



McDONALD INSTITUTE MONOGRAPHS

Boeotia Project, Volume III: Hyettos

The origins, florescence and
afterlife of a small Boeotian city

John Bintliff, Emeri Farinetti & Anthony Snodgrass



Boeotia Project, Volume III:
Hyettos



McDONALD INSTITUTE MONOGRAPHS

Boeotia Project,
Volume III:
Hyettos
The origins, florescence
and afterlife of a
small Boeotian city

By John Bintliff, Emeri Farinetti
& Anthony Snodgrass

With contributions from

Philip Bes, Yannick Boswinkel, Patrick Degryse, Lieve Donnellan, Machiel Kiel,
Kristalla Loizou, Anna Meens, Christel Müller, Bart Noordervliet, Kalliope Sarri,
Apostolos Sarris, Rob Shiel, Vladimir Stissi, Janneke van Zwienen, Athanasios
Vionis & Keith Wilkinson

Published by:
McDonald Institute for Archaeological Research
University of Cambridge
Downing Street
Cambridge, UK
CB2 3ER
(0)(1223) 339327
eaj31@cam.ac.uk
www.mcdonald.cam.ac.uk



McDonald Institute for Archaeological Research, 2025

© 2025 McDonald Institute for Archaeological Research.
Boeotia Project, Volume III: Hyettos is made available under a Creative Commons
Attribution-NonCommercial-NoDerivatives 4.0 (International) Licence:
<https://creativecommons.org/licenses/by-nc-nd/4.0/>

ISBN: 978-1-913344-27-6

On the front cover: *Aerial view of Hyettos (lower right foreground, with its main plain beyond and in the distance the Euboean Gulf and the mountains of Euboea (Darja Grosman).*
On the back cover: *Drone view of site CN4 (Sta Dendri) with its small chapel far left. Beyond the plain of Hyettos and the Acropolis hill (Lieve Donnellan).*

Cover design by Dora Kemp and Ben Plumridge.
Typesetting and layout by Ben Plumridge.

Edited for the Institute by Matthew Davies (*Series Editor*).

CONTENTS

Contributors		ix
Figures		xi
Tables		xxiv
	Introduction	1
	JOHN BINTLIFF	
<i>Chapter 1</i>	Hyettos: the historical background	5
	ANTHONY SNODGRASS	
<i>Chapter 2</i>	The survey methodology	17
	JOHN BINTLIFF	
	The comparative density counts for town and country	21
<i>Chapter 3</i>	The analysis of the Hyettos rural landscape (i): the zoning of the off-site finds	33
	JOHN BINTLIFF & EMERI FARINETTI	
	The dated off-site maps	43
<i>Chapter 4</i>	The analysis of the Hyettos rural landscape (ii): the CN rural sites	61
	JOHN BINTLIFF & EMERI FARINETTI	
	SITE CN 1	65
	SITE CN 2	76
	SITE CN 3	89
	SITE CN 4	107
	SITE CN 5	123
	SITE CN 6	135
	SITE CN 7	147
	SITE CN 8	161
	SITE CN 9	170
	SITE CN 10	179
	SITE CN 14	187
	SITE CN 11	194
	SITE CN 12	206
	SITE CN 13	212
	SITE CN 15	218
	SITE CN 16	228
	SITE CN 17	230
	Other sites and activity areas	238
	PALAIKASTRO	239
<i>Chapter 5</i>	The city site of Hyettos: analysis of the urban survey ceramics	243
	JOHN BINTLIFF & EMERI FARINETTI	
	Prehistory	243
	Early Iron Age	252
	The Archaic and the Archaic to Classical periods	258
	The Classical to Late Hellenistic eras (c. 500–1 BC)	260
	The Late Hellenistic to Roman (c. 150 BC to AD 200), Early Roman (c. AD 1 to 200), Middle Roman (c. AD 200–400), and the Early to Middle Roman maps (c. AD 1–400)	274
	The Middle Roman–Late Roman (c. 200 to mid-seventh century AD), the Late Roman (c. 400 to mid-seventh century AD) and the Roman–Late Roman maps (c. AD 1 to mid-seventh century AD)	280
	From Byzantine to Modern	285

<i>Chapter 6</i>	Geology, geomorphology, geoarchaeology and land-use potential	293
	ROBERT S. SHIEL & KEITH WILKINSON	
	Background	293
	Geology	293
	Climate	294
	Crops	297
	Methodology	300
	Results	300
	Discussion	301
	Human food production	309
	Conclusions	310
<i>Chapter 7</i>	Soil geochemistry in archaeology, with an evaluation of a long-term programme of trace metal analysis at the ancient cities of Hyettos and Thespiiai	313
	JOHN BINTLIFF, PATRICK DEGRYSE & JANNEKE VAN ZWIENEN	
	Review of previous research	313
	The Boeotian Research Programme	315
	Urban research at Hyettos and Thespiiai	320
	Results	322
	The regional soil transect	341
<i>Chapter 8</i>	The geophysical survey at Hyettos	345
	APOSTOLOS SARRIS & NIKOS PAPADOPOULOS	
	Methodology	345
	Results	350
	The magnetic survey	350
	The electrical resistance and electromagnetic induction surveys	355
	Concluding remarks	357
<i>Chapter 9</i>	Hyettos: the architectural traces at the urban centre	363
	YANNICK BOSWINKEL & ANTHONY SNODGRASS	
	Architectural traces: mapping – Introduction (Janneke van Zwienen Noordervliet & Bart Noordervliet)	363
	Architectural traces: interpretation	363
	Finds density	363
	Overall density	365
	Types of architectural elements	370
	Architectural elements that are not generic building blocks	370
	Size-based analysis of the building blocks	379
	Materials	383
	Missing materials	384
	Vertical elevations	384
	Conclusions	386
<i>Chapter 10</i>	Glimpses of history: Hyettos and its epigraphic testimonies	387
	CHRISTEL MÜLLER	
	Archaic and Classical times	387
	Hyettos and the Boeotian koinon (335–171 bc): the recruitment lists	388
	Hyettian civic life: Hellenistic political institutions and society	391
	Dedications at Hyettos in the second century bc: in search of the Agora	392
	Imperial inscriptions and the sacred <i>gerusia</i>	393

<i>Chapter 11</i>	Prehistoric Hyettos	397
	KALLIOPE SARRI	
	Character and expansion of prehistoric occupation	397
	Prehistoric finds on the Acropolis	398
	Prehistoric pottery from the Lower Town	398
	The prehistoric off-site material	400
	Prehistoric pottery classes	403
	Character and quality of the prehistoric ceramics	403
	Conclusions	412
<i>Chapter 12</i>	The pottery of the Early Iron Age to the Hellenistic Period	413
	VLADIMIR STISSI & ANNA MEENS	
	The urban survey	415
	The off-site survey	439
	The rural sites survey	451
	General conclusions	479
<i>Chapter 13</i>	Urban and rural Hyettos: Late Hellenistic to Late Roman pottery	483
	PHILIP BES	
	Aims and methods	483
	The ceramic data: quantities and other properties	484
	Local and regional manufacture and circulation	486
	A diachronic discussion of the urban and rural pottery	494
	Case studies	519
	Provenance: local, regional and beyond	527
	A diachronic summary for the urban, off-site and rural site pottery	534
<i>Chapter 14</i>	A household archaeology and history of Hyettos and its territory: the Byzantine to Early Modern pottery	537
	ATHANASIOS K. VIONIS, WITH CHRYSTALLA LOIZOU	
	Fragmentation, chronology and terminology	538
	Household assemblage-composition at Hyettos and the CN sites	542
	A historical and archaeological biography of the post-Roman sites	548
	Pottery fabrics, technology and production	564
	The pottery	571
	Summary and concluding remarks	590
<i>Chapter 15</i>	Three settlements in northern Boeotia in the Ottoman and early modern Greek periods, 1460–1879	593
	MACHIEL KIEL	
	The economic development of Vendre	594
	(Andrea) Lutsi	595
	Pavlo (Muzak)	596
	Economy	596
<i>Chapter 16</i>	Synthesis: the development of the town and countryside of Hyettos from the survey evidence	599
	JOHN BINTLIFF	
	Prehistory	599
	The lithic finds	607
	Proto-history	614
	The Archaic Period	617
	(Archaic-) Classical to Middle Hellenistic (c. 700–150 BC)	618
	Late Hellenistic and Early Roman (c. 150 BC–AD 200)	631
	Middle and Late Roman (c. AD 200–400 and 400–650)	633
	The Byzantine and Frankish era	638
	The Frankish-Early Turkish, Middle to Late Ottoman and Early Modern eras (c. AD 1400–1900)	644

<i>Chapter 17</i>	Hyettos, city and countryside: conclusions	651
	JOHN BINTLIFF & ANTHONY SNODGRASS	
	Hyettos in prehistory	651
	Hyettos in the Early Iron Age / Protohistoric period	652
	The Archaic era	653
	The Classical to Middle Hellenistic period	654
	The Late Hellenistic and Early Roman Imperial period (c. 150 BC–AD 200)	656
	The Middle and Late Roman Imperial era	658
	The Byzantine and Frankish eras	659
	The Ottoman to Modern era	661
	Epilogue	663
	Appendix	669
	JOHN BINTLIFF	
	Off-site archaeology	669
	The hidden landscapes model	672
	The relevance of these two reviews to the Hyettos Project	679
	Appendix bibliography	681
Bibliography		689

CONTRIBUTORS

JOHN BINTLIFF was Professor of Classical and Mediterranean Archaeology at Universiteit Leiden, Netherlands, and is now Honorary Professor in the Department of Archaeology, at the University of Edinburgh, UK (johnlbintliff@gmail.com).

EMERI FARINETTI is an Associate Professor at the Università degli Studi Roma Tre, Italy (emerifarinetti@uniroma3.it).

ANTHONY SNODGRASS is Laurence Professor Emeritus of Classical Archaeology of the University of Cambridge, UK (ams1002@cam.ac.uk).

* * * * *

PHILIP BES completed his Doctorate at the Katholieke Universiteit Leuven, Belgium. He is currently a research fellow at the University of Vienna, Austria (philipmbes@gmail.com).

YANNICK BOSWINKEL completed his Doctorate at the Universiteit Leiden, Netherlands (yboswinkel@gmail.com).

PATRICK DEGRYSE is Professor of Archaeological Sciences at the Katholieke Universiteit Leuven, Belgium (Patrick.degryse@kuleuven.be).

LIEVE DONNELLAN is Assistant Professor of Classical Archaeology at the University of Melbourne, Australia (lieve.donnellan@unimelb.edu.au).

MACHIEL KIEL was Professor at the Universiteit Utrecht, Netherlands, then Director and later Senior Research Fellow of the Netherlands Institute in Turkey.

CHRYSTALLA LOIZOU is a PhD candidate at the Department of History and Archaeology in the University of Cyprus (loizou.chrystalla@gmail.com).

ANNA MEENS took her Doctorate at the University of Amsterdam, Netherlands (anna_meens@hotmail.com).

CHRISTEL MÜLLER is Professeure de l'Histoire grecque at the Université Paris Ouest Nanterre, France (christel.muller@mae.u-paris10.fr).

BART NOORDERVLIET studied at the Universiteit Leiden, Netherlands, and is now an independent computer consultant (bartnv@gmail.com).

KALLIOPE SARRI is Marie Skłodowska-Curie Fellow at the Saxo Institute, University of Copenhagen, Denmark (kalliope.sarri@gmail.com).

APOSTOLOS SARRIS is Professor of Digital Humanities at the University of Cyprus (sarris.apostolos@ucy.ac.cy).

ROB SHIEL was formerly a Senior Lecturer at Newcastle University, UK (robert.shiel@newcastle.ac.uk).

VLADIMIR STISSI is Professor of Classical Archaeology at the University of Amsterdam, Netherlands (V.V.Stissi@uva.nl).

JANNEKE VAN ZWIENEN studied at the Universiteit Leiden, Netherlands, and is now a local government GIS specialist in urban planning (jannekevz@gmail.com).

