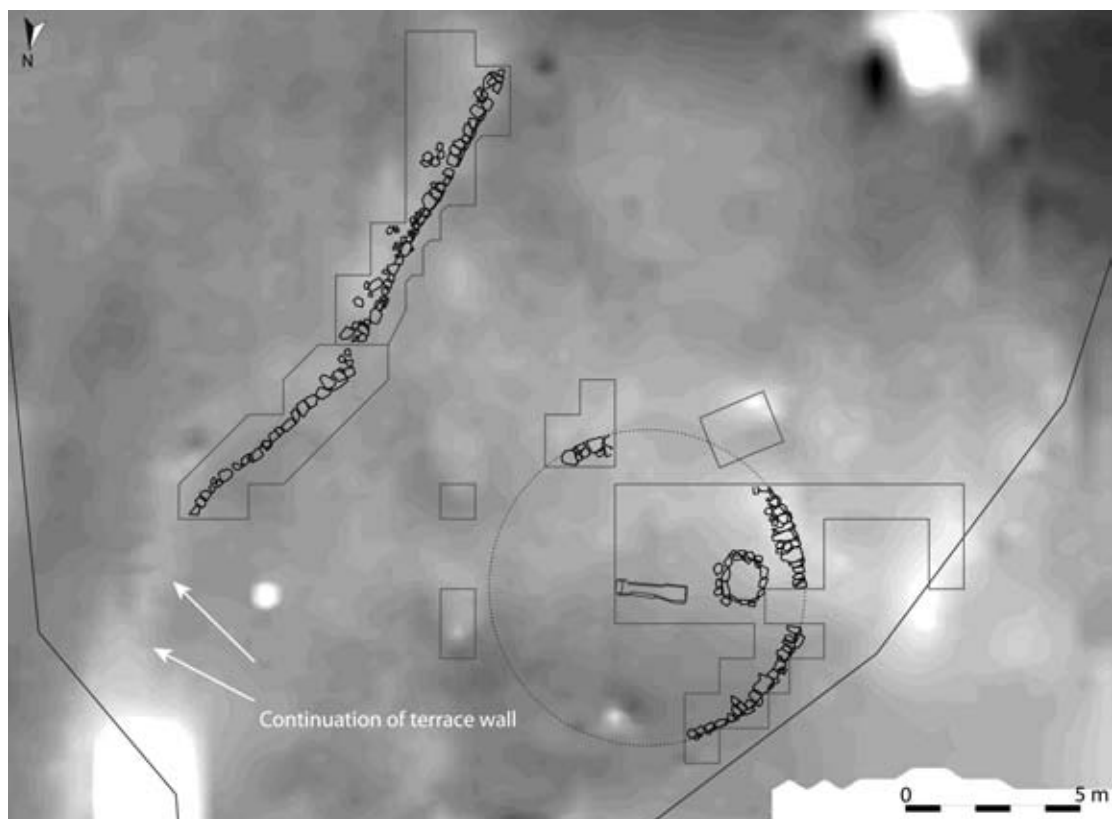


Figure 5. Magnetometer map indicating the terrace wall of Middle to Late Bronze Age and the early Late Bronze Age tumulus at PS 12.



Figure 6. Spindle whorls found at PS 12 of Early Bronze Age date.

The small test pit opened up in the southern concentration of phosphorus anomalies hit straight on a previously robbed cist grave, which is dated by a C-14 sample to the transition from MBA to LBA (this cist grave could also be part of a tumulus, but time restrictions prevented further work at this locus). Finally, a charcoal sample obtained in the trench near the terrace wall produced a radiocarbon determination associated with the wall at the beginning of the LBA, making it only slightly later than the graves to which it probably is connected.

Thus, the first trial trenches at PS 12 confirmed the impression received by the scant survey finds, meaning that we were dealing with a prehistoric site. However, the trial trenches taken together with the phosphorus- and geophysical survey results showed that the site was much larger and had been settled for a much longer period than the surface finds indicated. Furthermore, it is noteworthy that only last year's trial trenches revealed that this EBA site, after a long hiatus, had been reused as the setting for a communal burial place towards the end of the Middle Bronze Age

### **SITE PS 36**

Site PS 36 is located in Mavromandilia (fig. 7). While surveying some fields just to the east of the river Kokytos we found a scatter of Archaic to Classical pottery which we regarded as a site, PS 31. When we had finished walking the tract we stumbled just by chance on another very small, but clear concentration of pottery, assigned PS 36. The small size of this concentration, only some 10x10m, explains why we missed it initially while surveying. On the basis of the pottery collected on the surface it seemed to date to the Early Iron Age.

Figure 7.  
Mavromandilia,  
just east of the  
Kokytos river, the  
setting for PS 31  
and PS 36.





Figure 8. Two vessels where the smaller was found inside the larger. Both are of ninth or eighth century BC date.

Interestingly enough the Greek Archaeological Service had in 2003, in connection with drainage work, at a depth of ca one metre below surface, found a rich dump of pottery of Early Iron Age date at the edge of the field of PS 36 (Tzortzatou & Fatsiou 2009, 39-43). No finds were visible between PS 36, PS 31 and the spot where our Greek colleagues had excavated. As hardly any sites dating to the Early Iron Age or the Archaic period were known previously in all of Thesprotia we decided to put more stress on this area by carrying out a trial excavation at PS 36 and by taking phosphorus samples around it.

