

THE KERKENES PROJECT

A PRELIMINARY REPORT ON THE 2009 SEASON



Figure 1. The paved stone passage at the Cappadocia Gate. (09dpcp1644)

Geoffrey and Françoise Summers

LOCATION

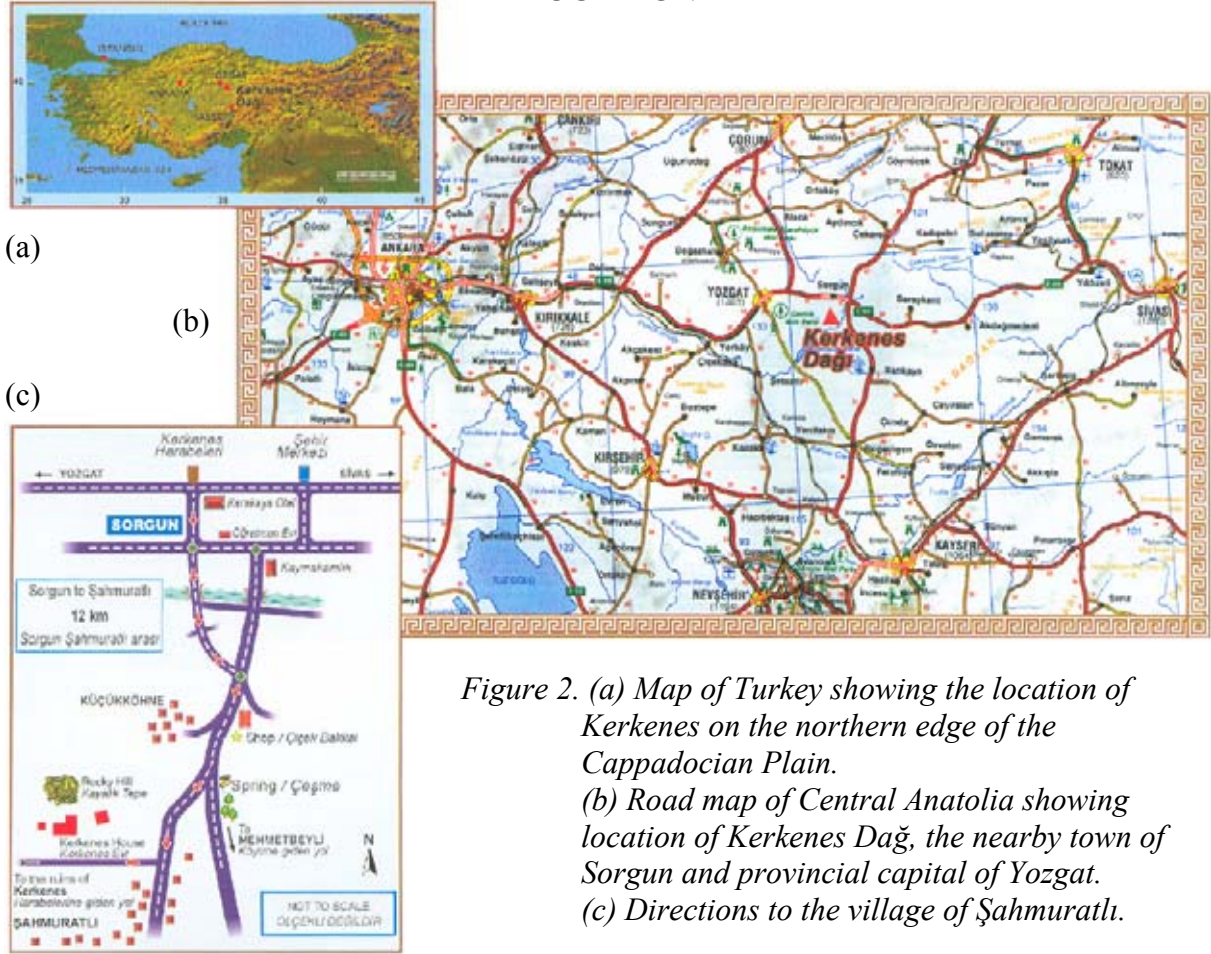


Figure 2. (a) Map of Turkey showing the location of Kerkenes on the northern edge of the Cappadocian Plain. (b) Road map of Central Anatolia showing location of Kerkenes Dağ, the nearby town of Sorgun and provincial capital of Yozgat. (c) Directions to the village of Şahmuratlı.

Kerkenes Project Office
Room B04, Solmaz Izdemir Salonu
Library Building
Middle East Technical University
Ankara



The Kerkenes House
Şahmuratlı Village
Sorgun, Yozgat



Tel/fax: +90 354 421 5154

Postal Address

The Kerkenes Project
C/o Faculty of Architecture
Middle East Technical University
Ankara TR-06531
TURKEY

or

C/o The British Institute at Ankara
Tahran Caddesi 24
Kavaklıdere
Ankara TR-06700
TURKEY

Tel/Fax: +90 312 210 6216
METU Fax: +90 312 210 7966

Tel: +90 312 427 5487
Fax: +90 312 428 0159

The Kerkenes Web Page



<http://www.kerkenes.metu.edu.tr>



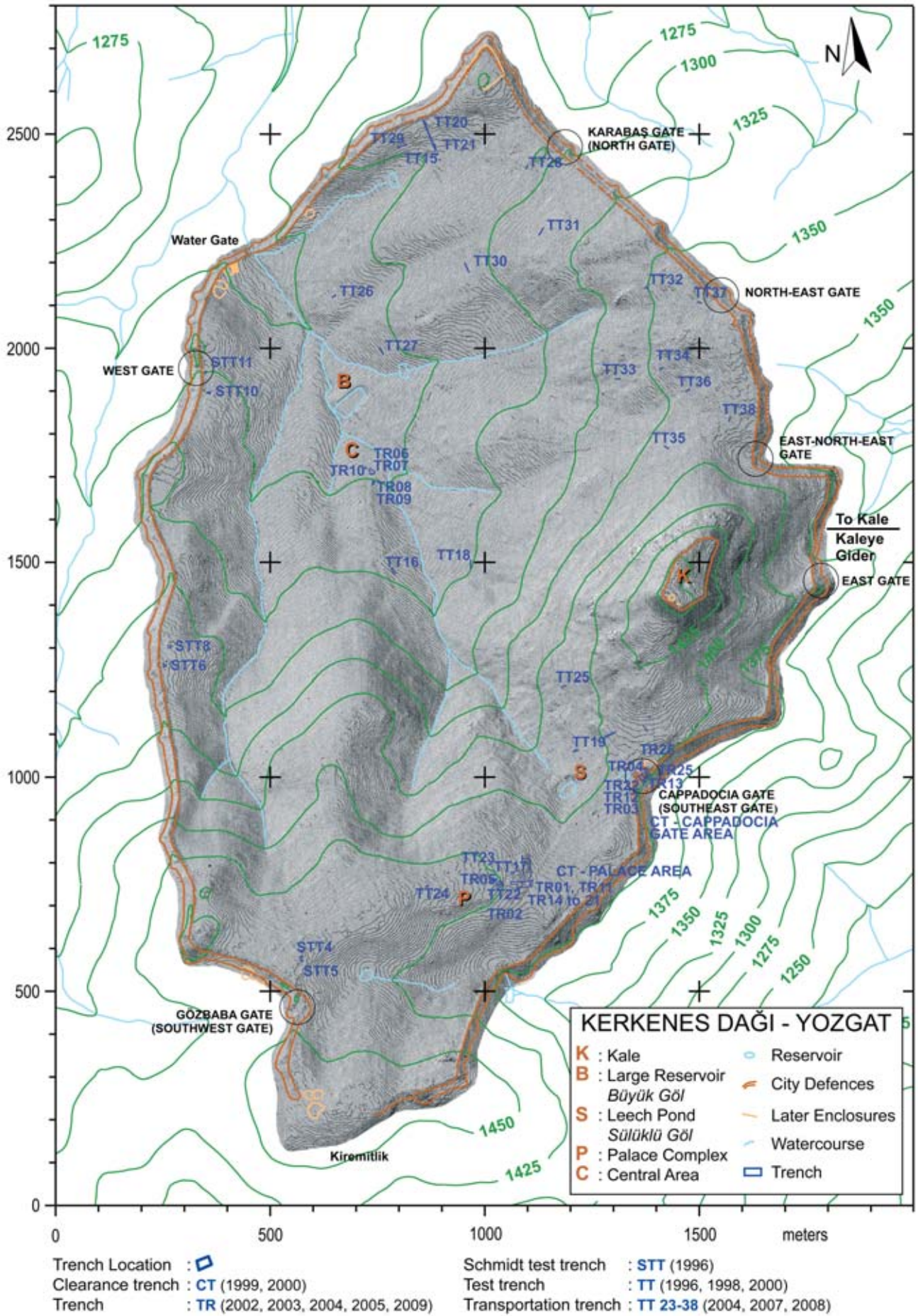


Figure 3. Digital Terrain Model (DTM) made by İşlem GIS, using ERDAS Imagine, from the GPS survey of Kerkenes.

