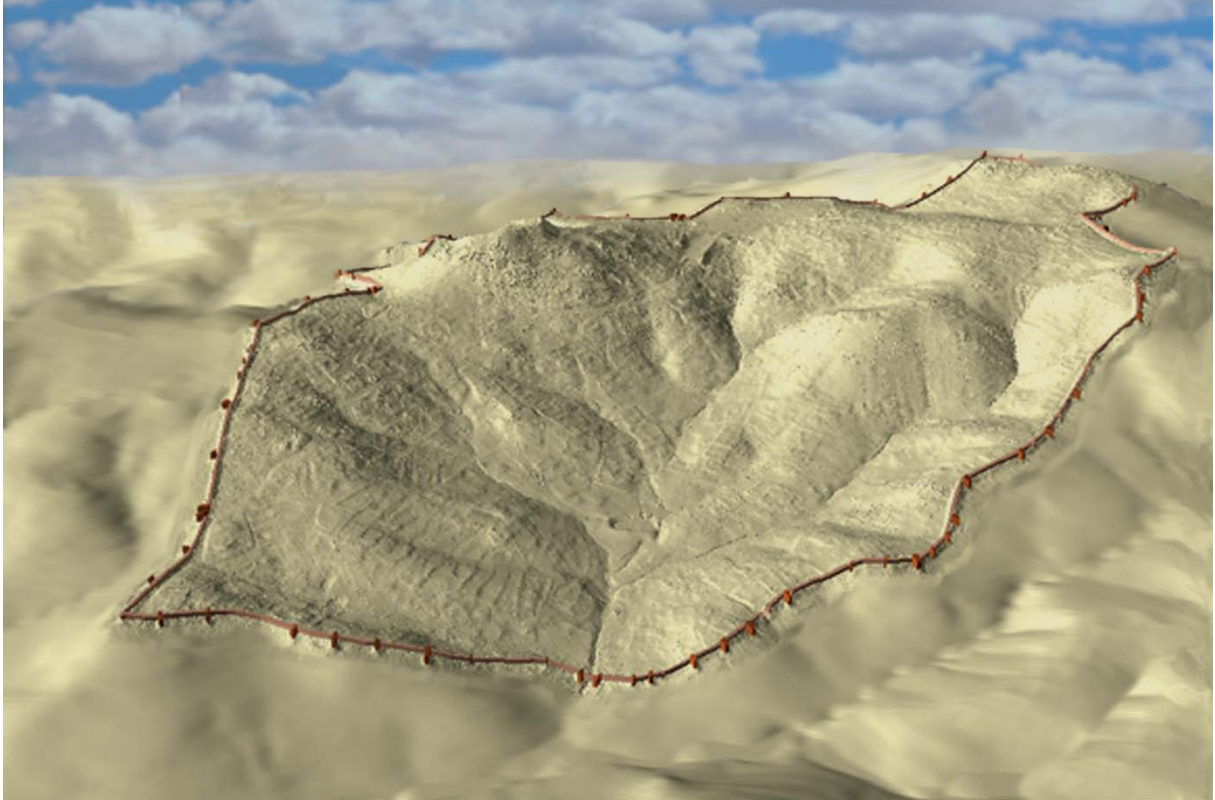


# THE KERKENES DAĞ SURVEY



PRELIMINARY REPORT ON THE 2000 SEASON

Geoffrey and Françoise SUMMERS

## INTRODUCTION

In the first year of the Third Millennium a combination of state of the art remote sensing techniques and traditional excavation methods produced many new insights into the magnificence and complexity of this Iron Age capital. Evidence for a major remodelling of the Palace Complex was obtained and the discovery of a columned hall, a type of building with clear Iranian antecedents, within the Palace Complex may lend further weight to the identification of Kerkenes with the Pteria of Herodotus, a place which the Byzantine geographer Stephanos called 'a city of the Medes'.

Revelation of monumental architecture at the Cappadocia Gate and the Palace Complex, test excavation and remote sensing survey gave remarkable new results. Architectural stone façades display impressive rhythmic symmetry on an imperial scale, complimented by evidence of a taste for sumptuous objects and a corpus of ceramic vessels. Geomagnetic imagery revealed the secrets of southern third of the city.

## THE TEAM

More than 50 staff and students took part in various aspects of the 2000 season and some continue to be deeply involved in data analysis and publication. Our thanks go to all participants in the fieldwork, in post-fieldwork, in the preparation of publications and in all other aspects of the project.

A group of men from Sahmuratli Köy gained very considerable skills in conducting remote sensing surveys, others approached excavation, clearance and the architectural consolidation of monuments with skill and enthusiasm.

Participants :

Aktan Acar	Mehmet Ekmekçi	Ceyda Oskay
Aysun Akkaya	Emine Erdem	Musa Özcan
Javier Alvarez-Mon	Salih Erdurmus	Derya Özgöç
Firat Ant	Mark Francis	Jennifer Ross
Nurdan Atalan	Katsutoshi Fukuda	Kendra Roth
Abdullah Ates	Katherine Geers	Isabelle Ruben
Harun Aydin	Andrew Goldman	Emanuelle Salgues
Nahide Aydin	Hilary Gopnik	Köksal Sanli
Ömür Bakirer	Kemal Gülcen	David Stronach
Özge Basagaç	Vedat Gün	Françoise Summers
Aylin Basal	Burcu Gündogdu	Geoffrey Summers
Nilüfer Baturayoglu	Ömür Harmansah	Ugur Terzioglu
Scott Branting	Hanna Kepka	Refik Toksöz
William Collins	Catherine Kuzucuoglu	Erol Tunali
Sertan Çağlar	Ugur Leloglu	Esra Uyanusta
Catherine Demos	Emre Madran	Arda Uysal
Umut Dervis	Sabrina Maras	Baris Yagli
Alper Dinçer	Sera Mutlu	Bige Yücelyigit

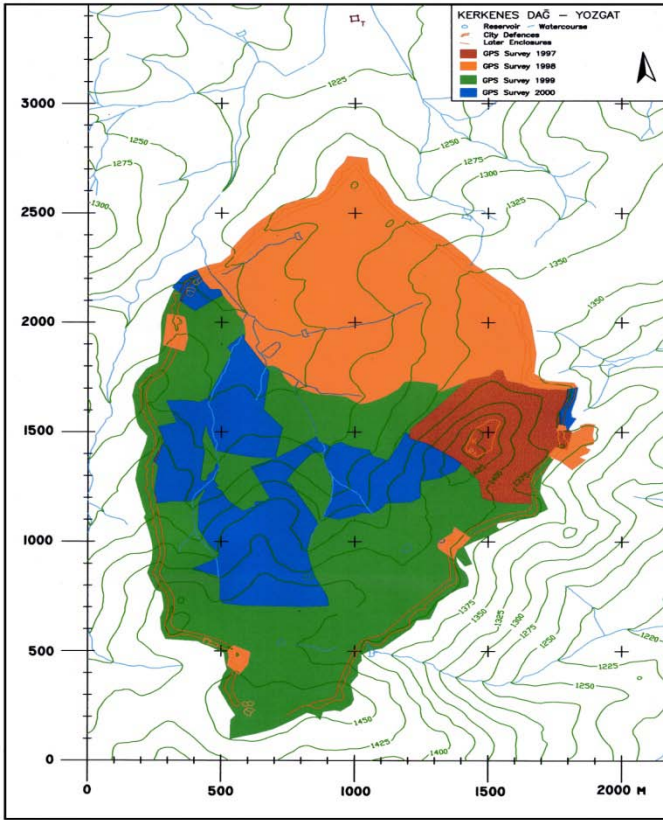


Figure 2: Progress map of the GPS survey completed in August 2000.



Figure 3: A Trimble 4600LS receiver being used in kinematic GPS survey by Köksal Sanli and Nurdan Atalan.

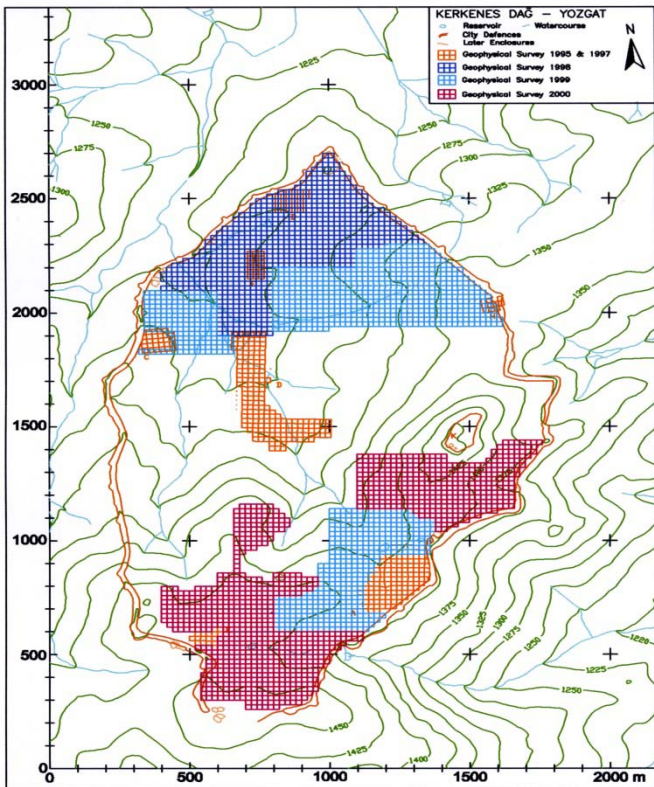


Figure 2: Progress of geomagnetic survey. The 60 hectares covered in 2000 are in red.



Figure 3: Nüfel Babayigit from Sahmuratli Village collecting geomagnetic data.

## THE URBAN SURVEY

### Completion of the GPS Survey

In 1997 Scott Branting initiated a highly sophisticated Global Positioning System (GPS) survey. In 2000, assisted by Nurdan Atalan and Köksal Sanli, Scott completed this essential component of the remote sensing program at Kerkenes (Figs 2, 6 and 7). The result is based on some 1,400,000 individual readings obtained through intensive kinematic survey with Trimble equipment. The 3D surface simulations can be combined, in whole or in part, with balloon photographs, geomagnetic data and measured plans. This is the first time that such intensive GPS survey has been carried out over an entire ancient city, underscoring the central role that the application of new, non-intrusive, techniques play in the development of research design at Kerkenes. Technologies with archaeological potential advance rapidly. It is worth noting that highly accurate GPS, such as that now utilised at Kerkenes, did not exist when the Project was inaugurated in 1993.