ATHANASIOS VIONIS is Assistant Professor in Byzantine Archaeology and Art at the University of Cyprus (vionis@ucy.ac.cy).

KEITH WILKINSON is Professor of Archaeology at the University of Winchester, UK (Keith.Wilkinson@winchester.ac.uk).

Chapter 9

Hyettos: the architectural traces at the urban centre

Yannick Boswinkel & Anthony Snodgrass

Architectural traces: mapping – Introduction
by Janneke van Zwienen Noordervliet & Bart
Noordervliet

Ancient building blocks can be found everywhere at Hyettos, and especially along the field boundaries of the small olive groves on the site. The blocks are relatively large and well-preserved, yet are sometimes hidden from the eye by bushes and larger trees. After the earlier experience of recording architectural remains at the ancient site of Koroneia, the documentation of the blocks at Hyettos was done in a more systematic way. The same characteristics were documented – size, colour, particular features, etc. – but at the end of each day of fieldwork, they were immediately put into a database and linked with the photographs taken. This had a triple effect: it prevented mistakes and data loss; it gave a good overview of the work done; and it made the data immediately available for other researchers to consult.

Janneke van Zwienen and Bart Noordervliet were accompanied in the field by two students from Leiden University, Jeroen Putters and Nico Slaats. With professional photo- and GPS-recording equipment, nearly all architectural remains could be documented with high precision. In the early years of fieldwork at the site, but also during more recent research seasons, the project directors had already located many blocks. Their lists provided some direction, but now many more blocks with at least one cut or modified side were recorded, by systematic walking of the fields.

The photographs, taken where possible from all four sides and from above, were post-processed to give them more contrast and bring out any special features that might be present. The database, with all recorded information, the GPS positions and the photos, was finally made available to our collaborators

by way of an online viewer. Thus these researchers have been able to look at all the data, search for specific items and add their own comments for each individual block, in preparation for this book. The web-link for access to this database is: <https://www.boeotiaproject.org/hyettos/architecture/>

Architectural traces: interpretation

This architectural survey provided a massive foundation for all our study of the buildings of Hyettos undertaken on the site. Beginning in 2010 with the work of John Bintliff, Janneke van Zwienen and Bart Noordervliet, this was continued with study of the finds by Dr. Inge Uytterhoeven and Chiara Piccoli, and essentially finalized by 2014 (Bintliff *et al.* 2014, 10–11). The survey yielded a final total of 1621 recognizable architectural elements, besides some ‘vertical elevations’ – these last designating sets of stones that still resembled a wall of some sort. Then, in 2015, Dr. Lorenzo Gentili and Yannick Boswinkel revisited the site and closely analysed the data from the survey, adding a few items. Yet further re-examinations and additions, using GPS to re-locate important stones, were carried out in 2018 by Anthony Snodgrass, with Annemarie Snodgrass and Nicola Jackson.

This chapter aims to evaluate these architectural finds and to present some consequent insights. The density, types and sizes of the architectural elements will all be considered; so too will the spread of various materials, as a basis for an architectural perspective of the ancient city of Hyettos. In examining certain of the finds, parallels will be drawn with Koroneia, another (as yet largely unpublished) Boeotian site, later surveyed within the Ancient Cities of Boeotia Project.¹

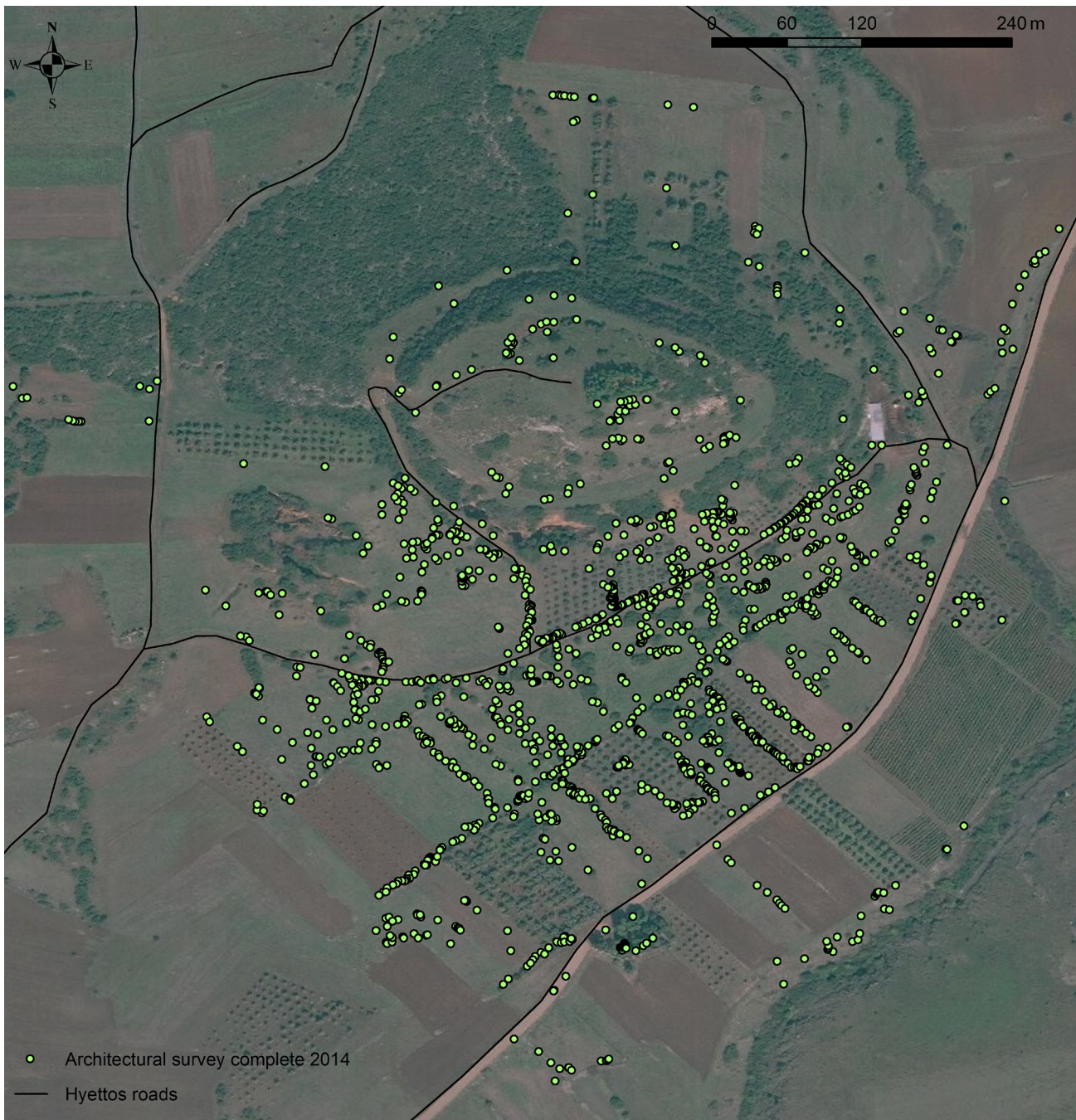


Figure 9.1. Locations of the building blocks, with modern roads and tracks, superimposed on a WorldView 2 satellite photo of the site.

Finds density

The site of ancient Hyettos comprises, first, a hill which at 316.9 m a.s.l. rises some 70 m above the surrounding land. The top of this Acropolis takes the form of a gently sloping plateau, surrounded by rather steep rock faces. The main approach route climbs up, hugging its

southwestern and western edges, then moving on to the platform from the northwest. The hill-top is mostly empty today, except for the small church of Agios Athanasios, surrounded by conifers. The terraces of the Lower Town, immediately below the Acropolis to the south, slope down gently towards the south and are now used for agricultural purposes. The modern fields

are oriented roughly northwest to southeast, as emerges fairly clearly from the satellite image in Figure 9.1.

This modern use of the area has had a profound impact on the archaeology, and particularly on the find concentrations. The green points in the figure represent the documented architectural pieces and, as can be seen, are very well aligned with the modern fields. The obvious explanation is that, by the clearing of the architectural blocks to the edges of the fields or of the modern farm tracks, artificial concentrations of finds, in almost straight lines, have been created. A second observation that emerges from this figure is that the lower terraces are much richer in architectural finds than the top of the hill, the Acropolis, which produced very few finds (only 82 out of 1621).

Any study of the find densities at Hyettos is naturally distorted by these artificial concentrations, created by modern agriculture. Various methods can be used in order to counteract this. One is *kernel density*, which calculates the density by analysing the distances between the finds, subsequently creating a graded map that shows the density extrapolated from the locations of the finds. A second method, '*fishnet density*', involves imposing a grid on to the site and calculating the number of blocks in each cell of the grid. If a grid is created that runs parallel to the modern fields, but cuts the lines of these fields, the density counts will be mainly based on the areas from which the architectural elements have most likely been cleared. It thus creates an artificial grid that cuts each field into four, with each cell incorporating areas from more than one field. The cell might therefore indicate a more realistic location of a concentration of finds, if we assume that the finds have been cleared to the nearest field edge.² Both methods thus generalize the locational data in order to give densities for the finds on the scale of the whole site. In consequence, both methods again highlight the concentrations on the lower terraces, mostly to the southeast of the Acropolis (see Figures 9.2 and 9.3).

Already it becomes clear that substantial architectural remains were present in the Lower Town of Hyettos; that a lot of this material has been moved, but over relatively short distances; and that presumably the town was therefore mostly concentrated to the south and southeast of the Acropolis. The Acropolis area itself, it seems, has mostly been cleared of architectural elements. The Acropolis wall, still prominently visible today in some sectors and dated to the Late Archaic period by Étienne and Knoepfler (1976, 63 – but see Chapter 1, p. 11), indicates the use and importance to the city of the Acropolis area at approximately this time. The architecture previously present on the Acropolis has been either removed or buried: the operation of this latter factor is hinted at by a small hole near the later

church, revealing an older building present underneath the level of the church. From what can be seen of this building, it was constructed of large blocks and mortar, perhaps dating to the Late Roman – Byzantine era. It is possible that this earlier 'church' was built on the site of an even earlier temple on the Acropolis, to which some other fragments may belong (see below). The church itself incorporates many ancient blocks, as do various other churches near the site.

Overall density

A first impression, from considering the overall density and the concentration of finds in the Lower Town at Hyettos (see also the General note at the end, p. 386), and comparing them with those at Koroneia, is that the two patterns differ. First, although on the basis of surface area, Koroneia is roughly twice as large as Hyettos, the numbers of architectural elements at the two sites do not differ by so much (2100+ as against 1600+). Accordingly, the calculated density in architectural finds per ha. for each site shows a higher density for Hyettos than for Koroneia (83.4 versus 56.8). This notable difference in density should be addressed. Both sites are close enough to modern villages that could take, and have taken, the material that was available from the ancient sites. For example, various inscribed blocks are found in buildings in Agios Georgios, taken from Koroneia (Fossey 1991); while at another nearby city-site, Thespiiai, the modern village of Thespies has clearly used ancient blocks in its buildings. This is thus not an uncommon practice, and could have had an important impact on the survival of ancient materials. As mentioned, however, Hyettos too is fairly close to modern villages that could have taken blocks; the three nearby churches have certainly done so. Blocks were taken not only to aid in the construction of the churches, but also to line the yards of their gardens; in two cases, a number of the more impressive stones were intentionally taken from the site for display in churchyards.