THE 2009 TEAM



Figure 4. The Şahmuratlı Village can be seen from the ancient city on the Kerkenes Dağ. Ominous skies and a wet spring made for good geophysics. (09dpnc0902)

Fieldwork in 2009 was divided between geophysical survey in spring and further excavation at the "Cappadocia Gate" (Fig. 1) in early summer. Work on the ancient Iron Age city located on the Kerkenes Dağ, in the region of Yozgat (Figs 2 and 3) has continued since 1993 when an international team began multi-disciplinary research. The expedition base at Şahmuratlı Village (Fig. 4) is closely associated with the growing Kerkenes Eco-Center. Villagers are employed for geophysical survey, excavations and other expedition tasks.

Geoffrey D. Summers

Research Associate, Oriental Institute, University of Chicago
Adjunct Associate Professor of Anthropology, State University of New York at Buffalo
and
Settlement Archaeology Graduate Program, METU Institute of Social Sciences
C/o Faculty of Architecture, Middle East Technical University, Ankara 06531, Turkey
Office Tel: +90 312 210 6213 *Home Tel/Fax:* +90 312 210 1485
e-mail: summers@metu.edu.tr

Françoise Summers

Dept. of Architecture, Middle East Technical University, Ankara 06531, Turkey
Office Tel: +90 312 210 2221 *Home Tel/Fax:* +90 312 210 1485
e-mail: fsummers@metu.edu.tr

Scott Branting

Director, Center for Ancient Middle Eastern Landscapes (CAMEL)
The Oriental Institute, The University of Chicago
1155 East 58th Street, Chicago, IL 60637, USA
Tel: +1 773 834-1152 *Fax:* +1 773 702-9853
e-mail: branting@uchicago.edu

Participants to the 2009 Field Season

Director:	Geoffrey Summers
Co-Director and architect:	Françoise Summers
Representative:	Şaban Kök
Restoration Architects:	Nilüfer B. Yöney Ahmet Çinici
Geophysicist:	Gabriella Carpentiero
Epigraphist:	Susanne Bernt-Ersöz
Archaeologists:	Ferhat Can Güzin Eren Yasemin Özarslan Lucile Richard Lee Ullmann
Graduate student:	Heidi Ullman
Student:	Pamela Summers

Post-fieldwork, research and publication, USA

Co-Director:	Scott Branting, CAMEL, Oriental Institute, University of Chicago
Metal Analysis:	Joseph Lehner, UCLA
Conservator:	Noel Siver, Berkeley, USA

Post-fieldwork, research and publication, Turkey

Sema Bağcı	Yılmaz Selim Erdal
Susanne Berndt-Ersöz	Güzin Eren
Berrin Z. Çakmaklı	Sajjad Haider
Ferhat Can	Evangelia Ioannidou Pişkin
Ben Claasz Coockson	Boran Kalay
Ali Çınk	Françoise Summers
Ahmet Çinici	Geoffrey Summers
Cengiz Doğangönül	Nilüfer B. Yöney

Kerkenes Eco-Center Project

We would like to note that collaboration with the Kerkenes Eco-Center team plays a significant role in various aspects of the project and wish to acknowledge the contribution of the 2009 key team members.

Project Director:	Françoise Summers
Project Advisor:	Soofia Tahira Elias-Özkan
Project Co-ordinator:	Asuman Korkusuz
Architect:	Özün Taner
Industrial Design:	Güner Mutaf and Korkut Mutaf
SAHDER Chairman:	Azmi Baştürk

Reports on the activities for the Kerkenes Eco-Center Project appear separately.



ACKNOWLEDGEMENTS

We thank the Director General, Orhan Düzgün, and his staff at the General Directorate of Cultural Resources and Museums for their support. We would particularly like to thank Melik Ayar and Serkan Atalay at the General Directorate for support and good advice. Thanks are also due to representative Şaban Kök, from Denizli Museum, for his helpfulness at all times. We extend our gratitude to the Acting Director of the Yozgat Museum, Hasan Şenyurt, and museum staff who offer continuous help and encouragement.

We are most grateful to the Governor of Yozgat, Amir Çiçek, the Yozgat Director of Culture and Tourism, Bahri Akbulut, the District Governor of Sorgun, Ertuğrul Kılıç, the Yozgat Mayor Yusuf Başer and Sorgun Mayor Ahmet Şimşek, who, with their staff, continue to be extremely supportive and provide every possible encouragement and help to the project. Assistance from local organisations is most welcome and we wish to thank the Directors of the Yozgat Provincial Administration (İl Özel İdaresi), TEDAŞ, and Türk Telekom, and their staff for promptly attending any of the project's need.

The Kerkenes project comes under the auspices of the British Institute at Ankara which provides facilities in Turkey and we thank the Director, Lutgarde Vandeput, for her support. Unfortunately the Kerkenes Project no longer qualifies for funding from the BIAA but we are particularly thankful to the BIAA for providing the geophysical survey equipment. There is a formal agreement with the Oriental Institute of Chicago University, with Scott Branting as Co-Director of the project. The Kerkenes Project is based in office space provided by the good offices of the Rector at METU and ongoing collaboration involves the Faculty of Architecture, TAÇDAM, the METU Museum, the Graduate Program in Settlement Archaeology, the Graduate Program in Archaeometry and the Department of Geological Engineering.

The main sponsors in 2009 were the Oriental Institute of the University of Chicago, the Binks Trust Scotland and an anonymous donor. The US Ambassador's Fund for Cultural Preservation was awarded to the Kerkenes Project for restoration at the Cappadocia Gate which will continue in 2010. Additional funding was received from the Archeocommunity Foundation, the Bernard and Innes Burrows Memorial Award of the Anglo-Turkish Society, the Charlotte Bonham-Carter Charitable Trust and Toreador Turkey Ltd. A generous donation, in memory of the late James Hogarth CB FSA Scot., has been given for the production and printing of the Kerkenes News 2009. Contributions from Andante Travel and other visitors have been gratefully received.

Research activities and work on publication of results which progress all year round at the Middle East Technical University are made possible by the generous donations, channelled through the METU Development Foundation, from Cimpor Yibitaş Yozgat Çimento, the Erdoğan Mustafa Akdağ Foundation and Yenigün. METU Computer Centre provides technical support and METU Press assists with publication. ESRI, İşlem GIS, Geoscan and John Haigh assist with software.

Research and educational activities related to the Kerkenes Eco-Center were supported by funds from AKG Gazbeton, Archeocommunity Foundation, British Embassy, MESA and the UNDP-GEF Small Grant Program.

We are deeply indebted to the Village of Şahmuratlı and to the Headman, Turan Baştürk, as well as his predecessor, Osman Muratdağı, for extending traditional Anatolian hospitality. Mehmet Erciyas, the Kerkenes Guard, has gone beyond the call of duty to assume his responsibilities in guarding the site and taking care of the project's premises. Finally to all the team, the house staff and workers from the village of Şahmuratlı, our heartfelt thanks. Little would have been achieved without their dedication, enthusiasm and hard work.

COLLABORATION, PROJECT FACILITIES AND ACTIVITIES

Collaboration and Support

International cooperation continues for fieldwork, post-fieldwork and publication with the Center for Ancient and Middle Eastern Landscapes (CAMEL) at the Oriental Institute in Chicago, The Malcolm and Carolyn Wiener Laboratory of Aegean and Near Eastern Dendrochronology at Cornell University, UC Berkeley, SUNY Buffalo, Laboratoire de Géographie Physique - CNRS and the Anatolian Iron Age Ceramics Project. The Italian survey team from the University of Florence shared the Kerkenes Project facilities while conducting their survey at the nearby site of Kuşaklı and a collaborative regional survey program is being prepared.