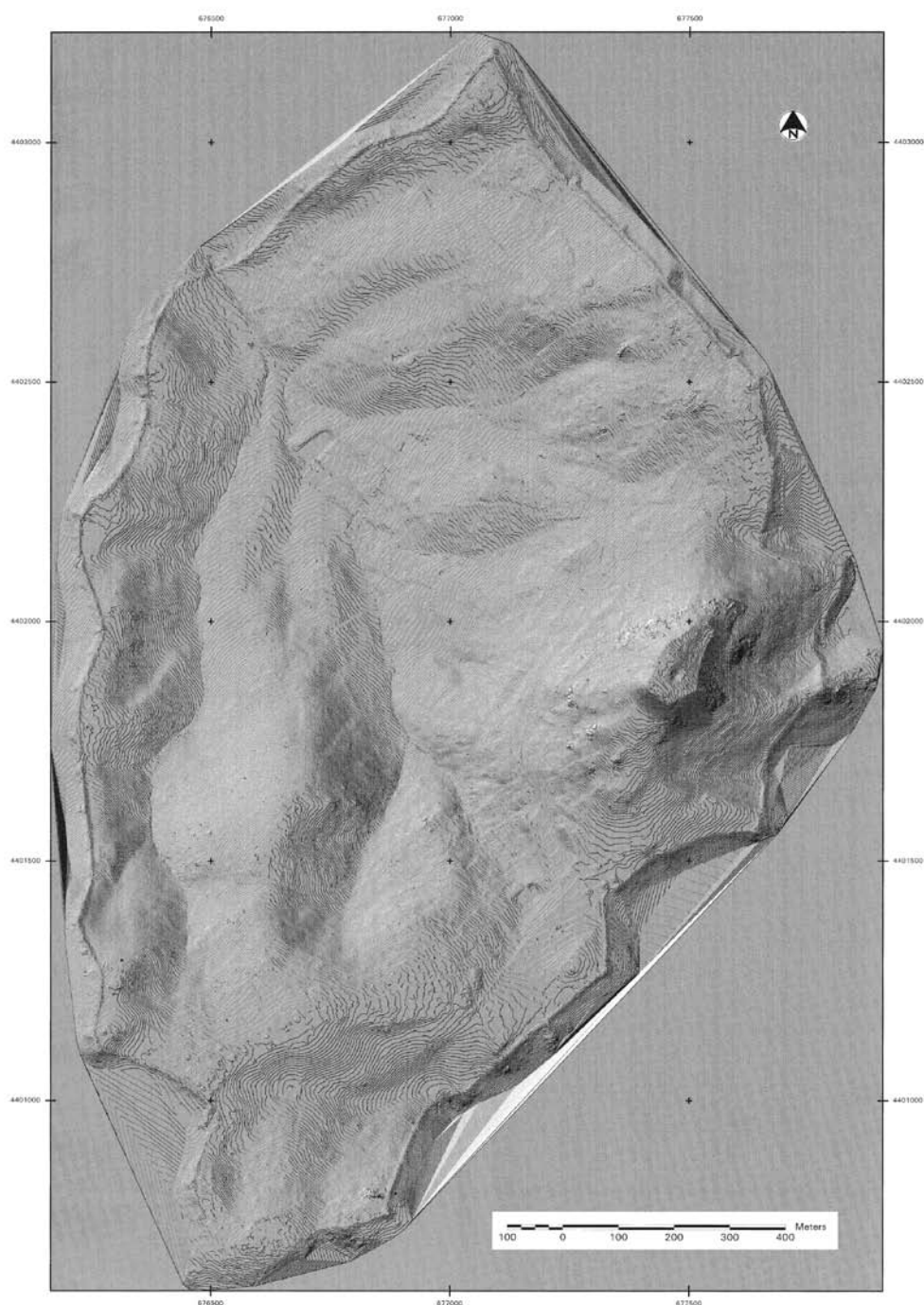


Figure 6: Digital Elevation Model (DEM) of the city, with north at top, made from GPS data by Islem GIS using ERDAS Imagine software.

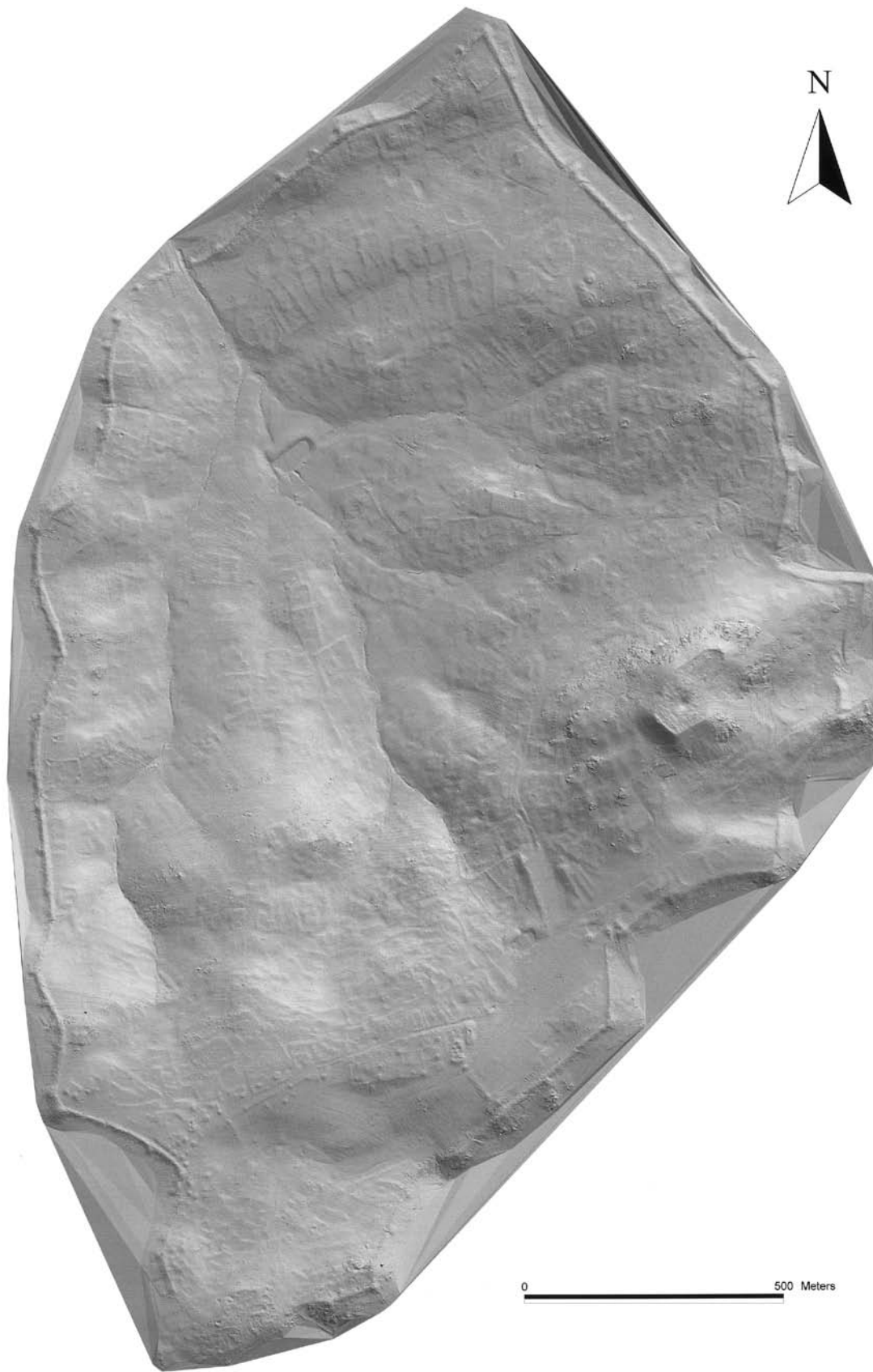


Figure 7: Triangulated Irregular Network (TIN) simulation of the city made in Arcview 3D Analyst from 1,400,000 GPS readings.

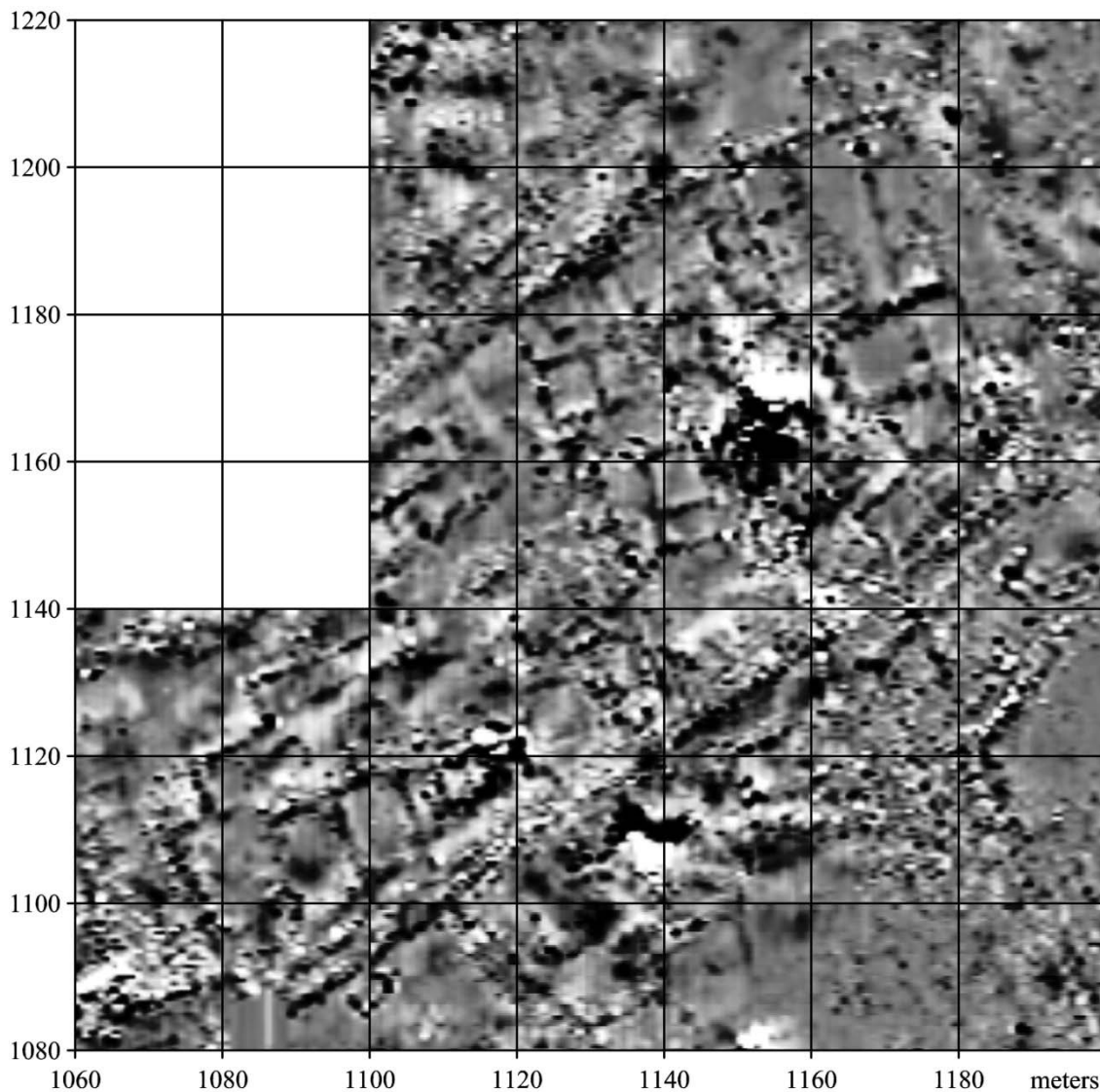


Figure 8: Geomagnetic image showing an urban block containing free-standing two-roomed structures and other buildings.

