Report of the first season 'Dimal in Illyria' 2010

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1) Introduction

The ancient site of Dimal (or Dimallon) in central Albania is the subject of a joint research project lead by the Institute of Archaeology of the University of Cologne, the Department of Archaeology in Tirana and the University of Applied Sciences Cologne. With the support of the RheinEnergie-Stiftung a first season of the project took place from September 15th until October 19th. During this period a geodetic network was established, large-scale geophysical prospections and terrestrial laser scans were carried out. At certain points of interest an intensive survey and stratigraphical sondages have been executed. The data collected by these methods are in the process of being integrated in a GIS.

2) Location

The ancient site of Dimal is situated in the central-Albanian highland, about midway between the modern towns of Berat and Fier. (Fig. 1) West of the Albanian Alps and south of the plain Myzeqe, there is a north-south running hi ghland called Mallakastra, in which we know of several Illyrian hill-top settlements. Dimal is one of them, located on a big plateau, which provides around 9 ha of flat land to settle (Fig. 2). On the eastern part, there is an isolated smaller plateau (2 ha), which is 50 m higher than the rest of the surrounding area with the highest point at 445 m above sea level (Fig. 3). Two modern villages lie at the foot of the mountain, Bistrovica

Fig. 1 - Map of Albania

Fig. 2 – Dimal view from the south (above) and Fig. 3 – Acropolis view from west (below).

and Krotina. Both are administrated by the community of Cukulat, belonging to the region of Berat. While Bistrovica is an old, small and remote village, Krotina tripeled in size during the last five years because of its being connected to the modern road. The latter village was chosen as the headquarters for the 24- member staff of the research team from Germany, Albania and Switzerland (Fig. 4 and Fig. 5).

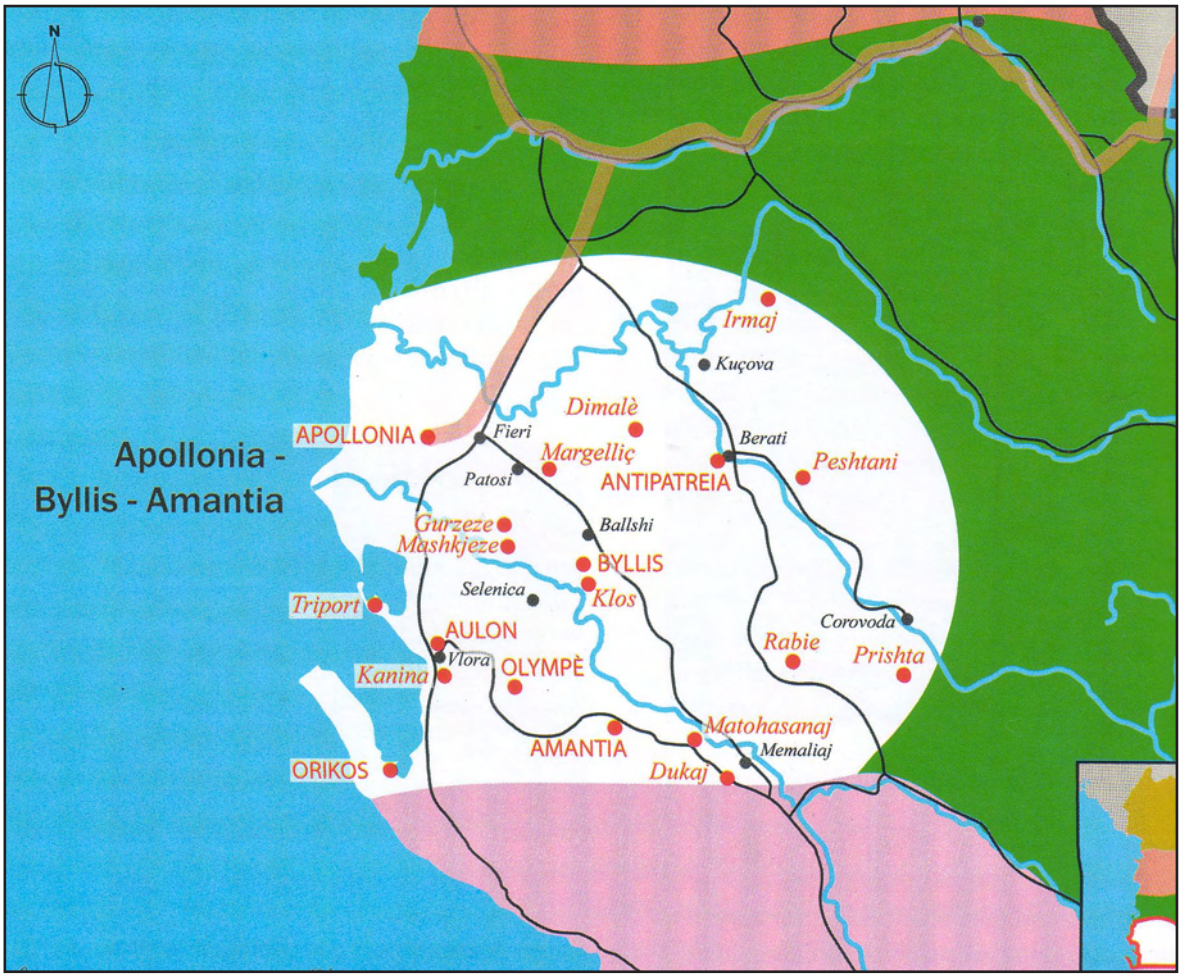


Fig. 4 – Map of the Region of Dimal (above) and Fig. 5 – View over Krotina from Dimal (below).

