# Appendix 1: Analysis of the survey results; the distribution of the total surface record in the first survey area

App. I.1 The analyzing procedures

The survey area was divided into 275 field blocks (map 1). As discussed in the chapter II, these were both field walking and quantitative units. The field blocks were drawn onto a 1: 2 500 geodetic map using a GIS program for personal computer, Map Info. This software was found convenient, because it not only allowed accurate depiction of the field blocks on a geo-referenced map, but it automatically stored the data in a pre-structured table. For each field block drawn on the map, the program automatically creates a new row in the table with fields indicating the number of the field blocks, the number of pottery fragments, presence/absence of building material etc. Basically the field walking forms for the large block survey were used to create the table structure for the program. Several other parameters were added later on: the field blocks' areas, the distance between field walkers (i.e. degree of coverage per block) and land-use.

The field blocks were divided into five categories regarding the number of the different types of registered material and the density of shards. A number of statistical methods offered by the program were tried. Depending on the sequence, three methods are giving satisfying results for the present purpose. These are the Natural Break, the Equal Ranges and the Quantile method[1]. Judging by the results, the Quantile method produces a more realistic picture when the entire study area is analyzed, but when field blocks from particular sectors were compared, the other two methods proved more adequate. Based on what is known of the three methods, the Natural Break method should be most appropriate because it sets the limits of the groups so that there is the largest difference between the greatest and the smallest number of the neighbouring groups. Discontinuities in the distribution of surface material by field block were thus most precisely expressed. Often the Equal Ranges method gave similar results, but in some instances, the arbitrarily set limits of the ranges left blocks very close regarding numbers of artifacts into two different groups. In the end Quantile method was used for the analysis of the study area as a whole and the Natural Break for the analysis of the results in particular survey sectors.

Field blocks were compared both by artifact numbers and by the density of pottery fragments. Density was estimated to guard against the unequal size of the field blocks; surely a better alternative to the splitting and joining of field blocks. It should be emphasized that density was estimated not for the entire field block area, but only for the surface actually covered by field walking. Understandably this enhances the artifact

[1] I found little on these methods in the local literature. The first two are relatively simple. Natural Break groups the closest elements of the sequence into a given number of categories; the Equal Range divides the greatest number of the sequel into a given number of even categories. I have only a vague understanding of the Quantile method. In world archaeology the use of Geographical Information Systems has developed into a highly specialized sub-discipline in the past two decades, Gillings, D. Mattingly, J. van Dalen, eds. *GIS and Landscape Archaeology*, Oxford 1999; B. Slapšak, ed. *On the Good Use of Geographic Information Systems in archaeological landscape studies*, COST Action G2, Ancient Landscapes and Rural Structures, 2001; J. Conolly, M. Lake, *GIS in Archaeology*, Cambridge 2006.

density, but we believe that this procedure was more accurate than simply dividing the number of finds collected by the integral area of the field block.

Depending on the statistical method adopted for the analysis, there are slight differences between the analysis of pottery counts and density figures. When the Quantile method was applied the results were nearly the same; several field blocks of very small size moved from the lowest to the upper categories when density was compared. The method of Equal Ranges lumped more than three quarters of the field blocks in the lowest category when density was compared; much more realistic results were obtained when field blocks were compared by pottery counts. Using the Natural Break method produced the opposite extreme. When density was compared, field blocks with one or zero artifacts per 1 000 square meters were grouped separately from field blocks with a density of up to 9 fragments per 1 000 square meters. These constituted the largest group, nearly two thirds of the total number of field blocks. Comparing absolute numbers with the same method, an equal number of field blocks was distributed in the last two groups.

In the end, all three methods basically produced very similar results. All reveal unambiguously the zones of high and low artifact density when the area is analyzed as a whole. The difference is that some are too much or too little sensitive for finer variations. Similarly not much is changed when field blocks are compared by the absolute number of finds and density per square meter; the latter method is slightly more inclusive for blocks of very small size, which is fine, considering their incomparably small size.

It is not redundant to repeat that the large block survey was in fact, only a quantifying campaign. Surface finds were only counted and indicated on field walking forms. Both surface material collection and regular grid surveys were to follow the findings of the general, block by block or transect survey. The results of this campaign were therefore only expected to reveal the overall distribution of surface material in the survey area and especially to reveal the inner structure of this distribution, whether in terms of separate clusters or in terms of linear tendencies of decrease/increase in the quantity of surface finds. The large block survey could not determine the chronological profile of the surface finds, nor define the limits of archaeological sites. It was simply used as a first step in the systematic and intensive survey of the study area. The correct interpretation of its results was expected to define zones of low, average and high densities of surface finds, taking into account the possible dislocations of the material by natural forces or the impact of humans. Some sort of multistage planning is clearly necessary, even when surveying micro-territories[2].

App. I.2 <u>The overall distribution of surface finds</u>

At a first sight, there were few ambiguities in the results of the quantification campaign. It offered a plain and an expected picture of the distribution of surface finds over the entire study area. By far the greatest amount of surface finds was revealed on field blocks bordering the village, particularly on field blocks in the southwest sector,

[2] M.B. Schiffer, A.P. Sullivan, T.C. Kringle, The design of archaeological surveys, 1-28, *World Archaeology* 10-1, 1978; J.F. Cherry, Frogs round the pond: Perspectives on current archaeological survey projects in the Mediterranean, 375-416, eds. D.W. Rupp, D.R. Keller, *Archaeological survey in the Mediterranean area*, Oxford 1983.

immediately to west of the village, with a maximum density of nearly 407 fragments per 1000 square meters (map 2; the figures are corrected for ground visibility). Going eastwards on field blocks east of the village, that is sectors SE and NE, the amount of surface finds is relatively stable, but considerably lower than on field blocks west of the village, the maximum density never exceeding 140 fragments per 1000 square meters. Further east, crossing over to the left bank of the valley, on field blocks in the sectors Ramnište and Jakupica, the density of surface finds decreases still further, reaching the lowest levels on field blocks at the northern foot of Gaber in sector VIII and on field blocks in the upper course of the central valley in sector XI, with 1 or less than 1 fragment per 1000 square meters. It is a simple and expected pattern: from the point of maximum quantity in the southwest corner of the surveyed territory, the number of surface finds declines steadily on a west-east axis and more sharply towards the opposite two corners of the triangular area, towards the north and the southeast. The overall pattern of surface finds distribution basically highlights the observations pertaining to the dominant land use of the area, the local topography and the distribution of resources. The zone that features the highest density of surface finds roughly overlaps with the area of the present day settlement and its nearest fields.

Of the total 5 750 ceramic fragments, 4 200 or roughly 80% were counted in the five sectors at the Prisoj's foot, on the valley's right bank (table 1, all counts are visibility corrected).

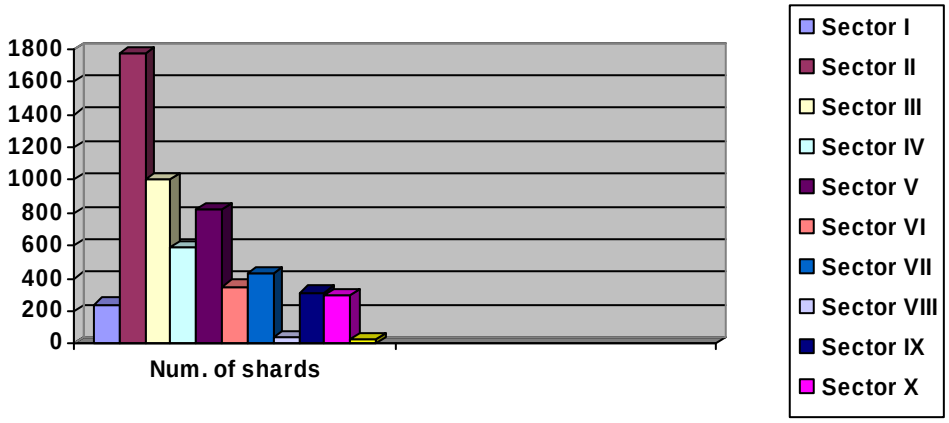
Table 1: Field blocks west and east of the central valley

| **Sectors** | **I-V** | **Sectors** | **VI-XI** |
|---|---|---|---|
| No. of units | 151 | No. of units | 122 |
| Total area | 440 000 sq. m | Total area | 450 000 sq. m |
| Total no. counts | 4 978 | Total no. counts | 766 |
| Min/Max | 0/143 | Min/Max | 0/35 |
| Mean | 32.97 | Mean | 6.28 |
| Min/Mix density | 0/407 per 1000sq. meters | Min/Mix density | 0/33 per 1000 sq. meters |
| Mean density | 54 | Mean density | 6 |
| Collected by grid units | 12 966 | Collected by grid units | 1 683 |

The average number of finds per field block in these sectors is twice the average for the entire survey area. Recall that this was the most heavily exploited part of the surveyed territory, having the most favorable living conditions in the area: spaciousness, freshwater springs, fertile soils accumulated at the foot of the hill and spreading into the floor of the central valley. Crossing over to the left bank of the central valley, both the

number and the density of surface finds declines, together with the intensity of agricultural exploitation and access to resources. Thus, on field blocks on the floor and the sides of the overgrown central valley, about 400 fragments were counted, in the Ramnište sector, on the left bank of the central valley, about 350 and on the easternmost sector Jakupica, less than 300. In each of these sectors only a tenth was counted of the amount encountered in sectors at Prisoj's southern foot. The least exploited and furthest corners of the study area, the northern foot of Gaber and the headwaters of the central valley featured a negligible hundredth of this amount; 38 fragments were counted on the field blocks at Gaber's northern foot and only 23 on field blocks along the upper course of the central valley (graph 1).

Graph 1: Number of counted ceramic fragments per sectors




But the varying intensity of agricultural exploitation is certainly not the most decisive correlating parameter, for although underexploited in comparison to the right bank of the central valley, still more than 50% of the field blocks in the eastern half of the survey area are presently under cultivation. It seems that far more decisive is the geo-pedologic substrate of the area, the proximity of resources and the geostrategic advantages of the various topographic components of the studied micro-region. There is no gradual decline in the quantity of surface material on a west-east axis, but a rather sharp one. The great majority of surface finds was counted on the valley's right bank, at Prisoj's southern foot. As described earlier, Prisoj's foothills presents a well-defined topographic component, physically separated by the central valley and the barren hill-slopes. This area also overlaps with the zone of colluvium, and the floor of the central valley is again the line that separates it from the Neogene sediments in the eastern half of the micro-region. In other words, the zone of high quantity of surface material overlaps both with the zone of colluvium and the area of the topographic entity defined as Prisoj's southern and eastern foothills. Outside this zone, the number of surface finds sharply declines, both across and upstream the central valley.

On this level of low resolution, it is difficult to observe patterns in the distribution of finds along a north-south axis. As expected the number of finds drops drastically as one starts to climb the steep slopes of the surrounding hills. The elusive border-line is again the limit of the colluvium: surface finds disappear along with soil layer on the slopes of the surrounding hills (map 2a). It is also impossible to integrate the results from

the survey of the small terraces at the Vardar Valley floor, because they are part of a separate micro-region. There is however an obvious analogy in the overall distribution of surface finds in this sector and in the rest of the study area: the bulk of the surface finds counted is concentrated on parcels near the monastic complex, the widest and the best positioned portion of the sector. The farther we move from this "core", the fewer the finds on the surface. The same applies to the area of Sopot; in general, the amount of surface finds progressively dwindles towards the periphery of the village area.

So far, we've spoken in terms of surface finds in general, basically referring to the wide category of ceramic fragments, including both vessel and tile fragments. The other categories of surface finds; the glass, bone and metal artifacts were simply too few and too isolated to comment on. The few finds belonging to this category were all found on the right bank of the central valley and one or two near the monastic complex in the first sector of the study area. Animal bone fragments, mostly sheep, were more numerous and more evenly spread, but the bulk was encountered on field blocks near the present-day village, as parts of modern rubbish heaps. Isolated fragments in the sectors east of the central valley are few, proportional to the number of ceramic finds. Not surprisingly, the same applies to the incidences of modern rubbish, appearing in heaps in the western half of the survey area and as isolated finds in its eastern half. All traces point to the present-day village as the chief factor generating the recorded distribution of surface material (map 3). We were nonetheless certain that amidst that mass of recent anthropogenic remains there were traces of various periods of the past; that people have always inhabited this small, but fertile and well positioned plain. Surface finds from the past settlements in this micro-region were either hidden in the fields and gardens of the modern settlement, amidst clusters of Early Modern period finds or amalgamated into a large agglomeration of finds' clusters dating to different time periods.

The only category of surface finds defying this pattern of distribution are the building remains (map 4). They are almost evenly spread across both halves of the surveyed area and actually, if the present day village houses and cemetery are excluded, the number of building remains visible on the surface will be greater in sectors east of the central valley. Indeed according to traditional survey archaeology, the eastern half of this micro region is richer in archaeological finds. Only one archaeological site, a minor hill-fort is officially registered on the land between the valley of Sopot and the Vardar Valley, the one over the monastery of St. George[3]. To this we added the remains of the Late Medieval/Early Ottoman village and a tower of an unknown date, on the Vardar Valley floor. To the east of the central valley and outside the Quaternary zone and the foothills of Prisoj, two new hill-forts were discovered, one of which was much larger and elaborate than all other forts in the wider region, plus the already known mound necropolis, where at least thirty mounds were registered. Also the remains of two minor or one larger building were discovered on the southeast edge of Ramnište. As we learnt later, pottery fragments were very scarce and on some of the fields with building remains not a single shard was found. Furthermore, it was later discovered that of the total number of ceramic fragments, far greater was the percentage of tile and brick; in fact, some clusters of surface finds consisted exclusively of building ceramics.

[3] *Arheološka Karta na R. Makedonija*, vol. 2, Skopje 1996.

There is a straightforward explanation for this seemingly awkward circumstance. The architectural remains in the eastern sectors of the survey area are of a specific character. They occupy peripheral locations: the forts are built on the tops of rocky outcrops, in the most distant corners of the micro-region, while the mounds were built along the barren top of the Jakupica Ridge, the eastern limit of the survey area. The latter was a veneered, sacred location, its sacredness being attacked only in the last century or two when this ridge was converted into agricultural fields. It is very likely that these locations were neither settled, nor were foci of intensive, everyday life activities to produce a substantial surface archaeological record. The less likely possibility is that the material was completely washed away from the surface by erosion. The large, architectural monuments were built to mark these peripheral locations in the local landscape, whether as stations on an interregional road or as territorial markers[4]. These were locations where the state and the spirits of the dead resided; settled, every-day life took place along the valley, almost in the centre of the triangle of forts that mark the extreme corners of this micro region (map 25).

App. I.3.1 Analysis of the distribution of surface finds by individual sectors

So far we've discussed the overall distribution of surface finds, looking at the study area as a whole. The results of the large block survey amply pointed to the part of the survey area where settled life took place during the greater part of the human past; these are the southern foothills of Prisoj. The location that stood out by its resources and favorable position in the local relief also featured by far the largest amount of surface material. The large block survey also identified the peripheral parts of the landscape, marked by specific types of building remains. It finally defined something like an off-site zone, characterized by very small amounts of surface finds, scattered over relatively large areas, along the left bank of the central valley and in its upper course. But this is a very raw, low-resolution image of the overall distribution of surface finds in the surveyed area. In fact a block by block, intensive survey would be unnecessary to learn that the right bank of the central valley was the core of human settlement in this micro-region.

However if we look at the field blocks in more details, sector by sector, we'll notice finer, but not insignificant variations in the distribution of surface material, both across neighbouring sectors and within the limits of single sectors. Thus in the sectors at the foot of Prisoj, there are stretches with a very low density of surface finds and on sectors east of the central valley, certain field blocks feature several times greater number of finds than on the neighbouring field units. It is oversimplified and to a certain degree incorrect to draw a bold line along the course of the central valley and separate the site and the off-site zones in the surveyed area. There are peripheral locations in the sectors at Prisoj's southern foot, just as there are large clusters of surface finds in the sectors east of the central valley. The sharp overall contrast in the amount of surface material between the right and the left banks of the central valley has obscured these finer variations. This is why the separate analysis of the survey results by sectors is essential.

[4] J. McInerry, On the border: sacred land and the margins of the community, 33-59, eds. R.M. Rosen, I. Sluiter, *City, countryside and the spatial organization of value in Classical antiquity*, Leiden & Boston 2006.

At a still higher resolution level, focusing on the variations in the field records of an individual field block, the large block survey even managed to reveal the distribution of finds within the limits of a single cluster. If we look at the counts made by individual field walkers, it is possible to observe variations in the surface records basically at a site level. Indeed when survey by regular grids was later carried out and the results were compared, it turned out that in some cases, the individual transect counts offered a clearer record of the distribution of finds within the limits of the cluster than the ultra-high resolution of the regular grid survey.

The method of large block survey or the quantification of surface finds by "ready-made", irregular blocks accomplished more than we expected. It has to be emphasized though, that it cannot replace the on-site, regular grid survey as a tool for controlled collection of surface finds. Only the later can reveal the chronological profile of the clusters and the existence of a horizontal stratigraphy within the limits of a single site. Finally, in a number of instances the results of the large block survey proved incorrect upon revisits of certain field blocks. As discussed in the previous chapter, often it was the incidences of super-diagnostic finds that drew our attention to certain field blocks, not the perceived quantity of finds on the surface. The lesson was that the two survey methods are complementary, but not interchangeable.