### Geophysical Survey

Geomagnetic survey of the southern portion of the city, from the East Gate to the Göz Baba Gate and covering many of the steep slopes to the north, was completed in 2000 (Fig. 4). Co-ordinated by Nahide Aydin, assisted by Mark Francis, Katsutoshi Fukuda and Kathy Geers, data collection with two GEOSCAN FM36 fluxgate magnetometers covered an area of 60 hectares in only 30 days (Fig. 5). A selection of images can be seen on Figures 9 to 10.

Highlights include evidence for considerable building on the steep slopes below the Kale and on the even steeper slopes on the north side of the southern ridge, and the discovery of a large bank of reservoirs on the slopes below the Kiremitlik, as well as the definition of large building complexes, perhaps all public, between the Leech Pond and the East Gate.

Large area geomagnetic survey of sub-surface remains continues to reveal a detailed city plan that it possible to interpret with increasing accuracy and confidence as additional techniques and test excavation add further dimensions. Completion of the geomagnetic map is the central goal of the Project over the next two seasons. The result will be an unprecedented plan of an Iron Age city.

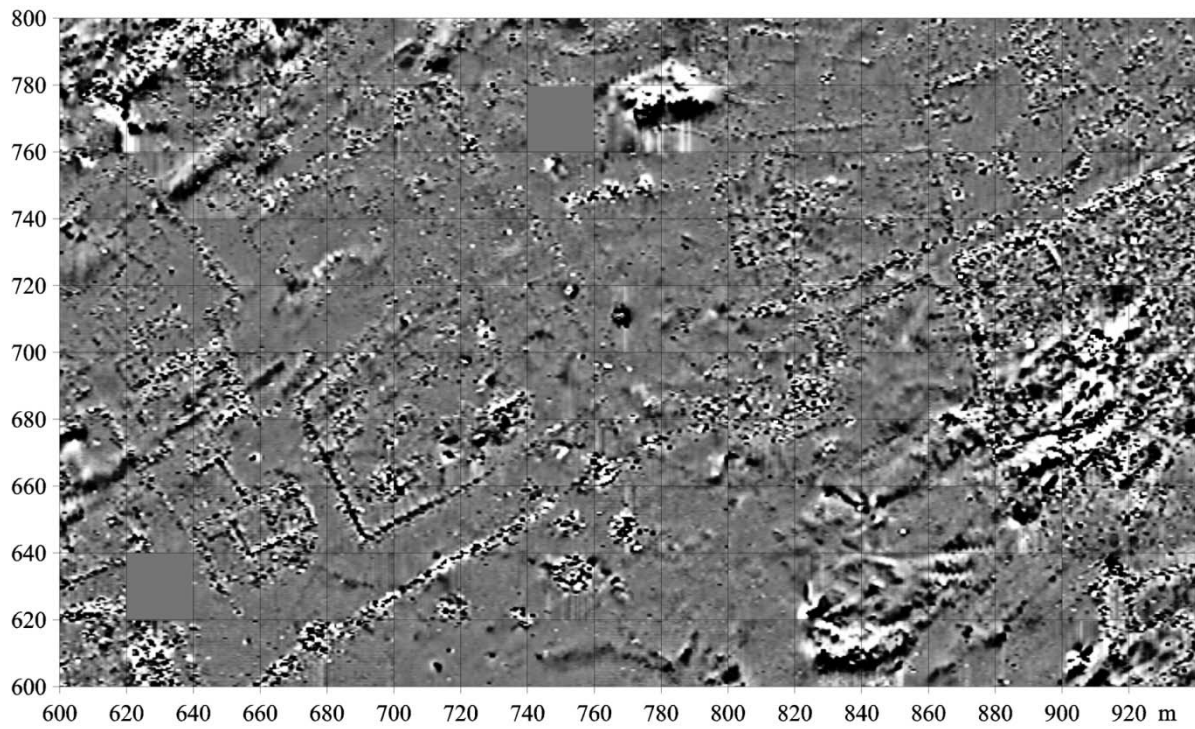


Figure 9: West end of the 'Palace Complex' at centre right, street and urban block.

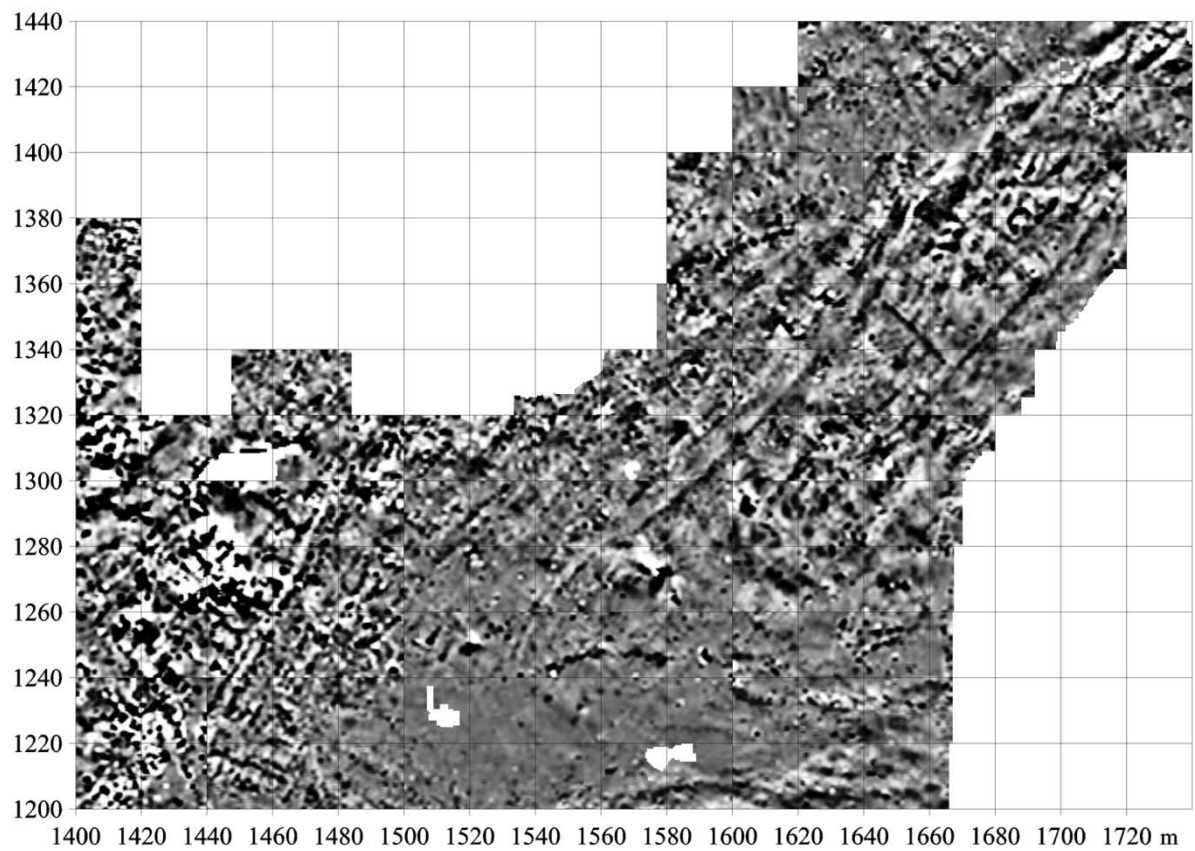


Figure 10: Street running north east towards the east Gate flanked by urban blocks. At left many details of large perhaps, structures can be discerned in spite of strong background noise from the geology.

In May, when the ground was still wet from spring rain, a brief season was devoted to experimentation with geoelectric survey using a Geoscan RM15 resistivity meter (Fig. 11) and in August Abdullah Ates and 3 students from Ankara University made experiments with a Noggin 250 Ground Penetrating Radar (Fig. 12), a CM-031 Conductivity meter and Magnetic Susceptibility.



Figure 11: Natalie Summers and Adnan Kilicarslan making the resistivity survey in the spring.



Figure 12: Posing with the Ground Penetrating Radar.



## Geographic Information Systems (GIS)

GIS is the environment for the management of the project data sets (Fig. 13 and 14). The different techniques of mapping surface and sub-surface features using balloon photography, GPS topographical survey, geophysical survey, ground truthing and evidence derived from test excavations, are brought together in a variety of combinations. The aims are twofold: the first is the creation of virtual reality simulations that will provide stunning visual images for a wide public and the second is the application of analytical techniques that will provide new insights into the urban dynamics of the city.

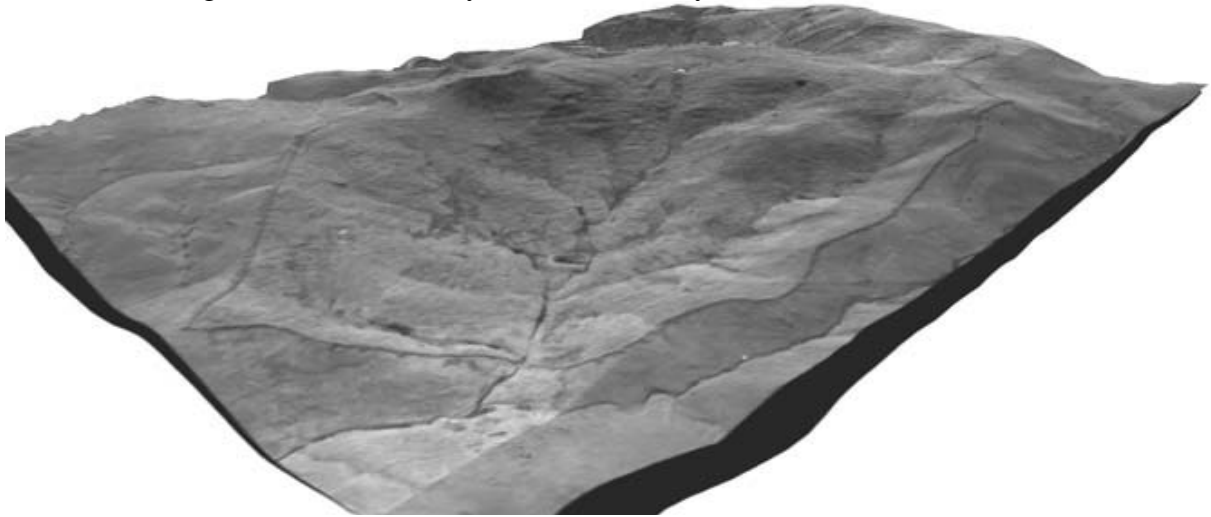


Figure 13: The rectified photograph of the site has been combined with the GPS 3D terrain model in Arc View using 3D Analyst. The 3D data allows virtual fly over and animation.