3) Research history

Fig. 6 – Roof-tile-stamp "Dimalitan"

The ruins of the ancient town were first explored by C. Praschniker in 1917. Years later B. Dautaj associated the place with the name "Dimal", which is known from ancient sources[1]. Stamps on Hellenistic roof tiles, found during the first excavations of an Albanian team, confirmed his educated guess. These tiles bore the name of the town Dimal in Greek letters (Fig. 6). The Albanian archaeological investigations run by Burhan Dautaj, lasted from 1963 until 1976 with some interruptions. As a result of these excavations, a first map of the ancient city was published on which the monumental town wall and some architectural remains could be studied (Fig. 7). According to this map, the city itself consisted of several areas called "Acropolis'" fortified by a massive wall, as well as an area interpreted as "Nymphaeum" or "Agora". The whole settlement spreads over the entire plateau and is surrounded by a second ring wall. The Albanian excavations concentrated on two areas: The first, at the bottom of a terrace wall with seven apse-constructions and the second on the northwestern part of the upper plateau. In the latter, Dautaj uncovered large walls of buildings and a 50 m long Stoa,

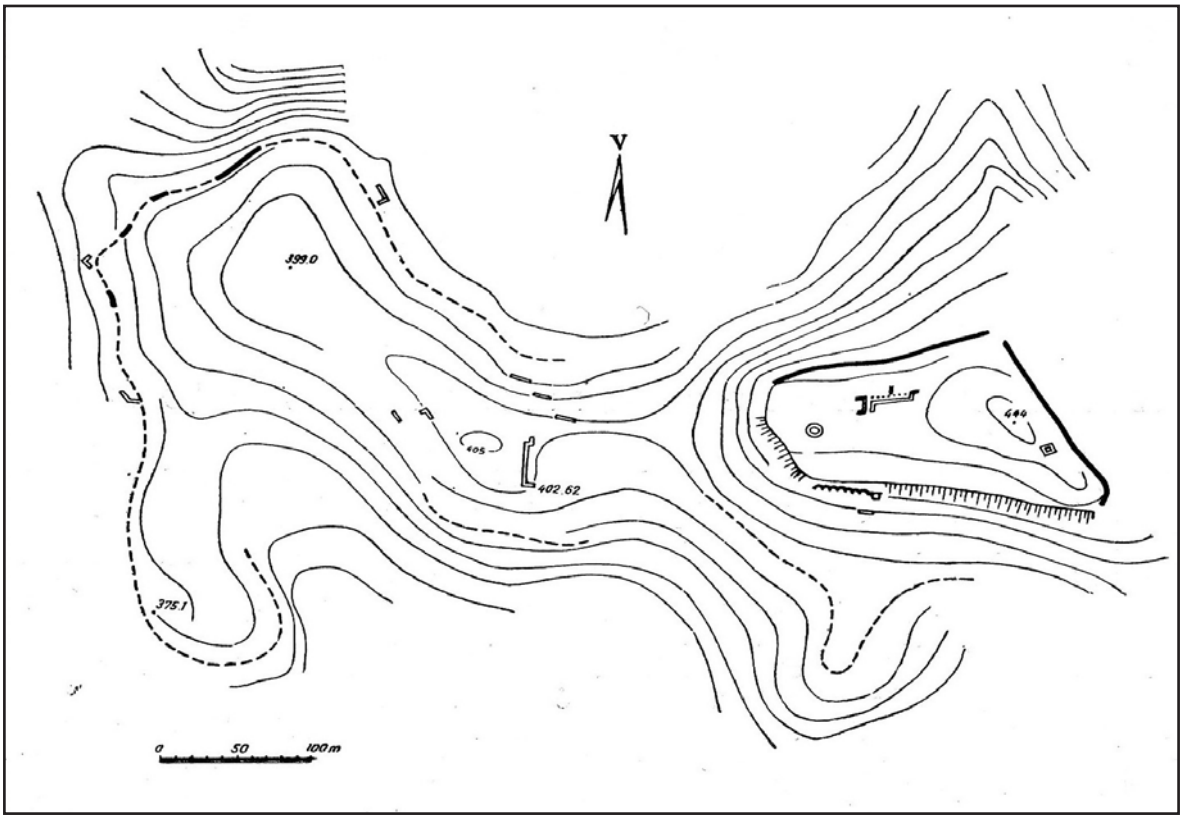


Fig. 7 – Map of the excavated structures until 1972

1 Polybios, NH, 3, 18.1.

which had been preserved under a massive layer of colluvium. During the 1980s, only smallish restoration works were conducted. The small finds from the excavations were used to form an idea of the development of the city in general: The first inhabitants settled on the mountain in the Iron Age from the 5th century BC onwards. In a second building phase of the city (begin 4th to middle-3rd century BC), the monumental town wall was built. In the Hellenistic period, the city saw its most dynamic building period where several Stoai and probably a Nyphaeum were erected. The role and degree of influence of the Greek colony of Apollonia in this still requires thorough analyzes. During the following centuries from the 1st BC to 3rd century AD, the city was in decline and perhaps was only used as a small military base in the Roman period. In contrast to the neighboring Illyrian hill-top-settlement of Byllis, which grew to an early Diocesan town, Dimal lost its importance and was abandoned after the 3rd century AD.