The on-site regular grid survey was carried out over field blocks where the density of surface finds was at least twice the average for the sector. From the rest of the field blocks, surface finds were collected either by individual field walking units or, in cases were the number of finds was very low, the field block surface was unsystematically checked and all material collected. As discussed in chapter II, the survey by regular grids revealed much greater amounts of surface material, especially on ploughed surfaces with high artifact densities. Total collection by regular grid is a survey at a much higher level of intensity and it is necessary to distinguish its results from those of the large block survey. One simple way to make the results of the two survey techniques comparable is to increase the counts of the large block survey by a factor of 2 or 2.5[5]. Roughly such is the difference in intensity between a regular grid and a large block survey, but only for the off-site zone or on field blocks with an average density of finds. When field blocks with very high densities of surface finds were gridded, the total counts exceeded the results of the large block quantification by a factor of 5 or 6. On the other hand, field blocks with few artifacts on the surface or very low ground visibility, would barely yield plus 50%, upon regular grid collection. As explained in chapter II, the obtrusiveness of the finds also plays an important role[6]. On field units where the predominant types of finds were building ceramics or Early Modern glazed pottery, multiplying the large block records by a factor of 2.5 will probably overestimate the true amount of surface material.

In the passages that follow, the results of the survey by large, irregular field blocks are discussed separately from the regular grid survey results. The estimated density for the former is expressed in 1000 square meters, for the later, in 100 square meters.

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[5] J. Bintliff et al. The Tanagra Project: Investigations at an ancient Boeotian city and in its countryside, 541-606, *Bulletin de Correspondance Hellénique* 128-129/2004-2005.

[6] M.B. Schiffer, A.P. Sullivan, T.C. Kringle, 7, 1978.

App. I.3.2 Sector I, the terraces on the Vardar's left bank

As argued in the preceding chapter, geographically this sector doesn't belong to the studied micro-region. It is therefore impossible to link the amount and the distribution of the surface finds to the overall situation in the surveyed area. Judging by the density of spotted and collected finds, the terraces on the Vardar's left bank are close to the sectors surrounding the modern-day village, with a mean artifact density of about 60 shards per 1000 square meters. As shown on the thematic map, there is a very stark contrast between field units surrounding the monastic complex and those on the sector's periphery (map 5). Some field blocks in the central parts of the sector (field blocks 4b and 3) feature near or over 300 fragments per 1000 sq meters, while on the periphery artifact density plummets below 50 fragments per 1000 sq meters. It has to be noted that the field blocks in sector I have two to three times' smaller areas than field blocks in most other sectors of the survey area, but even when compared by the sheer number of surface finds, they are closer to field blocks west of the central valley than to field blocks on the east (table 2).

Table 2: Statistical distribution of the overall surface record in sector 1

| | |
|---|---|
| Number of field blocks | 9 |
| Total area | 21 968 sq. m. |
| Mean density | 60 fragments per 1000 sq. m. |
| Min/max density | 0/324 fragments per 1000 sq. m. |
| Number of gathered fragments | 92 |
| Number of sites | 2 |

As in all other sectors of the survey area, the predominant type of surface find is the ceramic fragment, large portions of which was building ceramics. The considerable amount of modern rubbish was partly produced by the activity of the monastery, construction camps and fishermen. Large amounts are also regularly deposited by the river. The remnants of one building were discovered in the southern end of the sector, outside the drawn field block limits. This is site number 1.

We encountered a small rectangular tower, built at the foot of the steep limestone ridge that encloses the larger terrace from the south. The building stands only a few meters from the river bank and leans against the limestone rock (map 5, photo 1). It is built of a roughly hewn limestone and rare insertions of small tiles. The solid ground-floor is relatively well preserved in the southern half. Poor mortar or more likely, mud was used as a binding material. The tower has a rectangular shape; it is 7 meters long, 4.5 wide and oriented parallel to the course of the Vardar. It was built at the end of a shorter, but less comfortable road linking the village with the Vardar Valley, presently used only by the local shepherds. It is another confirmation of the importance of the small river terraces in the local communication network.

As in general in this survey area, there is a rather sharp contrast in the distribution of ceramic fragments within the limits of the sector. The amount of surface material on field blocks in the northern half (field blocks 1 through 5) of the sector is higher than the average for the study area, while those in the lower half had zero or very few artifacts on the surface (field blocks 6 through 12). Over 200 hundred fragments were registered on

field blocks northwest of the monastic yard and less than 40 on field blocks to the southeast. In terms of density, almost 110 fragments per 1000 square meters in the northern, less than 1 per 1000 square meters in the southern half of the sector. This is partly related to modern land use: field blocks on parcels in the lower half of the sector are now completely abandoned, with very unfavorable visibility conditions. On the other hand, field blocks in the upper half of the sector are either cultivated or positioned on tilted, rocky terrain, with far less vegetation on the surface.

There is however an alternative explanation. We see that on the last, northernmost field block of the sector (field block 1 on map 5), the number of ceramic finds is several times lower than on field blocks surrounding the monastic yard. Whether going upstream or downstream, the amount of surface material declines as one draws away from the monastic complex. Thanks to the visibility conditions and modern land use, the drop is merely sharper on field blocks southeast of the monastic complex and more gradual to the northwest.

There is a conspicuously high concentration of surface finds on field blocks surrounding the monastery, particularly those to the north and the northwest. At a first sight, the monastic yard offered very few, scattered finds, mostly on small cultivated stretches. The rest of the surface was covered with buildings and partly paved. Upon revisit, it was discovered that the high concentration of artifacts continues southwards, into the monastic yard, on field blocks 5a and 5b.

The main question concerning the described distribution of ceramic fragments in this sector was the origin and the character of the zone of high concentration of ceramic fragments, stretching over field blocks in the immediate surroundings of the monastery, particularly field block 4b. Was it simply a result of the back-yard dumping activity of the monastery or the accumulated remains from some other periods of the past? Equally possible is that this material was dislocated from the small fortress, 70-80 meters above the monastery, during the construction of the Skopje-Thessalonica highway. It was also important to check the relation between the finds in the zone of high and low artifact density.

Two separate regular grids were imposed; one to the north of the monastery, covering the area of field block 4b, the other over field block 5b, a narrow cultivated stretch in the southern half of the monastic yard. From the rest of the field walking units, surface material was collected by individual field walking transects (map 6). The initial plan was different. We intended to carry out total collections on field units 4a, 4b and 3, but during the second year's campaign, surface conditions have visibly changed from the previous year. Field unit 3 in particular was completely overgrown and we were barely able to collect several badly worn fragments. It seemed that much of the collected material consisted of recently discarded or dislocated building ceramics.

The collection of surface material by regular grids defined two separate clusters of surface finds, one in the central units of grid 16a, the other in the southeast corner of the monastic yard, about 90 meters to the south, in the southern half of grid 16b. In the first case, the maximum density of ceramic fragments reached 42 per 100 square meters, while in the latter a maximum density of 33 fragments per 100 square meters was recorded. Both clusters are very small, occupying areas of only about 300-350 square meters. In the first case, on grid 16a, there are two vaguely separate cores, with three to ten times the amount of material found on the surrounding grid-units. It is certain that a

minor portion of this material is modern brick and tile discarded from the monastic complex, the bulk however can be dated to the Late Roman Period.

Looking at the collections' weight distribution, the cluster is more compact, with an evident concentration on the "core" near the southern edge of the gridded area. The "core" in the central part of the grid appears as a smaller off-shoot of the main concentration. In total, 20 kilograms of surface material were collected from grid 16a. On average, over 500 grams were collected per grid unit, but this is hardly instructive of the distribution of the finds. On one grid unit nearly 7 kilograms were collected or one third of the total collection. This is one of the heaviest collections in the first survey, undoubtedly related to the fact that the majority of the finds consisted of building ceramics piled up in the corner of the field.

The cluster on grid 16a is situated at the foot of Kale Ridge, 100 meters below the small fortification on its tip. It is possible that the material found on this location was washed away from the western slope of the steep ridge, but in such a case, one would expect to find a more or less even distribution of artifacts, rather than isolated piles. Another possible source of bias are the recent building activities and rubble deposition from the neighbouring monastic complex. The parcel on which the site was found is a small, agriculturally inactive meadow positioned just across the main entrance to the monastery.

Table 3: Statistical distribution of the overall surface record on grid 16a

| | |
|---|---|
| Number of gathered finds | 88 |
| Mean density | 5 fragments per 100 sq. m. |
| Min/Max density | 0/42 fragments per 100 sq. m. |
| Number of cores | 2 |
| Approximate area of the site | 300 sq. m. |
| Total weight of the grid collections | 20 kg |

The other cluster of surface finds, "site 3", discovered in the southeast corner of the monastic yard consists of a group of freshly excavated material, still embedded in the disturbed soil layer. It was found on a narrow plough-field, a meter lower than the rest of the monastic yard. During the first survey season this group of finds was rendered invisible by the finely harrowed soil; the next year, the garden was left fallow and the artifacts started to emerge from the soil layer. They formed a very small concentration in the southern half of the grid. Unlike site 2 this is a compact cluster: it ends abruptly on the north and probably spreads for another ten meters on the east, below the monastic complex. On the other two sides it is naturally bounded by the Vardar and the small creek that drains the southern side of the Kale Ridge. This type of locations, by the mouths of the small tributaries is the most commonly inhabited in this part of the Vardar Valley. A series of larger sites were discovered on the opposite bank of the Vardar, across the monastery by the mouth of the larger stream of Solp.

Although fewer in number the finds collected from grid 16b are in a much better state of preservation than those from grid 16a. There is further a significant difference in the general character of the finds. While more than 95% of the finds from grid 16a are tile fragments, on the neighboring grid only around 15% of the total finds are tile or brick

fragments. This fact is most clearly reflected by the very low weight of the collections. In total the collection from grid 16b weighs only a forth of the collection from grid 16a. The weight of the average grid collection was 380 grams. However, as on grid 16a, about 40% of the total weight was collected from a single grid unit in the central portion of the grid. More specifically, this was chiefly contributed by one or two larger tile fragments. Hence unlike on grid 16a, there is hardly any overlap between the weight and the quantity distributions. When it was decided to weigh the total collections, the expectations were that freshly excavated, well preserved material will inevitably weigh more than the off-site finds, lying for decades or even centuries exposed on the surface. It became immediately clear that this hypothesis can only be tested in certain conditions. A single fragment of Early Modern or Late Roman tile can obviously weigh as much as a dozen well-preserved pottery fragments. Indeed taking the weight of the total collection as an indicator of site-cores can be highly deceptive, as is the case in sector I.

Table 4: Statistical distribution of the overall surface record on grid 16b

| | |
|---|---|
| Number of gathered finds | 68 |
| Mean density | 8 fragments per 100 sq. m. |
| Min/Max density | 0/34 fragments per 100 sq. m. |
| Number of cores | 1 |
| Approximate area of the site | 320 sq. m. |
| Total weight of the grid collections | 5.25 kg |

On the rest of the field blocks from this sector, the quantity of surface material is at least three times lower. Outside the two clusters the average density of ceramic fragments drops to between 60 (field unit 2) and 30 fragments (field unit 6) per 1000 square meters. Their quality also declines. Fragments collected by individual field walking transects were regularly scrappy and worn, often reduced to unrecognizable chunks. Only on grid 4a did the artifact density remain very high, above 100 fragments per 1000 sq meter when compensated for the lower visibility factor and the lesser degree of survey intensity. As on the neighboring unit 4b, the majority of surface finds consisted of heaps of architectural fragments, some of which were clearly of a recent date. It was therefore decided to limit the total collections to field block 4b. Even if there was a genuine archaeological site on field unit 4a, it definitely formed a separate cluster; in all probability a heap of brick and tile, similar to the one collected from grid 16a.

App. I.3.3 Sector II, Sopot SW

The results of the large block survey plainly indicated that this was the sector with both the greatest number and the highest density of surface finds (table 5, map 7a). We recorded a maximum density of 405 shards per 1000 square meters and an average of 144 fragments per 1000 square meters, both figures being well above the survey average. Unlike the small terraces by the Vardar and most other sectors, the recorded amount of surface material was rather evenly spread across the field blocks. On almost three quarters of the field units the recorded artifact density ranged between 90 and 240 fragments per 1000 sq meters. Only the western end of the sector, across a shallow ravine

and descending from the Prisoj's southern slope has a smaller amount of artifacts on the surface. Here however, there were several piles of building material and pottery fragments aligned by the main local road, probably dislocated during its construction. Interestingly more than 80% of the area is not cultivated. Most field blocks are completely abandoned and on some, large amounts of modern rubbish were encountered. In the early stage of the survey, knowing that the sub-surface layers have remained undisturbed, it was thought that most of the surface material in this sector was produced by the still active village. But after the regular grid survey and the gathering of surface finds, it became clear that there was a difference between finds gathered from the upper and the lower halves of the sector.

Table 5: Statistical distribution of the overall surface record in Sopot SW

| | |
|---|---|
| Number of field blocks | 29 |
| Total area | 45 930 sq. m. |
| Mean density | 144,6 fragments per 1000 sq. m. |
| Min/max density | 12/405 fragments per 1000 sq. m. |
| Number of gathered fragments | 942[7] |
| Number of sites | 1 |

As explained earlier, the distribution of surface material in this sector was largely shaped by artificial terracing. The sloping terrain is cross-cut by at least four terraces, including the main local road. It suffices to look at the counts made by individual field walkers to observe that the number of surface finds regularly increases towards the terrace edge. On both the lower and the upper half of the slope, larger concentrations of surface material regularly occur near the edges of the terraces (map 7b) Thus the greatest number of finds was encountered on field blocks immediately to the north of the local road (field blocks 22, 25 and 26) and particularly on the small terraces along the southern edge of the slope (field blocks 20, 21 and 72). On field walking units in the upper portions of the slope, the density of ceramic fragments was slightly over 90 per 1000 square meters. On units in the lower sections, closer to the edge, it rose to over 140 fragments per 1000 square meters. Only field blocks 8d and 13 defy this pattern, but in these cases there are other factors, such as the very small size of the field block or the presence of material from recent decades, especially modern brick and tile.

This pattern was confirmed by the regular grid survey (map 7c). Four separate grids were laid out; three covering the fields north of the local east-west road and one covering the fields on the southern side. Thus a large portion of the sector was included in the regular grid survey, only the field blocks on the small terraces in the southern end of the sector were left out. The highest concentration of surface artifacts was recorded on grid units along the terrace walls. There is no other apparent focus or trend in the distribution of the surface finds on the gridded areas. This fact is perhaps instructive of the off-site character of the material on the terraces west of the modern village. The relatively low number of artifacts collected lends further support for this thesis. In this sector of the survey, total collection by regular grids actually revealed artifact densities not much higher than the large block survey records corrected for the lesser degree of

[7] The figure includes regular grid collections.

survey intensity. Only on one grid unit does the artifact density approach the sector's average of 14 fragments per 100 sq meters. On the great majority of grid units the number of collected artifacts ranged between 0 and 10 or less than 5 fragments per 100 sq meters. Does this imply a flaw in the large block survey records? In most other sectors the amount of surface material collected by grid units greatly exceeded the number of artifacts counted by individual transects. In my opinion, the problem lies elsewhere. The survey of the fields in sector II was carried out in the same fashion as in the rest of the survey area. The individual sight range was limited to the more standard 1.5-2 meters on both sides of the individual field walking transects, due to the lower ground visibility. We believe that this accuracy of the transect survey records has to do mainly with the character of the surface material on the fields in sector II. As on most field units surrounding the modern village, a large portion of the finds consisted of tile fragments and glazed pottery, discarded during the last two centuries. This material has a greater obtrusiveness than plain prehistoric pottery, so that even the smallest fragment was likely to be noticed and counted during field walking. Further enhancing the visibility of this material is the fact that most of the finds lie loose on the surface, freed from the soil layer. Finally, the fact that the average ground visibility in this sector was low to average also had a significant impact on the local density figures.

There are however important differences between the northern and the southern half of the sector. The same "terrace-edge" effect has increased the number of surface finds by a factor of two on field blocks north of the local road and by a factor of four on field blocks in the southern half of the sector. Despite the very high average for this sector, field blocks along the edge of the southern slope, in particular field blocks 20 and 21, conspicuously stand apart from the neighbouring field walking units, with 407 and 276 fragments per 1000 square meters. The zone of high concentration of surface finds also partly stretches along the edge of the neighbouring upper terraces, on field blocks 15 through 18, but the core of this potential site are the two small terraces covered by field blocks 20, 21 and 72. A large portion of the artifacts that belong to this cluster is spread across the steep side of the central valley, especially on the stretch between the two terraces. Thus the total grid survey was essentially misplaced. The narrow terraces along the sector's southern limit were however hardly suitable for a regular grid coverage. Therefore towards the end of the second year's campaign we decided to carry out total collections by individual transect units.

Other types of finds also point to this part of the sector. At the western periphery of the modern village, there stand the well-preserved ruins of at least four houses. Most likely, these houses were deserted only a century ago, being planned and oriented like the rest of the village houses. But surveying the field blocks in the lower part of the sector, less than 90 meters to the southwest from the last of the village ruins, there appeared another group of architectural remains. They were so meager, it was impossible to count separate buildings (photo 2). One can barely spot the vague lines or amorphous concentration of stone rubble or the negatives of weak wall foundations following the line of the terrace edge. Slightly better preserved are the remains of very small buildings leaning against the terraces on field blocks 20 and 21. These are remains of long and narrow buildings (a width of between 4 and 5 meters was measured) divided into small compartments.