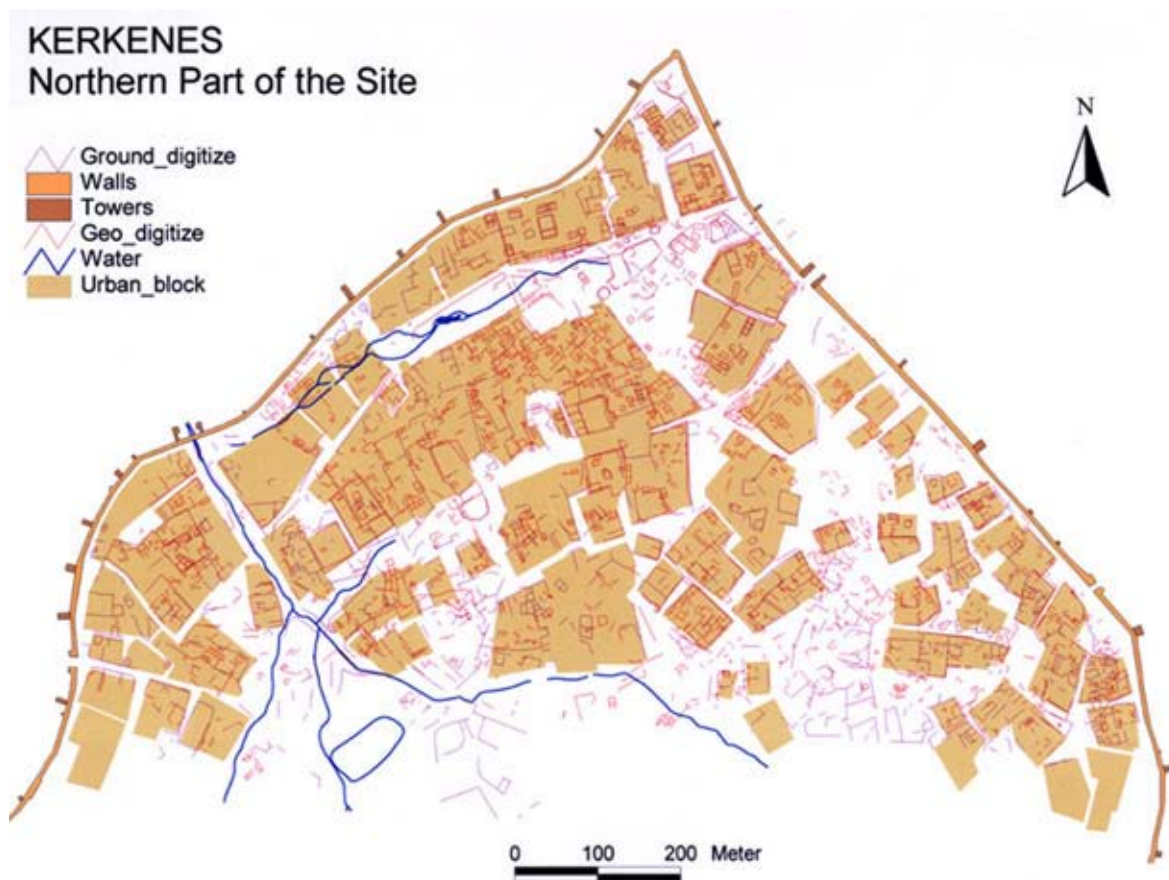


Figure 14: Digitised topological features of the northern portion of the site displayed in Arc View.



Figure 15: The steeply inclined stone glacis at the 'Cappadocia Gate' is fully preserved in the central niche of the double South-East Tower. The east wall of the gate passage is in shadow. The Kale forms a backdrop.

## CLEARANCE AND TEST EXCAVATIONS

### The 'Cappadocia Gate'

In 2000 a new plan of the 'Cappadocia Gate' was obtained (Fig. 16), the impressive double tower with a central recess (Figs 15, 17 and 18) flanking the east side of the gate was revealed, evidence for the unexpected extent of preservation of the inner gate chamber was obtained and the existence of a small, secondary, Iron Age structure in front of the easternmost tower was recorded. One major surprise was that the form of the double tower appears to have been an architectural design element and not, as had been expected, a direct reflection of the character of the underlying bedrock. The symmetry of the plan echoes that of the Palace Complex façade. Whatever combination of causes may account for the design, including perhaps topography and structural strength, visual impact and architectural form would appear to have been over-riding concerns. It was also discovered that the glacis was preserved to its full original height in the centre of the recess and that one course of the vertical wall still rose directly behind the recess.

A second surprise was the existence of a small structure in front of the easternmost tower. This extramural building would have reduced both the visual impact of the gate complex and its defensive properties. Evidence might suggest that this secondary structure was demolished before the final assault on the city.

It was further ascertained that the sandstone blocks, noted last year as being used in a Byzantine repair to the gate passage, are of Iron Age origin. It appears that there were sandstone crenellations atop the towers flanking the gate and perhaps carried over a part of the gate passage. The sandstone blocks display simple tool marks, have some well smoothed surfaces and bear traces of heavy burning. There is insufficient sandstone for there to have been more than a single course. Further evidence for the inclusion of timbers in the upper part of the towers was revealed, but whether or not battlements were carried on overhanging parapets (as was suggested in 1999) remains moot.

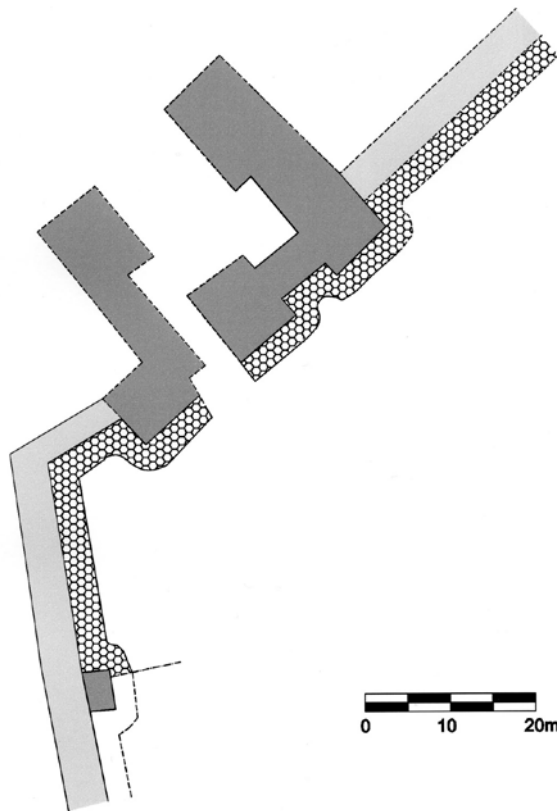


Figure 16: Provisional plan of the 'Cappadocia Gate', as revealed by the end of the 2000 season.



Figure 17: Kemal Gülçen, from the METU Photogrammetry Group, recording the stone glacis at the base of the 'Cappadocia Gate' double tower and niche.

# CAPPADOCIA GATE GLACIS

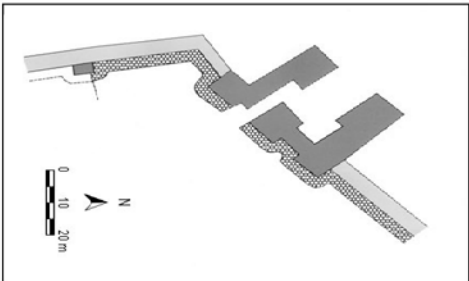
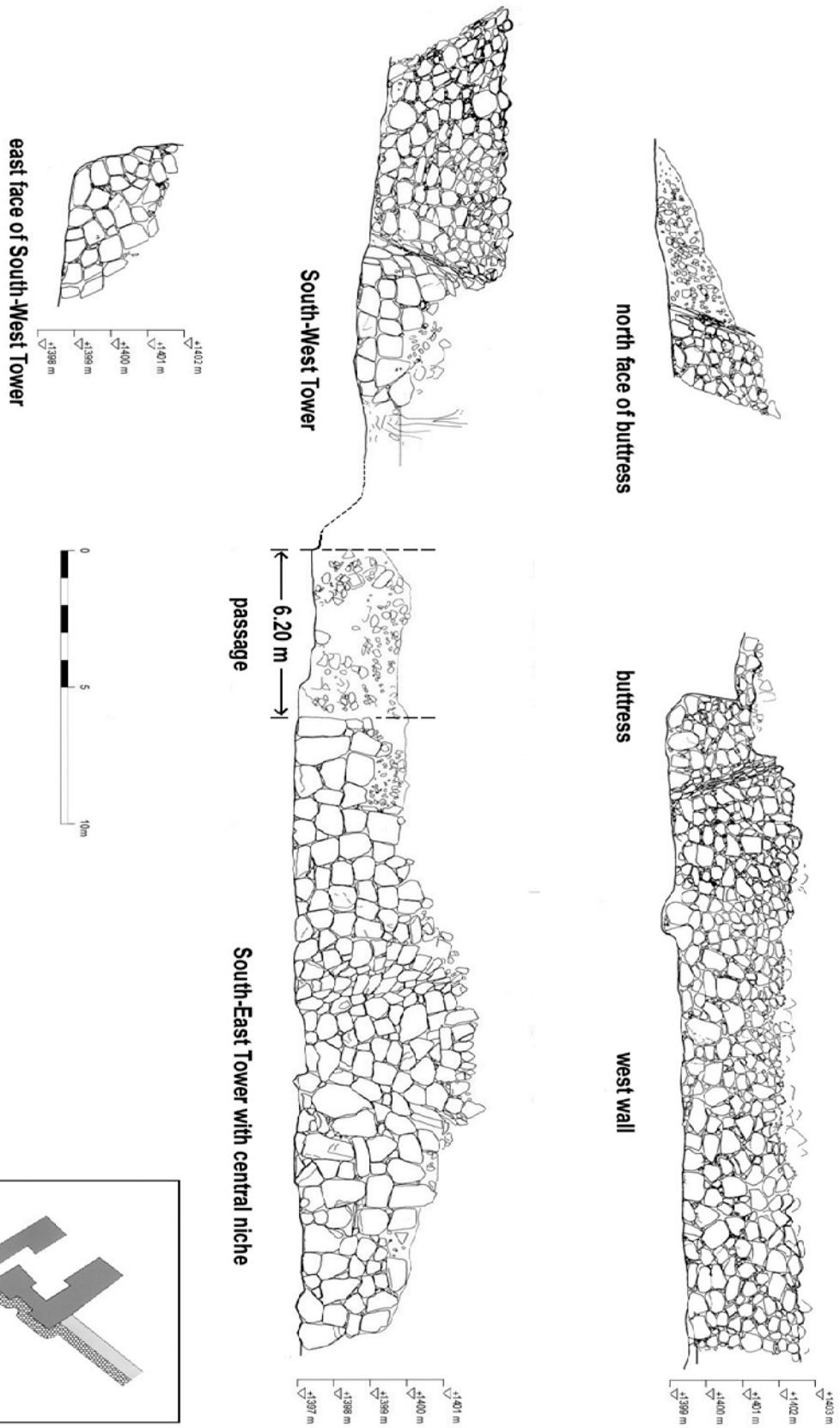