4) Objectives of the first season

The first aim of our research project was to set up a fixed measurement grid. As we planned to do an extensive survey on Dimal as well as in the surroundings of the settlement, we needed a measurement grid with fixed concreted points, spread out over the hill-top. An important objective was to locate the excavations of Burhan Dautaj during the 1960s and 1970s (unfortunately not extensively published) and to measure every visible remain of the ancient architecture with modern instruments. In addition to that, we planned to do an intensive small finds survey on some selected areas in order to get an idea regarding those parts of the plateau that had been settled at a given period. This is being combined with a large-scale geophysics survey and some test trenches at interesting points. The aim of the test trenches was to gain stratigraphical information on the structures in the area of the so-called 'acropolis'. This 'acropolis' is formed by a system of artificial terraces, which surround the entire hilltop. In cooperation with the University for Applied Sciences, we are interested to generate a Digital Elevation Model of the entire mountain to better understand how the ancient terrace system works. In addition, we plan to scan every standing wall and include the results of the small-scale excavations to support the documentation team. In the end, all data is to be incorporated in one coordinate system and then in one single GIS.

5) Setting up a measurement grid

In cooperation with the Institute for structural engineering, surveying and informatics from the University of Applied Sciences Cologne, our team set up a grid with a differential GPS (Fig. 8 and Fig 9). It basically consists of three groups of concreted measure points (Fig. 10). Each group comes with one main point and several secondary points. With this system, we could use our Total Station (Leica TCRA 1205)

Fig. 8 – GPS – working shot (above) and Fig. 9 – GPS – transport (below)

independently all over the research area. We first used a local system, which then had to be transformed in the Universal Transverse Mercator (UTM) – coordinate system, for global location.

6) Geophysical survey

Results at the 'acropolis'

Only the so-called 'acropolis', the hilltop including the remains of the Stoa, the apse wall and the terraces, are a National cultural heritage site and therefore protected and