An additional difference between Koroneia and Hyettos, which may shed light on the difference in density, is the topography of their localities. Koroneia, like Hyettos, comprises a hill, but in this case a much steeper one all round. Where Hyettos' Lower Town slopes down gently to the south, Koroneia is today formed of terraces on its east side, while the west side is a rather unstable steep slope, where only traces of a city wall were found (Boswinkel 2015). This could mean that the material at Koroneia has rolled down further, whereas the material at Hyettos sits stable in the Lower Town area. This would, and does, produce a difference in the distribution of the concentrations of finds within the sites; but it would not account for the

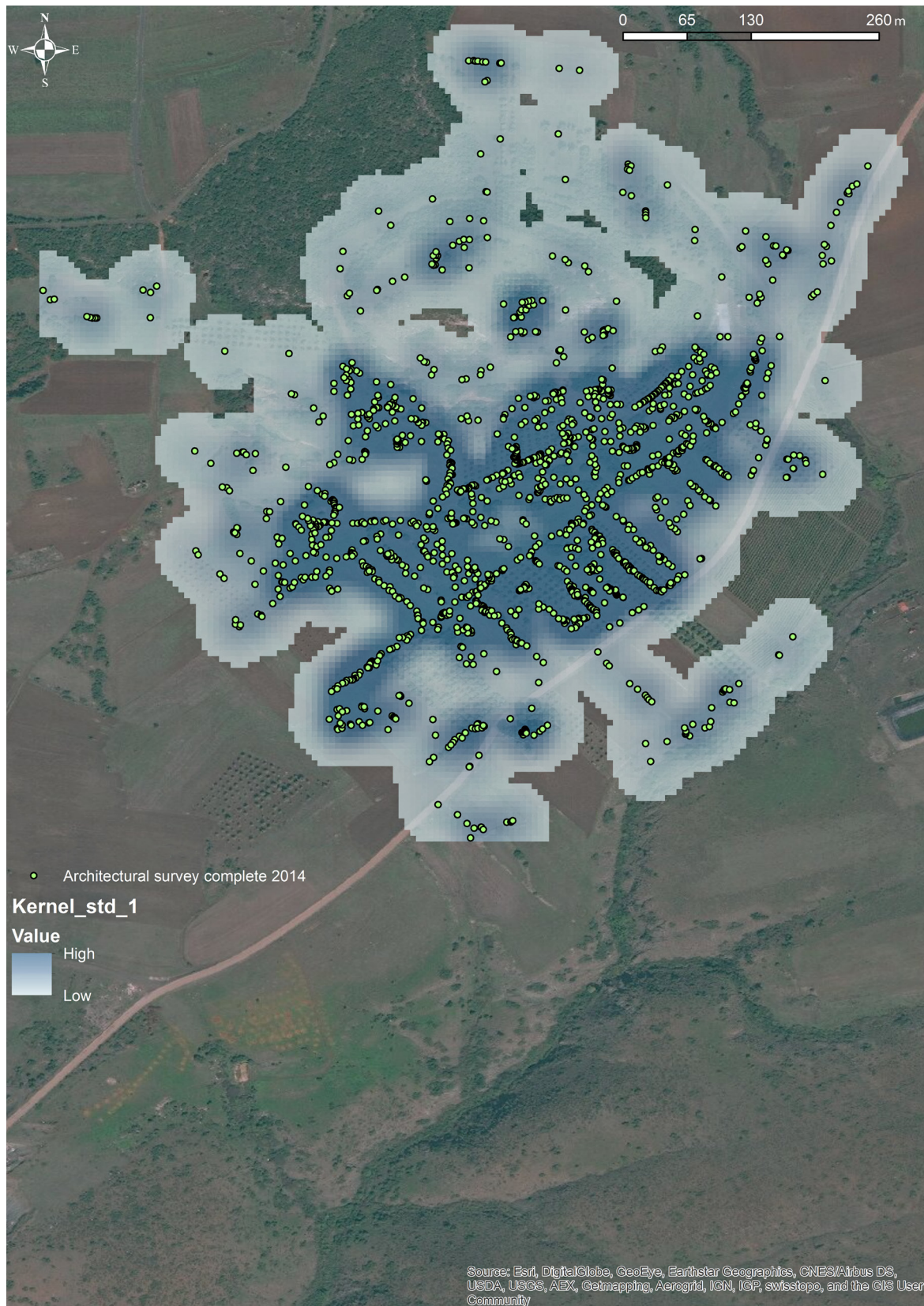


Figure 9.2. Map to illustrate the application of kernel density.

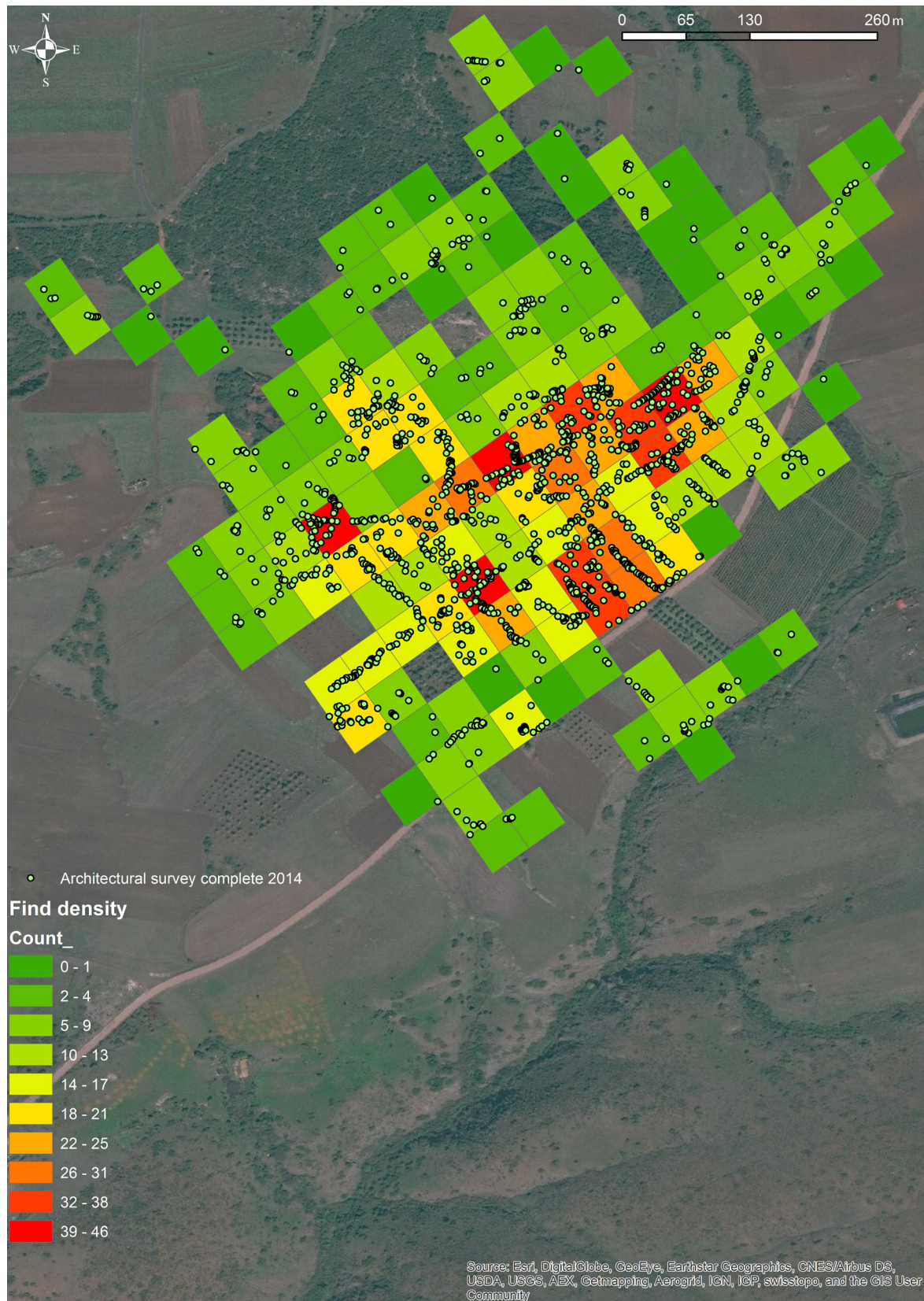


Figure 9.3. Map to illustrate the application of fishnet density.

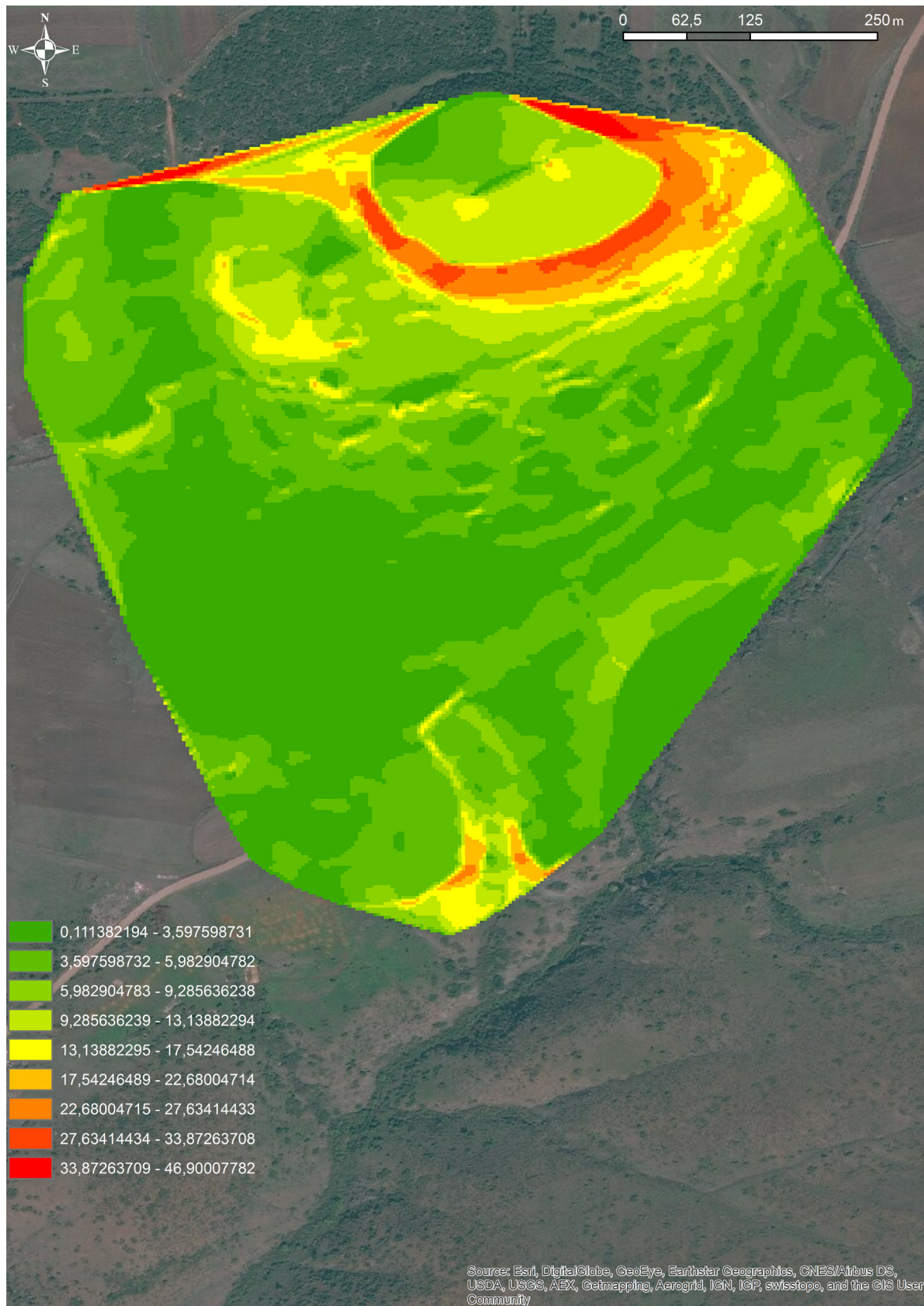


Figure 9.4a. Slope map of the city site of Hyettos.