Collaboration at METU involves the Faculty of Architecture, the Faculty of Engineering, the Museum and TAÇDAM. Colleagues and students from the Department of Geological Engineering and its Remote Sensing and GIS Laboratory, the Department of Metallurgical Engineering, the Materials Conservation Laboratory and Photogrammetry Center and the Graduate Programs in Settlement Archaeology, Archaeometry and GGIT contribute to the research and publication activities. Ongoing work is also in progress with a team from the Departments of Hydrogeology and Anthropology at Hacettepe University.

Project Facilities

Thanks to the generosity of sponsors and friends, the Kerkenes Project is provided with facilities such as the Erdoğan Akdağ Center for Research and Education (Fig. 5) and the Kerkenes Eco-Center which can accommodate large groups of visitors and students. The Kerkenes team based at METU works in collaboration with ŞAHDER, the Kerkenes and Şahmuratlı Village Association for Public Relations, Prosperity, Help and Support, to promote sustainable rural development and to involve villagers in the daily running of the expedition. The Kerkenes Eco-Center promotes sustainable rural life through the development of renewable energy, drip irrigated organic gardens, and building with appropriate materials and energy efficient designs.



Figure 5. On July 17, the Governor of Yozgat, Amir Çiçek, hosted Ambassador James Jeffrey and Mrs Jeffrey at the Erdoğan Akdağ Center for Research and Education. The Ambassador was invited to break the pot of the 'Testi Kebab', a Yozgat speciality. (09dpcp1932 and 36)

Fieldwork and 'Hands on' Activities

Kerkenes has provided fieldwork experience to archaeology and architecture students from Turkey and abroad since 1993. New facilities provided over the years permit an increasing variety of educational activities to take place for visiting students and villagers.

Students from the Middle East Technical University come to the Kerkenes Eco-Center to take part in the 'Hands on Building' program of the elective course 'Architecture *in situ*' (Figs 6 and 7). With the emphasis being on environmental design and recycling, students have selected strawbales, mudbricks, old tyres and bottles to realise their projects while at the same time adding to the amenities of the Kerkenes House. Erasmus exchange students from France and Italy were among those who took part in the activities this year.



*Figure 6.
Architecture
students from
METU learning
how to make
traditional sun-
dried mudbricks.
(09kecp0714)*



*Figure 7. Students
and village children
at the end of the
'Hands on Building'
session at the
Kerkenes Eco-
Center.
(09kenc0801)*

Visitors

Yozgat is an ideal choice for an overnight as a tour of Central Anatolia progresses from Hattusa to Cappadocia. Andante Travel this year visited Kerkenes in the spring as well as in the autumn (Figs 8 and 9) and both groups were eager to see the site and the Eco-Center where lunch was simmering on the solar cookers. Groups of teachers, students and members from organisations (Figs 10 and 11) visit Kerkenes mostly during the summer months.

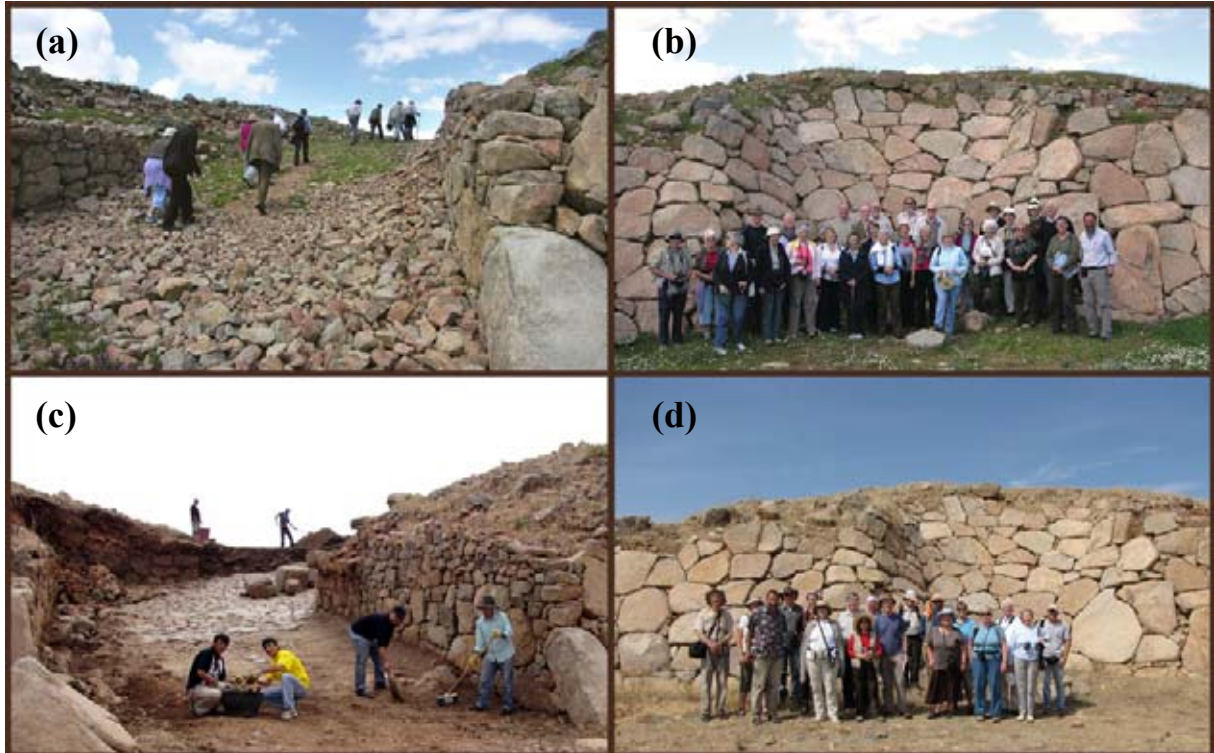


Figure 8. In spring an Andante Travel group stumbled through the stone-filled passage (a) to admire the impressive Cappadocia Gate glaxis (b). Excavations in July exposed an ancient stone-paved road (c) which greatly facilitated the walk out to the front of the glaxis for another Andante group (d) in September. (09dpnc0215-0218, 09dpcp1626-2105)



Figure 9. Andante group visiting the Cappadocia Gate in September. (09dpcp2110)



Figure 10. In July, a group of teachers from several countries included in the program of their EU funded project a visit to Kerkenes. (09dpcp1317)



Figure 11. Geoffrey Summers explaining the construction of the Cappadocia Gate, part of the Iron Age defences, to the METU architecture students who visited the site in October. (09dpcp2411)

Visit by James Jeffrey, Ambassador of the United States of America

On the 17th of July we were honoured by a visit from the Ambassador of the United States of America, Mr James Jeffrey in connection with an award from the *Ambassador's Fund for Cultural Preservation* to conserve and enhance the glacis in front of the 'Cappadocia Gate' at Kerkenes (Fig. 12). Yozgat Governor Amir Çiçek and Mrs Çiçek generously hosted the Ambassador and Mrs Jeffrey for the day. A copious breakfast at the recently restored *Hayri İnal Konağı* was offered by Yozgat Mayor Yusuf Başer. The visit to the Yozgat Museum started with speeches from the Ambassador, Governor, and Kerkenes Project Director followed by a short powerpoint presentation of archaeological assets in the province given by Hasan Şenyurt, the Museum Acting Director. Following a tour of the museum, which includes the Kerkenes exhibition installed only last year, the party proceeded to Kerkenes itself where there was time to climb the Kale for the expansive view that it offers and to tour the Cappadocia Gate (Fig. 13). At the Kerkenes Eco-Centre, where project activities include the promotion of solar energy, guests were shown an array of different solar cookers and driers (Fig. 14). The Sorgun District Governor Ertuğrul Kılıç offered an excellent local lunch of *Testi Kebab*, a speciality of Yozgat, provided by the Sorgun Büyük Termal Oteli. We would like to thank all those who laboured to make this special day such a success, particularly the Sorgun *Jandarma* (Gendarmerie) and the hospitable people of Şahmuratlı Village.