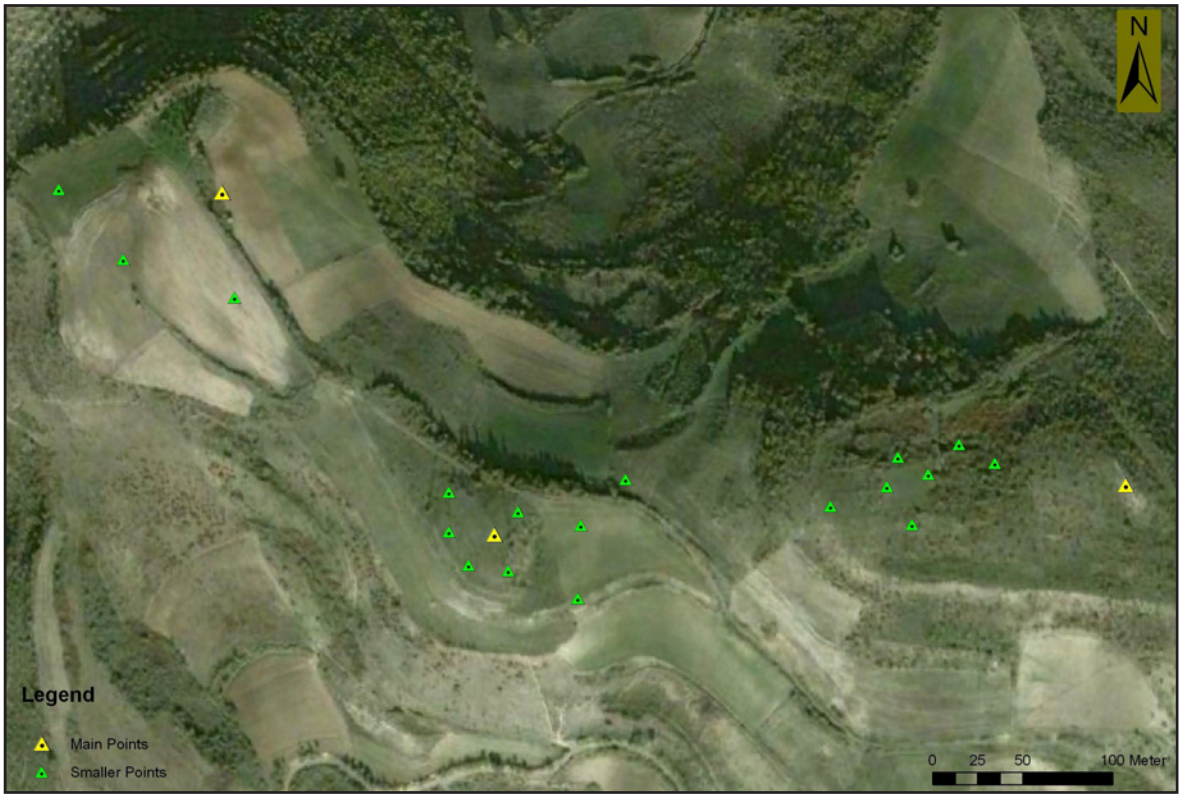
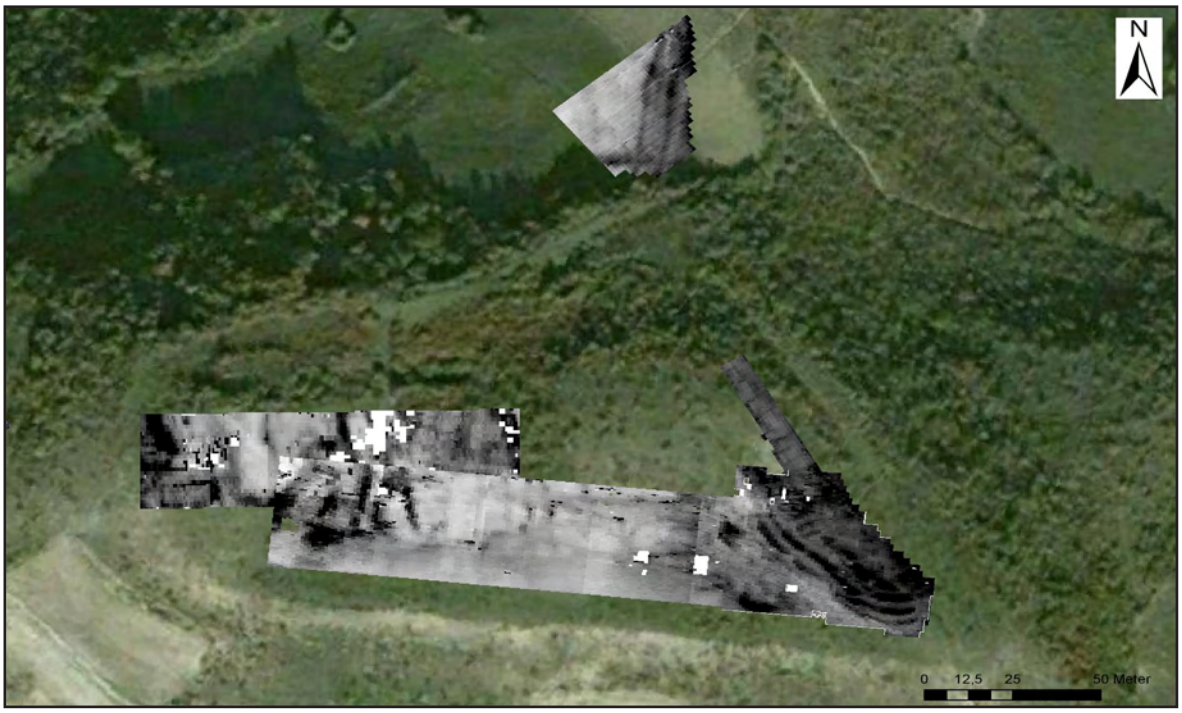


Fig. 10 – Distribution of GPS-points

Fig. 11 – Magnetometry on the 'acropolis' (above) and Fig. 12 – Resistivity on the 'acropolis' (below)



public ground at the moment. We had to clear the ground first, in order to be able to do the geophysical prospections as well as to start with the digital elevation model. For the geomagnetic survey, a Geometrics G 859 Ceasium-Magnetometer was used. On the hilltop a surface ca. 1 ha was surveyed, which covered almost half of the plateau. Two remarkable structures were visible in the results (Fig. 11): In the south-western

part of the magnetometry, there is a strong signal running west-east 130 m along an artificial terrace. At its western end, the signal turns northwards and then again at a right angle eastwards. This signal could belong to the collapsed back-wall of a stoa.

Fig. 13 - Magnetometry on the lower part of the settlement (above) and Fig. 14 - Magnetometry on steep slopes (below)

Therefore we decided to place a test trench right above the signal, trying to find the destroyed structure and to date its first phase. East of the stripe-shaped signal, there are three smaller anomalies staggered in a row, each about 11 m long. These could be traces of three buildings. Unfortunately, the resistivity results are inconclusive at this point, but there is also a signal on the position of the assumed collapsed terrace wall (Fig. 12). To its north, there are some rectangular anomalies, which could belong to a monumental building in the center of the plateau. In the eastern part of the 'acropolis' there was a narrower terrace, where we could easily make some walls visible, which probably divide the supposed eastern stoa building in several rooms.
Finally, we tried both methods on the northern slope of the plateau, where the results show two large structures, which run parallel straight downhill. This promising area is not completely done yet, but will be finished during the next campaign.