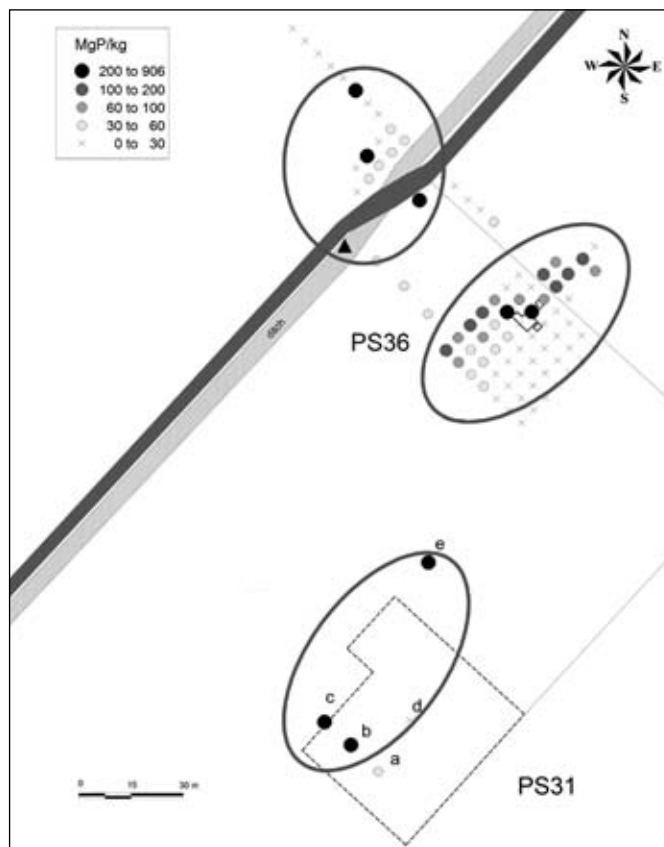
The soil at Mavromandilia consists mostly of loam and silty clay. The depth of the fine top soil varies considerably, sometimes being only some 30-40cm, whereas at the spot of the excavation of the Greek Archaeological Service it is 1.5m. Below the top soil coarser sediment layers are found, including limestone particles and gravel, as well as cultural layers.

In the excavations of PS 36 we found remains of fire places and/or shallow bothroi consisting of dark soil mixed with charcoal, ash, animal bones and large amounts of broken pottery. The different features found at PS 36 can on the basis of C-14 analyses be dated to between 1100 and 700 BC (Forsén 2009, 57-59). Part of the pottery dating to the ninth and eighth centuries BC was well preserved, such as a large fragment of a Thapsos ware stirrup-handled crater (Forsén 2009, 64 no. 9), a small trefoil mouthed pitcher (Forsén 2009, 62 no. 5) and two vessels, where one was found inside the other (fig. 8; Forsén 2009, 64-66 nos. 13-14). We also found daub/clay lining, indicating huts nearby (Forsén 2009, 60 fig. 5). On the basis of the pottery sequence, the site seems to have been used in one capacity or another at least until the fourth century BC, as evidenced by a stamped Corinthian amphora handle (Forsén 2009, 66 no. 21) and a small black glazed bowl (Forsén 2009, 66 no. 20).

In order to study the surroundings of PS 36 in more detail a total of 89 augering holes were made to a depth of three metres maximum below the surface. Phosphorus samples were taken from all holes, either from cultural layers if such were found or otherwise at a depth of ca. 50-60cm below the surface. The spread of phosphorus anomalies give us a better idea of the size of the three find concentrations at Mavromandilia. Thus, PS 36 appears to be ca. 40x20m large, whereas the spot for the Greek Archaeological Ser-



Figure 9. Map showing the location of the augering holes where the phosphorous content indicates the size of the three sites PS 31, PS 36 and the so-called Greek Archaeological Service site.



vices excavation continues on both sides of the modern ditch, covering at most ca. 40x40m. The size of PS 31 is more difficult to estimate, but it is at a maximum 40x60m (fig. 9; Lavento & Lahtinen 2009, 77-83).

The setting of Mavromandilia is and has always been affected by the group of small springs that exist nearby (fig. 10). At springs 4 and 7, also today water rises up to the surface, developing small seasonal ponds, from where it runs towards the river Kokytos. Most water has apparently run from spring 7, from where at some stage it has formed a small stream leading to the Kokytos, between PS 36 and the Greek Archaeological Service site. This stream was recently covered by soil, but on the basis of the drillings it may originally have been 2-3m deep.

Springs such as 4 and 7 may through time be covered and can also find new outlets. Thus the farmers have covered a similar natural spring, 3, and channelled the water to two artificial springs, 1 and 2. A close study of the satellite photograph reveals two other possible springs, 5 and 6, visible as shallow depressions. They are located along the 'old' stream running from spring 7 to the Kokytos, one of them being located between PS 36 and the Greek Archaeological Service site (fig. 10).

In the case of Mavromandilia it appears that the small stream located between PS 36 and the spot excavated by the Greek Archaeological Service existed already during the Early Iron Age, and that the existence of running water made the place attractive for human occupation. The deposition of sterile fine soil on top of the settlement took place during a time period of some 2,500 to 3,000 years. The sedimentation



modelling of the landscape in order to create new and larger fields for the farmers, something that had covered part of the site with soil void of artefacts. Our two cases from Thesprotia confirm that the surface assemblages of prehistoric sites often reveal only part of the reality. A more complete picture can only be obtained by adding multiscale datasets to the surface finds. This article was written in 2010. For more information concerning PS 12 that has appeared since then, see Forsén and Tikkala 2011 or <http://www.thesprotiaexpedition.com>.

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