Figure 12. On July 17 at the Cappadocia Gate, the US Ambassador James Jeffrey, the Governor of Yozgat Amir Çiçek and distinguished guests posed with the Kerkenes team and Şahmuratlı villagers for a group photo. The Ambassador's Fund for Cultural Preservation will fund restoration of the glacis. (photo Yozgat Valilik web page)



Figure 13. At the Cappadocia Gate, Ambassador Jeffrey and Mrs Jeffrey listened to the explanations given by the Project Directors . (09dpcp1920)



Figure 14. Guests visiting the Kerkenes Eco-Center before lunch were shown solar cookers and driers being used to cook and preserve fruit and vegetables. (photo Yozgat Valilik web page)

THE SPRING GEOPHYSICAL SURVEY

Geophysical survey was conducted over the high southern ridge (Figs 15 and 16). The area extends from the base of the stone glacis at the eastern end of the Palatial Complex to the terraces at the foot of the south-west side of the Kale east of the Field and northwards to where the terrain begins to drop steeply towards the lower sectors of the city.

A Geoscan RM15 was used for the electrical resistance survey in 20 by 20m grids with a sampling strategy of readings every 0.50m at 0.50m traverse intervals in zig-zag mode (Figs 17 and 18). Data was collected for a total of 142 grids covering an area of 56,800 square metres, a little more than five and a half hectares. As anticipated, results were of the high clarity that one expects at Kerkenes. The unusually damp conditions provided by much needed heavy spring rainfall facilitated the survey where the ground normally dries up very rapidly after the winter snow cover has melted.

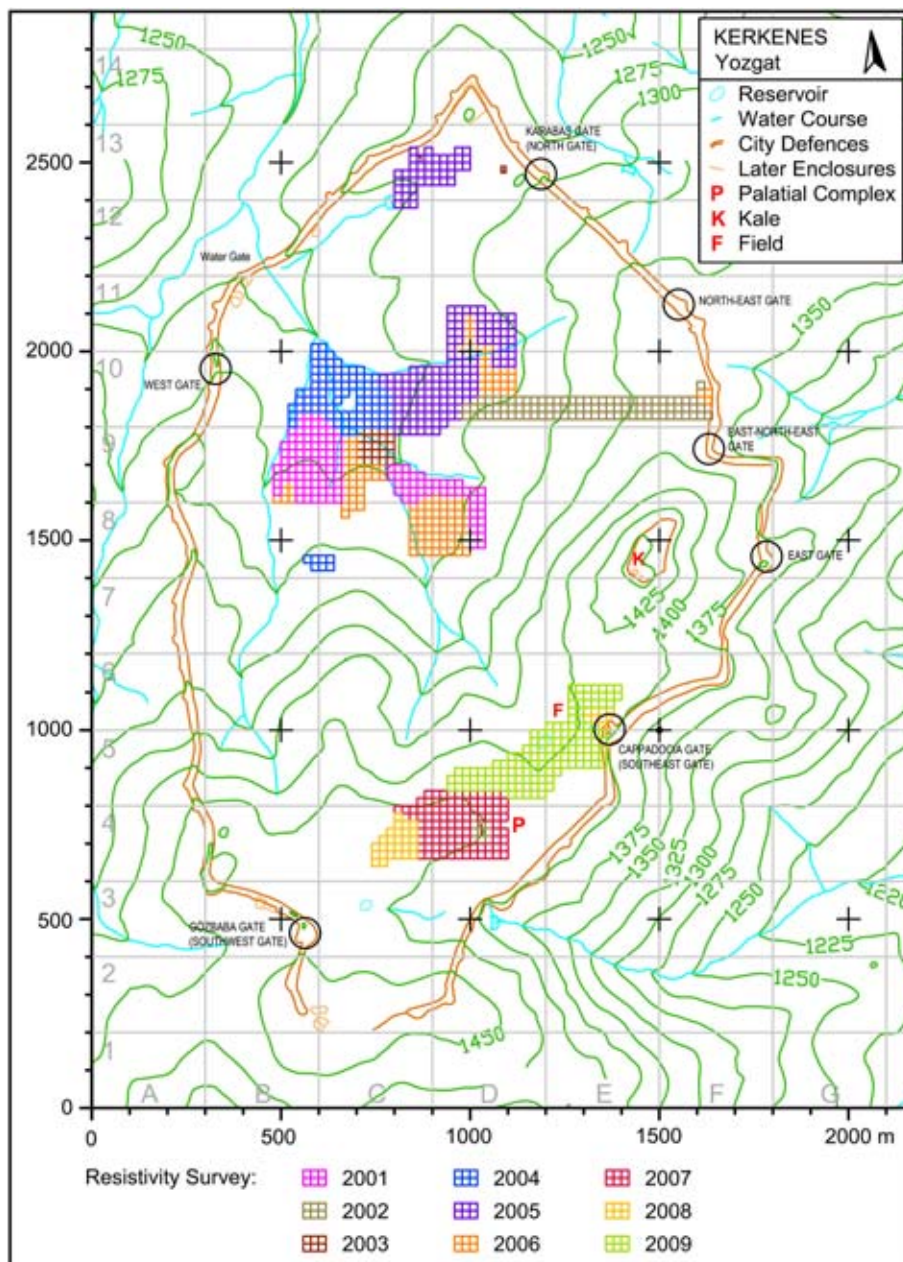


Figure 15. Progress map showing the 2009 resistivity survey area between the Palatial Complex and the Cappadocia Gate.

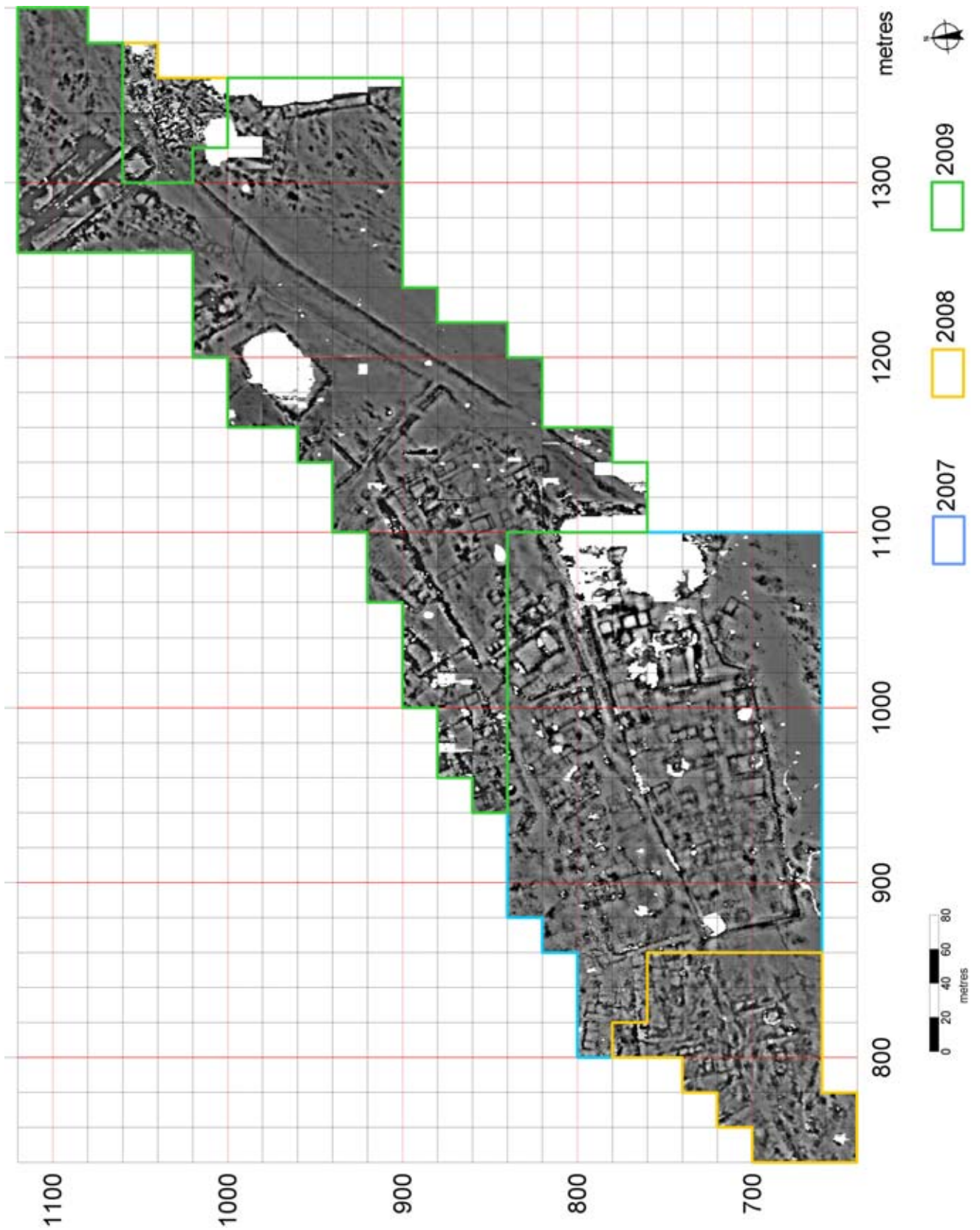


Figure 16. The 2009 resistivity survey filled in the area between the Palatial Complex and the Cappadocia Gate.