Two groups of building remains were registered, an eastern and a western, concentrated above the small terraces covered by field blocks 15, 20, 21 and 72, over the zone of high concentration of surface finds (map 8). This is a naturally defined and well protected location. Both on the west and the east, there are larger limestone outcrops, symbolically delimiting the space. The small terraces, each measuring roughly 100x20 meters lay on the edge of the gentle slope, only 10 to 15 meters above the bottom of the valley, making them almost invisible for the casual passer by.

The two groups stand about 120 meters apart, but it is possible that the surface remains were completely washed away from this section of the slope, for the ground falls sharply into the valley's bottom. To this agglomeration we could also add the dozen piles of building material and pottery fragments on field blocks in the western end of the sector (field blocks 8 and 9), another 120 meters away from the western group of buildings. The roughly hewn stone, the brick and the pottery fragments are apparently very similar to those found on field blocks 20 and 21.

There still remains the problem of the large amounts of surface finds on the rest of the field blocks from this sector. Recall that the sector's average density is twice the average for the entire study area. Surely the analysis of the gathered finds will shed some light on their character and hopefully explain the occurrence of the very high concentration of surface material on the slopes west of the village.

App. I.3.4 Sector III, Sopot NW

The area of this sector is a natural continuation of the sloping terrain of the previous one; the two are artificially separated by the Skopje-Thessalonica highway. There is nonetheless a striking discontinuity regarding the amount of surface finds. The average density in sector III is slightly over one quarter the density encountered in sector II and lower than the amount of surface finds encountered in sector I or around 40 fragments per 1000 square meters. The surface material is evenly spread over the field walking units, with a sudden decline in the number of artifacts in the sector's northern part, near Prisoj's foot. This coincides with the limit of the plough-zone; above this line, the soil layer becomes very thin and patchy and artifacts are scarce (field blocks 34 through 38, less than 6 fragments per 1000 square meters; map 9 and table 6). On certain field blocks the pattern of even distribution is broken by larger concentrations of modern brick and tile, thrown away by the local roads or on abandoned parcels (field blocks 32, 33 and 45c).

Also characteristic for this sector is the large amount of animal bone. Almost two thirds of the bones in the survey area were found in sector III (map 3). There are two larger concentrations: one on field blocks 45b and 45c, the other on field blocks 42, 43 and 33. Both groups of field blocks surround modern sheepfolds.

Table 6: Statistical distribution of the overall surface record in Sopot NW

| | |
|---|---|
| Number of field blocks | 20 |
| Total area | 63 842,5 sq. m. |
| Mean density | 41 fragments per 1000 sq. m. |
| Min/Max density | 0/125 fragments per 1000 sq. m. |
| Number of gathered fragments | 433 (excluding grid collections) |
| Number of sites | 2 |

Two locations were immediately selected for regular grid survey and total collection, field blocks 45a and 45b and field blocks 44a and 44b (map 9a). They are located in the sector's western end, by the small ravine that continues through the western half of Sopot SW. On field blocks 44a and 45a and over parts of 44b and 45b, the density of surface finds reached around 100 fragments per 1000 square meters. Most of the material was freshly excavated, often lying half-buried in the soil. It was not merely the quantity, but the good state of preservation of the surface finds that caught our attention: almost completely preserved tile or large pithos rims sticking out of the surface.

When we first saw the results of the regular grid surveys, it was difficult to accept what the figures were saying (map 9b). Much greater quantities of material were expected, especially on grid 5a. On this grid, stretching over the larger part of field block 44a and over a minor portion of field blocks 44b, the total grid survey recorded a maximum of 33 fragments per 100 square meters. Recall that on grid 16a featuring much worse ground conditions, the total grid survey recorded over 40 fragments per 100 sq meters. A zone featuring over 14 fragments per 100 sq meters occupied an area of approximately 8000 sq meters. It is possible that at its eastern end a minor portion of this cluster was covered by modern buildings. The core of the site is nonetheless clearly defined over the larger part of field block 44a and the northern part of 44b. About 75% of the grid units feature over 9 fragments per 100 sq meters or at least 13 fragments per grid unit. This threshold roughly delimits the cluster, though units featuring low artifact density also appear in the central portions of the grid. Consequently the zone of higher artifact density bears an irregular, elongated shape: rows of low artifact density alternate with rows of grid units featuring over 20 fragments per 100 sq meters. On the south the cluster gradually disappears, the number of finds slowly approaching the sector's average. On the north and east, as usual for this survey area, no traces are visible outside the ploughed field. Access to the parcels east of the grid was limited, we weren't allowed to carry anything out from the field, but the material was evidently different and too scarce. Similar situation was observed on the parcel north of the site, in the village cemetery.

Table 7: Statistical distribution of the overall surface record on grid 5a

| | |
|---|---|
| Number of gathered finds | 1 329 |
| Mean density | 14.5 fragments per 100 sq. m. |
| Min/Max density | 3/32 fragments per 100 sq. m. |
| Number of cores | 1 |
| Approximate area of the site | 0.7-0.8 hectares |

The neighboring site on grid 5b, situated on the other side of the ravine, about 90 meters southwest of the centre of site 5a is even smaller, with a thinner layer of surface finds. Here the regular grid survey revealed a fairly uneven distribution pattern, with clear signs of dislocation and piling up of material in the recent decades. Thus on one grid unit in the southwest corner of field block 45b, the density of surface finds reached almost 1 shard per square meter, while the average for the grid is more than ten times lower or only 9 fragments per 100 square meters. Note that this is comparable to the artifact density recorded on the periphery of grid 5a. It is symptomatic that the large concentration of 85 fragments was collected from a grid unit lying on the boundary between field 45a-45b. Quite possibly this is a case of a secondary dislocation. There is another core in the eastern half of the grid, featuring only about 13 fragments per 100 square meters. This cluster is larger occupying about 800 sq meters. In total both groups of grid units featuring over 13 shards per 100 sq meters occupy slightly over 1000 sq meters.

Table 8: Statistical distribution of the overall surface record on grid 5b

| | |
|---|---|
| Number of gathered finds | 271 (422 counted)[8] |
| Mean density | 8.2 fragments per 100 sq. m. |
| Min/Max density | 0/100 fragment per 100 sq. m. |
| Number of cores | 2 |
| Approximate area of the site | ca. 0.15 hectares? |

There are a number of parallels between the clusters on grids 16a and 5b. As with the "site" on grid 16a, it is difficult to determine the site limits, because it consists of at least two cores, separated by units with very few artifacts on the surface. Because of their dispersed character, it is possible that one or two more isolated clusters were missed. To a certain degree all sites in the survey area revealed a very erratic distribution when surveyed with regular grids; even site 5a, which is one of the more compact clusters, has sudden and drastic shifts in artifact density. Another similarity between the clusters on grids 16a and 5b is the character of the surface finds. The dominant type of ceramic fragment on both "sites" is architectural ceramics, amounting to about 75% of all finds. In most other surface clusters, the amount of brick and tile was either proportional or more often, considerably smaller than the amount of pottery fragments. Nonetheless the tile/pot fragments ratio is smaller here than on "site 2" (grid 16a). The material from grid 5b finds close parallels in the material gathered from "site 5a" indicating that the two were chronologically and functionally related.

Obviously on the "sites" on grids 5a and 5b the weights of the collections were determined by the predominance of brick and tile. Grid units featuring larger quantities of surface material also gave a greater number of architectural ceramics and consequently they weighed more. Because it was found impractical to carry all architectural fragments for further analysis, we lack this set of data for grids 5a and 5b. But the direct relation between the weight and quantity distributions is self-evident.

According to the large block survey results, the amount of shards on field blocks to the north of site 5b is still above the sector's average, reaching 78 fragments per 1000

[8] Duplicate tiles were counted but not collected.

square meters on field block 45c. This increase however is completely related to the activity of the modern sheepfold. A large portion of the counted material is modern building ceramics or fragments covered with industrial glaze. The amount of modern rubbish is also the highest in this part of the sector.

The clusters on grids 5a and 5b occupy a different location than that of the architectural remains, situated west of the modern village or our "site" number 4. Like the latter, the clusters on grids 5a-5b are situated on the periphery of the plough-zone, but their location is far from hidden. They are situated 50 to 60 meters higher than site 4, on an exposed and relatively spacious slope. Apart from the two gullies delimiting the field from the west and east, there are no other natural barriers to separate it from the surroundings. While "site" number 4 is situated below the line of the main local roads, the clusters on grids 5a and 5b are above the main, east-west line and close to the local road leading northwards, along the edge of the Taor Gorge. The cemetery of the modern village is situated immediately across to the cluster on grid 5a, on the other side of the dirt road. It is an indication that the northern entrance in the village area was considered more important than the rest. This dominating, strategic location may also be related to the near proximity of a freshwater spring, only ten to fifteen meters to the west of the village cemetery (blue circle on map 9b). The modern settlement is still partly fed by this spring.

Towards the end of the second year's campaign, we already had some preview of the character of the finds gathered by individual transects. This drew our attention to a pair of field blocks in the immediate vicinity of the modern village, for it became clear that apart from the predominant Late Ottoman-Early Modern off-site debris, there were obviously low density clusters dating to earlier periods. One of these was field unit 31, where the large block survey recorded an average density of 40 fragments per 1000 sq meters. With time running out, total collection was carried out not by regular grid units, but by doubling the number of individual field walking units. Eight instead of four, evenly spaced field walkers collected all fragments accessible on the surface. The density recorded was slightly over 40 fragments per 100 square meters or 10 times the density recorded by the large block survey. In the southern part of this field unit, the slight increase can be related to a pile of modern rubbish and building material, but in its northwest corner, there is a small cluster of material different from the predominant small roof-tile and pottery fragments covered with industrial glaze. As already explained, a large amount of the off-site finds on field blocks near the modern village is produced by piles of broken brick and tile and sometimes fragments of large water-jugs or storage vessels.

This was the chief problem during the survey of the sectors surrounding the present-day settlement. On the majority of field blocks from this part of the survey area the quantity of surface material is relatively constant, but its origin and contents are various. In such a condition the principal goal of the quantification of surface finds is threatened, for it is impossible to discriminate between field blocks solely on the basis of the quantity of surface material. Other non-quantitative parameters, such as the physical or the formal qualities of the finds helped us reveal the "site" on field block 31.

App. I.3.5 Sector IV, Sopot SE

This is the area east of the modern village. The terrain it occupies is slightly higher and much gentler than in sector Sopot SW. In the description of the survey area, it was stressed that this is basically the geometric centre of the micro-region, holding the most dominant point in the surroundings. Unfortunately a large portion almost one quarter of the sector could not be systematically surveyed because of the extremely poor ground visibility conditions. Even on field units where systematic survey was possible, the ground visibility conditions had a considerable effect on the field walking records.

The mean density for the sector is less than 45 fragments per 1000 square meters, very close to the densities estimated for sectors I and III (table 9). But there is a notable difference between field blocks in the northern half, above the local, east-west road and field blocks in the southern half, between the road and the central valley (map 10). The average density of surface finds in the first group is almost 60 fragments per 1000 square meters and only 18 in the later. This is most likely determined by the factors of ground visibility and modern land-use. Of the 9 field blocks north of the main local road, only two were left uncultivated and both had quantities of surface finds only half the sector's average. South of the local road, 4 out of 5 field blocks have been left fallow for years. Here the density of surface finds dwindled to between 3 and 6 shards per 1000 square meters. Even if tripled the amount of surface finds on these field blocks would've remained far below the average for the sector.

Table 9: Statistical distribution of the overall surface record in sector IV

| | |
|---|---|
| Number of field blocks | 14 |
| Total area | 45 854 sq. m. |
| Mean density | 45 fragments per 1000 sq. m. |
| Min/Max density | 4/88.5 fragments per 1000 sq. m. |
| Number of gathered finds | 192 |
| Number of sites | 0 |

There are further differences in the distribution of the surface finds within the two halves of the sector. The majority of the field blocks aligned by the local roads feature densities between 60 and 88 fragments per 1000 square meters, including the sector's maximum of 88.6 fragments per 1000 sq meters recorded on field block 87. This is about 20% less than the maximum amount counted on field blocks in sector II, west of the modern village. Higher artifact densities were also recorded on field units 74a, 77 and 80. Although not particularly high in absolute terms, the increase from neighbouring field blocks was quite significant and we decided to cover at least some of these field units by the regular grid survey. But when re-visited for material collection, the situation on the ground has changed drastically, with the amount of surface finds evidently depleted. For instance on field block 80, we were able to collect not more than 20 fragments or about 40% of the material counted, taking into account the visibility factor. Similarly on field block 87, featuring the highest artifact density in the sector, only 30 fragments were collected or three times less than the large block survey record; on field block 82, less than a third of the counted material was collected and so forth. Only on field blocks 80

and 87 were there finds datable prior to the last two centuries. It seems that as in sector II, the high visibility of the finds related to their physical characteristics resulted in more accurate large block survey records. In addition the wider sight-range, particularly on field units north of the local east-west road resulted in a fuller surface coverage, probably approaching 50-60% of the field block's area. Finally one shouldn't dismiss the possibility of changes in the surface record over the course of the survey.

In the southern half of sector IV with very low ground visibility and low artifact density, we were able to collect a much higher fraction of the number of finds counted during the quantification campaign. The surface conditions on these agriculturally inactive and overgrown fields proved far more stable than in the plough-zone.

Another characteristic of this sector is the uneven distribution of surface finds within the limits of a number of individual field units, particularly on field blocks 76, 77 and 87. On all three field units the number of counted artifacts by one of the field walkers exceeded the counts of the rest by a factor of two or three. On field blocks 76 and 77, these discrepancies are related to the small piles of ceramic debris, discarded in the recent decades or the contrasting ground visibility conditions within the field blocks' limits (map 10a).

App. I.3.6 Sector V, Sopot NE

This sector is located further away from the modern village. It covers the northeast quarter of Prisoj's southern foothills, opposite the one occupied by the village and mostly beyond the radius of 500 meters from the village centre. At present however, this section represents nearly 70% of Sopot's cultivated land. Unlike the other three sectors bordering on the modern settlement, only a small percent of the field blocks in sector V lie uncultivated.

The amount of surface material declines by nearly 50 percent when compared to the neighbouring sectors. The sector's average is 24; the maximum, 49.5 fragments per 1000 square meters (table 10). The piles of modern rubbish and building material are also scarcer. There is less variation between field blocks than in most other sectors. Apart from the expected decrease towards the slopes of Prisoj, there are no other recognizable spatial patterns. One can barely point to a few field units where the concentration of artifacts is at least twice the average or around 45 shards per 1000 square meters (map 11). These are field blocks 55, 68 and 103, each in a different part of the sector. There is also a small increase towards the easternmost group of field blocks, apart from field block 103; field blocks 93 and 91 have a density of nearly 45 fragments per 1000 square meters. As in sector IV there are no sudden increases between field blocks, but there are sharp differences between individual field walking units, within the limits of a single field block.

Table 10: Statistical distribution of the overall surface record in sector V or Sopot NE

| | |
|---|---|
| Number of field blocks | 36 |
| Total area | 109 487,5 sq. m. |
| Mean density | 21 fragments per 1000 sq. m. |
| Min/max density | 0/47 fragments per 1000 sq. m. |
| Number of gathered fragments | 318 (excluding grid collections) |
| Number of sites | 2 |

One large grid was imposed over field blocks 62, 63, 68 and 67, with the aim of examining the gradual increase in the surface material density in the central parts of the sector. The grid survey couldn't define any pattern in the distribution of the surface finds. The mean artifact density on the grid was exactly 5 fragments per 100 square meters. For certain sectors of the study area, this amount of surface finds is close to the "site threshold", but in sectors surrounding the village, greater concentrations feature a minimum of 10-12 fragments per 100 sq meters. More to the point, the slight increase in the number of shards revealed by the large block survey now became invisible. The density of finds shifted unpredictably across the grid; units featuring density of less than 1 shard per 100 square meters alternated with units featuring nearly 10 fragments per 100 square meters (map 12). We will see that this is the typical distribution pattern in the off-site zone. Although fairly irregular, genuine sites exhibit at least vaguely concentric patterns. Thus in addition to the sheer quantity of finds and their state of preservation, the on-site zone is further characterized by the specific signature on the artifact density map[9].

Table 11: Statistical distribution of the overall surface record on grid 6

| | |
|---|---|
| Number of gathered finds | 453 |
| Mean density | 5 fragments per 100 sq. m. |
| Min/Max density | 0/9.3 fragment per 100 sq. m. |
| Number of cores | 0 |

It seemed that as in sector IV, there were no major concentrations of surface finds that would indicate prolonged and intensive human presence in the past. We were soon proved to be mistaken. During the collection of surface finds by individual field walking units, a very high concentration of recently exposed material was encountered between field blocks 52 and 56, in the southwest corner of the sector, 250 meters northeast from the centre of the village (maps 12, 13). The areas of both field blocks were almost completely gridded and total collection was carried out. The findings were striking: the average density over the entire grid was 23 fragments per 100 square meters or almost twice that recorded on the larger sites in the other sectors! And grid units featuring this density of surface finds barely mark the edge of site number 6. It is 100 meters long and less than 20 meters wide, stretching over parts of field blocks 56 and 52. Only the western edge does remain quantitatively ill-defined. The high concentration of surface finds continues into the western half of field block 52, but the character of the finds is

[9] Cf. J. Bintliff, P. Howard, A. Snodgrass, *Testing the Hinterland: The work of the Boeotia Survey (1989-1991) in the southern approaches to the city of Thespiai*, Cambridge 2007.

different and consists mostly of small format roof-tile fragments dating to the last couple of centuries. The maximum density of surface finds at the core of the site, in the western half of field block 56, reached 75 fragments per 100 square meters. Recall that the large block survey revealed densities of only 18 and 34.5 fragments per 1000 square meters on these two field blocks (table 12)!