Results in the lower part of the settlement

All lower parts of the lower plateau, which might have been used for settlement, are in used for agriculture at the moment. Fortunately, the local farmers usually do not work with heavy machines, so we had the opportunity to see well preserved structures with the geophysical survey, which are well preserved. The geomagnetic survey didn't give very good results (Fig. 13 and Fig. 14). The test field at the foot of the 'acropolis' shows a structure that could be a large wall. Opposite to that on the western end of

Fig. 15 - Resistivity on the lower part of the settlement

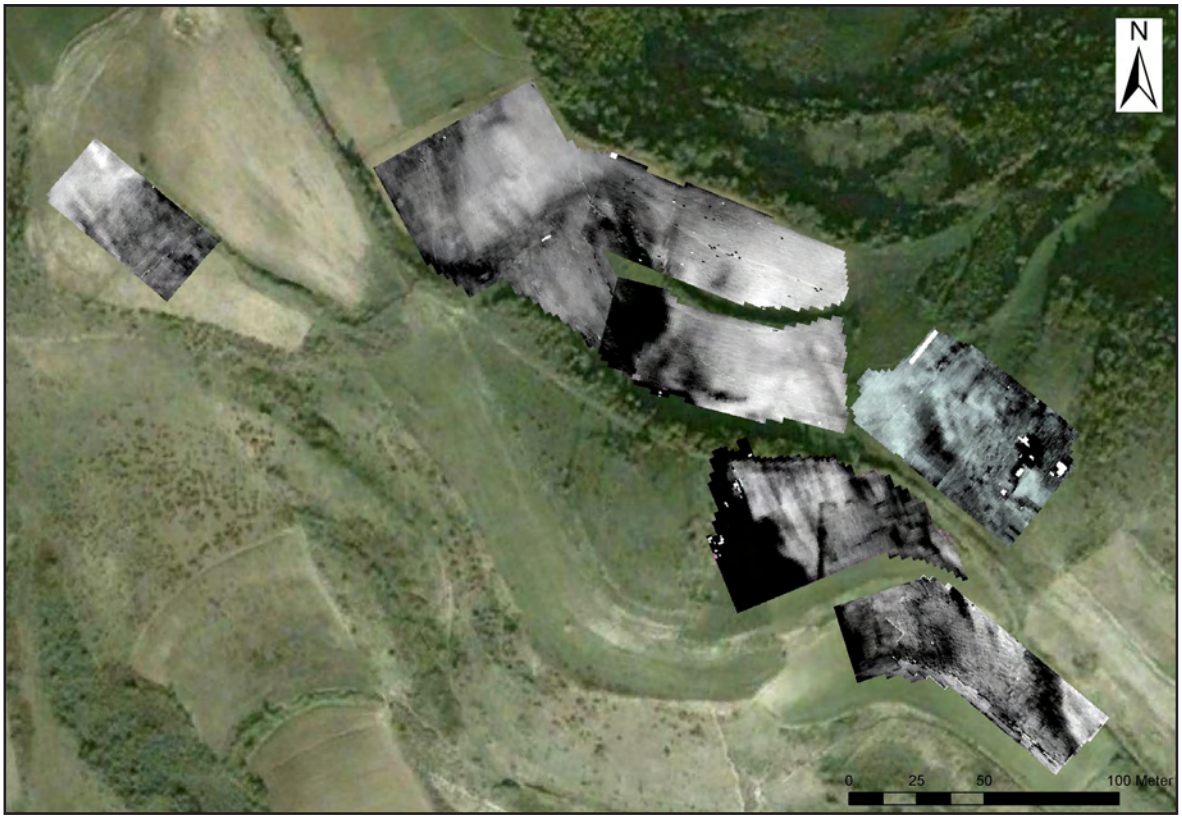


Fig. 16 - RM 15 working shot

the hill, a small, isolated field includes an anomaly, which could belong to a part of the monumental town wall. In the resistivity image, this structure disappeared and only the modern path is still visible. The rest of the magnetometry is not very clear. In contrast to that, the resistivity gives some more information (Fig. 15 and Fig. 16). A remarkable signal is seemingly produced by a 30 m large wall running North-South through a flat area in the vicinity of the so-called 'nymphaeum'. On the northern end it turns eastwards but the relationship to the already excavated walls 40 m west of it is yet uncertain. There are anomalies which seem to be wall constructions in some areas, but could not be interpreted yet. In summary, during a period of three weeks we did 3,7 ha were explored with the resistivity method while more than 3,5 ha with the magnetometry. Probably due to the geology or the state of preservation, each of the two methods was only helpful at some places in understanding the settlement structures. While the resistivity gave us some information about wall structures, the magnetometry basically seemed to show places with stone concentrations. During the next campaign, we plan to go on with the geophysical survey in some promising places.

7) Sondages

Sondages at the so-called 'acropolis'

Both in order to get a correct erection date for some of the buildings and to get stratigraphical information concerning possible phasing, we decided to conduct several test trenches. According to the excavated areas in the 1960s and 1970s, we placed them