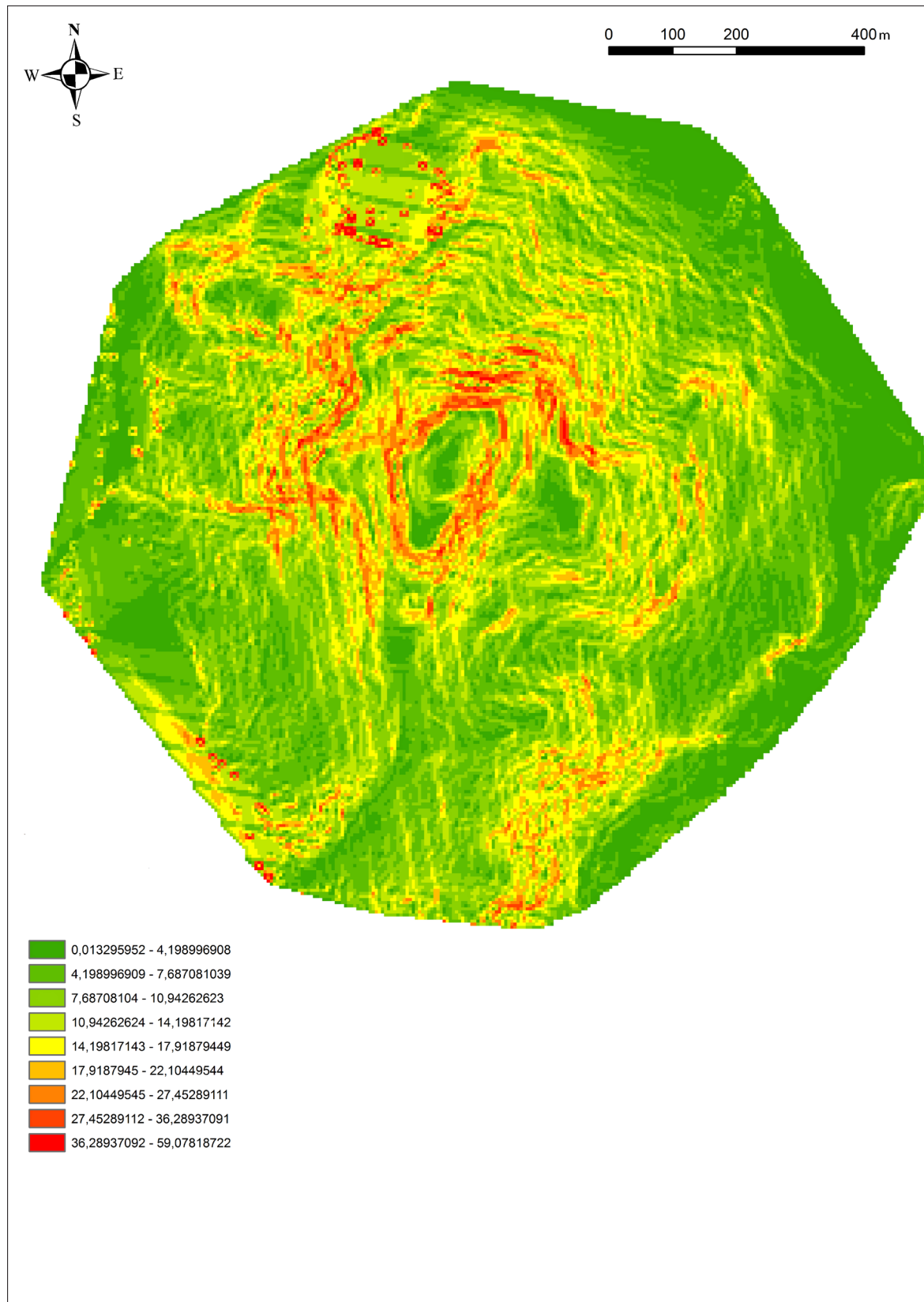


Figure 9.4b. Slope map of the city site of Koroneia.

Table 9.1. Overview of the extent of area usable for construction based on the threshold value of slope on which can be built. The amount is presented as a percentage of the total area, based on the DEM (digital elevation model).

	Hyettos – % of total area	Koroneia – % of total area
Area with a slope up to 30° – 16.70°	92,47	86,12
Area with a slope up to 25° – 14.04°	90,21	77,38
Area with a slope up to 15° – 8.53°	78,44	46,59

overall lower find density at Koroneia. Furthermore, geophysical research at both sites has revealed substantial subterranean architecture. This means that in each case the documented surface architecture forms only the tip of the iceberg of what is still present at the sites.

These similarities still evade the question: where does the substantial difference in find density come from? One way to visualize the topographical differences between the sites more clearly is through a slope map of the sites, in which the slope of the terrain is visualized through different colours. Figures 9.4a and 9.4b show the respective slope maps for Hyettos and Koroneia.

It soon emerges that the site of Koroneia consists almost exclusively of terraces, while that of Hyettos has a platform-like acropolis (as indeed has Koroneia), but with an area to the south that slopes gently down. This meant that, at Hyettos, this entire area could be used to build on, whereas at Koroneia only the flatter areas of the terraces could be so used. While the total area (based on the slope map) of Koroneia is quite a lot larger than Hyettos, the difference in area suitable for building is much smaller – a conclusion based on a maximum slope usable for building of about 14

degrees. This is less than the 30 degrees proposed by Groh for Ephesus (Groh 2012, 68), but it is more in line with modern construction guidelines; a modelling experiment by Piccoli has shown that a slope of 12–14 degrees seems to be the most plausible (Piccoli 2018). Such a reduction in usable land, for Koroneia in particular, means that the potential built-up area is similar for both sites (see also Table 9.1). Thus the difference visible in the finds per ha., which was 83 versus 57 in favour for Hyettos when the entire area is included (above, p. 365), is reduced to 93 versus 74, (again in favour of Hyettos) when the slope is taken into account. The find densities thus become more closely comparable.

Types of architectural elements

The architectural elements are classified, as far as possible, according to function (capital, column, basin etc.). In the case of the less diagnostic pieces, a distinction is made between polygonal and (more or less) rectangular building blocks. The results are shown in Table 9.2. It is immediately clear that the bulk of the material is made up of generic building materials, with rectangular blocks comprising 88 per cent and polygonal blocks 9 per cent; the other categories all together make up less than 3 per cent of the finds. Each of these various categories can be informative in different ways, as was shown in the case of Koroneia (Boswinkel 2015). The bulk material, the blocks, can be used to identify ‘hotspots’ of building activity.

The more functionally specific of these categories can be used to identify places of production (‘presses’), other activities (dedication), or specific types of buildings (large thresholds and columns).

Architectural elements that are not generic building blocks

The majority of the distinctive architectural elements, again, are to be found in the Lower Town area, south of the acropolis (see Figure 9.5). This conforms to the overall density of finds in this area.

Unfortunately, the diffuse distribution and low numbers of the various finds make it difficult to recognize any patterns.

The *slabs*, however, seem to be concentrated on the west side of the town and all four are quite large. But this tells us relatively little, unless the building blocks in this area are relatively large as well, which might point to the presence of a larger (public) type of structure here. Alternatively and much more likely, as this area has been identified (see Chapter 5, *passim*) as the northwestern cemetery, lying as it almost

Table 9.2. Classification of architectural elements.

Classification	Count
Inscription	1
Grinder	1
Capital	2
Stele_base	4
Slab	4
Threshold	6
Basin	5
‘Press’	13
Column	17
Polygonal_block	146
Rectangular Block	1422
Total	1621

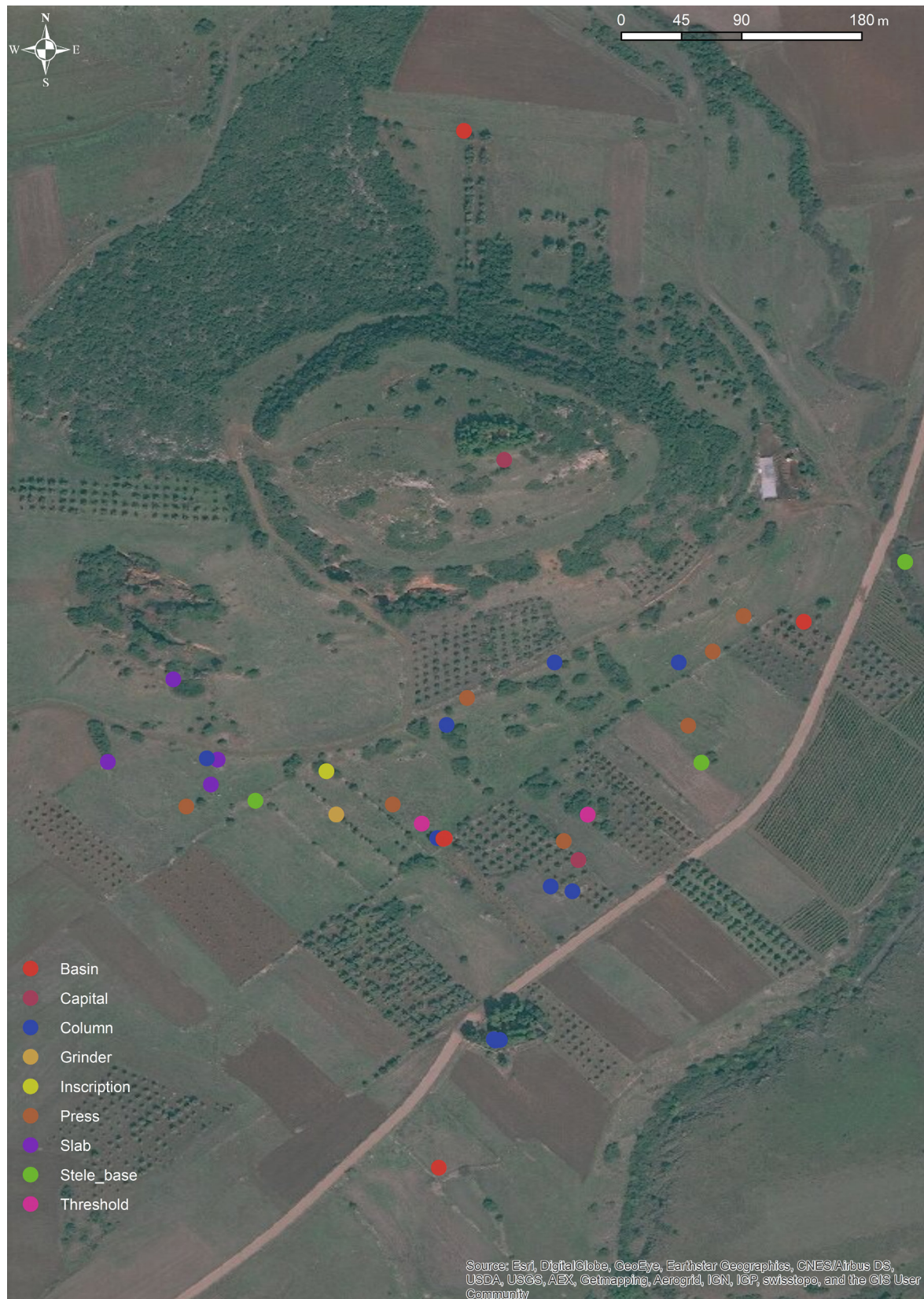


Figure 9.5. *Distribution of the architectural finds that are not generic blocks.*

certainly does outside the city limit, they might have served as cover-stones for burials: so too the location of the stele-base 218 (below, p. 377) makes excellent sense in this context.

The *columns*, like most of the other categories, are spread all over the lower town; nor was there any concentration of columns with a closely similar diameter. A number of these were carved from reused limestone blocks, mostly of the soft limestone because this was easier to work; all but one are unfluted. The three columns shown towards the southern extremity of the map are in fact located in the courtyard of the church of Agios Nikolaos (see note at end of chapter), and have thus clearly been moved from their position. The two columns found a short way north of these appear somewhat similar in diameter (42 and 46 cm), are unfluted, and lie in close proximity. Quite close to these two columns is a *capital* of the Doric order (# 847), from the top of an unfluted column, whose profile looks, if anything, of late Archaic or early Classical date, but on which a cross, crudely scratched, indicates its survival, or reuse, down to at least the Late Antique period (Figure 9.6a). In this case, the column diameter was only 37 cm, so that the three fragments can hardly have belonged to the same building. The diameters of all these columns are slightly larger than those of the columns found in the domestic structures at Olynthus, which range between 13.5 and 35 cm (Robinson and Graham 1938, 247–8).