Table 12: Statistical distribution of the overall surface record on grid 7

| | |
|---|---|
| Number of gathered finds | 959 |
| Mean density | 23 fragments per sq. m. |
| Min/Max density | 2.7/79 fragments per sq. m. |
| Number of cores | 2 |
| Approximate area of the site | 6250 sq. m. |
| Total weight of the grid collections | 41 kg |

In total 41 kilograms of surface material were collected from grid 7 (map 14). This is only twice the volume collected from the much smaller grid 16a in sector I. There is no doubt that this was determined by the small amount or the complete absence of architectural ceramics on grid 7. The mean weight of the collections is 410 grams, the maximum, just over 2 kg. The weight distribution across the grid is fairly even, but it closely follows the quantity distribution. Both the cluster in the central and the western part of the grid are well-defined. However looking at the weight to count ratio, one notes that although the collections from the western third of the grid are as large as the collections from the centre of the grid, in terms of weight they are two to four times smaller. Moreover, while in the collections from the western part of the grid it seems that tile features prominently, the collections from the central grid units are almost exclusively comprised of pottery fragments. In this particular case, the increased weight to count ratio is most probably related to the quality of the material, indicating freshly unearthed archaeological finds.

Table 13: Statistical distribution of the overall surface record on grid 8

| | |
|---|---|
| Number of gathered finds | 418 |
| Mean density | 33 fragments per 100 sq. m. |
| Min/Max density | 6/84 fragments per 100 sq. m. |
| Number of cores | 1 |
| Approximate area of the site | 750 sq. m. |
| Total weight of the collections | 12.3 kg |

A very similar concentration of finds, freshly exposed on the surface and spreading over a tiny area was found on field block 103 (table 13). Here already the large block survey revealed a small increase in the number of surface finds; a density of almost 40 fragments per 1000 sq meters was estimated, which is the maximum for this sector. The total grid survey completely covered field block 103 and was extended over the neighbouring field units to the south and east. It confirmed that the bulk of the finds was concentrated on field block 103 and more particularly, in its southern half. The mean

artifact density for grid 8 was 33 fragments per 100 sq meters or 7-8 times the large block survey records! At the core of the site, in the southwest corner of the field block, the artifact density reaches the maximum of 84 fragments per 100 square meters. This is an even greater concentration than that recorded on grid 7, but in terms of area, it is only half its size, measuring only 50x15 meters (map 15). The extensions of the grid into the neighbouring field blocks revealed the typical off-site scatter in this part of the survey area. Both the quantity and the distribution of the finds are very similar to the situation uncovered on grid 6.

The weight distribution roughly overlaps with the quantity distribution, though in terms of the collections' weight, the cluster is bounded to an even smaller area (map 16). There is very little difference between collections from grid units covering the periphery of the cluster and collections from the off-site zone, on the neighbouring field units. The total weight of the collections from grid 8 is 12.3 kilograms, four times less than the collection from grid 7. On average the collections from grid 8 weigh less than 200 grams. One third of the total mass of the finds was collected from four grid units forming the core of this cluster.

The cluster on grid 8 is many times smaller than its neighbour on grid 7. The former measures only about 750 sq meters, the latter at least 6000 sq meters. Both clusters stretch over elongated and narrow areas, roughly oriented east-west. The cluster on grid 8 is situated 270 meters northeast of the cluster on grid 7, on a slightly elevated terrain. Unlike the sites on grids 5a-5b and the building remains west of the village, these two are situated in the middle of Prisoj's foothills, in the centre of the modern plough-zone. Both locations are completely open and easily accessible.

The clusters on grids 7 and 8 are similar in another aspect. They are both large concentrations of surface finds limited to relatively small areas, especially the cluster on grid 8. In fact among other things, their very small size is one of the reasons the large block survey failed to recognize them. They occupied small portions of the field walking units and in one case (the site on grid 7) the cluster stretched over parts of two field blocks. They were thus more likely to pass unnoticed or partly noticed. Though appearing in great quantities, the surface finds are still embedded in the upper soil layer and because of the brownish-grayish color of the predominant local fabrics they are difficult to spot, especially in the first few weeks after ploughing. It is possible that one or two sites of this category were completely missed because of the fluid ground conditions in the plough-zone. Especially for sectors II and III, the northwest and the southwest corners of the foothills, the average density is about 45 fragments per 1000 square meters, twice the average density for the northeast sector.

The off-site material in the fifth sector is slightly less numerous than in the other three sectors surrounding the modern village. Modern rubbish and building material appears sporadically and its input in the thin cover of artifacts over the surface of sector V is obviously insignificant. Preliminary observations of the material gathered from individual field walking units and from the regular grids show that it is of a similar character to the off-site finds from the previous three sectors.

App. I.3.7 Sector VI, the central valley

There are basically two groups of field blocks in this sector; one around its lower course, where the stream slowly turns westward, the other around mid-course, a kilometer northeast of the modern village. The two belong to the same sector because they are part of the same topographic unit, with similar ground conditions and land use. But in terms of quantity and character of the surface finds, they are completely different. The sector's average density is about 25.2 fragments per 1000 square meters; but the first group, in the lower course of the valley and south of the highway has an average density of nearly 63 fragments per 1000 square meters, higher than the averages for sectors III and IV and almost three times the amount of surface finds in sector V. The second group, situated above the line of the highway has a density of less than 6 fragments per 1000 square meters or ten times less. On the lower group of field blocks, essentially a continuation of sector Sopot SE, the amount of surface finds fluctuates between 39 and 75 fragments per 1000 square meters. Then, there is a sharp increase towards the turn of the valley, on field blocks 198 and 197, with densities of 131 and 99 fragments per 1000 square meters. North of the highway there follows a sudden and sharp decline, with only 6 fragments per 1000 square meters on field block 199. In fact, all field blocks positioned at the valley floor or on its slopes, north of the highway line have densities of surface finds not greater than 16 shards per 1000 square meters. Exceptions are field blocks 186 and 187, on the valley's left slope, featuring about 24 fragments per 1000 square meters. Although humble in comparison to the densities encountered on the right bank, these field blocks still feature several times higher artifact density than field blocks on the floor of the central valley or those further upstream, along its left bank. It seems very reasonable to see them as part of the larger zone of high density of surface finds spreading from the opposite side of the valley. Typically for this sector, large parts are covered with dense, hydrophilic vegetation and it is often impossible to follow continually the density of surface finds. This supposed intrusion of the cluster on the opposite bank of the valley, stretched from field block 186a on the north to field blocks 188 on the south, over a length of 240 meters. A 100 meters long belt, between field blocks 187 and 188 is unfortunately inaccessible (map 17, table 14).

Table 14: Statistical distribution of the overall surface record in sector VI

| | |
|---|---|
| Number of field blocks | 29 |
| Total area | 61 960 sq. m. |
| Mean density | 25.2 fragments per 1000 sq. m. |
| Min/max density | 0/131 fragments per 1000 sq. m. |
| Number of gathered fragments | 136 |
| Number of sites | 0 |

When field blocks in the lower course of the valley were revisited for the gathering of surface finds, the amount of pottery shards encountered on the surface appeared too thin to deserve a total coverage by regular grids. All finds were collected by individual transects and indeed the amount gathered was rarely exceeding the individual transect counts. Even on field blocks 197 and 198, both being ploughed fields with

density of finds, 1.5 to 2 times the average for the sector, the material gathered by transect units didn't exceed by a great margin the counts recorded in the large block survey. In fact a density of 5 fragments per 100 square meters is way below even the thinnest clusters in the western half of the survey area. In sector II, field blocks with over 70 fragments per 1000 square meters proved to be merely modern dumping yards. More confusing than the transient doubling of the quantity of surface finds is their rapid and almost complete disappearance on field blocks north of the highway.

App. I.3.8.1 Sector VII, the eastern foothills of Prisoj

This is the last sector situated to the west of the central valley and over the zone of Quaternary deposits. But according to the character and the quantity of surface finds, it sits between the sectors surrounding the village and those situated east of the central valley. The eastern foothills of Prisoj are situated less than one kilometer from the village, but they lie hidden from sight. The rarely frequented road to Vetersko passes between the eastern face of Prisoj and the central valley. In sharp contrast to the sectors near the village and the highway, modern rubbish is almost absent on the surface of this sector.

The average density of surface material is less than 18 shards per 1000 square meters (map 17 and table 15). There is a gradual and steady decline on a south-north axis: field blocks 97 and 100, on the southern edge of the sector feature densities of 60 and 51 fragments per 1000 square meters, slightly higher than the neighbouring field blocks in the eastern end of sector V. Two hundred meters to the north, on field blocks 104 and 107, the amount of surface finds drops to 18 fragments per 1000 square meters. After another 200 meters on field blocks in the northern half of the sector, it drops below 12 fragments per 1000 square meters. This tendency is broken by a couple of field blocks in the middle of the sector, field blocks 126 and 113, featuring densities of roughly 36 fragments per 1000 square meters. As in other sectors stretching along the foot of Prisoj, field blocks above the limit of the plough-zone, usually have only between 0 and 6 artifacts per 1000 square meters.

Table 15: Statistical distribution of the overall surface record in sector VII

| | |
|---|---|
| Number of field blocks | 25 |
| Total area | 71 830 sq. m. |
| Mean density | 18.6 fragments per 1000 sq. m. |
| Min/max density | 0/60 fragments per 1000 sq. m. |
| Number of gathered fragments | 342 |
| Number of sites | 2-3 |

The large block survey revealed concentrations higher than the sector's average only on field blocks 97 and 100, east of site 7 and in the middle of the sector, on field blocks 126 and 113. These are very low densities, twice as low as those recorded on field block 198, for example. The relative scarcity of surface finds was confirmed during the individual transect collections. However on certain field blocks (126, 107, 104), we noticed decorated, diagnostic pottery and it was decided to carry out total grid surveys on

these field units. As in sector V on field blocks ranking average or below the survey average regarding the artifact density, it turned out that the true density of surface finds was more than ten times the counted in the large block survey. Especially distorted were the counts for field blocks 107 and 126, both vineyards with rapidly changing surface conditions. Fabrics of brownish and grayish color were predominant adding to the difficult visibility conditions, but it is very possible that the majority of the finds, especially on field block 107 were unearthed immediately prior to the grid survey.

Almost one third of this sector was gridded, nearly 25 000 square meters (map 18). Four field blocks in the middle of the sector, 104, 107, 126 and 125 were surveyed by regular grid units, 5 by 10 or 5 by 8 meters. This is a 450 meters long, 50 to 70 meters wide stretch, by the right bank of the valley of Sopot. It has a constant NE-SW orientation, gently sloping towards SE. Throughout this entire length, certain types of fabrics were found, along with a smaller number of diagnostic fragments that we thought belonged to a single period site, number 8. In the northern end of the sector, around a small rocky outcrop, five field blocks were partly or completely surveyed by regular grids, field blocks 113 through 116. The density of surface finds was indeed very low on these field units, but discovering weak architectural remains on the top of the outcrop and at its western foot (site 9), we wanted to examine the amount of surface material on the surrounding fields. In addition, there were reports of stray coin finds from this place.

App. I.3.8.2 "Site number 8" (thematic maps 18, 19a-b)

It soon became clear that this was either one very large site, with an extensive halo around its perimeter, unnoticeably merging with the off-site zone or a number of smaller sites with partly overlapping surfaces. The increased density of surface material begins on field block 104, basically continuing from the northern periphery of the cluster on grid 8, on field block 103. When density was estimated after the collection of all surface fragments by grid units measuring 5x10 meters, it reached 25 shards per 100 square meters, almost equal to the periphery of the site on grid 7. The distribution of finds within the field block's perimeter is generally even, but there are a number of "cores" where the density of surface finds is around 30 fragments per grid unit or 60 per 100 square meters, slightly less than the maximum density on the cluster on grid 7. Four such "cores" can be observed: three in the eastern half of the grid, one in the western half. Here on several neighbouring grid units, the artifact density is between 30 and 60 fragments per 100 square meters. It is difficult to draw sharp limits; the number of surface finds gradually declines on all sides, dropping below 20 fragments per 100 square meters in the peripheral parts of the gridded area (maps 18 and 19a, table 16).

Table 16: Statistical distribution of the overall surface record on grid 9

| | |
|---|---|
| Number of gathered finds | 1417 |
| Mean density | 25 fragments per 100 sq. m. |
| Min/Max density | 0/71 fragments per 100 sq. m. |
| Number of cores | 3-4 |
| Approximate area of the site | / |
| Total weight of the collection | 30 kg |

This denser scatter of surface finds continues into field blocks 103 and 107. The situation on the rest of the neighbouring parcels is very different. To the south, field blocks 96 and 100 although showing a slightly greater number of artifacts than field block 104 in the large block survey, after total collection by regular grid yielded no more than 15 fragments per 100 square meters. They lie almost a meter below field block 104, separated by a long escarp. To the north and the west, field block 104 borders with units with very low ground visibility. Only a few artifacts were found amidst the tall grasses and some of them confirmed the possibility that the same material continues to spread into field blocks 105 and 106. There is no continuity in the character of the finds to the west, on field blocks 70 and 71 on the other side of the local road.

Much higher artifact densities were recorded on field block 107, immediately to the northeast of field block 104. The average density on this field block is around 57 fragments per 100 square meters. As on the previous grid, there is no clear distribution pattern. There are slightly more shards in the western and in the lower half of the gridded area. On certain groups of grid units however, the density of finds rises to between 1.25 and 2.3 fragments per square meter, which is the maximum density of surface finds in the entire survey area. These irregularly shaped "cores" are concentrated in the middle of the field block and in its western half. It is possible to observe vague, linear patterns in their positioning, reminiscent of the shape of the "sites" on grid 7 and 8 in the NE sector. Variation among neighbouring grid units on field block 107 are often extreme. The density of surface finds can suddenly drop from over 1 fragment per sq meter to below 10 fragments per 100 square meters. Only in the southwest corner and the northeast part of the grid is the distribution of surface finds more even. Actually the last five rows of grid units in the eastern half of the field block feature about 27 shards per 100 square meters, almost equalling the average for field block 104 (table 17).

Table 17: Statistical distribution of the overall surface record on grid 10

| | |
|---|---|
| Number of gathered finds | 4 402 |
| Mean density | 57 fragments per 100 sq. m. |
| Min/Max density | 0/2.5 fragments per sq. m. |
| Number of cores | 4-5 |
| Approximate area of the site | / |
| Total weight of the collection | 89.8 kg |

For the greater part the quantity and the weight distributions overlap on both grids (map 19b). In fact comparing the maps showing the weight and the quantity of the total collections, the site "cores" are more contracted when the latter parameter is considered. In certain cases however, such as the two grid units in the northeast corner of grid 10, small collections consisting of less than a couple of dozens shards weighed nearly 1 kilogram. Again this could be related to the character rather than to the quality of the finds. These two collections in particular consisted of a number of large vessel fragments, probably pithos. Thus even when architectural ceramics is absent, the function of the vessels can still greatly influence the weight distribution.

Although the area covered by grid 9 is only slightly smaller than that covered by grid 10, the total weight of the collections is twice as low. This is directly related to the differences in quantities. The collections from grid 10 are considerably larger and despite the fact that the individual finds from this grid were evidently better preserved, the weight to count ratio is roughly equal on both grids. Individual fragments rarely weigh over 150 grams and the average for both grids is a mere 24 grams. In consequence the weight of the finds can only partly reflect their state of preservation. A much finer wear analysis is needed in order to express this parameter

On all sides except for the southwest corner, field block 107 is surrounded with overgrown and impermeable stretches, beyond which the material disappears from the surface. Systematic survey is possible only after fifty meters to the northeast, on field block 126 (grid 12). Again a very large density of surface finds was encountered, but in comparison to the finds from field block 107, these were rather tiny and worn (map 20). The average density is about the same as on field block 107, around 57 fragments per 100 square meters. Unlike on the previous two grids, there is a surprisingly clear pattern of distribution. The amount of surface pottery increases from east to west and from north to south. A maximum density of 1.45 fragments per sq meter was measured in the southwest corner of the grid, a minimum of 26 fragments per 100 square meters in the last row of grid units on the north. This pattern of distribution can only be partly explained by the ground configuration. Field block 126 is positioned across a slope and the southern edge is almost ten meters lower than the northern. However the increase in the number of pottery fragments is limited to the southwest corner of the grid. In the eastern half of the field block there are no significant variations along a north-south axis. More significant is the difference between the western and the eastern half of the grid. The three columns in the western half feature a density of 64 fragments, the four eastern columns, 38 fragments per 100 square meters. After the gradual decrease in the eastern part of field block 107, there is at least one other increase, perhaps near the eastern edge of the overgrown parcel that separates field blocks 107 and 126. This is the northernmost cluster with a density of nearly 1 fragment per square meter. It occupies the western half of field block 126, gradually disappearing towards east. Nevertheless the amount of surface material on the easternmost grid units is still above the sector's average, suggesting that the cluster spreads further upstream.