Figure 17. The Kale forms a backdrop to Gazi Erciyes, Mehmet Baştürk and Nüfel Başer conducting resistivity survey by the Cappadocia Gate. (09dpng0719)



Figure 18. Resistivity survey in front of the glaxis at the Palatial Complex with Gabriella Carpentiero supervising data collection by Eyüp Babayiğit, Mehmet Baştürk and Ramazan Babayiğit. (09dpng1105)

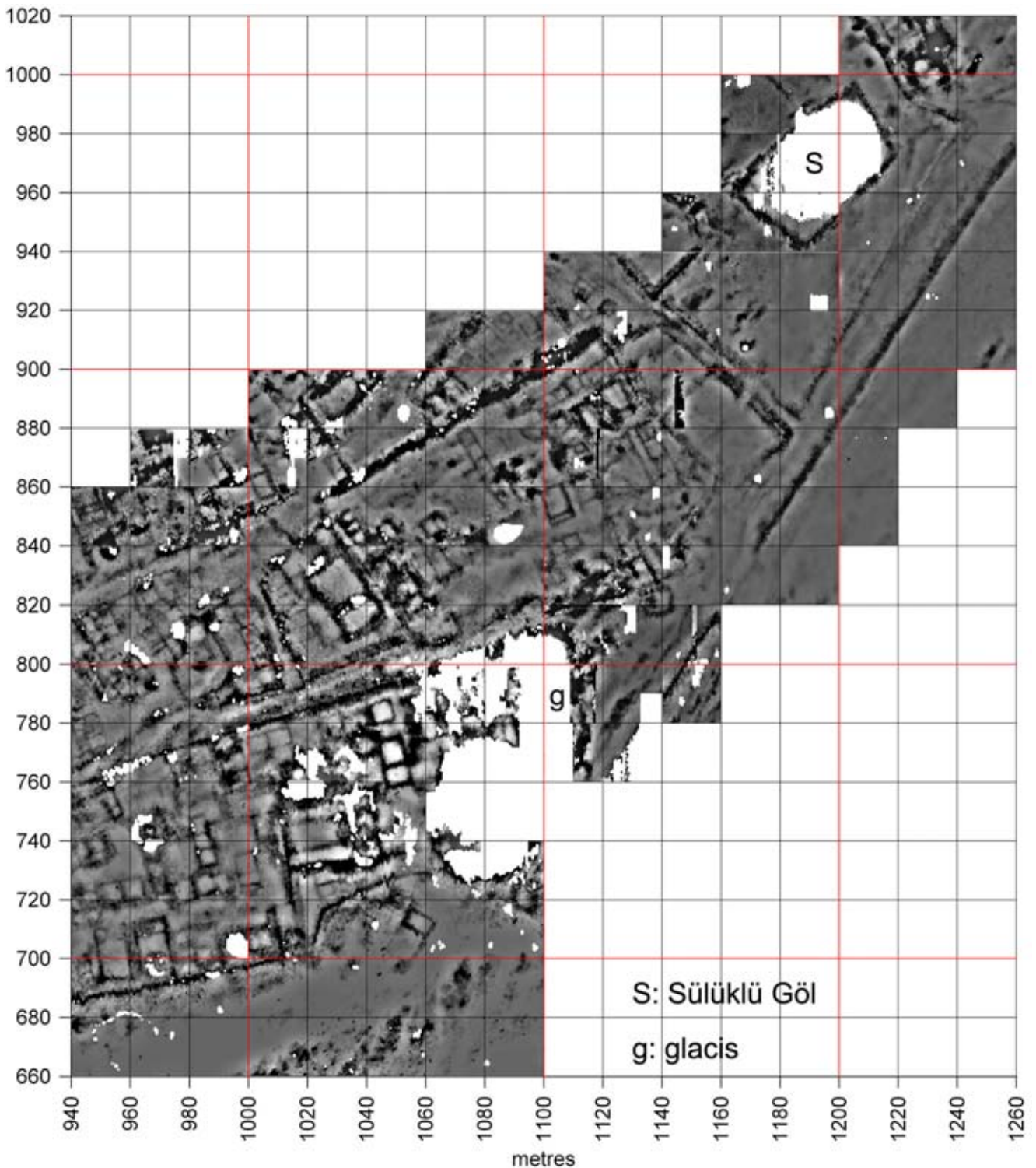


Figure 19. The stone glacis (g) at the east end of the Palatial Complex appears white where dummy data was entered. The area immediately in front is devoid of buildings. The stone lining of the Leech Pond or Sülüklü Göl (S) surrounds the white area at upper right while what appear to be newly discovered reservoirs, one partly surveyed with a sluice located at (e1140, n940) and another with double wall and central sluice located at (e1160, n880).

The Area by the Palatial Complex Glacis

The area immediately in front of the glacis at the eastern end of the Palatial Complex, as also demonstrated by earlier geomagnetic survey, is devoid of buildings (Figs 18 and 19). This is one of the few large unencumbered public spaces within the entire city.



Figure 20. Resistivity survey by the Leech Pond. Long structures built on the narrow terraces above the Field, on which the lone figure stands at centre left, are perhaps stables. The Kale, in shadow, dominates the horizon. (09dpng0910)

Reservoirs

The Leech Pond or *Sülüklü Göl* (Figs 20 and 21), so named on account of its population of the European medicinal leech, has long been recognised as an important and perhaps focal feature within the public zone at the southern part of the capital. There is local inconsistency in the naming of ponds, with the *Sülüklü Göl* sometimes being referred to as the *At Gölü* (Horse Pond). Resistance survey confirmed an absence of structures within the enclosed space around the Leech Pond while, in a new revelation, showing two reservoirs each with artificial banking and a central sluice, on slightly more elevated terraces to the west of the main stone-lined facility (Fig. 19). It is not yet clear whether these newly identified reservoirs fed into the main one or were entirely independent. In any event, they further highlight the importance of water management within the city.

'Royal Stables'

Work spread over several years since the first season of the current investigations at Kerkenes in 1993 has investigated a series of large, prominent features (Figs 20 and 21) located below the south-western side of the ancient acropolis, known as Keykavus Kale, and facing what we have called the Cappadocia Gate. The idea that the two large parallel structures on the terraces above the Field might have been stables was mooted in the first, 1993, season.

For this reason a two-metre wide test trench, TT19, was excavated across the terraces in 1996 in cooperation with Musa Özcan, then Director of the Yozgat Museum. Geomagnetic survey with a Geoscan FM36 fluxgate gradiometer was conducted over these terraces in 2000 while electrical resistance survey was done with a Geoscan RM15 in 2009.