A further and much more substantial testimony to the survival, into Late Antiquity, of activity at the city site was found in the shape of the impost block shown in Figure 9.6b. This was seen, in the same general locality, in 2010 and photographed by John Bintliff then or soon after. But before long it had disappeared from view, and repeated searches, over the next decade and more, failed to retrieve it. The photograph thus remains the only proof of its existence, but that is enough to show that it had originally served as an impost or capital, from whose upper surface an arch had once sprung – possibly as part of an arcade, like the much finer specimen later located on the edge of the small rural site CN15 (see above, Chapter 4, p. 219 with Figures 4.242–4.244), but this time probably from the left-hand arch rather than a central one. The scale looks, if anything, slightly larger than that of the CN 15 piece, with the extant height of the arch itself slightly greater, at about 50 cm; but the use of a much coarser stone prohibited the addition of the refinements seen on the other piece. A relief cross, carefully carved on the spandrel, in this case has every appearance of being original; This find perhaps increases the likelihood that the piece from CN15 did indeed originate from the city site as there

conjectured; but any closer association between the two can be excluded.

In the vicinity of these architectural pieces at Hyetos, a number of larger building blocks were found, indicating that there may have been a substantial building nearby (mapped in Figure 9.7). When taken together with the columns, which are relatively large in diameter (up to 46 cm), it seems likely that some sort of public or non-domestic structure was present here. This is reinforced by the results of the geophysical research that revealed, through soil resistance measurements, a building or a number of buildings at this location (R6, R10, R15, marked in red on Figure 9.7. Furthermore, this area yielded rich ceramic finds, including terracotta figurines (see above, Chapter 2, p. 17), indicating the presence of a sanctuary.

Two other *capitals*, both of the Doric order, were found: one was on the Acropolis (# 38), this time dated to the Classical-Hellenistic era. Little more can be said of this capital, except that it is quite eroded. The second one (# 1621) was a late discovery from 2015, on a line of rubble marking a field-edge, well towards the eastern extremity of the site and not far from the modern tarmac road. Here, for once, the uppermost part of the Doric column attached to the capital was found to be fluted: desperately weathered, it has a column diameter of 38 cm and still shows seven of its original flutes. The field from which it had been cleared is an unusually large one, making indications of its original location correspondingly vague. Its diameter is similar to that of # 847 (above), found about 200 m to the west, but the fluting means that there can be no question of associating them with each other.

In connection with the stone *basins*, we note that Étienne and Knoepfler reported (*HB* 149–51) their discovery of two aligned examples, regrettably no longer traceable today, in the sector to the northwest of the Lower Town where the slope eases off, to the west of the Acropolis approach road but well to the east of the area with the slabs. On Figure 9.5 above, this sector today appears empty of diagnostic finds, but it produced the architectural features coded G1-3 and M1-2 detected by geophysics (Chapter 8 above, p. 355 and Figure 8.5); and they could have been re-located, during the intervening four decades, to locations marked elsewhere on the map. The discovery was given added significance by the suggestion that they pointed to the presence here of a gymnasium: urban gymnasia were regularly located, as here, near the periphery of the built-up area.

We turn next to the objects listed as '*presses*' (that is, olive press weights) from the site: ten in number, with an example shown in Figure 9.8. Their distinguishing feature is the holes drilled into one of their sides,



Figure 9.6. a) Column capital, marked with a much later scratched cross; b) impost block from an arch, seen in 2010 but now missing, decorated with a carved cross.

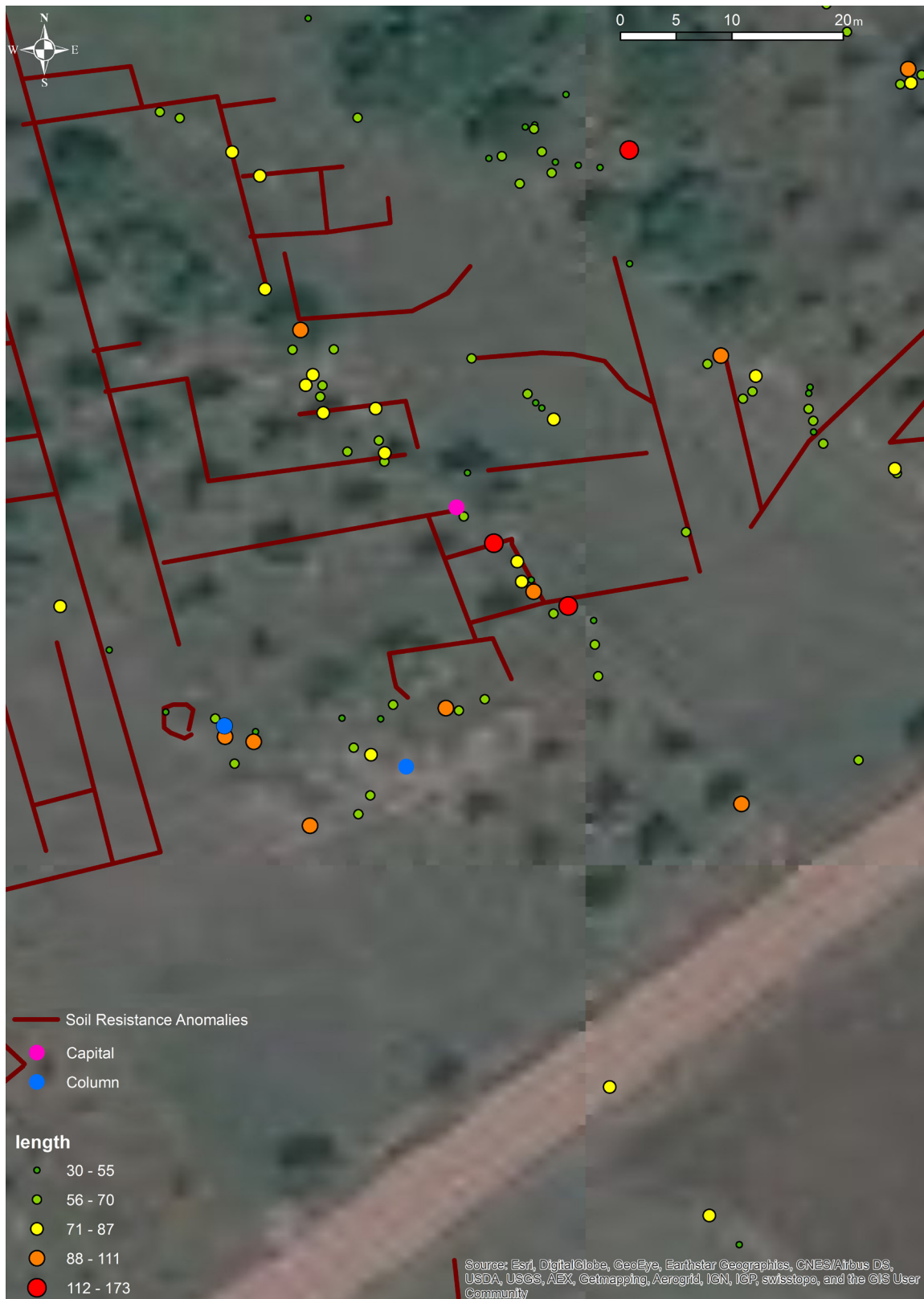


Figure 9.7. Map of the inferred sanctuary area, showing the distribution of columns, capitals and larger architectural blocks, with buildings detected by geophysics outlined in red.



Figure 9.8. *A specimen of the blocks, initially interpreted as olive press weights, with larger and smaller holes – originally five in this case – drilled into their upper side.*

with a larger, central circular one, flanked by smaller, also normally circular ones – either two, arranged in a straight line with the central one, or four, to form a quincunx arrangement with the central one. Together, they represent a majority of the total number of finds taken to be related to presses.

At the small church of Agios David, roughly 1 km to the northeast of the site, five fine examples of these ‘presses’, all from the Lower Town, were exhibited in the yard, along with other material from the site; another example is in the yard at Agios Nikolaos, adjoining the ancient site. Nearly all of the ‘presses’ are substantial in size, but they vary in shape: the most notable feature of the conserved examples is their height, with five of the six specimens at the two churches ranging from 74 to 117 cm in height, from the prepared face to ground level. The remaining one, at Agios David (# 1583), now stands only 25 cm high, but this time has five holes carved into one of the long sides of this huge rectangular block (# 1583), 135 cm long, as well as three holes in one of the end-faces, showing that at one time the prepared surface must therefore

have stood 1.35 m above ground (less any part of the block that was embedded in the soil).

Here was a first indication that the interpretation of these pieces as elements from presses might need to be reconsidered: if there was any advantage in working a press with its lowest element at something approaching, or even above, waist height, then the need to manhandle the upper elements at an even higher level would surely outweigh it. Recent studies of oil presses have also shown that such presses were a large capital investment, in general producing far more than the quantities needed for a single household (Ault 2005; Cahill 2002; Foxhall 2007). The broad spread of these objects throughout the Lower Town of Hyettos would thus suggest a communal, or neighbourhood, commitment to olive oil production all over the built-up area, rather than in a designated commercial zone – not in itself improbable. The pattern was repeated in similar form at Koroneia, where the ‘presses’ are mostly spread throughout the (lower) town (Boswinkel 2015, 197–201). Since these ‘presses’ are very hard to date, it is nearly impossible to decide whether or not

they were in contemporary use. In any case, there is a strong possibility that many of them result from the secondary use of blocks originally designed for other purposes: indeed, in the case of the ‘hybrid’ block # 1583 this can be taken as proven.

There are further difficulties in the ‘press’ interpretation that can be briefly mentioned. First, a number of the pieces reported from other sites, as well as of our own examples, retain clear residues of metal within the small peripheral holes on these blocks – either of lead, or of the broken tips of iron rods. This was already observed by W.A. Oldfather, who made the first reported sighting of such objects at Cheliadou in Lokris, not so far from Hyettos (Oldfather 1916, 166, n.2). These rods argue for an originally static, rather than a mobile or rotating, role for these stones (or for anything placed on top of them): if re-cycled, they could only function as the upper element of a press, presumably superimposed on a flat lower block and rotated by lateral purchase, using the now empty holes.

From the start, we had noted the quite different interpretation tentatively offered by Étienne and Knoepfler (*HB* 147–9), that these blocks instead functioned as bases for dedicated tripods – though without our immediately grasping the important corollary, that the smaller peripheral holes could have nothing to do with the actual feet of the tripods, but were for stabilizing rods to hold the tripods in place. This of course explains why they occur in pairs or quadruples. But such an interpretation at first seemed at odds with the dispersal of the blocks all over a domestic quarter.

We then turned to the large body of potential supporting evidence found in the writings of Pierre Amandry, on the inscribed stone tripod bases dedicated in sanctuaries at Athens, Delos, Delphi – and indeed Boeotian Orchomenos, the Ptoion and Koroneia (Amandry and Ducat 1973; Amandry and Spyropoulos 1974; Amandry 1978; 1987). We also consulted Dr. Sylvian Fachard of the Swiss team excavating at the sanctuary of Artemis at Amarnythos near Eretria, where Knoepfler himself had much earlier reported the finding of specimens (*HB* 147, n.445). The parallels that emerge from this evidence relate primarily to the ‘5-hole’ examples from our survey, which fairly closely resembled the much finer, usually inscribed specimens from the major sanctuaries. As these latter showed, some of the dedicated bronze tripods simply rested on the upper face of their stone bases without as yet any strong attachment; all that usually appeared on the base was the faint imprint of a bronze lion’s paw, much favoured as finial decoration for the tripod’s foot; the function of the central hole, meanwhile, was understood as being for a column to support the underside of the tripod basin. The need for the

stabilizing rods, usually in a quincunx arrangement like our own, would be especially obvious when the tripod stood in the open air. Even so, the rod-holes are present only in a minority of the cases from major sanctuaries (Amandry 1978, 567 and n.4), though they are commoner among the examples from Boeotia, which show no signs of other attachment (Amandry and Spyropoulos 1974, 233). But the rods must also have acted to disfigure the dedications rather seriously, as Amandry pointed out in a slightly puzzled discussion of them (1973, 51–3; 57). The measurements of two examples from Koroneia (central hole diameters 23.5 and 25.3 cm: Amandry 1978, 565–9) agree well enough with our range of 15 to 22 cm; but a difference is that the neat, usually circular peripheral holes, between 2 and 4 cm in diameter, that Amandry records from major sanctuaries are hardly matched by the larger, rougher holes on our examples. Nor are the ‘five-hole’ examples that are still to be found on the Lower Town site (## 113, 543) in good enough condition to retain any tell-tale traces of fittings on their upper surfaces; nor did close examination even of the better-preserved examples in the churchyards yield any further useful detail.