Figure 18: Photogrammetric elevation of the 'Cappadocia Gate'. The glacis is preserved to its full original height in the niche.



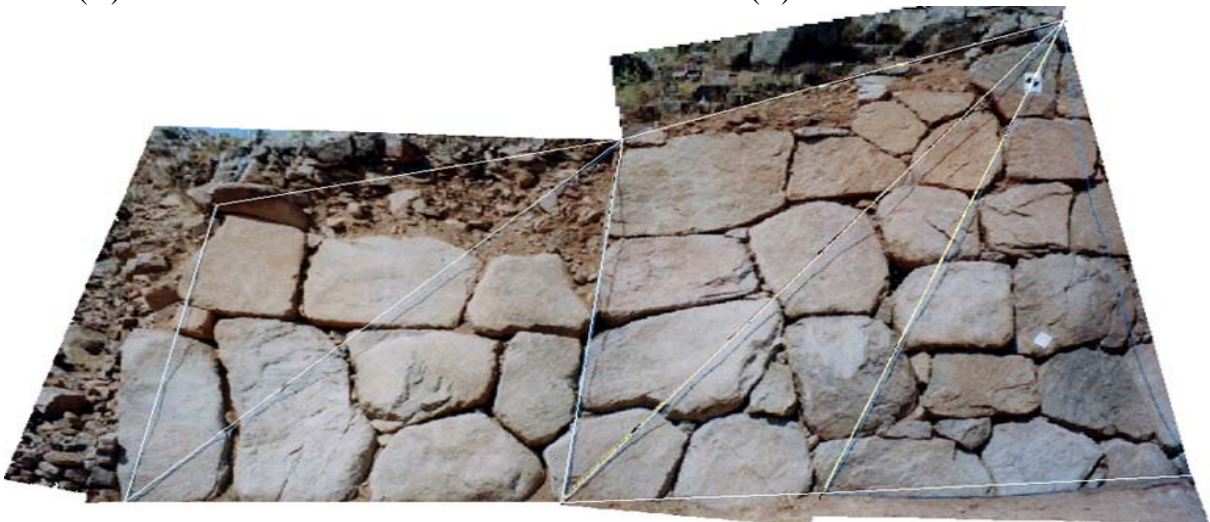
Figure 19: The stone glacis slopes at 45-60 and has rounded corners. Strings and control points mark out triangular planes on the glacis face to facilitate accurate measuring and rectification of photographs.



(A)



(B)



(C)

Figure 20: The rectified photograph of the site has been combined with the GPS 3D terrain model in Arcview using 3D Analyst. The 3D data allows virtual fly over and animation.

### The East End of the 'Palace Complex'

The tall, sloping stone façade that defines the eastern end of the 'Palace Complex' was completely cleared of stone rubble (Figs 21, 22 and 24). No special features were found to have existed within the central niche, although here the glacis was preserved to within a course of its full height where it would have met flush with the walling behind. The northern half of the monumental stone building (Structure A, Fig.21) immediately above and behind the glacis, was also largely cleared of stone rubble and the extant walling was preserved by the addition of new courses of stone. Certain of the walls of Structure B, representing a major re-modelling of the southern side of Structure A, were partly cleared. Two stone buildings, Structures C and D, constructed in the open space behind Structure A, were partially cleaned and probed through test excavation. Finally, a trench was dug across the wide street that runs parallel with the northern wall of the complex.

The striking visual symmetry of the glacis is mirrored by the symmetrical aspects of the two huge stone tower-like elements and connecting corridor that make up Structure A. This imposing monument was perhaps partly, if not wholly, defensive in concept. Moreover, the stone face of the glacis can now be seen to have served, in part, to retain the stone rubble of an artificial platform on which the towered monument was erected. Bedrock must also rise to form the core of the platform.

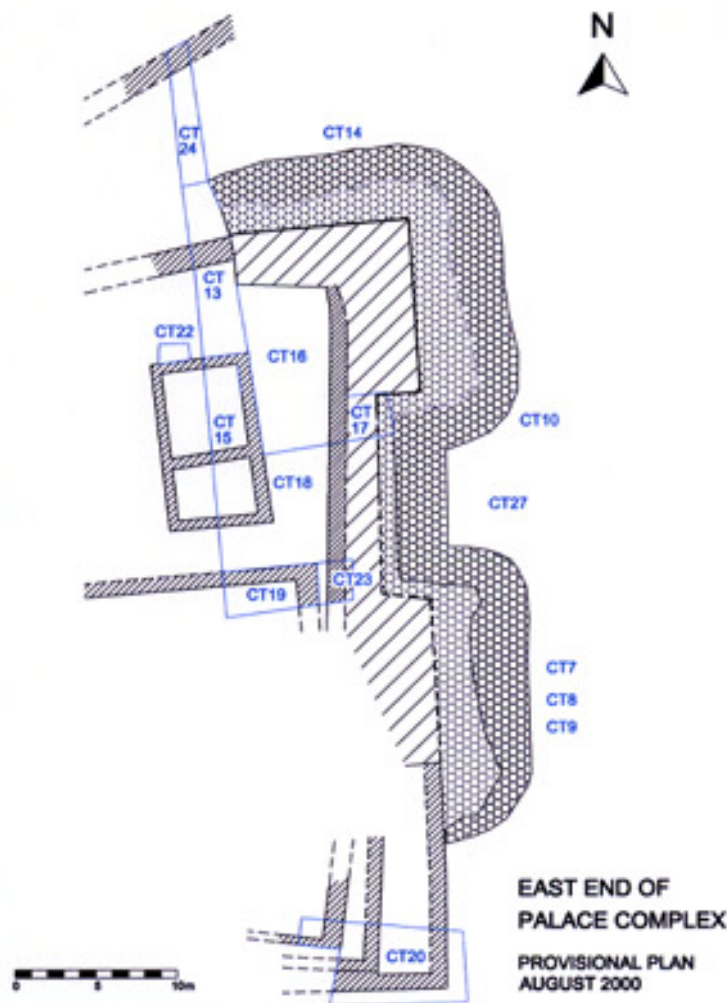


Figure 21: Plan of the east end of the 'Palace Complex' showing structures and trenches.

Nothing now remains of the floors of Structure A, which, to judge from the very considerable amount of fallen stone that had to be cleared from in front of the glaxis, would have stood several meters above the top of the glaxis. At its north-west limit the glaxis was cut through and abruptly ended by the construction of a ragged stretch of walling. It appears most probable that the glaxis originally turned southwards at the point where it was demolished. At its south-west end the glaxis was similarly cut through and a stone paved approach to an original entrance was partly built over when the various terraces of Structure B were erected. It is clear, therefore, that Structure A underwent a major remodelling that entailed the removal of its western side. It is anticipated that future work will reveal more of the original plan beneath the secondary buildings at the east end of the 'Palace Complex'.

Built on a series of terraces, Structure B (Figs [23](#) and [25](#)) appears to have superseded an earlier paved entrance to Structure A and to have formed the footings for a strong southern tower. This discovery raises questions concerning the location of the later entrance to the complex - questions which only future work will resolve. It is, however, clear that the new scheme was on a grand scale, not least since it recast the opposed north and south flanks of Structure A.

Immediately to the west of Structure A two buildings were investigated on a limited scale. Structure C is a two-roomed building of a type attested in many parts of the city (Figs [26](#) and [27](#)). Partial excavation produced a small corpus of complete pottery vessels, pieces of bone inlay and seeds of exotic plants. Structure D was found to contain substantial timber beams which had been reduced to charcoal beneath a thick covering of fallen mud-brick (Fig. [29](#)). Samples of the beams were removed for possible tree-ring dating by Professor Peter Kuniholm.

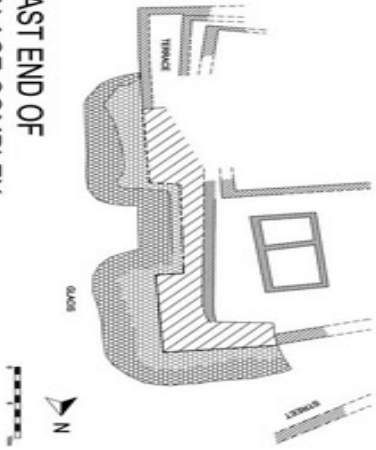


Figure 22: Glaxis at the east end of the 'Palace Complex' after clearance of fallen rubble.