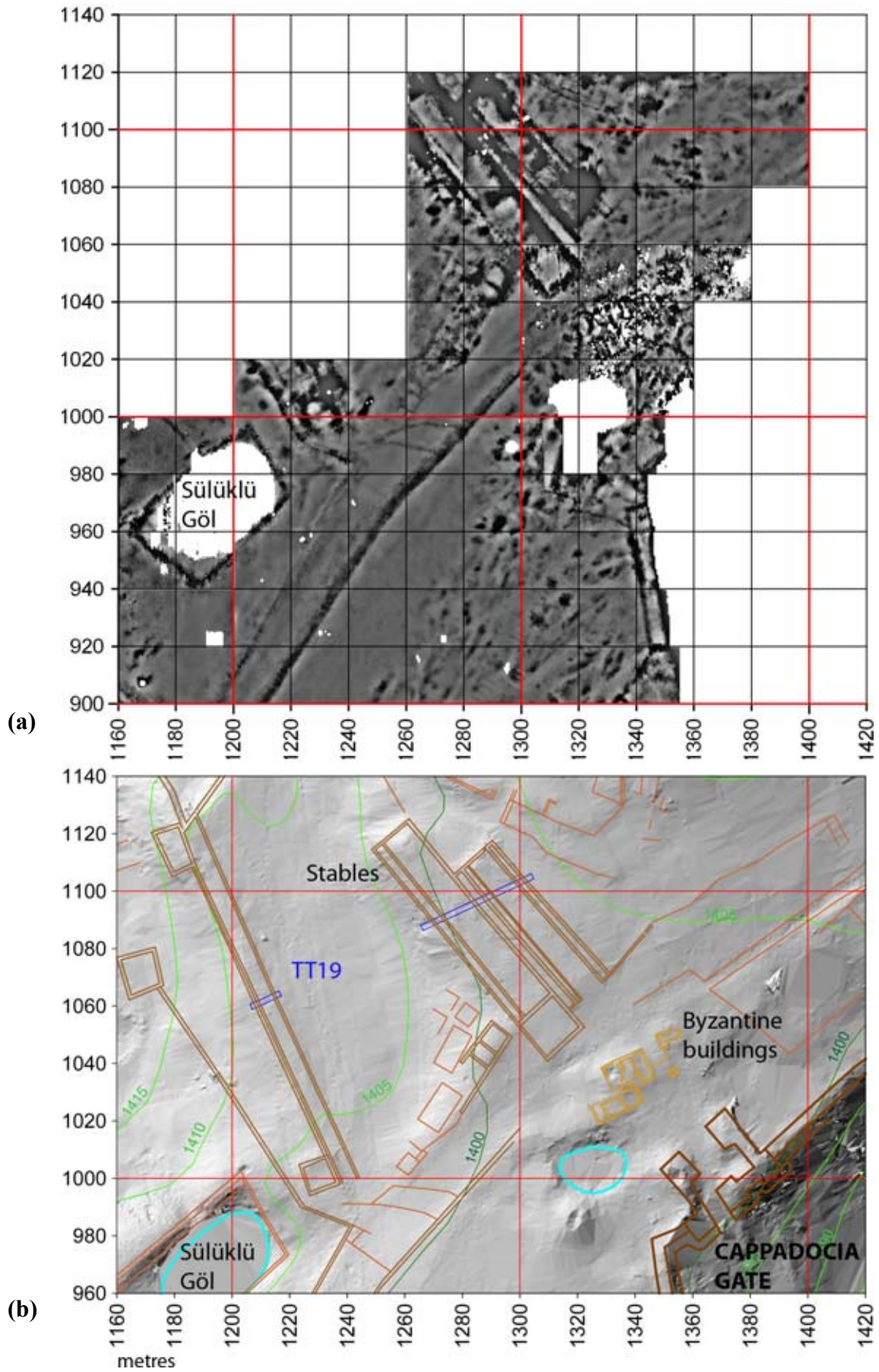


Figure 21. (a) Resistivity survey showing the long structures thought to be stables. (b) GPS map of the terraces overlaid with plans of visible remains and interpretation of geophysical surveys. Test trench TT19 was dug across the structures in 1996.

Location within the City

The features discussed here are located on the high southern ridge of the city between the substantial and very largely destroyed public structures that stood on the rocky terraces below and to the southwest of the acropolis and the stone-lined reservoir known as the *Sülüklü Göl*. The gate called by us the Cappadocia Gate, perhaps the most important of the seven city gates (Fig. 15), lies opposite, on the far side of the main street that runs from the East Gate past the Palatial Complex to the Gözbaba Gate. The major street leading from the Cappadocia Gate to the lower sectors of the city passes above, i.e. on the north-eastern side, of the uppermost structure. Thus these public structures are situated at the crossing of the two most important streets within the city which, according to Scott Branting's predictive models, would have carried the greatest volumes of traffic.

Architectural Considerations

One major consideration that would have needed to be addressed in designing stables at Kerkenes was the bitterly cold winters. A second and equally important consideration would have been aeration, particularly in the short hot summer months.

The roof span of each of the two stable buildings was approximately 20 metres. In this respect it is worth noting that a number of large halls with similarly wide spans are known at Kerkenes. These buildings were covered with pitched roofs of reeds supported by two rows of substantial wooden posts resting on stone bases. Equally large buildings appear to have been similarly roofed as early as the ninth century BC at Gordion. However, posts supporting the pitched roofs over the largest of the pre-destruction megarons at the Phrygian capital rested on wooden sleeper beams rather than individual post bases. The pitch of a thatched roof in a region prone to heavy falls of snow could hardly have been less than 40°, in which case the apex of the pediment would have approached eight metres in height. It might thus be imagined that the buildings attained a total height approaching or in excess of 12 metres. While positive evidence for post bases has yet to be found, it is known that stone bases are not generally identifiable on geophysical imagery at Kerkenes, presumably because, in contrast to linear features such as wall foundations, they are not distinguishable from the stone rubble terrace fill in which they sit.

Phosphate Analysis

Soil samples were taken for phosphate analysis to be carried out in the Central Research Laboratories at METU by Prof. Cemal Göncüoğlu. Some samples were taken from within the stables themselves while others were collected from the Field, the long structure flanking the southwest edge of the field and the main street above the terraces. In most cases it appeared that erosion had exposed the subsoil, an observation that had already been made in test trench TT19. Samples were taken by burrowing a few centimetres into the ground avoiding or removing plant roots in as far as was possible. Where stone paving had been revealed in test trench TT19 samples were taken from below the paving. Control samples were taken from similar terraces laying to the north of the Palatial Complex, although these samples are likely to be of deposits above floors and surfaces.

Excavations, together with micromorphological analysis conducted by Wendy Matthews in 1996, have consistently demonstrated that shallow deposits above floors and surfaces at Kerkenes are thoroughly mixed as a result of bioturbation caused by burrowing rodents, birds and reptiles. The entire site is heavily grazed by cattle and sheep as well as some goats and occasionally water buffalo. Such grazing has in all probability been common practice for most of the last two and a half millennia. In theory, if there has been intensive stalling of animals, as in stables, the soil and subsoil should contain much higher levels of phosphate than other areas regardless of subsequent grazing over the site.

EXCAVATION AT THE CAPPADOCIA GATE

In June and July 2009, excavations at the Cappadocia Gate (Figs 22 and 23) were conducted in three areas:

- (i) Within the passage and court (TR12, TR22 and TR13);
- (ii) At the eastern corner of the glacis below the East Tower (TR25);
- (iii) On the outside of the North and East Towers (TR26).