Table 18: Statistical distribution of the overall surface record on grid 12

| | |
|---|---|
| Number of gathered finds | Around 2 000 |
| Mean density | 57 fragments per sq. m. |
| Min/Max density | 0.16/1.45 fragments per sq. m. |
| Number of cores | 1 |
| Approximate area of the site | / |
| Total weight of the collections | 34.125 kg |

Unfortunately the eastern edge of this group of finds can only be followed along a narrow stretch on field block 125 (grid 13), positioned perpendicularly to field block 126. Along the rest of its eastern perimeter this field block is surrounded by impenetrable, vegetation belts. On field block 125 the average density of surface finds is less than 20

shards per 100 square meters. The material is evenly distributed over the greater part of the field block. Only in the eastern third did it finally diminish to less than 10 fragments per 100 square meters, marking the northern end of "site" 8 (map 20, table 19).

Table 19: Statistical distribution of the overall surface record on grid 13

| | |
|---|---|
| Number of gathered finds | 612 |
| Mean density | 19 fragments per 100 sq. m. |
| Min/Max density | 0/60 fragments per 100 sq. m. |
| Number of cores | / |
| Approximate area of the site | / |
| Total weight of the collections | 14.300 kg |

Analyzing the weight distribution on grids 12 and 13, it chiefly repeats the quantity distribution (map 21). The weight of the collections gradually declines along a south-north axis. The core of the cluster on grid 12 is almost completely limited to the southwest corner of the gridded area. On the map showing the weight distribution, it appears most clearly as an off-shoot of the main concentration on grid 10. Further north on grid 13 there are no visible peaks, the weight of the collections gradually declining to an off-site level. Over 34 kg of surface material were collected from grid 12, less than 15 kg from grid 13, although the latter stretches cover a larger area. Understandably the key factor is the much larger quantity of material on grid 12, approaching the densities recorded on grid 10. The low weight to count ratio indicates the low quality of the finds, especially on grid 12. On this grid the weight of the individual fragment rarely exceeded 25 grams. As explained earlier the field covered by this grid was a finely harrowed vineyard and the surface finds were reduced to tiny, rounded bits of tile and pottery.

The unfavorable ground visibility conditions prevented us from following this larger concentration of surface finds in its entirety. Parts of it certainly remain hidden beneath the thick vegetation cover between grids 10 and 12 and between the latter and grid 13. We further don't know where the southern edge of the cluster is; how far it penetrates into the valley floor. The few shards found during unsystematic searches of the overgrown fields barely confirmed that the same or similar material continued into field block 105 and on the overgrown parcel between field blocks 104(grid 9) and 107(grid 10). It is possible that this cluster continued on the other side of the central valley, on field blocks 186 through 188. These field blocks feature higher artifact densities than the neighbouring field blocks in sector VI and the material gathered is similar to the one gathered on the opposite bank. Along the northwest side, parallel to the course of the valley, the local road to the village Vetersko is obviously an artificial border. Field blocks situated between this local road and the eastern slopes of Prisoj have far fewer artifacts on the surface.

We'll have to hopefully wait for the final study of the gathered material to learn whether this large concentration of finds marks the remains of a single or more sites. It is by the far the largest cluster of surface finds in the survey area, both in terms of quantity and area size. A density of nearly 60 finds per 100 square meters stretches over an area of around 3 hectares, almost three times larger than all other sites in the survey area. This is a well-protected location, hidden from sight and not easy to access. On the southeast and

the northwest, it is protected by the V-shaped valley and the steep, eastern face of Prisoj. On the southwest it is separated from the southern foothills of Prisoj by a low ridge, while on the opposite northeast corner there is a small pass leading to the secluded upper course of the central valley. The main west-east road is almost half a kilometer to the south. This large site is in effect connected only via a local side-path leading to the northern and most isolated part of the micro-region. It's left the spacious and insolated southern foothills for the shelter of the narrow and corridor-like eastern foot.

But there is another characteristic of this location when observed from a different perspective. Its defensive qualities are beyond any doubt, especially if we add the fact that only 500 meters to the north there was at least one freshwater spring. But the prevailing image of a hidden, defensive location is derived from observations of the present day landscape. As argued in the previous chapter, at present the productive territory of the village Sopot has contracted to an area within the radius of 500 meters from the centre of the village. It is thus occupying only the southwestern third of the natural micro-region. The present-day village, like the sites on grids 5a-5b and 7 is concentrated on the southern foothills of Prisoj. On the other hand, the site (or sites) on grids 9, 10 and 12 is situated in the geometric centre of this micro-region, equally distanced from all three major foothills in the drainage of the central valley: the southern foothills of Prisoj on the southwest, the southern foot of Radičica on the southeast and the upper course of the central valley on the north. If we are dealing with a single site on this location, it is probably the largest ever to exist in the drainage basin of Sopot, centrally positioned to the entire natural micro-region and not only to some of its components.

App. I.3.8.3 Site 9, grids 14 and 15

Field blocks in the northwest half of the sector, on the other side of the local road to Vetersko are situated on a higher ground, covered with a thinner soil layer and less artifacts on the surface. The large block survey recorded artifact densities ranging between 3 and 18 fragments per 1000 square meters. Total collection by regular grids on the northernmost field blocks of the sector confirmed these findings (map 22).

The northern end of this sector is marked by a small outcrop, made of red conglomerate. Although standing only 15 meters higher than the surroundings and measuring 90x50 meters on the top, it has an impressive appearance, protruding almost into the middle of the corridor that separates the hill-masses of Prisoj and Radičica. It is connected to Prisoj's hillside by a low ridge. On its western side, erosion has carved a deep and spacious recess into the limestone face of the hill, giving the local name for this location, the "Cave". From the hilltop there is an excellent visual control over the lower course of the central valley, all the way to the northern face of Gaber.

The ruins of a small, triangular fort were discovered on the top of this rocky outcrop (site number 9). Its shorter sides are almost equal; the one to the northwest measuring 61.5 meters, the one to the southwest, 65. On the east it is enclosed by a 100 meters long, straight line. Following the surrounding topography the most logical place for the entrance is the southern angle, coming from the gentler southern side of the hillock. The fort is inclined to the west, towards the spacious recess in Prisoj's eastern side. The western angle of the fort is its lowest point and it was evidently built more massively than the rest of the walls. It seems that the builders have made the maximum

use of the rocky outcrops, simply connecting them with short stretches of wall. No further details are visible on the surface. The ground is covered with dense packs of thorny bushes and a carpet of roughly hewn or broken local stone. Later we were surprised to discover the ground plan of a small rectangular building (c.a. 4x2 meters), at the western foot of the outcrop, about 30 meters southwest of the fort's western angle. Site 9 actually refers to the fort and the surrounding building remains at the foot of this hillock.

We wanted to survey the surrounding field blocks hoping to find material related to the nearby fortification and the rest of the buildings. The slight increase in the density of surface material on field blocks 113a and 113b (39 and 30 fragments per 1000 square meters) and the favorable position of the recess west of the outcrop, covered by field blocks 114 and 115 were both promising targets. However it became immediately clear that the quantity of surface artifacts was nowhere near that encountered on field blocks on the other side of the local road. Two grids were set; one over field block 113a and part of 113b, the other over the eastern halves of field blocks 114 and 115 (grid 14 and 15, map 22). For the first, an average density of less than 6 fragments per 100 square meters was estimated, with a slight increase from south to north (table 20). On certain grid units by the southern foot of the hillock, a density of nearly 24 fragments per 100 square meters was recorded. Even when compared to the quantity records on grid 6, this is a negligible amount. However relative to neighbouring grid units it is a visible increase, possibly indicating the remains of a minor site. Field blocks 114 and 115 (covered by grid 15) featured even lower artifact densities, 12 and 4.5 fragments per 1000 square meters or an average of 1.6 shards per 100 square meters after the regular grid survey (table 21). Here too, there is a slight increase towards the western foot of the hillock: from less than 1 fragment per 100 square meters in the western and the northern half of the grid, to the maximum of 10 fragments per 100 square meters in the eastern half, around the foot of the hill fort and near the small building remains.

Table 20: Statistical distribution of the overall surface record on grid 14

| | |
|---|---|
| Number of gathered finds | 251 |
| Mean density | 6 fragments per 100 sq. m. |
| Min/Max density | 0/24 fragments per 100 sq. m |
| Number of cores | 1? |
| Approximate area of the site | 800 sq m? |
| Total weight of the collections | 7.75 |

Table 21: Statistical distribution of the overall surface record on grid 15

| | |
|---|---|
| Number of gathered finds | 74 |
| Mean density | 1.6 fragments per 100 sq. m. |
| Min/Max density | 0/10 fragment per 100 sq. m. |
| Number of cores | 0 |
| Approximate area of the site | / |
| Total weight of the collections | 1.9 kg |

The very low weight of the collections further strengthens the impression that these are either remains of the diminished off-site carpet or of other non-residential activities. For illustration the total weight of the collections from grid 15 equals the weight of a collection from a single unit from grid 10. Both the weight and the quantity of surface material sharply decline on field units west of the dirt-road (map 23).

If it wasn't for the fortification remains, this miniature increase in the quantity of surface finds would have most likely passed unnoticed. Increases of a much larger scale in other sectors of the study area gave only off-site material. Similarly on field blocks surrounding the small rocky outcrop, there was no freshly excavated surface material. Half of the fragments were unrecognizably small and weathered. Preliminary analysis showed that they are different both from the shards found on off-site field blocks at Prisoj's southern foot, but also from the material gathered from the neighbouring field blocks, in the lower part of the sector. Contrary to our expectations there were almost no building ceramics on the surface of field blocks near site 9, a fact also reflected by the small weight of the collections. The rare fragments of worn brick and tile were mostly of a recent date.

App. I.3.9 Sector VIII, the northern foot of Gaber

This is the sector with one of the lowest average densities of surface finds in the survey area or exactly 6 fragments per 1000 square meters. Most field blocks feature between 0 and 3 fragments per 1000 square meters. The average is increased by the higher densities on field blocks 201 through 203, with 27 and 9 fragments per 1000 square meters. Ceramic fragments were gathered by individual field walking units, confirming the findings of the large block survey. Nearly the same amount of material was collected from the surface of this sector, as recorded during the quantification campaign. In its general characteristics it is similar to the off-site finds from field blocks at the floor of the central valley and in Prisoj's southern foothills (map 24, table 22).

Table 22: Statistical distribution of the overall surface record in sector VIII

| | |
|---|---|
| Number of field blocks | 12 |
| Total area | 37 969 |
| Mean density | 4.5 fragments per 1000 sq. m. |
| Min/max density | 0/27 fragments per 1000 sq. m. |
| Number of gathered fragments | 20 |
| Number of sites | 1 |

At the eastern end of the sector and the southeast corner of the study area, on a low spacious plateau jutting off Gaber's northeast face, we discovered the remains of another fortification (site number 10, photo 3). As with the previous fort situated 1.2 kilometers to the northwest, the building stone was mostly quarried from the local reddish conglomerate. Carpets of broken local rock, often several meters wide, mark the line of the main fortification. At places larger, roughly hewn blocks appear. This fort is many times the size of the previous one. It encloses an oval flattened plateau, 220 meters long and almost 150 meters wide. The fortification line closely follows the local topography.

The walls are drawn along the line of 280 meters above the sea, except on the southern side, where a low and flat pass joins the plateau with the Gaber Massif. Here the wall was erected closer to the plateau's top, leaning against a chain of rocky outcrops that spreads to the western perimeter of the fort. Again the maximum was made of the advantages offered by nature. These tall, rocky protrusions were enclosed within the fortification: they both watch over the western entrance in the plateau and offer a second line of defense. On the eastern side where access to the fort is even easier and there are no protrusions of bedrock, at least two rectangular towers were erected: a larger southern one, near the eastern entrance and a smaller on the north, guarding the gentle, northeast slope. The local rock was also used for constructions inside the fortification line. On many places in the western and taller half of the fort, the rock was leveled or small, rounded pits were cut for wooden posts. The fort has a roughly rectangular shape, with rounded corners. It occupies an area of approximately 2.5 hectares.

There were a very few surface finds inside the fort's perimeter. All in all 5 fragments were counted, mostly in the western half of the fortification. These were exclusively tile and brick fragments, usually found on the leveled portions of the rock. Where the soil layer is preserved, there is usually a dense vegetation cover; at best, tall grasses, but large parts of the plateau including its sides and foot are covered with dense oak forest. Systematic survey is possible only along the eastern foot, outside the limits of the survey area.

Sites 9 and 10 are in many aspects similar and complementary in the surrounding landscape. Leaving aside the obvious differences in size and complexity, the two forts are built in the same building technique and of the same material. Both have geometrically designed ground plans, but at the same time they are fully adapted to the micro-relief, following the contour-lines and regularly integrating the natural protrusions of bedrock into the fortification walls. There are further similarities in terms of the locations they occupy in the local geography, although they differ at least in one important aspect. Seen in isolation both forts are located on the top of low outcrops, standing only 15 and 30 meters above the surrounding terrain. Unlike some other forts in the region, these two occupy rather exposed positions; the settlements and the agricultural fields lie within their immediate reach. They are further positioned at the limits of the local, micro-topographic entities: site number 10 is exactly in the southeast corner of Sopot's drainage basin, rising closely above the road that leads to the neighbouring Vranov Dol. Site number 9 marks the northern corner of the area around the modern village and the mid-course of the central valley. Nearby passes the road to the village Vetersko. They are in other words, built near the natural exits of the micro-region. Recall that a third fort, built over a limestone outcrop guards the road leading along the cliffs of the Taor Gorge, just outside the western corner of the area. The latter doesn't have visual communication with site 9, but they both have very close visual contact with site 10. The present day village and all other settlements at Prisoj's foot lie in the middle of this triangle of forts (photo 4, map 25). However recall that the passes guarded by these forts weren't of an equal geo-strategic value: the eastern and the western passes were of a much wider, interregional importance, while the narrow strait protected by the fort on site 9 has only a local significance. While the forts on site 10 and the one on "Kale" above the monastery of St. George are ideally positioned to act as military outposts, the one on site 9 in combination

with the recesses at its western foot could rather function as a refugium for the local community.

Considering the similarities in the building technique, planning and positioning in the surrounding landscape, it is very probable that at least sites 9 and 10, if not all three, were built and used roughly at the same time. The surveyed area is not an isolated example. Similar distributions of small hill-forts, located at the ends of the settlement's area were discovered in a number of neighbouring micro-regions. These are doubtless the remains of a highly developed network of roads, military outposts and settlements. It is unfortunate that most hill-forts yield either very few or no surface finds, leaving no other dating evidence but the building remains.

Another group of building remains of a very different character was discovered on a narrow belt between field blocks 205 and 206 and the Skopje-Thessalonica highway. Several rings of roughly hewn stone blocks are the remnants of a small excavated group of burial mounds[10]. They are part of a large mound necropolis, spreading half a kilometer to the north of the highway along a low ridge, descending from the southern slope of Radičica. Most of the mounds of this necropolis fall within the limits of the tenth sector, only minor groups belonging to sectors VIII and IX. There are no surface finds on the surrounding field blocks that can be related to the mound burials.

App. I.3.10 Sector IX, Ramnište

Table 23: Statistical distribution of the overall surface record in sector IX

| | |
|---|---|
| Number of field blocks | 33 |
| Total area | 99 739 sq. m. |
| Mean density | 10.2 fragments per 1000 sq. m. |
| Min/max density | 0/32.7 fragments per 1000 sq. m. |
| Number of gathered finds | 209 |
| Number of sites | 2 |

As discussed in the preceding paragraphs, there is an apparent decrease in the number of surface finds on field blocks east of the central valley. In the Ramnište sector the large block survey revealed an average density of over 10 fragments per 1000 square meters, twice as low as the density recorded on field blocks on the floor and the sides of the central valley. The distribution pattern is far from even. On the whole, there are two groups of field blocks with a density of around 21 and 24 fragments per 1000 square meters, while the rest of the field units feature less than 13.5 fragments per 1000 square meters (map 17).

The first group is concentrated on the southern tip of the sector, at the junction of the small ravine delimiting the sector from the east and the central valley. These are field blocks 157, 192 and 193, with densities of 22.5, 30 and 22.5 fragments per 1000 square meters, respectively. Two hundred meters to the north, there is another group, field blocks 186 through 188 featuring similar densities, but these field blocks belong to the central valley, rather than to the Ramnište Ridge. Field blocks 157, 192 and 193 cover

[10] D. Mitrevski, *Proto-historical communities in Macedonia through burials and burial customs*, Skopje 1997 (in Macedonian).

one of the most favorable locations in this sector: the tip of the ridge and the small terrace beneath. Total collection by regular grid on field block 157, confirmed the increase in the amount of surface material. The average density recorded on the gridded area was slightly over 22 fragments per 100 square meters. Though not as extreme as on site number 8, there are variations between the grid units. The southern half of the grid featured over 30 fragments per 100 square meters, while the northern half yielded an artifact density close to the grid average or 20 fragments per 100 square meters (map 27, table 24).

Similar to the small sites on grids 7 and 8 in sector V, it is possible to define a core of the site in the central-south part of the grid by the edge of the ridge, with a maximum density of 95 fragments per 100 square meters or about 38 fragments per grid unit. There is a second, much smaller core about 15 meters to the east. Compared to the "sites" on grid 5a or 9-10, this is a far more compact cluster, exhibiting a nearly concentric distribution pattern. On all three sides, the core of the "site" is surrounded by a belt of average artifact density. Unfortunately it is impossible to follow the dispersion of this cluster outside the limits of field block 157. Grid 11 was extended into the neighbouring field block on the north and towards the small terrace on the west, but with little success. In vain we searched amidst the tall, dense grasses, hoping to find at least a few worn pieces. Only one chunk of a carbonized daub fragment was found, most likely dislocated from the vineyard on field block 157.