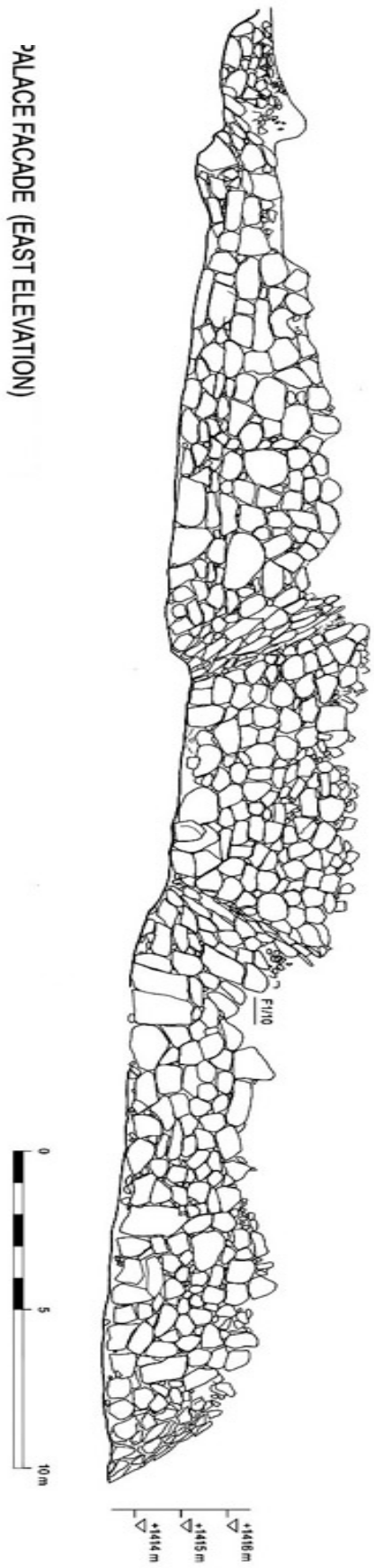


Figure 23: The foundations and the rubble fill of the terraces that comprise Structure B, partially built over the stone pavement.

EAST END OF  
 PALACE COMPLEX  
 PROVISIONAL PLAN  
 August 2000



PALACE FACADE (EAST ELEVATION)



PALACE FACADE (NORTH ELEVATION)

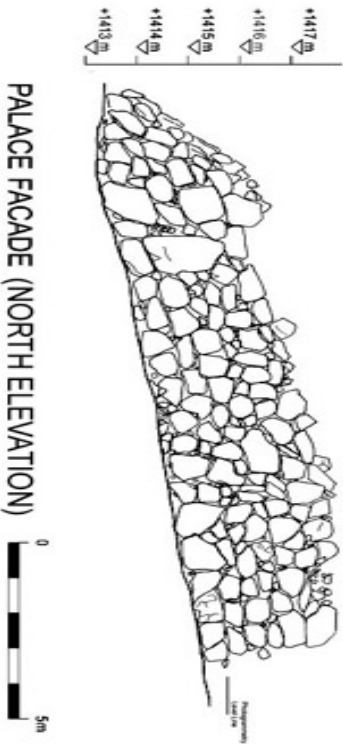


Figure 24: The stone glacis at the east of the 'Palace Complex'. The elevations are drawn from the photogrammetry stereo pairs.



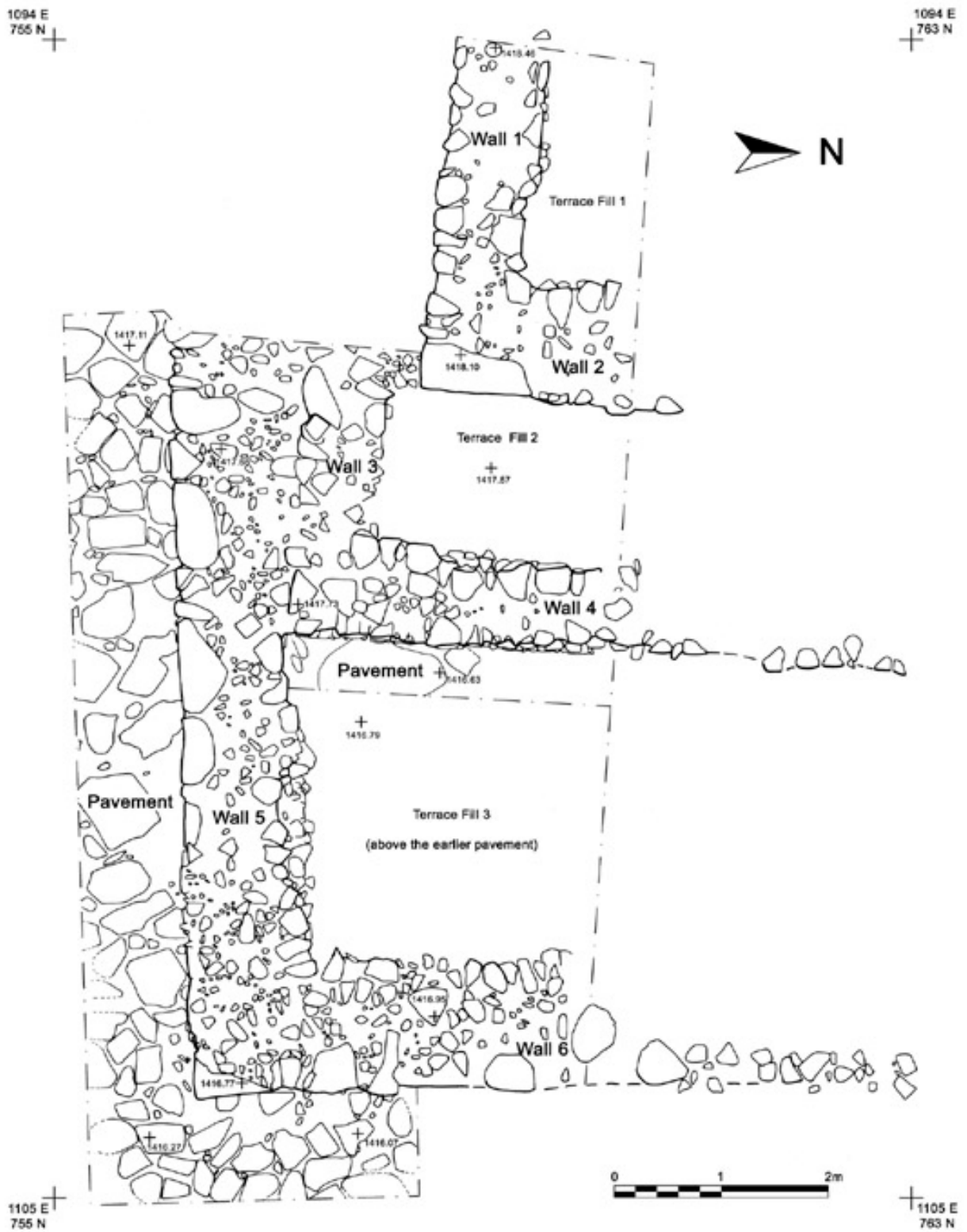


Figure 25: Plan of Structure B, partially constructed over a stone pavement.



Figure 26: Plan of Structure C.



Figure 27: A group of smashed pottery vessels on the floor of the Structure C in the 'Palace Complex'.

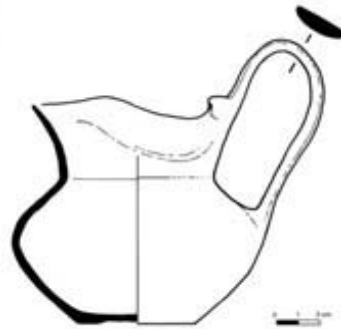


Figure 28: A fine side-spouted buffware juglet from Structure C.

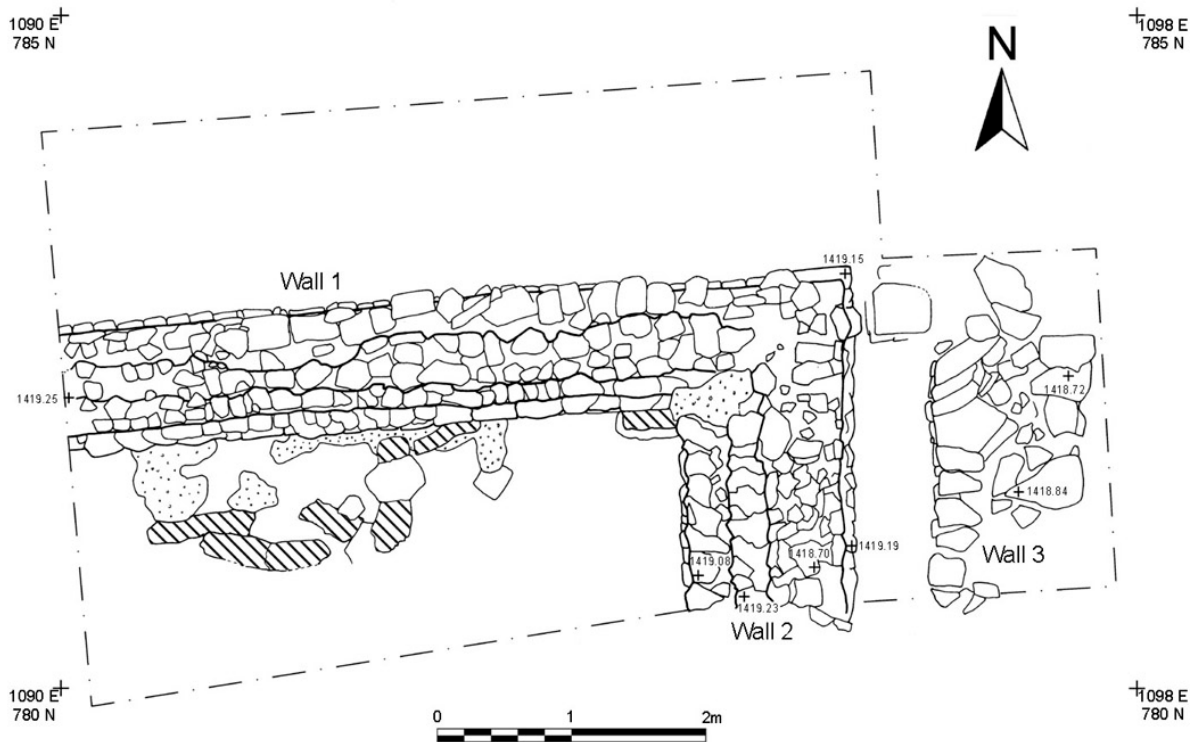


Figure 29: Plan of the Structure D, showing the stepped walling and burnt beams.

### A Columned Hall in the 'Palace Complex'

Test Trench 22, positioned so as to examine a major structure on one of the Palace Complex terraces, revealed part of a columned hall (Figs 30 and 31). In 1996 a columned hall was discovered in the north-western sector of the city and, subsequently, other columned halls were revealed in various other parts of the city through geophysical survey. Columned halls are not thought to belong to an Anatolian architectural tradition but seem, rather, to reflect strong Iranian influence. Their presence at Kerkenes may very well be used therefore to support the idea that the site was founded by the Medes.