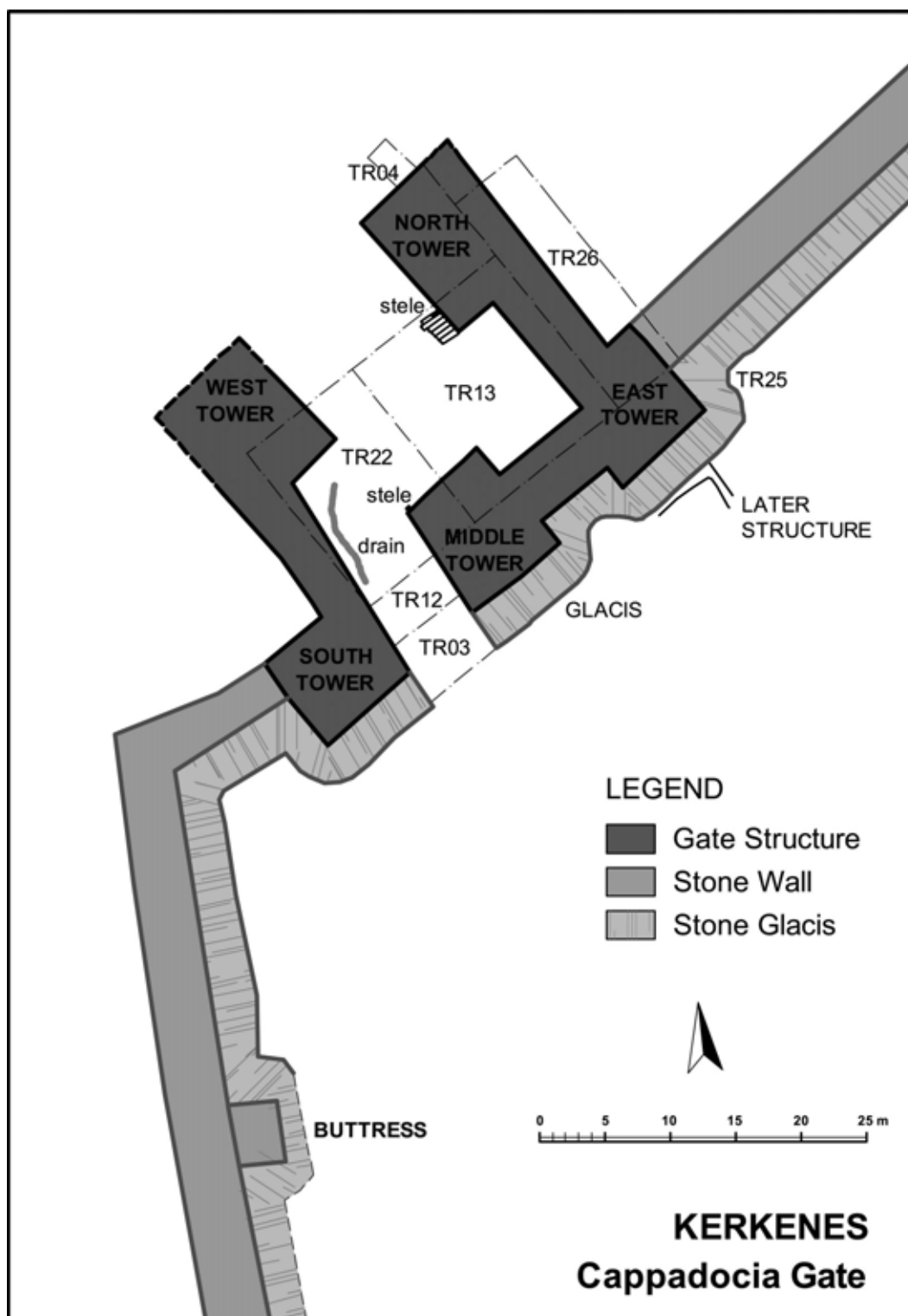


Figure 22. Plan of the Cappadocia Gate with trenches, drain and the stelae.



Figure 23. The Cappadocia Gate with the Kale behind. (09dpcp2206)



Figure 24. Paving stones uncovered in the gate passage are angular and of moderate size. (09dpcp0642)

The Gate Passage and Court

Trenches TR12, TR22 and TR13 within the gate structure revealed the northern end of the gate passage together with a large portion of the gate court (Figs 24 and 25). A large amount of stone collapse was cleared (Fig. 26). Workers removed some of the larger blocks (Fig. 27) but where there was access this task was facilitated by a tractor (Figs 28 and 29). Major discoveries, summarised below, include a stone paved road, additional stone paving with a drain, an aniconic (formless) granite stele set up at the corner of the Middle Tower and the excavation of a partially burnt human skeleton. The only finds comprise two identical copper alloy bi-lobate arrowheads found laying directly on the stone paving.



Figure 25. The Cappadocia Gate at the end of the season. (09dpcp2012and13)



Figure 26. Clearing collapse from the gate passage and court. (09dpng2146)



Figure 27. With no access for machinery big blocks are moved by manpower. (09dpng2806)



Figure 28. Stacking large fallen stones for later use in repairs. (09dpcp0233)



Figure 29. One way of moving large stones. (09dpcp0509)

Much of the walling is in a precarious condition (Fig. 30) and will require support before further work can be undertaken. Excavation of the north-eastern portion of the gate court (Fig. 31) will be completed in 2010. Options are being considered for both long and short term solutions, the latter perhaps entailing the insertion of tubular metal scaffolding.



Figure 30. The very loose stone core of the southwest wall was exposed when the facing, in which horizontal timbers were incorporated, had collapsed. (09dpcp1619)



Figure 31. Excavation in the gate court will be completed in 2010. Leaning walls will need support. (09dpcp2004)

Trench TR25 exposed the junction of the city wall with north-eastern corner of the East Tower (Fig. 32). This work was carried out in conjunction with the preparation of a proposal for conservation and enhancement of the glacis in 2010. At this location it was found that the stone glacis at the corner of the tower had been completely destroyed while the inner corner has also been partially or totally destroyed. At the inner corner the very loose condition of both the rubble collapse and the indistinguishable rubble fill behind the facing stones of the glacis made it impossible to reach the base of the glacis safely. If further work is to be done here it will have to be carried out in conjunction with conservation and at least partial replacement of glacis face stones. A ramp has been created to facilitate access round the outside of the East Tower (Fig. 33).



Figure 32. At the southeast corner of the East Tower all but the base of the glacis was found to have been destroyed. (09dpcp1256)



Figure 33. A ramp on the outside of the East Tower, at right, facilitates access to the front of the Cappadocia Gate glacis which will be restored in 2010. (photo Yozgat Valilik web page)

Trench TR26 (Figs 34 and 35) was located to the northeast of the Gate where uppermost surviving stones of the inside face of the city wall were uncovered and, after recording by photography, a modern shepherd's wall was removed from the top of the ancient city wall. This work confirmed observations made some seasons ago that the northeast end of the East Tower was buttressed and that the city wall was butted against the buttress. No evidence for means of access to the top of the tower or the city wall was revealed. The northeast face of the long stretch of walling extending from the North Tower south-eastwards to the junction of the inside face of the city wall with the East Tower was uncovered down to the level of the modern ground surface. This was achieved by removal of fallen stone rubble and, at the north end, crude shepherd's walling. The main result has been significant visual enhancement of the monument.



Figure 34. Exposing the inner face of the city wall with the face of the northeast wall of the gate structure at right. (09dpcp1111)



Figure 35. Perhaps as much as two metres of wall face lays still buried beneath the exposed portion. (09dpng3002)

Summary of Excavation Results from the Cappadocia Gate

1. A very considerable amount of timber was used in the construction of the gate. Horizontal beams were set back a few centimetres from the wall faces, partially or completely hidden by small stones and some mud that were employed to jam the round timbers in place. There is no evidence for either vertical timbers nor for cross beams within the core of the wall. Horizontal beams were in the order of 25cm thick, there being no evidence as to whether they were split logs, squared beams or complete trunks. Inside the Passage and Court timbers were set at about 1.00m intervals. There are no preserved beams, only ash and fragments of charcoal recovered amongst the collapse (Fig. 36). Some samples have been retained for possible dendrochronological dating, although no pieces approach the minimum of 100 preserved rings, let alone possess bark. Most or all charcoal has very wide rings, most probably being Black Pine (Karaçam, *Pinus nigra*). These observations also appear to have been true of the entire circuit of defences, a circumstance that would go some way to explaining how the entire 7 km circuit of stone defences had collapsed to more or less the same height, i.e. the level of the first set of horizontal beams in the outer face of the wall which would seem to have been laid approximately one course of stone above the top of the glacis. The extent of deforestation implied by this discovery would not have been insignificant.
2. The gate structure collapsed during the fire with the walls continuing to burn. This is seen in sections cut against wall faces where the collapsed fill resting against the walling is seen to have been reddened by the fire for a distance approaching 25 cm from the face stones (Fig. 37). Samples have been taken in the expectation that it will be possible to ascertain the degree of heat attained. A human skeleton (see below) was partially burnt.
3. Inside the gate, i.e. the passage and the court, wall faces were provided with two thick layers of mud plaster. This replicates evidence recorded in 2007 and negates the argument that mud plaster is indicative of roofed space. Fallen mud plaster appears to have partially covered paving before destruction. Samples have been taken to test this idea. This observation again raises the possibility, originally broached by Professor David Stronach in 2000, that the glacis might have been covered with mud plaster. Such a smooth mud-plaster face would have disguised the position of timbers and reduced the possibilities of gaining footholds. The plaster would, at the same time, have held loose chinking stones in place. Against this idea is the huge amount of mud plaster required but, on the other hand, it can be noted that the entire gate to the Early Phrygian Citadel at the Phrygian capital of Gordion was provided with a thick coat of mud plaster remnants of which are still visible.
4. Sandstone, as at the front of the gate, was used sparingly on tower tops with current indications that there was a single course of sandstone and timber on the northwest corner of the Middle Tower (Fig. 37). There is no indication of crenulations or mud-brick within the gate structure. However, we do have evidence for some kind of small mudbrick construction, made of surprisingly small bricks of many colours, on the Middle Tower. No sandstone appears to have been used on the North Tower at the rear of the Gate.
5. A paved road runs through the entrance on a different alignment to both the passage and the gate (Fig. 38). Pavers are relatively small and edges straight. The southern end of the initial paving coincides with the north-east corner of the Middle Tower.