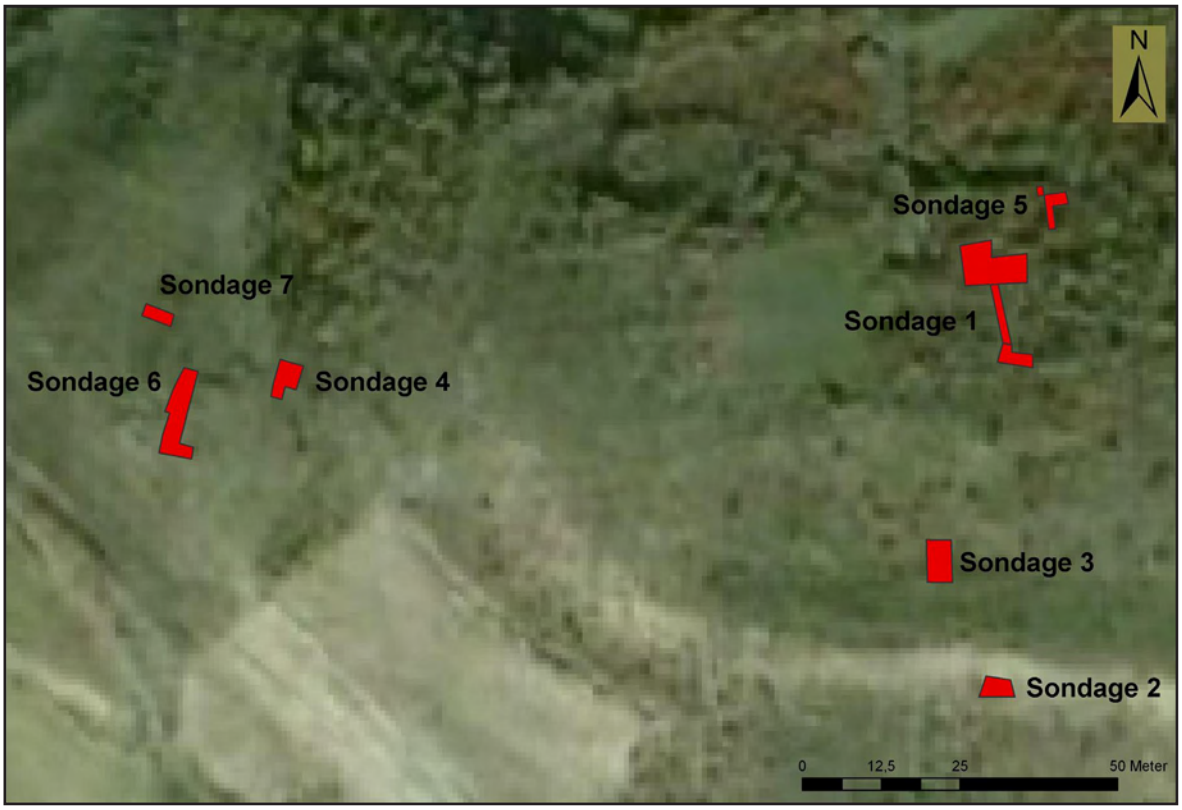


Fig. 17 - Overview placement of Sondage 1-7 (above) and Fig. 18 - Clearing the large Stoa wall (below)

basically on the "Acropolis". All in all seven trenches were opened in four different points. Three trenches were opened in the western part at the foot of the hilltop (Fig. 17). The first and the fifth trench belong together and were positioned to understand the building structures behind the stoa (trench 1), to date the building period of the stoa itself (trench 1 and 5) and to find possible remaining floor levels in the stoa (trench 5).

Fig. 19 - Sondage 1 (above) and Fig. 20 - South-extension of Sondage 1 (below)

After we had cleared all the bushes and trees, which grew since the Albanian excavation, trench 1 was placed to the south of the 50 m long stoa (Fig 18). Trench 1 unearthed a rectangular building (5 m by 5 m), which used the back wall of the Stoa as its own back wall. In contrast to the Stoa wall, the foundation of the building was laid on a higher artificial terrace. Opposite of it, there was a 2 m wide entrance. It seems that there are more similar rooms along the entire wall of the Stoa, but the outline of these structures are not clearly visible at the moment (Fig. 19).

Our intention in extending trench 1 was to get a stratigraphical connection between the excavated building and an isolated and visible big base-block, 10 m southwards which apparently still lay in situ. There was no ancient stratigraphy linking these two features, but we uncovered another massive foundation, running East-West on the same level as the buildings above the stoa (Fig. 20). It seems that there could have been

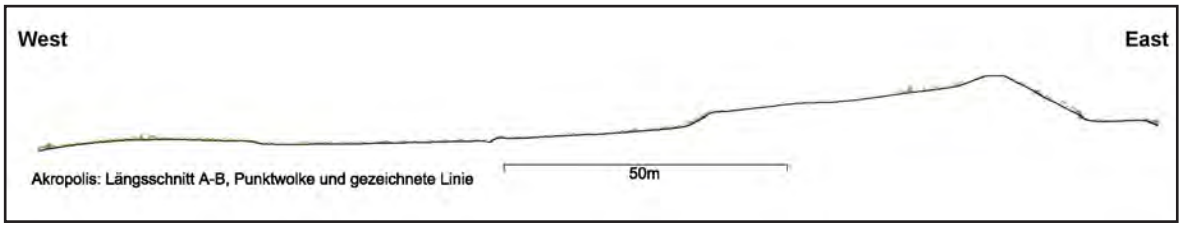


Fig. 21 - Section west-east through the Acropolis (above) and Fig. 22 - Sondage 5 view from North

monumental public buildings or another stoa. This terrace is the largest one on the hilltop, reaching to the edge of the top in the west. South and North on this plateau, there are two lower terraces added. To the east side we found another small higher terrace, which is not studied yet (Fig. 21). Unfortunately, we couldn't find any ancient floor level inside the already excavated long Stoa on opening trench five. In this area, B. Dautaj obviously had cleared the ancient surface in the course of his excavations. We enlarged the trench to look for some remains of the Porticus of the Stoa, also excavated by Dautaj. There we uncovered a 2 m wide foundation, on which the base-blocks for the columns where placed (Fig. 22).