Table 24: Statistical distribution of the overall surface record on grid 11

| | |
|---|---|
| Number of gathered finds | 1 404 |
| Mean density | 20 fragments per 100 sq. m. |
| Min/Max density | 0/95 fragments per 100 sq. m. |
| Number of cores | 2 |
| Approximate area of the site | 1.1 ha |
| Total weight of the collections | 27.175 kg. |

We were certain however that the site continued to spread at least over the small terrace, 30-40 meters to the northwest of field block 157. According to the large block survey, the density of surface material was even higher than on field block 157, reaching almost 33 fragments per 1000 square meters on field block 192. Moreover most of the fragments collected by individual transects were identical to those found on field block 157. Field blocks 192 and 193 are fallow, overgrown parcels, with slightly better ground visibility conditions than the land surrounding field block 157. When all material visible on the surface was gathered, it equaled the amount counted in the large block survey, corrected by the visibility factor: 27 fragments on field block 192, 11 on field block 193. In terms of density, this is eighteen times lower than the average grid unit on field block 157. Luckily in the second season, a small parcel situated only a few meters to the east of field block 192 was cleared for gardening and we were able to survey a tiny part of the terrace in ground visibility conditions equal to those on field block 157. The result was over 20 fragments per 100 square meters or identical to the average density recorded by the grid survey on field block 157. The gathered fragments were very worn and tiny, but

this is simply the result of the fine ploughing; the material collected from the uncultivated surfaces was in a much better state of preservation.

A very different conclusion can be brought when looking at the distribution of the collections weight (map 28). There is a very small difference between the core and the peripheral units on grid 11. Only a few collections weigh less than 100 grams and even the largest collections don't exceed 700 grams. Needless to stress the collections from grid 11 probably have the lowest weight to count ratio in the survey area. Although the recorded artifact density approaches the records on grids 10 and 12, the total weight of the collections is visibly lower. But this is not related to the state of preservation of the finds, but to the quality of the predominant fabric groups. As will be shown, the majority of the finds from this site date to the Middle Neolithic and are made in light, grass-tempered fabrics.

Returning to the results of the large block survey, it is evident that the amount of surface finds encountered on field block 192 is equal and indeed, slightly greater than the one recorded on field block 157. The large block survey basically revealed two site-cores: one on the tip of the plateau, the other on the lower terrace. The question is: given that ground conditions were similar to those on field block 157 can one expect the same amount of material on both locations? Field block 192 was recognized as part of site 11, merely because the same, specific type of material was found as on field block 157. This was further confirmed by the total survey from the small parcel covering the northeast corner of field block 192 and by comparing the density records of the transect survey on the two terraces.

A second dense cluster of surface artifacts was discovered in the middle of the sector; 440 meters north of field block 157 (site number 12, table 25). Already the large block survey detected a density of 22.5 fragments per 1000 square meters, roughly the same as on field block 157 (map 29). The material on the surface evidently came from a disturbed cultural layer and it was decided to grid both field block 167a and parts of field blocks 167b and 168 (grid 17). The average density for the entire grid was 11 fragments per 100 square meters or 14 times the density revealed by the large block survey, though the grid survey was carried out in worse visibility conditions. The maximum density on the grid was over 30 fragments per 100 square meters, very similar to the density revealed on the site on grid 5a, in sector III. Three groups of grid units feature this artifact density: one along the southern edge of the field blocks, one in the middle of the grid and an isolated unit in the grid's western end. They are separated by units featuring average density for this grid or between 10 and 15 fragments per 100 square meters. On all three sides except for the southern, the amount of surface material slowly declines, dropping below 10 fragments per 100 square meters. It is impossible to follow the situation on the south; the neighbouring parcels are covered with oak groves and are considerably lower than field block 167a.

Table 25: Statistical distribution of the overall surface record on grid 17

| | |
|---|---|
| Number of gathered finds | 202 |
| Mean density | 11 fragments per 100 sq. m. |
| Min/Max density | 0/34 fragments per 100 sq. m. |
| Number of cores | 3 |
| Approximate area of the site | 2 000 sq. m. |
| Total weight of the collections | 6.250 kg. |

The weight distribution only partly repeats the quantity distribution (map 30). The "core" along the southern limit of the grid persists, but the small "core" in the western end of the grid is less accentuated, while the "core" in the central portion of the grid has moved slightly to the north. In total 6.25 kg of surface material were collected from grid 17. The low weight is obviously related to the low quantity of artifacts. Such a small concentration of artifact would have hardly been noticed, if it wasn't for the very low artifact density on the neighbouring field units. On average the weight to count ratio is not much lower than on other grids in this survey.

The sites on grids 11 and 17 belong to a different topographic unit and to a different geo-pedologic zone, but their position is analogous to some of the sites on the western bank of the central valley. Like the site on grid 5a, they occupy the periphery of another flat and arable area, the southwestern foothills of Radičica. The site on grid 11 spreads over the terraces on the southern tip of the foothills, by the central valley. In terms of its micro-location, it is reminiscent of the site west of the modern village. Unlike the latter however, the location of site 11 is far from hidden. This site occupies a central and an imposing location in the studied landscape. It sits over the junction of the local roads and it is visible from all three corners of the survey area. The deep ravine on the east and the central valley offer some protection, but the location is nonetheless relatively open. In terms of size and quantity of finds on the surface, it is also similar to the sites west of the village. It probably stretched over two terraces, occupying an area of over one hectare, with a slightly higher artifact density. Actually regarding artifact density, site 11 is on exactly the same level as the small sites on grids 7 and 8 in sector V.

The site on grid 17 is not on the very edge of the sector, like site 11, but it is still close to the northern periphery, on a ground where the soil layer gradually becomes thinner. If site 11 was reminiscent of the site on grid 5a, the site on grid 17 recalls the micro-location of the site on grid 7. It is on an absolutely open location, on a slightly tilted terrain in the upper portion of the foothills. But there is an important difference: the site on grid 7 is close to the main, local road and possibly, to a major interregional road, while the site on grid 17 sits at the end of an isolated plateau, at a distance of more than half a kilometer from the main, east-west axis. The latter site also occupies a very small area, around 0.2 hectares, probably smaller than the sites on grids 7 and 8.

The field blocks between the two grids have a relatively stable and evenly distributed quantity of surface material. It varies between 3 and 15 fragments per 1000 square meters, with a sudden decrease in the easternmost field blocks of the sector, where a density of only 1.5 fragments per 1000 square meters was recorded. On the opposite western slope, towards the floor of the central valley, the artifact density increases, reaching 24 fragments per 1000 square meters on field blocks 186 and 187, less than 100

meters from the "site" on grids 9-10. To the north of grid 17, the density of surface finds again drops below 9 fragments per 1000 square meters. Actually except for field blocks 170 and 176, on all other field walking units the quantity of surface finds is thrice as small. This group of field blocks with ultra-low quantity of surface material is only the periphery of a wider zone featuring less than 3 shards per 1000 square meters.

The character of the "off-site" finds is also very different from those gathered on the valley's right bank. The fragments are equally small and worn, but they are predominantly related to the material found on the two sites in the sector. For instance the small format tile, often comprising over 50% of the material found in the sectors surrounding the village, completely disappears on field blocks east of the central valley. The amount of building ceramics in general is very small on sector IX.

Part of the tumuli necropolis also belongs to this sector. At least two groups of tumuli were discovered in the area between field blocks 162, 165 and 166. The surface is covered by a dense oak grove and it is impossible to survey systematically or even count individual mounds. It is a noticeable location at the western edge of Ramnište and about 30 meters above the floor of the central valley. The tumuli aligned in a row on a north-south axis, stood directly opposite the "site" on grid 10, on the taller eastern bank. Apart from a few mound rings and a number of dislocated blocks of roughly cut, reddish conglomerate, no other remains are visible on the surface.

Finally, the ruins of a larger rectangular building were discovered near the northwest angle of field block 159, in the southern half of the sector, near the site on grid 11 (map 28). Like the tumuli, the building is built near the western edge of the plateau, tens of meters above the floor of the central valley. Unfortunately it too is thickly overgrown and it is neither possible to examine the details of the ground plan, nor measure its exact dimensions. The walls appear rather massive, built predominantly of a whitish stone, probably the local limestone. The small cluster of tiles found in the northwest corner of field block 159 could be related to this building.

### App. I.3.11 Sector X, Jakupica

As explained earlier in this chapter sector X or the Jakupica Ridge is the eastern periphery of the studied micro-region, separating the drainages of the valleys of Sopot and the Vranov Dol. It consists of two micro-topographic units: the southeastern foothills of Radičica, a ridge called Jakupica and the western slope of Radičica. These are respectively, the southeast and the northwest half of the sector.

The average density of surface finds in the southeast half of sector X reached barely over 6 fragments per 1000 square meters. Not surprisingly the amount of surface finds decreases from south to north. On field blocks 127 through 136, 142 and 143, there are roughly 7.8 fragments per 1000 square meters; less than 100 meters to the north, on field blocks 144 through 150, the average density is slightly over 3 fragments per 1000 square meters. As in the previous sector, moving towards the slopes of Radičica, it is possible to detect a zone of very low density of surface finds. Into the northern half of the sector, stretching over the western slopes of Radičica, the density of surface finds remains constant, about 3 fragments per 1000 square meters. In fact on these parts of the sector, the majority of field blocks have densities of around 1.5 fragments per 1000 square meters. It is mostly thanks to the existence of two or three clusters of finds,

featuring up to over 20 fragments per 1000 square meters, that the average density in sector X is still over the threshold of 3 fragments per 1000 sq meters (maps 31a-31b, table 26).

Table 26: Statistical distribution of the overall surface record in sector X

| | |
|---|---|
| Number of field blocks | 33 |
| Total area | 144 899 sq. m. |
| Mean density | 5.7 fragments per 1000 sq. m. |
| Min/max density | 0/21.1 fragments per 1000 sq. m. |
| Number of gathered finds | 244 |
| Number of sites | 4 |

Two clusters are certain. Both are situated on the gently sloping, western side of Radičica. The southern one was discovered in the western half of field block 152 (site 14). Around ten fragments were counted over an area of less then 200 square meters or a density of roughly 5 fragments per 100 square meters. Compared to most other sites in this survey area, including "site" 12 (grid 17), this is a very low artifact density. Even after compensating for the lesser degree of survey intensity, the maximum density will barely reach 15 fragments per 100 sq meters. Characteristically more than 60% of the material collected was building ceramics and storage vessels fragments. Site number 15, nearly 300 meters to the north, on field block 156 is an almost identical cluster. Thirteen fragments were collected from an area of about 200 square meters or a density of 8.5 fragments per 100 square meters, 16.2 after compensating for the lesser degree of intensity. Again the dominant material was tile and pithos fragments. In both cases the amount of surface material was so low it proved unnecessary to carry out total grid collections (table 27, map 32).

Table 27: Distribution of the overall surface record on sites 14 and 15

| | Site 14 | Site 15 |
|---|---|---|
| Number of gathered fragments | 10 | 13 |
| Density of finds[11] | 15 per 100 sq. m. | 16.5 per 100 sq. m. |
| Approximate area | 200 sq. m. | 200 sq. m. |

400 meters to the south of site 14, already on the southern side of Radičica, a third cluster was indicated by the large block survey. On field blocks 148 and 149, the artifact density recorded by the large block survey is 10.5 fragments per 1000 square meters, which is almost the same increase as on field block 152. In contrast, the field blocks surrounding 148 and 149 feature only about 1 fragment per 1000 square meters. However when the field blocks were revisited for collection, only a few fragments were found on the surface of both field blocks. It is possible that in this case, as in the case of field block

[11] The figures are corrected for the visibility factor and the lesser degree of survey intensity.

4b and a number of field blocks in sector II, the visibility factor corrections produced slightly inflated density figures. These are all fallow fields or meadows, with 50 to 75% of the surface covered with vegetation. An increase of 50 or 75% is not insignificant, especially in conditions of low artifact density. Hence the difference in the number of gathered and counted finds on field blocks 152 and 155, sites 14 and 15. They feature roughly the same amount of surface finds, but have different visibility conditions: field block 152 is a ploughed field, while 155 has been left fallow for at least several years.

By their size and the amount of surface material, these ultra-small sites are on a completely different scale from all previously described clusters. They approach sites 6 and 7 in size, but they are still many times smaller, while the amount of surface material is at least ten times lower than the amount recorded on the latter. The character of the gathered material and their micro-locations are also rather specific. These clusters are situated on a gentler section of Radičica's western slope, hundreds of meters from the modern-day plough-zone. It is a rocky terrain, with thin soil cover. The surroundings have a desolate appearance; the closest sources of freshwater are on the other side of the central valley. This is one of the most isolated corners of the study area; a small plateau surrounded on all three sides by very steep sides. It can only be approached from the south, along Radičica's southwest foot.

Site number 13a was discovered in the southern end of the sector, on field blocks 133, 134 and 142. Like the previous two, it was quantitatively defined during the survey by individual field walking transects (map 33). It is situated on an open terrain, close to the left bank of the small ravine that delimits the sector on the west. On field blocks 133 and 134, we recorded densities of 10 and 16.5 fragments per 1000 square meters. Most of this material was concentrated in the northeast halves of the blocks. It spreads over an elongated area, over 100 meters long and 20-30 meters wide. In total 76 fragments were collected by individual field walking transects or an artifact density of only about 2.5 fragments per 100 sq meters or 6.5 when corrected for the lesser degree of survey intensity (table 28).

120 meters to the east of site 13a on field block 142, the amount of surface finds is again more than twice the sector's average (site 13b). Correcting for the visibility factor and the lesser degree of survey intensity, the recorded artifact density is nearly identical to the one recorded on field blocks 133 and 134. The positioning of the cluster and its approximate size are also very similar to the size and the location of "site" 13a. Unlike the latter however, site 13b is dispersed into a number of cores and it is impossible to determine its exact size without the high resolution of the total grid survey. Two "cores" were discovered along the eastern limit of the field block and another two in it southwest corner. Between these groups of finds, the surface is almost sterile. Similarly there are very few artifacts on field blocks north and east of the site.

Table 28: Distribution of the overall surface record on sites 13 and 13a

| | Site 13a | Site 13a |
|---|---|---|
| Number of gathered finds | 50 | 40 |
| Density of finds | 6.5 fragments per 100 sq m | 6.3 fragments per 100 sq m. |
| Approximate site area | 2 000 sq. m. | / |

By the character of the surface finds and their distribution in separate clusters, site 13b is similar to site 5b, 1.5 kilometers to the west, in sector III. 85% of the finds on these sites are tile fragments, grouped into smaller piles. In both cases, the amount of pottery fragments is very small and it is possible that they are not related chronologically to the predominant type of finds. Both appear in pairs with sites of similar size and quantity of surface finds, but with the "usual" types and distribution of artifacts. Sites 5a and 13a are only 100 and 120 meters from their pairs. In the case of site 13a however, the percentage of building ceramics is still unusually high or 66 percent. It is possible that in the two cases we are dealing with a settlement and its necropolis[12].

One also notices the very low density of surface finds on these locations. Artifact densities of slightly over 6 fragments per 100 square meters are well below the site threshold for the survey area. It is actually two to three times lower than the artifact densities recorded on the small sites 14 and 15 in the same sector. When revisited for collection, very thin artifact layers were encountered on both sites. Site 13a is a ploughed field and it is possible that the collection of artifacts had an unfortunate timing; but site 13b covers an uncultivated field and it is likely that the density of surface finds will stay constant. In any case, on both sites there is a sharp increase in the amount of surface material compared to the surrounding field walking units. In fact compared to the sites on the west bank of the central valley, the differences between the site and the off-site zone are as sharp, if not sharper. Not including these fields in the total grid survey was surely one of the major oversights of the Sopot survey. Lured by the relatively low overall artifact density, we decided to carry out intensified individual transect collections, failing to remember what has been realized at the very onset of survey campaign: the high artifact densities in the western sectors was a simple consequence of the accumulation of artifacts dating to more than one period.

As pointed out in the preceding sections, this sector covers a peripheral part of the survey area. It is the topographic barrier that separates the drainages of the basins of Sopot and the Vranov Dol and the administrative border between the present-day villages Sopot and Novačani. Jakupica is slightly higher and steeper than its western neighbour and soils and vegetation are scarcer than on Ramnište. The plough-zone is mostly confined to the southwest half of the sector, along the foot and the lower sections of Radičica's slopes. This is the zone where sites 13a, 14 and 15 were found. Site 13b is situated nearer to the crest of the ridge, outside this zone, on the same axis as the core of the mound necropolis, parts of which were encountered on sectors VIII and IX. In sector X there are four, possibly five groups of mounds, all of similar dimensions and construction (map 34). The groups numbered between 3 and 7 mounds, usually built one behind another, in a north-south direction. They closely follow the main orientation of the Jakupica Ridge. Better preserved groups are almost parallel to each other. Most of these mounds are impossible to approach, as they are almost regularly overgrown by oak groves. However a certain number of tumuli, cleared to the level of individual graves (examples on field blocks 131b and 145b) revealed the same conceptions regarding the distribution of the graves within the mound ring and the construction of the grave pits, as on the excavated group of tumuli on the other side of the Skopje-Thessalonica highway.