This, however, is already perhaps enough to demonstrate that the same explanation should apply to our ‘five-hole’ specimens as to some of the dedicated examples from the major sanctuaries: namely, that they supported tripods by means of a central column, of bronze or stone, and four iron rods set in smaller peripheral holes. There are glaring differences in the quality of the stonework, and in the absence of inscriptions on the bases from Hyettos, but these need not surprise us in so remote a city. The regular purpose of these dedications was to commemorate a choregic victory at a dramatic festival: Hyettians could well have competed successfully at, say, the nearby Ptoion sanctuary (see Ganter 2019, 89–91 for an upsurge of tripod dedications there in the third century), and then brought their trophies home, perhaps unable to afford the inscriptions used by the hundreds of others who dedicated them for self-promotion at the main sanctuaries, where strangers would see them. There was, after all, at least one sanctuary in the Lower Town of Hyettos too, in which these offerings could originally have been set up: when, in later centuries, the tripods themselves disappeared, the worked stone blocks would be useful enough to be re-cycled as building blocks – hence their appearance in apparent domestic settings.

But so far we have accounted only for our ‘five-hole’ specimens, which form less than half of these problematic pieces. The slightly more numerous ‘three-hole’ examples seem not to have the same documented

dedicatory contexts from elsewhere; nor are some of them at all suited to supporting tripods, being too narrow (our # 834 is only 44 cm across, although our bigger examples (## 1581, 1582, 1597) easily match the five-hole ones in dimensions). But the contexts, at Hyettos, Koroneia and indeed at Lokrian Cheliadou as recorded by Oldfather, show that the two varieties, five-hole and three-hole, are found in neighbouring contexts: not only that, but our example # 1583 is actually a hybrid of the two types, as we have seen. Can either the five-hole or the three-hole stones have acted as supports for something other than tripods? Here there is just one clue: a single base at Delphi (Amandry 1987, 93–5, n.37, fig. 6) had the large central hole but lacked all evidence for tripod feet attachments, to the point where Amandry judged that it could never have supported a tripod, but must have served for a free-standing column, perhaps of bronze; significantly, here the neat circular peripheral holes were replaced by bigger, oblong ones, up to 9.5 cm across. This recalls our own specimens: is it possible that our three-hole examples filled a similar role, supporting a single column rather than a tripod? We note that one of them, # 834, comes from exactly the same probable sanctuary locality as the columns, capital and ceramic dedications discussed above (p. 372 with Fig. 9.7), which is at least compatible with the suggestion of a dedicatory role for these objects. To sum up, a range of (admittedly circumstantial) evidence supports the general line of argument that has led us to our revised view, that we are dealing here with a series of stone bases which, whatever their later reuse, served for a period as supports for dedications of some prestige value.

Reuse, however, must be borne in mind as an equally important factor in discussion of such artefacts as these. Thus, bases for dedications, once shorn of their metal accoutrements – tripods, columns or stabilizing rods – could lend themselves to quite different uses: among them, as weights for olive-presses, where their now empty slots could give purchase for wooden spars, enabling rotary movement. This may be why some elements of presses, such as the one shown in Hadjisavvas 2008, 124–6, fig. 132 – a statue base, recycled in Byzantine times as a press weight – bear a certain resemblance to our objects.³

After this lengthy digression, it is satisfying to report that we have also found three examples that are genuine elements of oil or wine presses. Two of them are from the central part of the site: # 319 is a flat, squarish press-bed, suitable for use with one of the less developed forms of olive press such as the lever-press; while # 408 is an exceptionally rugged block that has been carefully hollowed on just one side into a smoother, concave, sub-hemispherical depression,

with a central hole and draining channel, offering an unusually clear instance of secondary reuse. If this example had been adapted to serve as the lowest element in what the Romans called a *trapetum*, used in conjunction with two upper blocks or *orbes*, also hemispherical, convex and set on their sides, then we have a prize specimen of that in # 557, from the eastern extremity of the Lower Town. Here are preserved a substantial and well-worked sector of the wide, flat-bottomed basin or *mortarium*, 94 cm in diameter in this case, that formed the lowest element of the press; it is carved from a single piece of limestone conglomerate with its upright central column or *miliarium*, whose upper surface bears two holes, a circular one within a wider square one, to hold respectively the locking pin and the fixed crowning plate, on top of which was then laid the wooden cross-beam, carrying the two hemispherical *orbes* that did the actual crushing. Since the *trapetum* is known to have been in use in mainland Greece by no later than the mid-fourth century (Foxhall 2007, 166–70), the dating range for this specimen is no closer than for the others.

Of the four *stèle bases* documented at Hyettos, one is kept at the church of Agios David, northeast of the site; the other three are located in the Lower Town area. Two of these are only roughly worked: one is found in the western part of the city (# 218) and has a nicely finished top face with a slot for the upright *stèle*, but the rest of the block is rough and uneven, suggesting that it was embedded in the soil; it may have served as a polygonal block at some earlier stage. While the slots for the *stelai* are always relatively carefully cut, none of the other blocks is as well finished as the monumental one found in the far east (# 1569, Figure 9.9). This particular *stèle base* is not only very large (120 cm in length, with a slot that is itself 94 cm long), but was found beyond the eastern edge of the city and the survey grid. Such a size and location prompt the suggestion of a funerary use, as a base for a large grave-stèle: and indeed Étienne and Knoepfler identified this area as a necropolis, after finding other grave-stelai and noting several tombs that were still visible in the ground (HB 113–15); and our own survey revealed eroded and robbed graves hereabouts.

Similarly, the western limit of the city was defined by Étienne and Knoepfler as a line from the church of Agios Nikolaos at the southern end to the ruined house of the mining company, southwestwards from the Acropolis: beyond this line, there is evidence for graves, while the density in sherds and building materials drops (HB 146, in the locality of the slabs mentioned earlier, pp. 370–2). The density in architectural finds also drops further to the north: the city limit on this side would thus have turned to the northeast, well before



Figure 9.9. An example of a stele base (# 1569).

reaching the location of the mining company house, but incorporating the road up to the Acropolis. To the north of the Acropolis, finds of building materials are few in number and in many cases could have fallen from the Acropolis above: here too, burials have been noted in the past, providing a fairly clear northern limit of the city.

Final mention should be made of the inscribed block, found and studied by Étienne and Knoepfler (HB 151–5), and discussed in Chapter 1, p. 13. It is undoubtedly *in situ*, more deeply embedded in the soil today than it was in 1976, and with its Late Hellenistic inscription, ΔΙΟΣ ΑΓΟΡΑΙΟΥ ‘of Zeus of the *agora*’, now heavily obscured by lichen. This dedication must indicate the vicinity of, and perhaps mark the entrance to, the city’s civic centre and later market place. It stands some way southwest of the Acropolis, just below the modern track that crosses the entire Lower Town from east to west, forming a kind of terrace above the rest of the site to the south (see also the section on vertical elevations, below, pp. 384–6). The modern track closely follows this terrace for most of its length, flanked by it on both the uphill and the downhill sides.

An *agora*, after serving its proper use as a civic centre, often with temples or shrines as well, during the Classical, Hellenistic and Roman periods, sometimes became subject to remodelling when houses were built in the open spaces or within the abandoned structures, such as *stoas*. Differences in architectural material might still be expected, and indeed the building blocks in the area do have a larger average length than the site-based average. The main concentration of these blocks is located roughly midway along the terrace, but still to the east of the road that leads up to the Acropolis, within a large, roughly triangular area. Within this group lay seven of the larger and differently-oriented grid cells, used in the density analysis (see below and Figure 9.14): of these, four have an average length in blocks that is larger than the site-based average; the other three cells, lying a little further downhill, have an average length that falls within that site-based norm. Furthermore, the find density is relatively high in this area. In short, the characteristics of these blocks found not far away from the *agora* site could indicate the existence of a larger (public) structure – such as a *stoa*. One alternative

explanation of this concentration of larger blocks, that blocks from the Acropolis fortification have fallen down to here, can probably be excluded, as the blocks are mostly rectangular and the fortification wall of the Acropolis is built in polygonal masonry. Further geophysical research in this particular area could shed light on the matter, but for now it seems plausible that a *stoa* or some other large structure stood here.

Size-based analysis of the building blocks

Size and monumentality should be connected, in as much as large buildings are often built with larger elements, so appearing more monumental than small structures. A sample of measurements, from various structures at a number of sites, shows that this is indeed the case (Table 9.3). The table clearly shows that the larger, public structures are built with larger blocks than domestic ones. This link between size of blocks and type of structure could be used in investigating the individual blocks documented in this survey. Ideally, what might be expected are ranges of measurements to represent different types of building (Figure 9.10).

But this is a *hypothetical* distribution, based on the assumption that the majority of the structures in a city are houses, built with smaller blocks, and so predominating in the bulk of the material (see also Boswinkel

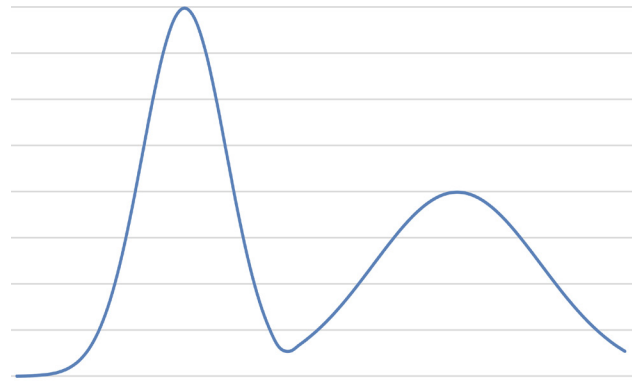


Figure 9.10. A hypothetical distribution of the quantities of blocks, based on their dimensions (size rises from left to right). A possible distribution of the blocks according to length, with the two ranges that may represent domestic (left) and (right) monumental structures.

2018). The second peak in the graph would represent the range of size used for more public (monumental) structures. In reality, however, the distribution of the blocks according to size is shown as it occurs in the case of Hyettos in Figure 9.11, and for comparison with Koroneia, in Figure 9.12a.

Table 9.3. Measurements of architectural elements at various Classical-Hellenistic sites. All values are taken from publications of these sites. The structures from Halos (Haagsma 2003), Olynthus (Robinson and Graham 1938) and Halieis (Ault 2005) all represent domestic structures, Tegea (Dugas et al. 1924), Delos (Étienne and Braun 2007) and Corinth (Scahill 2012) represent more publicly oriented buildings (after Boswinkel 2015).