Figure 36. Ash and fragments of charcoal have been recovered while cleaning the pavement and drain in the gate passage. (09dpcp0305)



Figure 37. A stele stands at the corner of the Middle Tower. Fallen sandstone blocks from the top of the tower were planned before removal while the very large granite blocks, at left, have been left where they fell. (09dpcp0624)



Figure 38. Looking down the paved street into the passage with the stele at the corner of the Middle Tower and the drain at right. (09dpcp0921)

6. There were additions to the paving. On the west additional paving was bounded by a stone drain, partially capped (Fig. 38). Paving was also extended to the south, terminating against bedrock just short of the last trench (TR12) that was excavated in the gate passage. A portion of additional paving on the west side was uncovered and seen to run up the base of the stepped monument.
7. Very clean light clayey material lay on the paving (Fig. 39) directly beneath the destruction. It is suggested that this represents fallen wall plaster. If this is correct it may yet turn out that the layer of similar material that was found to cover the base of the glacis was not, as had been thought, a laid surface but, rather, plaster washed from the face of the glacis and wall.
8. An entirely aniconic stele has been set up at the corner of the Middle Tower and the passage, against the north-west face of the tower (Figs 40 and 41). The faces of this stele display signs of dressing in addition to smoothing through use (Fig. 42a). The stele was set into the pavement and packed around with small stones covered with mud (Fig. 42b).
9. The front of the stepped monument (Fig. 43a) on which a smashed semi-iconic stele, or idol, was found (Fig. 43b) has now been completely excavated. Steps, once covered with mud plaster, were for ritual rather than ascent.



Figure 39. Cleaning the paved gate passage and partially capped drain. To the left a section through the clean light clayey material that lay over the pavement was recorded before further cleaning was undertaken. (09dpcp0633)



Figure 40. The aniconic stele by the corner of the Middle Tower. (09dpng2931)

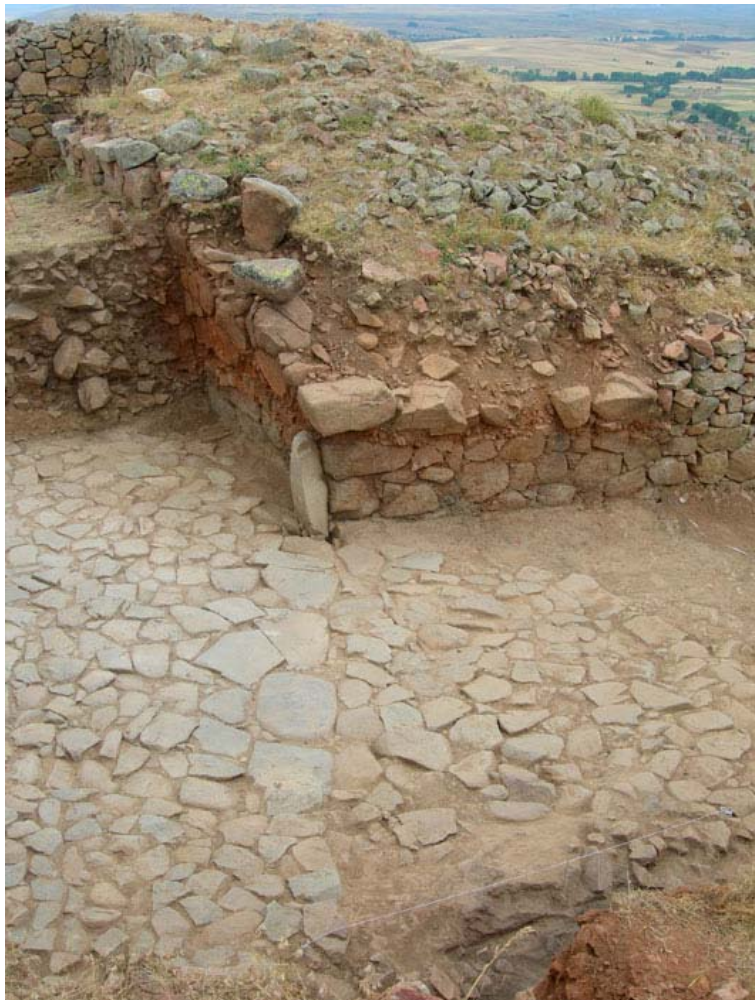
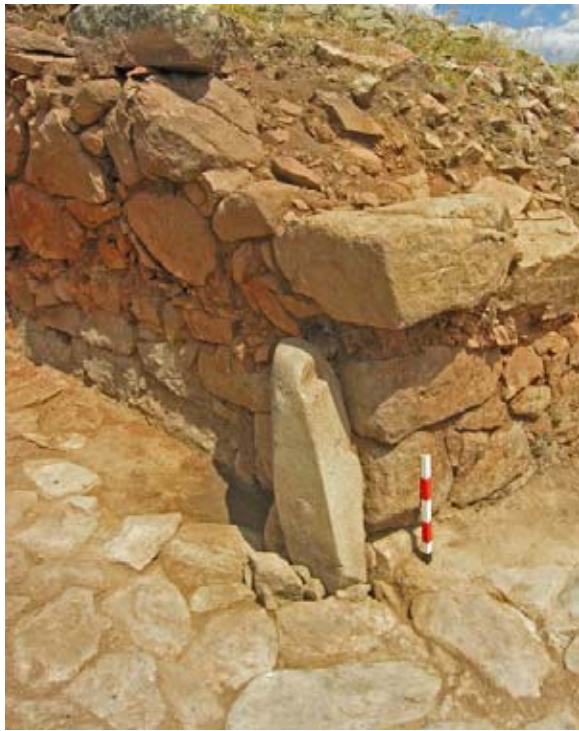


Figure 41. Standing against the wall the stele had been inserted into the pavement where the end of the street meets the tower corner. (09dpng2939)



(a)



(b)

Figure 42. (a) Although formless the stele had been faced by pecking and the top worn to a polish. (09dpnc2328)
(b) Set into the pavement the stele was secured by packing stones. (09dpng2947)



(a)



(b)

Figure 43. (a) The stepped monument on which semi-ionic stele, or idol, stood. Steps, once covered with mud plaster, were for ritual rather than ascent. (09dpcp1705)
(b) The digitally reconstructed semi-ionic stele.

10. A partially burnt human skeleton was found laying face down in the drain (Fig. 44). Over three days, Nuri Arslan and Yasemin Özarслан cleaned, recorded and lifted the burnt and crushed bones (Fig. 45). Initial interpretation is that the person, a woman, was apparently killed while attempting to flee when the burning timbers in the passage wall face caused the structure to collapse. The bones were sent to Prof Dr Yılmaz Erdal at Hacettepe University for anthropological study which might reveal the cause of death.



Figure 44. The skeleton of a middle aged woman was uncovered during excavations in the Cappadocia Gate passage. (09dpcp1016)



Figure 45. Nuri Arslan and Yasemin Özarслан cleaning the burnt and crushed bones of a woman apparently killed while attempting to flee. (09dpcp1127)

FUTURE WORK

Geophysical Survey

Resistivity survey in the spring continues to produce valuable results and add clarity to the results obtained from previous gradiometer survey. Further survey will continue for a few weeks each spring, the exact duration depending on funding and weather.

Cappadocia Gate

Excavation of the gate court will be completed in 2010 with supporting scaffolding being inserted where necessary. A program of conservation and enhancement of the stone glacis at the front of the gate is being finalised for submission to the Restoration Commission at Sivas and the General Directorate. The enhancement will include fencing and barriers to direct human and animal traffic along routes that will not adversely impact on the monument. Design and installation of information boards forms an integral part of the proposal. This work is essential if the glacis is not to be lost. Funding to carry out this work in 2010 will come from the *US Ambassador's Fund for Cultural Preservation*.

Completion of excavation in the gate court will permit rapid completion of a volume devoted to excavations at the Cappadocia Gate and thus complete this aspect of the Kerkenes Project.

Transportation Studies

In 2010, Scott Branting, Director Designate, will return to Kerkenes with a team from the University of Chicago. Scott, in a new initiative, will begin excavation of a large public building in the lower sector of the city while also continuing his GIS Transportation studies.

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