[12] Examples of this type of burial custom come primarily from the larger civic necropoleis; A. Wessolowski, Burial customs in the west cemetery 97-141, J. Wiseman et al. ed. *Studies in the Antiquities of Stobi I*, T. Veles 1973.

In most tumuli there was a maximum of 5 or 6 individual graves. The individual grave is basically a rectangular pit, usually measuring 1.70x.80 meters, sealed by a layer of broken rock. There is no constant orientation or clear pattern in the distribution of the graves within the mound perimeter. As in the neighbouring sector IX, on field blocks where the tumuli were found, the amount of surface material was usually poor and chronologically unrelated to the mound necropolis. The later is dated on the basis of grave finds to the Later Iron Age (Archaic Period), 7-6$^{th}$ century BC[13].

App. I.3.12 Sector XI, the upper course of the central valley

As one might expect, this is the sector with the lowest overall artifact density in the first survey. It is a part of a large zone of ultra-low density of surface finds observed already within the limits of sectors IX and X. From about 1 200 or 1 300 meters measured from the centre of the modern village, exactly at the northern and the eastern ends of the village inner territory or the lower half of the central valley, the amount of surface finds drops to between 0 and 3 per 1 000 square meters. Sector XI as a part of this zone is exactly half way between the modern settlements of Sopot and Vetersko. Only 6 shards were counted per hectare or five times lower than the average density recorded in the previous sector. There is a slight increase on field blocks in the western and southern parts of the sector. The density in these parts is around 1.5 fragments per 1000 square meters, while on the last group of field blocks on the north, the surfaces were completely sterile (map 35, table 29).

Table 29: Statistical distribution of the overall surface record in sector XI

| | |
|---|---|
| Number of field blocks | 31 |
| Total area | 133 063 sq. m. |
| Mean density | 6 fragments per 1 ha |
| Min/max density | 0/1.5 fragments per 1000 sq. m. |
| Number of gathered finds | 20 |
| Number of sites | 0 |

Almost all gathered finds bear the typical marks of off-site material. They are very small and often completely weathered. Brick and tile is also more numerous than pottery fragments. However this is not the typical small-format tile, found on almost all field blocks near the village. Most of the collected architectural fragments have thick walls and are of rougher fabrics, probably bricks. The other half of the gathered finds is mainly comprised of Late Ottoman or Early Modern pottery fragments, mostly water jugs. It must be recalled that systematic survey was only possible on a smaller portion of the headwaters.

[13] D. Mitrevski, 92-95, pl. 23-25, 1997.

App. I.4 Conclusion

The collection of surface finds, whether by regular grids or by individual field walking units not only supplemented, but also to a great degree corrected the large block survey results. In a number of cases the results of the two techniques were disparate. Most commonly the block by block survey underestimated the true amount of artifacts on the surface, but in a few cases during the collection of finds we encountered less than half the amounts counted during the large block survey. This is determined by a number of factors, which were discussed earlier. In essence the problem arises from surveying cultivated areas over a period of more than one agricultural season. The plough-zone understandably offers abundance of well-preserved archaeological material, but on the account of the stability of surface conditions. This factor only aggravated another delicate problem; that is, the difference in the intensity of the survey when conducted by irregular field walking units and by regular grid units. On some field blocks, the increase was two or three-fold, while on others ten-fold! In order to combine the results of the two quantification campaigns and finally form a definite image of the distribution of surface finds in the survey area in general, the results of the large block survey were increased by a factor of 2.5[14]. Similarly to the problem of integrating the ground visibility factor, it is the maximum that can be done to repair the incomparability of the two survey techniques.

Firstly, we need to question the observation that on the whole in the survey area, there is a simple linear pattern in the distribution of surface finds, decreasing from a single core in the southwest corner towards the opposite two corners of the region. The collection of surface finds showed that both on the level of the entire survey region and on an individual field block level, the distribution of surface finds is predominantly focal and discontinuous. Looking at the map of the combined results of the large block and the regular grid surveys, we observe a series of high concentrations of surface finds along the right bank of the central valley, in the southern and the eastern foothills of Prisoj (map 36). These are sites 4 through 8, plus the cluster covering the slope west of the modern settlement, the greater part of the area of sector II. They form an almost continuous chain 1.2 kilometers long, surrounded by a larger zone of average to higher than average artifact density. It is interrupted on individual field blocks with very low ground visibility, such as those in the southeast sector and also on stretches with a thin soil layer or barren surface, such as the field units covering the lower slopes of Prisoj. East of the central valley, the amount of surface material sharply dwindles, with only two major clusters on the left bank of the central valley. The average density in these sectors ranged between 6 and 9 fragments per 1000 square meters, which is still two to three times the density recorded in sectors VIII and XI. The latter are the northern and the southern periphery of the surveyed micro-region and for the greater part, the density of surface finds in these sectors was lower than 3 fragments per 1000 square meters. In fact on the northernmost group of field blocks in sector XI, there were virtually no finds on the surface.

But excluding the high on-site densities, it is possible to observe a linear pattern in the distribution of surface material in the first survey area: a gradual decrease along the southwest-northeast axis and a sudden one along the west-east axis. Indeed this is what the large block survey results were suggesting in the first place (map 2). An alternative

[14] J. Bintliff, et al, 549, 2008.

indicator is the increase in the amount of surface finds on sites from various sectors of the survey area. Sites in the western part of the survey area are quantitatively less articulated from their surroundings than sites in the eastern parts. For example, the increase in the amount of surface material on sites 4 and 5 is roughly 2 to 4 times the surrounding field walking units; on sites 6 and 7, between 5 and 6 times, while on sites east of the central valley, it is often tenfold. Sites in the eastern half of the survey, sites 12, 14 and 15 for instance, are possible to recognize only thanks to the surrounding zone of low and very low artifact density. Similarly, "site" 8 situated northeast of the modern village stands out in sharp contrast from the surrounding field walking units, featuring 10 to 15 times lower artifact density. "Site" 8 is essentially a separate agglomeration, attached and partly imposed over the zone of average to higher than average artifact density, surrounding the modern village. In general, in the western half of the survey area, the block by block survey produced a relatively accurate record of the off-site material distribution, but often failed to recognize the high concentrations of freshly exposed sub-surface material.

The character of the off-site zone has yet to be established. If there is off-site material in the first survey area, to which settlement(s) does it belong? The off-site material is not simply the material found in-between site areas[15]. The survey demonstrated that the borders of the site areas are far from clear. Nothing excludes the possibility that we are dealing with a chain of smaller or larger sites and not with an extensive off-site zone. During the overview of the survey results by sectors, it was frequently emphasized that already the preliminary examination of the off-site finds revealed a difference in their character. In other words, the surface material on the field walking units between the recorded sites was of a different composition. Particularly evident was the difference between the off-site shards picked up from field blocks east and west of the central valley, but there is already a difference between the neighbouring southeast and northeast sectors, both located in Prisoj's southern foothills. At the same time, without typo-chronological differentiation of the finds, we remain ignorant about the share of the off-site finds in the material counted and gathered from clusters defined as archaeological sites. The data presented so far only allow analysis of the distribution of surface material in general, assuming that the patterns observed are directly generated by past human habitation.

It seems that in general in the first survey area, natural post-depositional processes had little impact on the overall distribution of surface material. With only a faint idea of the basic mechanism behind these processes, we were able to observe its effects on the level of individual field blocks or group of field blocks, rather than in the survey area as a whole. Almost all of the discovered sites are found on their original locations; a possible exception being site 2, in sector I. Here larger concentrations of architectural ceramics were discovered piled up on the meadows at the foot of the fortification "Kale", Sopot. There remains the possibility that this material is eroded from the fortified area or was dislocated during the construction of the modern Skopje-Thessalonica highway. Erosion

[15] S. E. Alcock, J.F. Cherry, J.L. Davis, Intensive survey, Agricultural practice, and the Classical Landscape of Greece, 135-168, ed. I. Moris, *Classical Greece: Ancient Histories and modern Archaeologies*, Cambridge 1994; A.M. Snodgrass, The Archaeological aspect, 197-200, the same volume, J.L. Bintliff, 209-211, eds. M. Pasquinucci, F. Trément, *Non-destructive techniques applied to Landscape Archaeology*, Oxford 2000.

could also account for the scarcity of material on the other two fortifications in the survey area, sites 9 and 10.

The impact of modern anthropogenic activity seems to be far more significant. A number of high concentrations of surface artifacts on field blocks surrounding the present-day village were most likely produced by modern anthropogenic activities. However there is an important distinction between the two ways in which the distribution of surface artifacts is affected by modern or recent human activities. A number of sudden increases in sectors II, III and VI were evidently caused by isolated episodes of rubbish discard occurring during the past few decades. There are a number of examples: on field blocks 13 - 18, 32 – 34, 45c, 72, 74, 77, 86 and so forth. This material, mostly modern building ceramics or water jugs from the mid 20$^{th}$ century forms an inextricable part of the input of the modern settlement in the surface artifacts layer and it is methodologically unjust to treat it as a simple distorting factor. During field work this material was counted like all other movable surface finds, indicating in the field walking forms if there was evidence of modern waste disposal.

The other way in which modern humans affect the distribution of surface material is through direct interventions in the local relief. Two such instances were recognized in the surveyed area, both in sector II west of the modern village. The pattern of surface artifact distribution in this sector is largely shaped by the artificial terracing of the slope. Both the large block and the regular grid survey revealed higher concentrations of finds along the edges of the terraces. Agricultural terraces, mostly abandoned and partly disintegrated appear along the entire right bank of the central valley, but their effect on the distribution of the surface finds was less substantial than in sector II. Hence one shouldn't exclude the possibility that the terraced fields west of the modern village predate the Late Ottoman-Early Modern village and that they were originally built for non-agricultural purposes.

Another form of modern human-induced alterations in the surface material distribution is the dislocation of surface remains. On the westernmost group of field blocks, again in sector II, the dozen small heaps aligned by the local road are most certainly dislocated, perhaps during the construction of the local road leading to the monastery. The material collected from these piles is not of a recent date and it is possible that these are remains from the western end of site 4. Similarly in the Ramnište and Jakupica sectors in the eastern half of the survey area, the mound necropolis is almost completely destroyed through clearance for agricultural land, most probably during the late 19$^{th}$-early 20$^{th}$ century. In this case there was an opposite effect, with only meager traces of the large necropolis remaining intact on the surface.

These were the major artificial distortions that we were able to recognize during the field survey. There are surely a number of other ways in which modern human activities affected the surface record, particularly in the plough-zone and they were discussed in the preceding paragraphs. Their impact was mostly limited to partial modifications of the surface record: on some locations the density of surface finds was increased by deep ploughing, while on others the surface artifact layer remained hidden beneath the finely harrowed soil. These and similar factors can never completely conceal or remove the surface remains of major sites, but they can present a considerable problem when trying to determine the status of low or intermediary density scatters or when trying

to compare the size and the rank of two sites recorded in contrasting ground surface conditions[16].

In total 18 sites were discovered in the survey area, not counting the present-day village and the ruins of abandoned buildings and artificial terrace walls along the central valley and on the Vardar Valley floor. Four are building remains (two forts, site 9 and 10; one isolated tower, site 1 and the mound necropolis, site 16); fourteen are clusters of surface finds. In one case, site number 4, there is we think a combination of building remains and movable surface finds. It is almost impossible to find positive evidence on the surface that chronologically relates the two, but it is equally difficult to accept an alternative explanation. It is also very likely that the material gathered from grids 14 and 15 is chronologically related to the building remains on site 9.

The majority of the 14 sites defined as artifact scatters stand apart from the background by the sheer quantity and freshness of the surface material. But it is far from simple to define them quantitatively. Their physical limits are primarily defined by modern divisions of the land and land use. Therefore while it is relatively easy to delimit them within the limits of a field block, it is very difficult to trace them beyond those limits. They are either interrupted by some local road or by some impenetrable stretch of land, beyond which the archaeological material disappears from the surface. Such is the case of "site" 8, sites 7 and 11. Most of these clusters appear in the midst of larger survey sections featuring at least average amounts of surface material. Thus although quantitatively distinct, they are very difficult to recognize during field walking. In fact certain clusters defined as sites, site 12 or site 13, have densities of surface material only slightly exceeding the average for the survey area. An average density for sector II or VI for instance would indicate sites in sectors IX and X. It is thus theoretically possible that sites visible in areas of low artifact density passed unnoticed amidst the relatively large quantities of finds, in areas featuring average or higher than average artifact density. On the other extreme, site 4 barely stood out from the surrounding zone of very high overall artifact density in sector II, surpassing the average overall density by 200-300%. Finally, not all of the sites are compact or integral clusters. Sites 4 and 12 for instance, almost certainly occupy at least two separate surfaces; while "site" 8, 5b and 13b consist of several minor clusters. Thus there is an additional difficulty stemming from the erratic character of the distribution patterns, both on site and in the off-site zone. For example, on the periphery of the large agglomeration of what was called site 8, it is very difficult to quantitatively distinguish a "normal" increase in the off-site zone, from a smaller disintegrated or hidden site core. Similarly, comparing the distribution of finds on grids 6 and 17, it is difficult to spot a significant difference, except for the gradual decrease in the number of surface finds towards the periphery of grid 17. Only the density of the finds and particularly, the increase from the surrounding field walking units indicate that the location covered by grid 17 is a genuine archaeological site, while the one covered by grid 6 is a part of the off-site zone.

Prior to the analysis of the survey results, it was thought that analyzing the weight of the grid collections will present an alternative and a complementary way of

[16] J.L. Bintliff, 206, eds. M. Pasquinucci, F. Trément, 2000; see also M. Kuna, M. Zvelebil, P.J. Foster, D. Dreslerová, Field survey and landscape archaeology research design: methodology of a regional field survey in Bohemia, 110-126, *Památky Archeologické* LXXXIV-2, 1993.

distinguishing the site from the off-site[17]. It was reasoned that freshly unearthed finds, brought on the surface from enclosed deposits will necessarily weigh more than the highly abraded off-site material. But it quickly turned out that there are a number of problems with this seemingly reasonable assumption. In fact on the majority of the gridded sites, the weight distribution wasn't related to the state of preservations of the finds. Even when badly worn, fragments of tile and brick are obviously going to weigh more than most pottery fragments, regardless of their state of preservation. But even when the weight of collections lacking architectural ceramics is analyzed, there are other factors that are more significant than the artifacts' state of preservation. Again the weight distribution seems to be more related to function rather than to the state of preservation, as fragments of pithos or large cooking-pots will always weigh considerably more than other categories of pottery. The character of the fabrics is also a significant factor; Neolithic pottery, tempered with grass is much lighter than the fabrics from later prehistoric and historic periods.

Because of the sharp contrasts in the distribution of surface finds over the survey area, it is rather difficult to arrive at a secure threshold separating the site from the off-site zone. The limit varies from sector to sector; in sector X, sites 13a and 13b feature artifact densities of slightly over 6 fragments per 100 square meters, while in sectors on the western bank of the central valley, the minimum density was registered on site 5b, with around 9 fragments per 100 square meters. Absolute numbers tell little, especially when the total surface record is analyzed, but in all sectors the increase from the average density on the field blocks surrounding the site was at least three-fold.

Defined as they are, there are significant differences regarding the size of the site's area and the density of surface finds. Greatly surpassing the rest in both size and the amount of material on the surface is "site" number 8. But this agglomeration was the most difficult to define spatially. It is not only interrupted by larger stretches of very low visibility, but it also consists of a number of small cores, surrounded by zones featuring three to four times lower quantities of surface material. But even on these spots, the artifact density is 3 to 5 times higher than on the neighbouring field walking units, outside the site zone. Assuming that these finds are chronologically homogenous, site 8 measures almost 400 meters in length and at least, 80 to 90 meters in width; a total area of about 3.6 hectares.

Speaking against the homogeneity of this large cluster is the different distribution pattern on grid 12, where instead of several smaller cores there is a single, high concentration of finds in the southwest corner and a gradual fall off, towards east and north. It is also unclear how to treat the peripheral parts of the cluster, grids 9 and 13. The average density of finds on these grids is two to three times lower than on grids 10 and 12, but it is still far above the density on the surrounding field blocks. We are either dealing with the "halo" of one larger site or with a succession of a couple of smaller sites. Recall that this large cluster is nearly attached to site number 7 on the southwest. The core of the latter is practically identical to the cores of site 8 and it is situated only 90 meters to the southwest of grid 9.

Next in size are sites 4 and 11. As with most sites in this survey area, it is impossible to precisely establish their spatial limits. The lower half and the edges of site 11 are covered under thick vegetation, while parts of site 4 are possibly destroyed by

[17] B. Erdoğu, *The Prehistoric Settlement of Eastern Thrace,* Oxford 2005.

erosion and dislocation of surface material in recent times. The first occupies an area of 1.1 hectare, the second not more than a hectare, including the supposedly dislocated western half. They are both stretching over more than one surface: site 11 consists of an upper and a lower half, while site 4 occupies at least two neighbouring terraces. Unlike "site" 8, the components of these two sites are relatively compact clusters, especially site 11.

Regarding size and inner distribution of finds, site 5a is very close to sites 4 and 11. In fact if it wasn't for the very specific character and distribution of finds on site 5b, the two, along with site 5a would surely belong to the same category as sites 4 and 11. Site 5a occupies an area of 8500 square meters; the bulk of the material is concentrated in the northern half of the grid. It is possible however that the eastern part of the site is covered by the neighbouring inaccessible parcel and the very low visibility on field blocks 41-43. Like site 11, site 5a consists of one core with a narrow halo. The cluster is artificially interrupted on all sides except the southern, where it gently merges with the zone of average off-site density.