Site	Structure	Length (m)	Width (m)	Height (m)
Halos	External wall		0.45–0.50 (total)	0.3
	Internal wall		0.30–0.35 (total)	0.3
	Doorways	1.20–1.60		
Olynthus	Walls		0.40–0.50 (total)	
	Column (diameter)		0.135–0.35	
	Doorways	0.75–2.00		
	Doorposts	0.40–0.20		
Halieis	Doorways	up to 2.00		
Temple (Tegea)	Wall block	0.897	0.893	0.385
	Stylobate	1.64	1.64	0.38
	Orthostate	1.79	0.68	1.28
Altar (Delos)	Block	0.60–1.40	0.30–0.90	
	Triglyph	0.41	0.41	0.58
Stoa (Corinth)	Foundation (Euthynteria)	1.17–1.60	0.59–0.82	0.43–0.47
	Foundation (back rooms)	1.17–1.26		
	Foundation (Stylobate)	1.17	1.06	0.26
	Orthostate	1.17–1.24	0.47	1.05
	Wall block	1.17	0.45	0.53–0.55

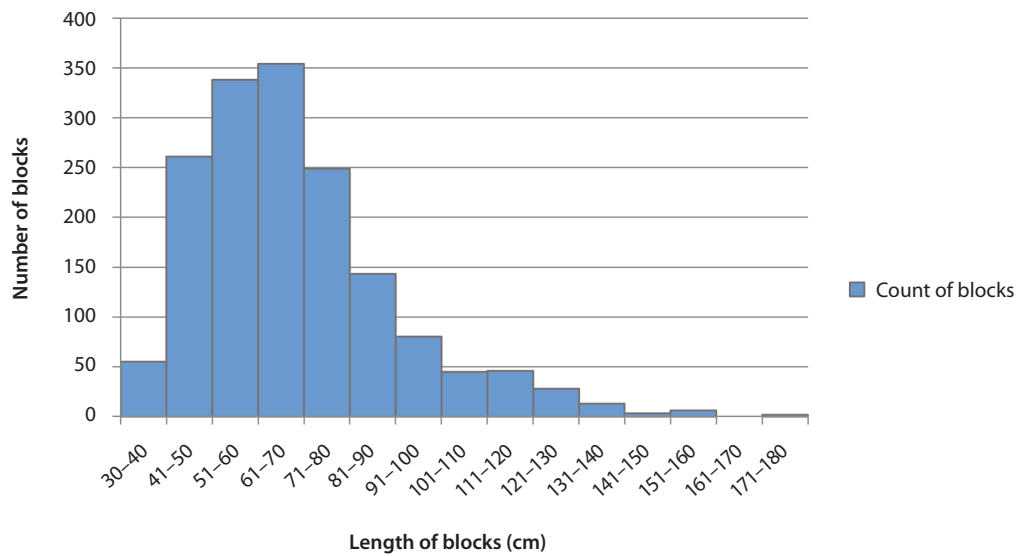


Figure 9.11. The distribution of blocks at Hyettos according to length in centimetres.

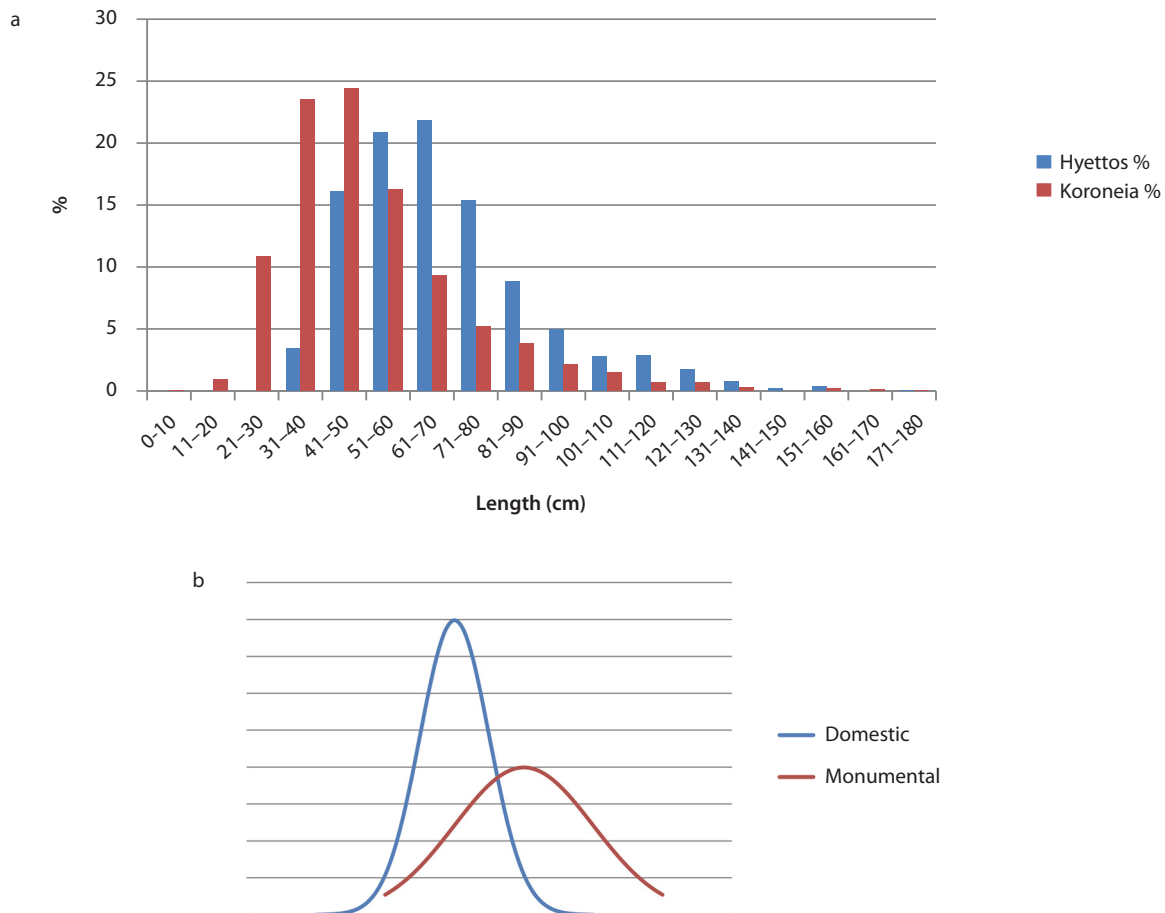


Figure 9.12. a) The comparative distribution of blocks at Hyettos and Koroneia, according to length; b) An alternative model where a smoother distribution of block lengths disguises two curves of domestic and public blocks.

This shows that the second peak in Figure 9.10, hypothetically representing the public structures, appears to be absent. Yet there *are* blocks that are significantly larger than others and there are also concentrations of larger blocks.

In theory, five major factors might contribute to this distribution:

1. The number of public structures, by comparison with that of domestic structures, is so limited that it simply does not show in a graph like this, because the absolute number is so low.
2. The documented blocks are in most cases virtually impossible to date, so that it becomes impossible to know which blocks are contemporary with which. The actual distribution for any given period may be very different from what is currently presented in Figure 9.11.
3. The heavy reuse of material, especially during the later periods, may lead to the re-cutting of blocks to fit in with new structures, thus obviously weighting the graph towards the lower values.
4. The two ranges, for domestic and public structures, may not be as clear-cut as hoped, and may overlap significantly. This would mean that the second peak is already incorporated within the peak now identified as domestic material (for an illustration of this, see Figure 9.12b). This could be due to the fact that not all public structures used only large blocks; or that the 'medium' sized blocks – say from 51 to 80 cm in length – were more often used than either the 'small' or 'large' blocks. This last suggestion is supported by the fact that the average block at Hyettos is too small by comparison to the blocks associated with temples elsewhere, as presented in Table 9.3, yet still quite large in relation to what might be expected for domestic structures.
5. The Central Limit Theorem states that when there are too many variables that influence the studied characteristic (in this case length), a distribution graph will always result in a (log) normal distribution (Lyon 2014). Hence, any differentiation within this characteristic will not be visible in such a distribution graph.

All this prompts the question as to why the measurements are being used as part of this analysis in the first place, when this type of analysis has proven flawed in the past (Boswinkel 2018). While a division between domestic and public structures based on the absolute

measurements cannot be taken as given, size still can function as an indication, as Table 9.3 showed. Perhaps rather than assigning each block to a domestic or public function on the basis of its dimensions, concentrations of blocks of certain sizes should be identified. There is evidence that when a concentration of large blocks is located somewhere, this certainly indicates the presence of a more monumental building there (Boswinkel 2015). In Figure 9.13, a combination of the find density (the coloured cells) and the average length of the blocks in that cell (the coloured circles) is shown. In this way not only can concentrations of larger blocks be identified, but it can also be checked whether this is indeed a concentration, that is of multiple blocks, or whether it represents just a single or only very few blocks.

The figure shows once again that the highest concentrations are in the Lower Town, situated to the south and southeast of the Acropolis. On the fringes of this Lower Town area, the density drops and typically consists of 1 to 9 finds per cell; this includes the Acropolis area. As for the distribution of cells with a higher average length in blocks, a different picture emerges. There are a number of cells, or groups of cells, on the site that have this larger than average length: a group of cells to the northwest, a group to the east, a group on and just south of the Acropolis and finally a number of individual cells, mainly located on the fringes of the surveyed area. It will be clear that cells that have a high average length of blocks, but only contain a few blocks, do not directly represent the location of larger or public structures. This means that many of the cells or groups of cells just described do not fit the criteria. When the actual number of finds is taken into account, only the most central concentration of these cells seems to be significant, as possible indication of a larger structure (such as a *stoa*, as suggested above, p. 378). Moreover, the three cells that show a very high density but only an 'average' length are on the high side of this average range, and as such may represent the 'medium' range in length that may have been used for (parts of) public structures.

A final element in the analysis of block dimensions is a comparison with Koroneia. Interestingly Hyettos, besides showing an overall higher density of architectural elements, has on average larger-sized blocks than at Koroneia. This is shown in the histogram, Figure 9.12. It is clear from this figure that the profiles of overall distribution of the blocks are quite similar, yet for Hyettos the entire graph is shifted towards the upper end of the scale by a dimension of 20 cm. This indicates that larger blocks were in general use at Hyettos, not just for public structures, but for all buildings, as a similar distribution of types of buildings can be expected in both cities.

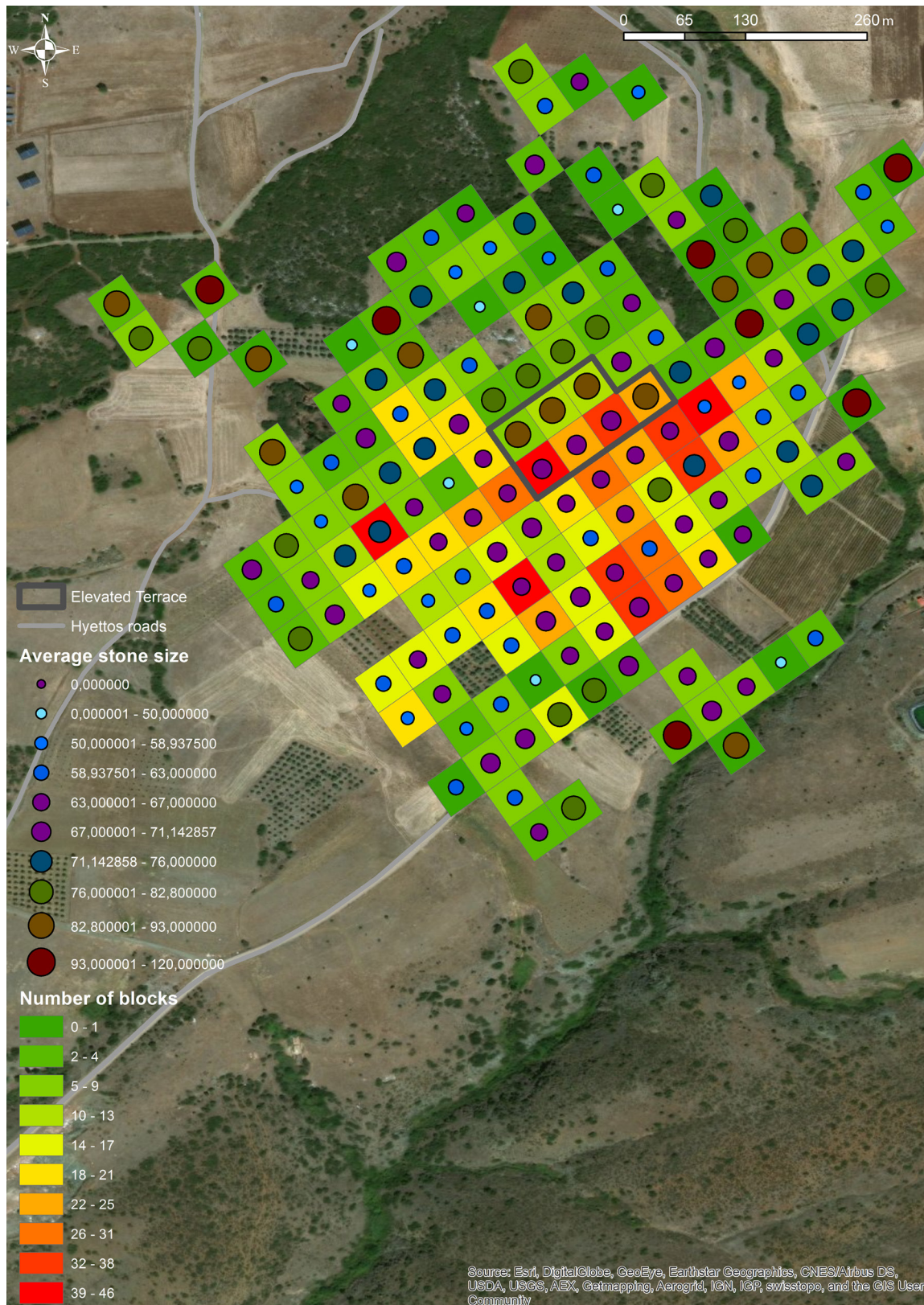


Figure 9.13. The average length of the blocks in each cell (the coloured circles) superimposed on the overall find density of that cell (the coloured cells).