We opened a trench at the remains of the monumental town wall in order to date the building periods of the wall. We chose a spot in the vicinity of the apse wall, where the foundations of a tower belonging to the older wall where visible (Fig. 23). We opened two meters in the

Fig. 23 - Sondage 2 view eastwards (above) and Fig. 24 - Set-off on the town wall (below)

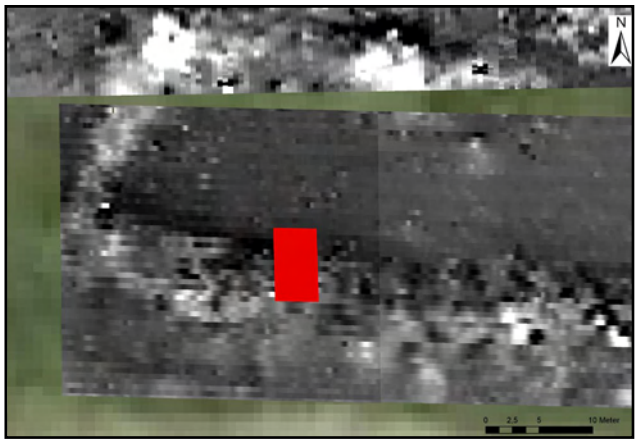
back of the massive foundation to get the building trench. We first had to clear away the rubble of Dautaj's excavation, but underneath it, the building trench was visible. As the dating of the pottery from this feature is not finished yet, the date of the structure is still uncertain. The wall itself was 2,1 m wide and built as a cavity wall construction with massive blocks laid in a row in the middle. There are still up to three layers of stones remaining in situ, especially in an interesting part of the trench, where the wall obviously

Fig. 25 - Stratigraphical situation between apse wall and town wall

sets off at a rectangular angle (Fig. 24). These blocks are worked in a way (Spiegelquadermauerwerk) meant to be visible. The town wall was later backfilled with a thick layer for the new terrace above it. This probably happened at the same time as the building of the apse wall. A study of the stratigraphical relationship between the town wall and the apse wall demonstrates that the apse wall is later then the town wall and was probably filling a 30 m wide destruction gap. The niches of the wall were built right above the foundation of the older town wall (Fig. 25).

Trench 3 was placed over a large, narrow anomaly in the magnetometry (Fig. 26 and Fig. 27). This was planned to control whether this structure belonged to a terrace wall or not. The test trench was 4 x 7 m and had an upper layer of stone rubble with a huge amount of pottery and tiles. At a lower stratum, there were two parallel wall constructions, running North-South (Fig. 28). Due to bad weather conditions, we could not finish excavating this trench to clear the function of the large stripe-shaped anomaly. The four trenches at the Acropolis cover an area of 150 m².

Fig. 26 - Placement of Sondage 3; Fig. 27 - View over the terrace with the S 3 in the foreground



Sondages at the Theater

Some time before our arrival, the owner of the field directly at the foot of the 'acropolis' had torn some big stone blocks from his land. In the ensuing pit, three more stone blocks were visible, which we left in situ, of course. Of particular interest was

Fig. 28 - Sondage 3 view northwards (above) and Fig. 29 - Trench 4 (below)

their alignment: all blocks lay in a curved row. To further investigate, we decided to lay a trench of 4 x 4 m on top of the already existing pit in the field, thus extending and excavating it. The results very convincingly demonstrate the discovery of a theater at Dimal. All in all, we unearthed six rows of seats, which had slid slightly down the hill

Fig. 30 - Trench 6 Analemma wall; Fig 31 - Re-used marble block

due to erosion. Their curve is clearly visible, thus demonstrating their use (Fig. 29). Because of a thick layer of colluvium having eroded from the hilltop, the shape of the theater was completely hidden in the slope. Burhan Dautaj had always assumed that the ancient city of Dimal also had a theater and now finally, we know its location!

In addition to trench 4, we opened trench 6, which basically was another extension of an already existing pit (with huge blocks inside) in the same field, some meters below. In this trench, we followed a large wall foundation both northwards and southwards. After 13 m, the wall turned eastwards in a rectangular angle (Fig. 30). Some of the blocks are overturned and only some parts of the foundation are in situ. Especially the part around the southern corner seems to have been robbed, possibly in ancient times, because the building trench of this former wall is filled with loose rubble made up of smaller stones, which have been left lying. This massive foundation belonged to the analemma-wall of the theater, protecting the southern side of the seats. The integration of re-used stones from other monuments in the foundation proves that the theater belongs to a later phase of the settlement (Fig. 31). An indication of the size of the theater and its orientation can be gained with the help of a reconstruction using the outlines of the Apollonia theatre (Fig. 32). According to this reconstruction, the theater had a diameter of approximately 34 m, marking it out as rather small compared to other known theaters. A third trench was opened in the area of the theater in order to discover the outlines of the Skene. We documented a destruction layer in the middle of the trench, but due to bad weather conditions, we were unable to finish this test trench.