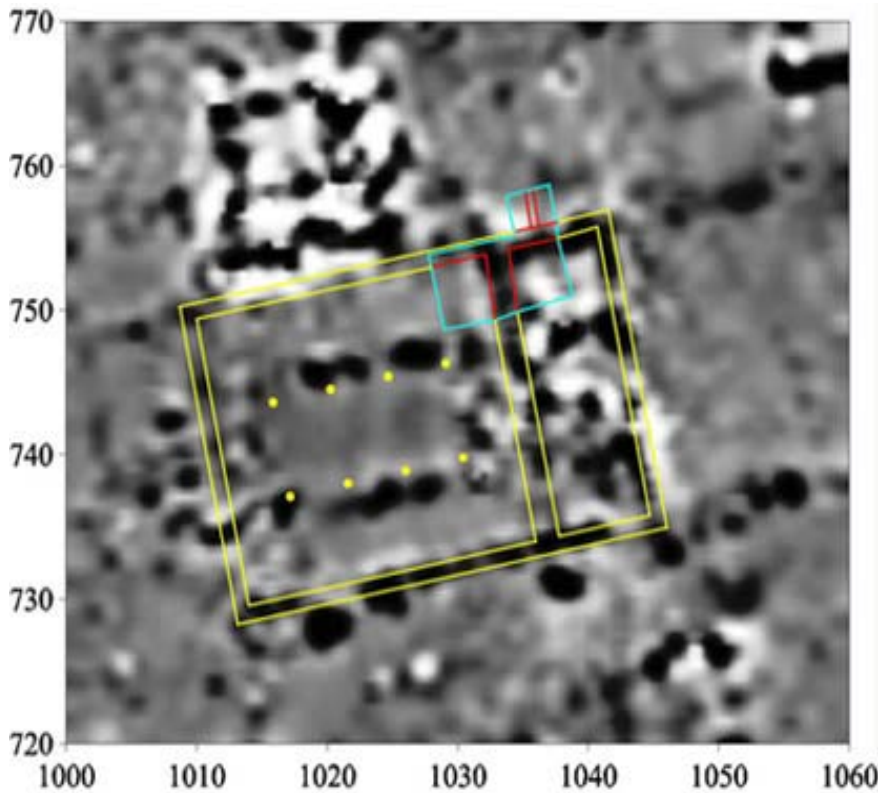


Figure 30: A combination of topography and imagery reveals what appears to be a columned hall, reconstructed in yellow. Test trench 22 is in blue, excavated walls in red.

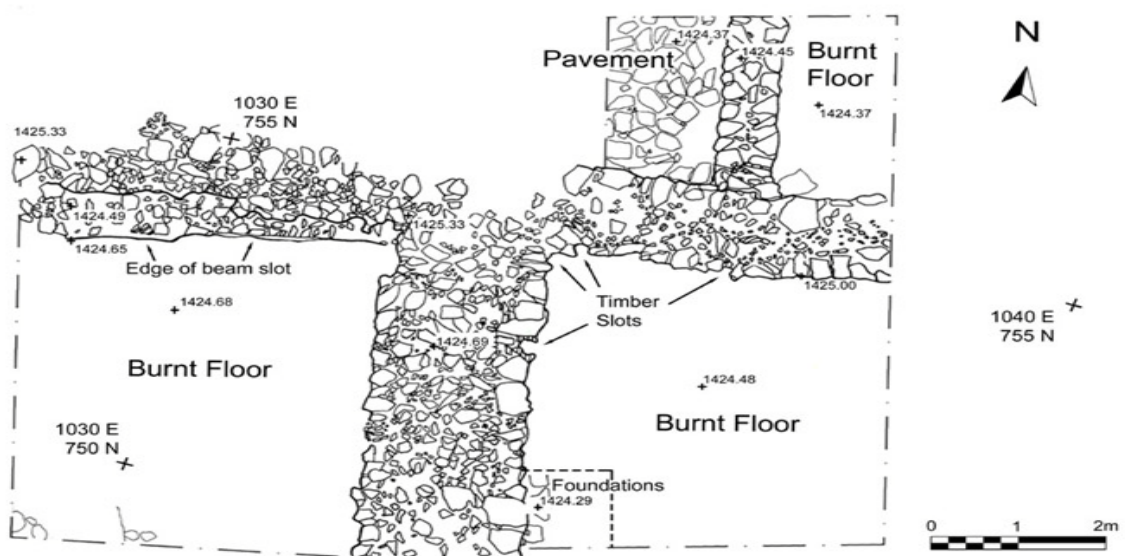


Figure 31: Plan of Test Trench 22.

## Material Culture

Even the limited excavation conducted in 2000 has greatly added to our knowledge. Objects found in the burnt destruction level have a secure and well-dated context, and thus shed light on everyday life, aspects of trade and industry and canons of artistic taste. A fragment of carved ivory (Fig. 32), very possibly of Egyptian manufacture, indicates distant connections and exotic taste. A socketed bronze arrowhead (Fig. 33), is similar to examples found at Gordion that are thought to be associated with the advance of Cyrus the Great on Sardis after the Battle of Pteria (Kerkenes) in 547 BC. The growing corpus of pottery, much of it in the destruction levels (Figs 27, 28, 34 and 35), will be very considerable value in the study of ceramics of this period in Central Anatolia. Several pieces have single marks scratched into the surface.

Remains of seeds (including Cornelian cherry stones and fruit)

and animal bone (including a noticeable component of wild pig) will tell us something about diet and economy. Alexia Smith is studying the carbonised seeds, recovered from excavation and flotation in 1996 and 2000, in combination with her larger study of the floral remains from the multi-period excavations at Çadýr Höyük, only 10km from Kerkenes. The tight chronological context of the Kerkenes samples will provide a secure benchmark in the mid-first millennium BC. Reinder Neef, also as part of a broader study, is undertaking identification of different tree species from the very many charcoal samples that were, mostly, obtained by flotation. Preliminary indications are that both oak and juniper were used in defensive architecture, and that black pine was very common. In broad terms these very preliminary results meet expectations and demonstrate the extent to which the local environment, now largely denuded of trees, has been altered by man. It will be interesting to see, in the longer term, if there is a significant decline in juniper (and perhaps oak) during the short life of the city that could point to growing scarcity of these slow growing species.

## Site Conservation

Once the recording of exposed structures had been completed measures were taken to ensure their preservation. Trenches were backfilled, the glacis footings, at both the 'Cappadocia Gate' and the 'Palace Complex', were covered with clean soil to protect the setting stones and to aid drainage (Fig. 38). In some of the trenches and in front of some stretches of glacis geotextile was laid at the interface between backfill and unexcavated levels or features in experiments that are intended to test the utility of this material in inhibiting plant growth and animal activity. As in previous seasons, exposed stone walling was capped with courses of new stone in such a way that the wall lines were made clear and, where possible, the uppermost course of original stonework could be seen.



Figure 32: Fragment of carved ivory. The obverse once held coloured enamel, the reverse is incised with a pattern which presumably matched that on the other side.

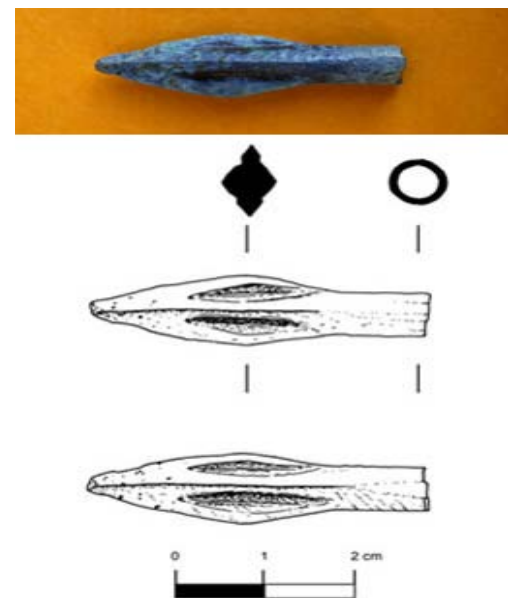


Figure 33: A Socketed bronze arrowhead.

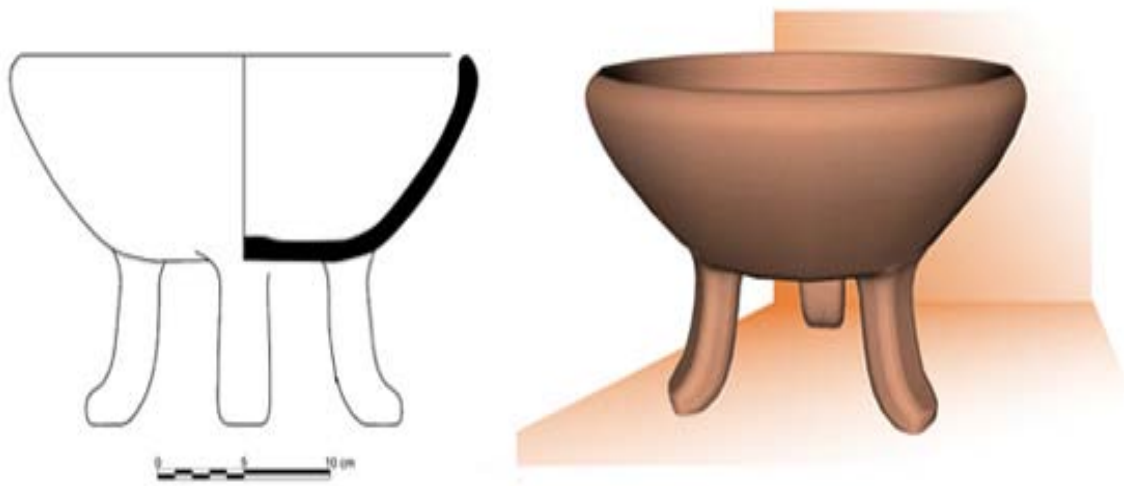


Figure 34: A tripod bowl from Structure D in the 'Palace Complex'. Combination of a drawing and digital photography allows 3D simulation in Rhinoceros.

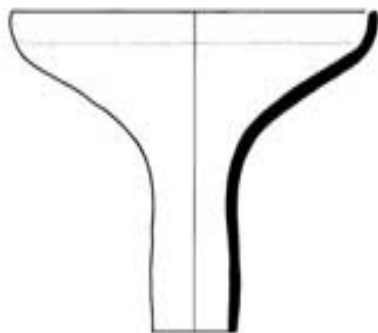
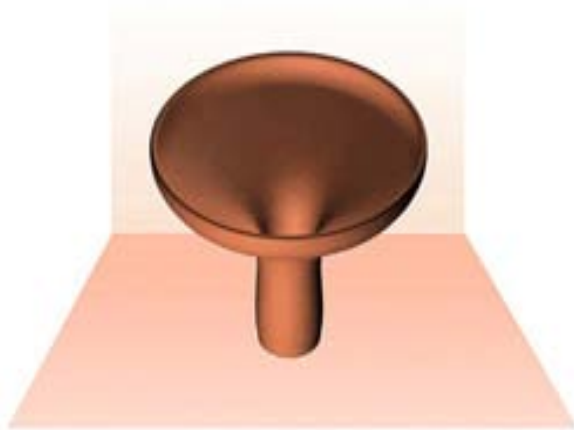


Figure 35: A funnel with a graffitti. The rim is red slipped.