Site 5b is much smaller; basically consisting of two cores, almost 60 meters apart, each measuring roughly 400-500 square meters. The very large amount of finds on one unit in the northwest corner of the grid warns us that the original distribution was in all likelihood modified by recent clearance of the field.

Site 6 measuring over 6000 sq meters is in a similar category with site 5a, but the concentration of surface finds is much higher. It is twice the density recorded on sites 4 or 5a and higher than the mean artifact density on site 11. In this respect, site 6 is more similar to sites 7 and 8. Because of the higher artifact density it was easier to define its limits, even in conditions of dense background scatters.

Next follows a couple of still smaller sites, 12 and 13a-13b. Both measure around 2 000 square meters, but there is a significant difference in the amount of surface material on the two; on site 12, 18 fragments per 100 square meters were gathered, while on site 13a, almost three times less. In both cases it is difficult to talk about cores. A number of separate units in grid 17 have a quantity of surface finds twice as high as the grid average, but similar patterns of distribution were revealed on grids 5a and 11 and even on grids 6 and 14, in the off-site zone. In comparison on the cores of sites 8, 5b and 13b, the increase is often several times greater. Site 13b seen as forming a single complex with site 13a consists of 3 or 4 cores, surrounded by an almost sterile surface. It is basically a replica of site 5b. On the contrary, sites 12 and 13a feature very gradual increases from the surrounding field walking units.

Site 7 is even smaller in size, measuring only 750 square meters. However the density of surface finds is much higher than on sites 4, 5 or 12 and equal to that recorded on site 11. Almost incommensurate to their size, sites 6 and 7 have average densities of 25 and 33 fragments per 100 square meters, rising to nearly 1 fragment per square meter on their cores. Thus they look very much like the cores of "site" 8.

The smallest category is represented by sites 14 and 15. Both are miniature clusters, basically consisting of a dozen shards, spread over an area of less than 200 square meters. To these, we can also add site 3 found in the southern part of the monastic complex in sector 1. But unlike the previous two this cluster consists mostly of pottery fragments including fine table ware.

By the character of the finds and their distribution, site 2 closely resembles sites 5b and 13b; understandably, assuming that it represents a genuine archaeological cluster. It is comprised of two separate cores and the finds almost exclusively comprise brick and tile fragments. In terms of size however, it is in the same group with sites 14 and 15.

Table 30: size of the documented sites and density of finds on the surface

| **Cluster** | **Area/Rank** | **Mean density per 100 sq m** |
|---|---|---|
| "Site" 8 | 3.2 ha/small village? | 42 fragments |
| Site 11 | 1.1 ha/hamlet | 21 fragments |
| Site 4 | c.a. 1 ha/hamlet | 12 fragments |
| Site 5a | 0.75 ha/hamlet? | 12 fragments |
| Site 12 | 0.2 ha/farmstead | 12 fragments |
| Site 13a | 0.2 ha/farmstead | 6.5 fragments |
| Site 6 | 0.12 ha/farmstead | 25 fragments |
| Site 7 | 0.08 ha/farmstead | 33 fragments |
| Site 5b | 0.04 ha/cemetery? | 9 fragments |
| Site 13b | 0.03 ha/cemetery? | 6.3 fragments |
| Site 14 | 0.01 ha/farmstead? | 15 fragments |
| Site 15 | 0.01 ha/farmstead? | 16.5 fragments |
| Site 3 | 0.01 ha/farmstead? | 8 fragments |
| Site 2 | 0.01 ha/cemetery? | 5 fragments |

Considering the small size of the survey area, there is a surprising number and variety of sites. It is possible to observe five categories taking into account only the parameter of size and there are a number of other parameters that vary in completely unrelated ways: density and basic character of the finds, their inner distribution, positioning and location in the micro-region. There are another five categories regarding the average density of finds on the gridded site areas; sites with over 40 fragments per 100 square meters ("site" 8), sites featuring between 20 and 33 fragments per 100 square meters (sites, 6, 7 and 11), sites with between 10 and 16 fragments per 100 square meters (sites 4, 5a and 12, 14 and 15) and sites featuring between 5 and 9 fragments per 100 square meters (sites 2, 3, 5b, 13a, 13b). Note that sites of small size feature relatively large densities and vice-versa. Hence emerges the question of the actual significance of this parameter. Theoretically the amount of material on the surface can be related to a few major factors: the intensity and the longevity of human occupation, the range of ceramic materials used during various time periods and the impact of post-depositional processes and events, including modern land-use[18]. As we are looking at the overall on-site density variations, prevalence must be given to the latter set of factors. Once the material is

[18] J.L. Bintliff, A.M. Snodgrass, The Cambridge/Bradford Boeotian Expedition: The first four years, 123-161, *Journal of Field Archaeology* 12, 1985; M. Millet, Pottery: population or supply pattern? The Ager Tarraconensis approach, 18-26, eds. G. Barker, J. Lloyd, *Roman Landscapes: archaeological survey in the Mediterranean* Region, London 1991; E. Neustupný, The transformation of community areas into settlement areas, 45-61 ed. E. Neustupný, *Space in Prehistoric Bohemia,* Prague 1998; J.L. Bintliff, The concepts of 'site' and 'offsite' archaeology in surface artefact survey, 200-215, eds. M. Pasquinucci, F. Trement, *Non-destructive techniques applied to Landscape Archaeology*, Oxford 2000.

divided into different chronological groups, we'll see that there is a fair amount of consistency concerning the on-site density during certain time-periods.

The majority of the discovered sites are open and occupy single compact surfaces, but sites 4 and 11 are dispersed on separate terraces. Concerning the inner distribution of the finds within the limits of individual sites, the majority of the clusters consist of a single core, possibly surrounded by a narrow halo, but "sites" 8, 5b, 13b and possibly 2, consist of at least two cores. The uneven distribution of surface finds is especially evident from the grid survey results. Whether on-site or off-site, it is a rarity to observe simple linear regularities in the distribution of surface finds. But while in the off-site artifact density fluctuates almost randomly, the intra-site distribution is characterized by vague concentric patterns. Thus in addition to artifact density and the freshness of the finds, the pattern of distribution is another indicator of the on-site character of surface artifact clusters.

The predominant category of finds in all parts of the survey area was the ceramic fragment. During the counting of the surface finds we were not able to distinguish between building ceramics and pottery. The participation of these categories in the total amount of ceramic fragments became evident only after the collection of the surface finds by regular grids and individual transects. On most sites the bulk of the collected shards were pottery fragments and on a number of sites, no building ceramics was found. This is certainly related to the chronology of the sites; but on sites 5b, 13b and 2, consisting predominantly of large format tiles, it is either related to their specific character or to the specific taphonomic conditions in which they were recorded. Equally "unusual" is the character of the finds gathered from the small clusters 14 and 15, consisting only of storage vessel fragments and bricks.

Finally in terms of location in the surroundings, there are centrally positioned sites, located close to the major local roads and visually and physically exposed (sites 5a and 5b, 11 and 13a, the fort on site 10); and sites occupying sheltered locations, with limited approach and at a greater distance from the main natural corridors (sites 4, 8, 12 and the fort on site 9). Most sites were discovered on the western bank of the valley, at Prisoj's foot; only four on the left bank, at Radičica's southern foot. In both cases the majority is located on the fringes of the arable area. Exceptions are the ultra-small sites, 6, 7 and 13a, situated in the middle of the modern plough-zone.

The location of "site" 8 is rather specific. It occupies the right bank of the central valley, but unlike the other sites situated in the spacious, southern foothills of Prisoj, "site" 8 occupies the narrow stretch between the eastern side of this hill and the central valley. In fact it is possible that part of this site continues on the other side of the valley as well. Thus "site" 8 is perhaps not by accident, situated at an equal distance between the foothills of Radičica and Prisoj, the two main arable surfaces in the surveyed area, in the very centre of the studied micro-region. Given that it consists of a chronologically homogenous group of artifacts, this site will feature over 3 times the size of the second largest site in the survey area.

Most of the discovered sites are supposedly settlements, exceptions being the two forts, the tower and the mound necropolis. These are all monumental building remains, situated on the very corners of the study region, marking its periphery. The two forts are most likely contemporary, while the mound necropolis and the small tower by the Vardar belong to different time-periods. The character of the assemblages collected from five

other clusters is "unusual", sites 2, 5b and 13b, 14 and 15. The first three are probably small, communal cemeteries: they are located on uncultivated parcels, in the immediate vicinity of sites with the regular repertoire of finds. Clusters 14 and 15 are for now impossible to characterize. They differ not only by the general character of the finds and their very small size, but also by their location in a very distant and isolated corner of this micro-environment, with rather poor soils and lacking surface water.

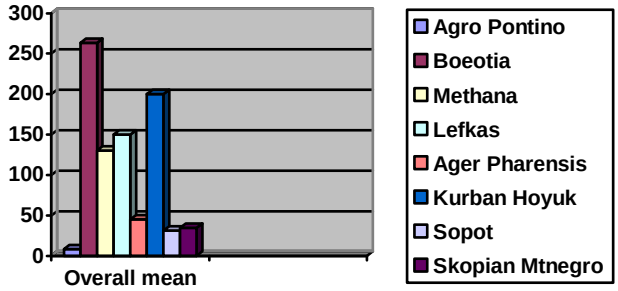
The rest of the clusters are either situated on the very periphery or in the midst of the micro-region's arable areas. Many of them are positioned with regards to the proximity of freshwater springs, roads and defenses. The general character of the finds also clearly indicates that these are the remains of permanent settlements, dating to various periods of the past. It is difficult to say anything about their character before the material is studied in greater details, but judging by the size of the clusters' area and the quality of the material, these were all very small communities of the rank of farmsteads or hamlets. Sites 4 and 11, and "site" 8, if it proves to be a single settlement, could belong to the categories of small or small to medium-sized villages[19]. The relatively large number and the variety of settlements in an area of barely one square kilometer indicate that the first survey area experienced a long history of settlement. It is also not too early to point out that the survey results confirmed the observations made on this micro-region as a separate settlement niche. The drainage of Sopot was the home of at least one minor settlement during a number of periods in the past.

Until the collected finds are chronologically differentiated, the "sites" we are discussing will in reality remain mere surface clusters featuring larger quantities of surface finds than the surrounding fields. This is the essential step towards defining the site and the off-site zones[20]. It is possible though not very likely that once the chronological dimension is introduced, some of these clusters will lose their significance as actual entities in the studied landscape. Nevertheless it would be interesting to compare the overall densities recorded in the first survey area with those recorded by some of the regional surveys in Greece and in other Mediterranean countries, over the past couple of decades. After all recording the total amount of surface material was one of the general goals of this survey. As a conclusion to this chapter, the amount of the total surface record encountered in the Sopot survey is compared with the overall artifact densities recorded in the second survey area and in other regions of the Mediterranean and the Near East.

[19] Compared to settlements from the regions of central or southern Greece or other parts of the Mediterranean, the ancient settlements in the Republic of Macedonia are considerably smaller. For example, a settlement measuring 20 hectares is considered very large, though it has to be emphasized that these measurements almost exclusively refer to the fortified areas or to the extent of visible building remains. See for instance, I. Miklučić, Über die Grösse der spätantiken Städte in Makedonien, 191-212, *Ziva Antika* XXIV 1974.

[20] J.L. Bintliff, 200, eds. M. Pasquinucci, F. Trement, 2000.

Graph 2: Overall mean densities in some regions of the Mediterranean and the Near East in 1000 sq meters[21].




It has to be remarked that only rarely are overall mean values given in the available publications. In some cases this information had to be deduced from the thematic maps showing total off-site and on-site density ranges over particular sectors of the surveyed region. Needless to stress, artifact densities can vary considerably, even within micro-regional limits as in the case of the Sopot survey. On over 80% of the field walking units in the first survey area, the artifact density was lower than the overall average of 31.5 fragments per 1000 sq meters. At the other end of the scale, on at least a dozen field units (less than 5%) the artifact density rose to over 174 fragments per 1000 sq meters[22]. Consequently the mean overall density can often be misleading, although it gives a solid impression of the amount of surface material across different regions of the Mediterranean. An additional problem is posed by the lack of congruence in the density figures in the available literature[23]. In certain survey projects we see visibility corrected density figures, in others only the raw counts are presented. Equally problematic is the fact that the ways in which artifact density is estimated are rarely explicated. Obviously it makes a significant difference if artifact densities are estimated for the entire field walking unit or only for the portion actually covered by field walking.

[21] It should be noted that but a few scholars have discussed overall artifact densities. Often it proved impossible to find clear information from the publications available. Overall artifact densities are specifically discussed by J. Bintliff, A. Snodgrass, Off-site pottery distributions: A regional and interregional perspective, 506-513, *Current Anthropology* 29-3, 1988; T.J. Wilkinson, Extensive shard scatters and land-use intensity: some recent results, 31-46, *Journal of Field Archaeology* 16-1, 1989. Information for specific survey projects came from: S.H, Loving, H. Kamermans, A. Voorips, eds. *The Agro Pontino Survey Project*, Amsterdam 1991; T.W. Gallant, "Background noise" and site definition: a contribution to survey methodology, 403-418, *Journal of Field Archaeology* 13-4, 1986; J.L. Bintliff, V.L. Gaffney, The Ager Pharensis/Hvar Project, 151-175, eds. J.C. Chapman, J.L. Bintliff et al, *Recent developments in Yugoslav Archaeology*, Oxford 1988; C. Mee, H. Forbes, Survey Methodology, 33-41, eds C. Mee, H. Forbes, *A rough and rocky place: The landscape and settlement history of the Methana Peninsula, Greece*, Liverpool 1997; J. Bintliff, Town and Chora of Thespiai in the Imperial Age, 199-229, eds. L de Ligt, et al, *Roman rule and civic life: Local and Regional Perspectives*, Amsterdam 2004. The figures given don't include very high on-site densities.

[22] Similar distribution has been revealed in the Agro Pontino, in Central Italy, S.H, Loving, H. Kamermans, A. Voorips, Randomizing our walks: The Agro Pontino Survey Sampling Design, 61-78, eds. S.H, Loving, H. Kamermans, A. Voorips, 1991, and on Kephalenia and Lefkas, T.W. Gallant, 409, 1986.

[23] S. E. Alcock, J.F. Cherry, Introduction, 1-9, eds. S.E. Alcock, J.F. Cherry, *Side-By-Side Survey: Comparative Regional Studies in the Mediterranean World*, Oxford 2004.

Not surprisingly,the overall amount of surface material in the first survey area is at least three to four times lower than the average amounts recorded on the Greek islands, Central Greece or Southeast Turkey. In fact the difference in the amount of surface material recorded in the first survey area and the hinterland of ancient Thespiai in Boeotia for example, is roughly proportional to the difference in size between the major settlement centres along the Vardar Valley and in Central Greece. Just for comparison, the city walls of Roman Scupi, a colony and later a provincial capital, enclosed an area of approximately 40 ha, while Thespiai, an important, independent city-state, but never a regional or provincial capital, stretched over an area of almost 100 ha in its heyday[24]. Most of the sites discovered in the first survey area would be completely submerged below the very high off-site densities recorded in the hinterland of Kurban Höyük in Southeast Turkey[25]. In regions where there were no major urban centres, such as the island of Lefkas or the Methana Peninsula, the overall artifact densities are somewhat lower, although they are still three to four times the overall mean artifact density recorded in the Sopot survey. The overall densities recorded in both survey areas (about 30 fragments per 1000 sq meters) are rather in the rank of the densities recorded on the island of Hvar, in the northern Adriatic or in the Agro Pontino, in southern Latium. As explained in chapter 2, this fairly low overall artifact density has an important implication concerning the fieldwork methodology, because in this or similar conditions total collections shouldn't present a particular challenge.

Apart from population size, regional variability in the amount of surface material has been related to a number of factors, including longevity of occupation, pottery supply and consumption, but also to climatic and geomorphologic factors[26]. Concerning this last factor, it has been observed that the amount of surface material increases from the humid, cooler climates of Northwest Europe to the more arid, dry regions of the Eastern Mediterranean and the Near East[27]. On this scale the environs of Sopot fall somewhere between temperate Europe and continental Greece, the mean overall artifact density approaching the lower limit of the total background density recorded by the Boeotia survey. However as explained in the previous chapter, the first survey area belongs to one of the drier regions of the country. The regions along the Mid-Vardar Valley and its left bank in particular are also unlike the typical regions of temperate Europe by the fact that they are prone to erosion and in general have very thin soils. Interestingly in the second survey, placed in a more typically temperate environment, the overall artifact density is roughly the same as in Sopot, although the maximum densities are considerably lower. Understandably concerning specific micro-regions, the total artifact density is always a resultant of a very wide range of factors. We'll return to this issue, once the chronological profile of the collected finds is established.

[24] I. Mikulčić, From the topography of Scupi, 29-35, *Archaeologia Iugoslavica* XIV, 1973; J. Bintliff, A. Snodgrass, Mediterranean survey and the city, 57-71, *Antiquity* 62, 1988.
[25] T.J. Wilkinson, fig. 2, 1989.
[26] J. Bintliff, A. Snodgrass, 513, *Current Anthropology*, 29-3, 1988.
[27] J. Bintliff, A. Snodgrass, fig. 2, *Current Anthropology*, 29-3, 1988.