Fig. 32 - Reconstruction of the theater

Nevertheless the work done here indicated the existence of a structure belonging to the theater. Altogether we excavated an area of about 85 m² to define the orientation and basic structure of a theater.

The finds from these trenches are not finally analyzed, but the big amount of finds was excavated in trench 3. There are just some finds out of the bedding trenches of the town wall in trench 2 and a bit some datable finds from the building structure in trench 1. In trench 4, finds came only from the colluvium and the abandonment layer lying above the remains of the seats. There we found a fragment of Terra Sigillata (Drag. 27) rarely discovered in Dimal which dates in the middle of the 1st century AD and indicates that the theater was derelict at this time (Fig. 33, Fig. 34, Fig. 35).

8) Intensive survey

During this first season two sites in the lower city have been chosen to execute an intensive side-by-side survey. Field 1 was located ca. 300 m west of the 'acropolis', field 2 immediately south of the agora (Fig. 37). Both survey fields measured 30 x 30 m and were subdivided into grids of 3 x 3 m. This strict limitation of the surveyed surface was connected with two goals: the main aim was to gather chronological information about the phases of use of the chosen investigation areas, wherefore a complete collection of all the visible surface materials, including smallest fragments of pottery was regarded as necessary (Fig. 38). Secondly the intention was a critical testing of methodological

Fig. 33 - Pottery from the trenches; Fig 34 - Stamps

Fig. 35 - Terracotta fragments; Fig. 36 - Fragments of Architecture

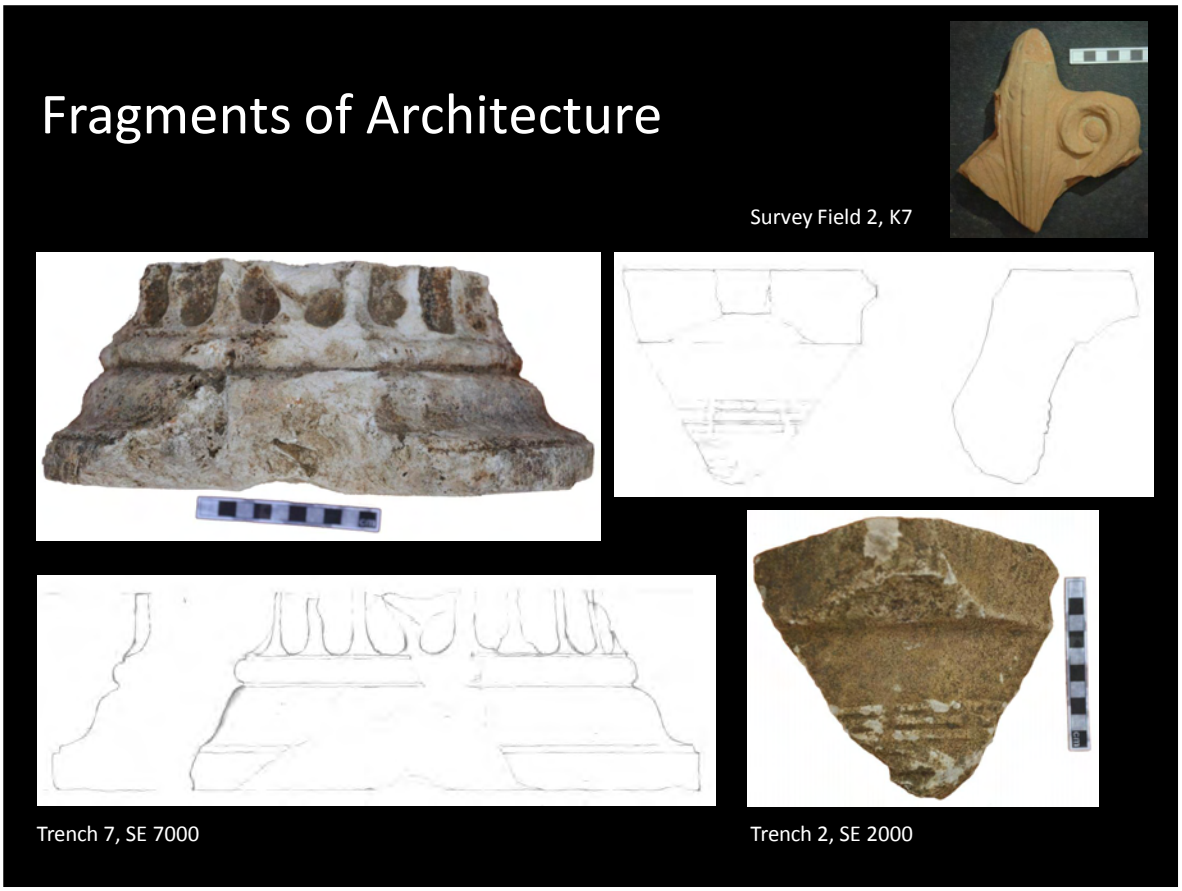


Fig. 37 - Location intensive survey fields (above), Fig. 38 - Working shot intensive survey (below)

Fig. 39 - Pottery fragments from the intensive survey

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