## REGIONAL STUDIES

The construction of a great city on a virgin site must have had a very significant impact on the local environment. Clearing of the mountain-top itself, cutting of nearby timber for building and other purposes, and the introduction of new agricultural practices in the near vicinity would each have had a strong impact on the ecology through deforestation, erosion and changes in hydrology. Destruction and abandonment of the city would perhaps have brought about some reversal. In order to document and assess the level and speed of these aspects of human impact on the environment a program of environmental and geomorphological studies is being undertaken by Catherine Kuzucuoglu and Mehmet Ekmekçi (Fig. 36). This involves the geophysical sectioning of surrounding valleys and drilling into local sediments to obtain cores. Study of the cores will reveal a regional history of environmental change that it will then be possible to relate to patterns of human exploitation of the landscape throughout the last 10,000 years of the holocene period.

Dates for sediments in the cores will be obtained through radio-carbon atomic mass spectrometer (C 14 AMS) dating of very small quantities of organic matter. One exciting possibility is that traces of ash from the fire that finally destroyed the city, around 547 BC, might be detectable in the cores.



Figure 36: Kuzucuoglu, Ekmekci and Aydin arouse local curiosity while laying out a line across an ancient lake to make a geo-electric profile.



Figure 37: Coring was to confirm interpretation of resistivity data.

## CONCLUSION

State of the art survey techniques are providing a unique understanding of this major Iron Age city through the recovery of a remarkably detailed plan. Imaging techniques allow for graphic visual display and permit the formulation of testable hypotheses that will shed light on the urban dynamics. Of the three major components two, balloon photography and GPS mapping, are now complete. Geomagnetic survey will require two further seasons of intensive work. The results should be of extreme interest to students of the Ancient Near East.

Clearance of a portion of the defences is revealing a city gate that turns out to be far more substantially preserved than had been anticipated. The gate, already visually impressive, will be enhanced by clearance of the passage and chamber and through a program of limited conservation that will afford protection and enhance the safety of visitors.

The discovery that the east end of the 'Palace Complex' underwent a major remodelling has added a new dimension, as has the realisation that, in spite of its exceptional size and the grandeur of some of the freestanding structures at its east end, the complex as a whole appears closely to resemble other large urban blocks within the city. Sparse finds from limited areas of excavation extend the previously known taste for exotic trappings of ivory and gold and have provided a valuable corpus of pottery vessels from a secure context. If the charcoal beams have sufficient annual growth rings, the question of the date and, therefore, of the identification of the site, will no doubt be resolved.

Regional landscape studies will provide a wider setting within which cultural choice and still other consequences of dramatic human intervention can be assessed.



Figure 38: The base of the "Palace Complex" glacis was protected by a layer of clean soil.



## ACKNOWLEDGEMENTS



The standing glaxis of the 'Cappodocia Gate' is the highlight of a visit to the site.

We would like to thank Dr Alpay Pasinler and staff at the General Directorate; Mr H. Önal, Governor of Yozgat; Ms S. Dogan, Yozgat Director of Culture; Mr V. Özkul, Yozgat Director of Rural Services; Mr M. Dünder, Mayor of Sorgun and Mr Y. Kiliçarslan, Sorgun District Governor.

We also thank Mr Musa Özcan, Director of the Yozgat Museum, for his collaboration. Mr Ugur Tezirioğlu of the Samsun Museum was Representative for a third time; that so much was achieved is a tribute to his sound advice and active participation.

Kerkenes is sponsored by the British Institute of Archaeology at Ankara. Major grants for the 2000 programme were awarded by the British Academy and the National Geographic Society and further generous support was received from Raymond and Beverly Sackler, the Joukowsky Family Foundation, the Stahl Fund of the University of California at Berkeley, Norman Solhkhah and a number of anonymous donors.

The Faculty of Architecture of the Middle East Technical University provides a Project Room and a research grant for GIS studies coordinated by Prof. Ö. Bakirer. Dr E. Madran of the METU Architectural Photogrammetric Centre arranged for stereographic recording by Mr K. Gülçen. Mr R. Töksöz brings expertise in 3D modelling.

Yibitas Lafarge continues to be a major sponsor of the project all year-round through the METU Development Foundation.



Foundations for the newbuilding were started in August 2000 but it was decided to resume the construction in spring 2001.

Contributors to the building program (house, depot and laboratory) are Lafarge Aslan Çimento, YL Yibitas Yozgat Çimento, Onduline, MESA, Çimentas, Dogan Kum and Sorgun Belediye.

Other sponsors include the Ankara Business Centre, the Ankara Hilton, Aytaç, Bell Helicopter- Textron, the British Embassy, the Çamlık Galata Hotel, Dogan Alçi, ERDAS, ESRI, İslam GIS, KavMar, MENSA, MNG, NuroI, the Sheraton Ankara, Soylu Aviation, Yenigün İnsaat and Yimpas.

A full list of sponsors and participants can be found on our web page

<http://www.metu.edu.tr/home/wwwkerk>

# KERKENES DAĞ PROJECT PUBLICATIONS BY YEAR

**Kerkenes Dağ Home Page:** <http://www.metu.edu.tr/home/wwwkerk/index.html>

This site represents a major experiment in the electronic publication of an international archaeological project.

2000. Özcan, M., Summers, G. and Summers, F.  
“1998 Yılı Kerkenes Dağı Projesi”, *XVII. Araştırma Sonuçları Toplantısı, 24-28 Mayıs 1999, Ankara*. Ankara, vol. II, 211-228.
2000. Summers, G. D.  
“Archaeology on the World Wide Web: Who Wants What?”,  
<http://www.achemenet.com/pdf/colloque/summers.pdf>
2000. Summers G. D.  
“Kerkenes Dağ”, in Bienkowski, P. and Millard, A., *Dictionary of the Ancient Near East*, British Museum, London, 166.
2000. Summers, G. D.  
“Kerkenes Dağı. Orta Anadolu’da Yer Alan Demir Çağı Kentinin Araştırılmasına Teknolojik Yaklaşımlar, 1993-1999”, *1999 Yılı Anadolu Medeniyetleri Müzesi Konferansları*, 119-150.
1999. Ertem, E. and Demerci, Ş.  
“Characteristics of Hittite Pottery Sherds from Sites in the Kızılırmak Basin”, *Journal of Archaeological Science* 42, 1017-1023.
1999. Summers, G. D.  
“Medes, Lydians, the 'Battle of the Eclipse' and the Historicity of Herodotus”,  
<http://www.metu.edu.tr/home/wwwkerk/12propub/eclbygds/index.html>
1999. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağı 1997”, *XVI. Araştırma Sonuçları Toplantısı: 25-29 Mayıs 1998 Tarsus*, Ankara, vol. II, 121-151.
1999. Summers, G., Summers, F., Özcan, M. and Stronach, D.  
“Kerkenes Dağ 1999”, *Anatolian Archaeology* 5, 19-22.
1999. Summers, G., Summers, F., Stronach, D. and Özcan, M.  
*Kerkenes News / Haberler 2:1999*, METU Press, Ankara.
1998. Ertem, E., Summers, G. D. and Demerci, S.  
“An Archaeometric Study on Plain Ware Ceramics from the Hittite Period, Kızılırmak Basin”, in Alp, S. and Süel, A. (eds) *Acts of the III<sup>d</sup> International Congress of Hittitology, Çorum, September 16-22, 1996*, Ankara, 197-215.
1998. Summers, G. D., Özcan, M., Branting, S., Dusingberre, E. R. and Summers, M. E. F.  
“Kerkenes Dağ 1996”, *XIX. Kazı Sonuçları Toplantısı: 26-30 Mayıs 1997 Ankara*. Ankara, vol. I, 627-659.
1998. Summers, G. D. and Summers, M. E. F.  
*Kerkenes News / Haberler 1998*, Ankara (METU Press).
1998. Summers, G. D. and Summers, M. E. F.  
“The Kerkenes Dağ Project”, in Matthews, R. (ed.) *Ancient Anatolia*, London (BIAA), 177-194 and colour pls 29-30.
1998. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ”, *Anatolian Archaeology* 4, 25-27.
1997. Korolnik, S. A.

- “The Conservation of a Carved Ivory Plaque”, *Anadolu Medeniyetleri Müzesi: 1996 Yılı* XI, 173-196.
1997. Summers, G. D.  
“The Identification of the Iron Age City on the Kerkenes Dağ in Central Anatolia”, *Journal of Near Eastern Studies* 56.2, 81-94.
1997. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ”, *Anatolian Archaeology* 3, 23-25.
1996. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ”, *Anatolian Archaeology* 2, 27-28.
1996. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ 1994”, *XIII. Araştırma Sonuçları Toplantısı: 29 Mayıs - 2 Haziran 1995 Ankara*, Ankara, vol. 1, 99-122.
1996. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ 1995”, *XIV. Araştırma Sonuçları Toplantısı: 27-31 Mayıs 1996 Ankara*, Ankara, vol. II, 331-357.
1996. Summers, G. D., Summers, M. E. F., Baturayoğlu, N., Harmanşah, Ö. and McIntosh, E. R.  
“The Kerkenes Dağ Survey, an Interim Report”, *Anatolian Studies* XLVI, 201-234.
1995. Gurney, O. R.  
“The Hittite Names of Kerkenes Dağ and Kuşaklı Höyük”, *Anatolian Studies* XLV, 69-71.
1995. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ 1993”, *XII. Araştırma Sonuçları Toplantısı: 30 Mayıs - 3 Haziran 1994 Ankara*, Ankara, 567-582.
1995. Summers, G. D. and Summers, M. E. F.  
“Kerkenes Dağ Survey Project”, *Anatolian Archaeology* 1, 22-23.
1995. Summers, G. D., Summers, M. E. F. and Ahmet, K. “The Regional Survey at Kerkenes Dağ: an Interim Report on the Seasons of 1993 and 1994”, *Anatolian Studies* XLV, 43-68.
1994. Summers, G. D.  
“Kerkenes Dağ”, *Research Reports 1994*, BIAA, 18-20.
1994. Summers, G. D.  
“Kerkenes Dağ 1993”, *Anatolian Studies* XLIV, 15.
1994. Summers, G. D. and Summers, M. E. F.  
“The Mountain Top City on Kerkenes Dağ (Yozgat) in Cappadocia”, *Arkeoloji ve Sanat* 62-63, 2-20.