Materials

The analysis of the distribution of materials across the site is divided into two parts: the non-limestone pieces and the limestone (both soft and hard) pieces. Since the overwhelming majority of the architectural remains are of limestone (98.6 per cent), the distribution of the remaining categories needs to be studied separately. When the limestone is eliminated, there remain only 23 architectural finds, of which one is a 'press' and one a column, both of conglomerate stone, while the rest are building blocks. The material itself is thus not an indicator for the type of architectural element. The distribution shows a concentration of magnetite- or iron-containing stones near the iron quarries on the south slope of the Acropolis, thus demonstrating that the material from this source was used nearby. One conglomerate polygonal block was found on the northern edge of the Acropolis; the rest of the blocks are found in the Lower Town area. The sandstone blocks (4) are found in one general area, yet are still spread over a distance of some 80–100 m. The conglomerate finds are spread all over the site, seemingly at random. It thus seems that, apart from the blocks from near the iron quarry, the remaining stone types are very few and not noticeably clustered. They may have been used to highlight aspects of a building, but are not otherwise significant.

As for the limestone, a division has been made between hard (1186 specimens) and soft (408) limestone. The hard limestone, obviously the most used material, encompasses all the classifications of type discussed earlier. The soft limestone category also encompasses all categories except for the *inscription*, *grinder* and *thresholds*. More columns are made of the softer limestone,

perhaps because this was easier to shape into cylinders. As far as any difference in distribution of the two types is concerned, there are a few. Most of the material is yet again, as with all category comparisons, from the Lower Town area. But the hard limestone has more pronounced concentrations on and just below the *agora* area, with a number of concentrations south and southeast of there. The softer limestone can be seen in three large concentrations, but in the same areas as the hard limestone. Both materials have a concentration to the east of the road leading up to the Acropolis, while the hard limestone has a few concentrations on the top of the Acropolis. All in all, the concentrations of the hard limestone are spread over a larger area, but seem relatively more pronounced, whereas the softer limestone is mostly concentrated in six 'hot spots'. This mixed distribution of the limestone types shows no real preference for either, except perhaps on the *agora* and Acropolis.

The distribution of the blocks in hard and soft limestone according to length does, however, show an interesting difference (Figure 9.14). The distribution of the hard limestone is similar to its overall distribution shown earlier, which is logical as it concerns the bulk of the material. The softer limestone, however, shows a lower peak in the smaller blocks, yet represents a greater share of the larger blocks, that is of lengths between 80 and 130 cm.

Of course, the group of hard limestone blocks does contain larger blocks too (there are no blocks larger than 155 cm in the soft limestone), but relatively the soft limestone was used *more* for larger blocks. Furthermore, the numbers of hard and soft limestone blocks are almost identical for those more than 100 cm long (71 against 67 blocks) while, as we have seen, the

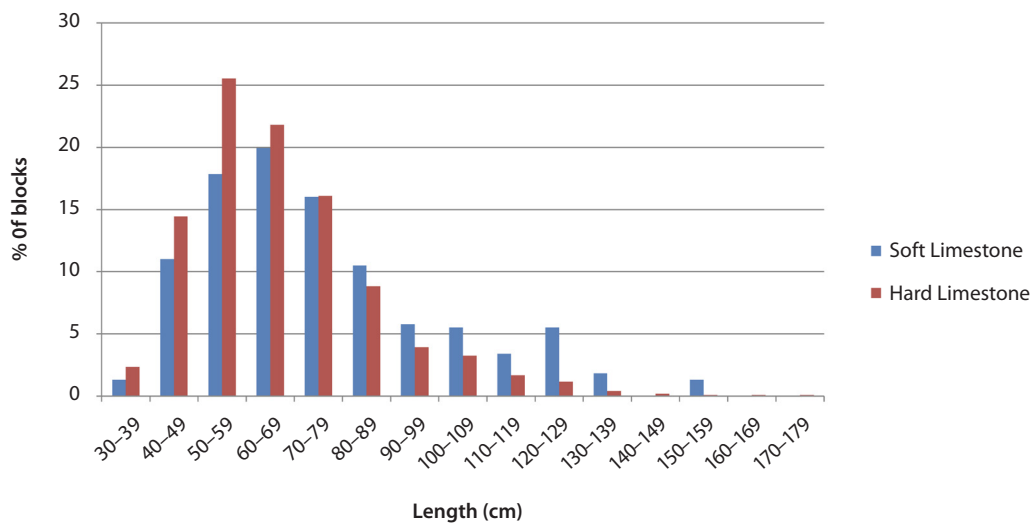


Figure 9.14. Distribution in percentages of limestone blocks, hard and soft, according to length.

Table 9.4. *Quality of the blocks. The numbers represent the percentages of hard and soft limestone blocks.*

Sum of %	Roughly cut	Medium cut	Well cut	Total
Hard limestone	50.08	45.78	4.13	100%
Unfinished	0.17	0.08		0.25
Roughly finished	49.24	27.40	0.17	76.81
Medium finished	0.67	18.30	3.46	22.43
Well finished			0.51	0.51
Soft limestone	26.96	51.96	21.08	100%
Roughly finished	26.72	10.05	0.25	37.01
Medium finished	0.25	41.67	19.36	61.27
Well finished		0.25	1.47	1.72

overall number of blocks in soft limestone is only about one quarter of the total number of limestone blocks. A relatively large number of these bigger soft limestone blocks are located around the *agora*, but otherwise the distribution of the larger blocks follows pretty well the overall distribution of the soft limestone. A final difference between the soft and hard limestone is that in general the soft limestone blocks are more regular and better cut and finished than the hard limestone blocks (see also Table 9.4). No doubt this again has to do with the fact that these were more easily worked; there are well-cut and finished hard limestone blocks, but they represent a relatively low number in comparison to the soft limestone blocks.⁴

Missing materials

It is remarkable that there is no marble whatever present at the site today. We know that it could be made available at Hyettos for special needs: a few of the inscriptions from here are said to be of marble, such as *IG* vii.2835 and 2836, and one of those presented in *HB* (129, no.14). There is also the unusual architectural block from Site CN 15, from the support for an arcade (Figures 4.242–4.244). Yet, for example, at the chapel of Agios Georgios adjoining Site CN 3 a little way north of the Acropolis, we find several inscriptions built into the walls, as well as a base for a standing bronze statue, that are in each case (once modern white-washing is discounted) found to be of the hard grey limestone. It could be that all surviving elements made from marble were likewise taken from the site; but clearly, as a building material, marble was not favoured by Hyettians and perhaps not easily available to them, in striking contrast to our experiences at Thespiai and Haliartos. The complete absence of marble at Hyettos (and the single find made at Koroneia) must surely indicate that it was hardly used in these cities for ordinary construction. Furthermore, even though the site was in use throughout the Roman Imperial era,

hardly any mortar was found either: only the remains that are just visible underneath the modern church on the Acropolis, one stretch of wall (see VE09 below) nearby, and a wall in the field west of the southern church of Agios Nikolaos, showed traces of mortar. In this case, by contrast, several structural remains with mortar were identified at Koroneia, which were used as primary indications for Roman constructions at the site.

Vertical elevations

Besides the architectural remains that are not *in situ*, described above, there are a small number of *in situ* remains that were categorized as ‘vertical elevations’. These comprise stones that are likely to have formed a wall, based either on their horizontal location relative to each other (a number of stones on a line, seemingly in their original position), or because they apparently form a number of courses, but are not considered recent. Apart from the earlier-mentioned Acropolis wall, studied extensively in the past (notably by Étienne and Knoepfler in *HB*), very few potential walls exist nowadays on the surface at Hyettos (Figure 9.15). Only ten were recorded in the surface survey, in contrast to the numerous subterranean structures found through geophysics (Chapter 8).

Of these ten surface finds, some are more easily recognized than others. Three rubble walls have been identified on the northwest side of the acropolis. Two (VE01 and 2) are built in a dry-rubble fashion, whereas the third (VE09) is built with mortared rubble. VE01 and 2 might be related, although this is hard to prove, since VE02 is extremely difficult to see. VE09 is close to, and perpendicular to, VE10. The latter is constructed with larger blocks that also seem to have been originally better-shaped; only 2 blocks, however, remain visible today. VE12, which is located northeast of VE09 and VE10, is again only barely visible: it consists of a small section of rubble wall built against a single larger (47 cm



Figure 9.15. Map of the vertical elevations identified at Hyettos.

long) rectangular block. This block may have been reused in the rubble wall, but too little is visible to be sure of its function within this context.

The final wall section on the Acropolis (VE11) is located east of VE01 and consists of four blocks of limestone that form a short line (a little over 2 m in length). It is uncertain whether they were originally more nicely shaped, or were used as they are, possibly in some sort of foundation. There is plenty of smaller rubble material nearby that has plainly been cleared and pushed aside, and that could have been part of the same structure.

In the Lower Town, VE05 and 6 are located just south of the track that cuts across the site in a roughly southwest to northeast, curving line. Where visible, they are somewhat similarly constructed with large rubble stones. These stones are clearly larger than those used in VE01 and 2 for example, but still not as well shaped as, for example, the blocks used in VE10. VE05 and 6 lie roughly 6.5 m apart, but parallel, and could potentially be part of the same structure, although this remains difficult to ascertain from the surface finds only.

The final two sections (VE03 and 4) are located roughly 70 m southeast of VE05 and 6, on the edge of one of the modern fields. Due to this location and the poor visibility of the remains, it is difficult to judge whether this is an ancient *in situ* wall or, once again, the result of the material being re-located to the edge of the field. The blocks are nicely shaped, large and rectangular. If this is their original location, it might point to a well-built, possibly large (public) building. The smaller material around it could have been used for a superstructure, wall fill or an internal wall. The presence of both soft and hard limestone could suggest that the two types were used simultaneously in the same ancient building.

These 'vertical elevations' thus inform us on only a few aspects of the layout of Hyettos. First, VE10, VE03 and 4 (setting aside the issue of their being *in situ*), might point to locations where a larger building could have been present. VE09 has so far been the only mortared construction documented, apart from the churches found in the area, and points to a late (Roman and beyond) phase of usage of the area on the Acropolis. In the Lower Town, VE05 and 6 might be part one structure and could, with further research in that specific area, provide more information on the kind of structures that this area of the town held. Sadly, the limited *in situ* surface finds cannot provide any more detailed information about the infrastructure of Hyettos.

Conclusions

The very low numbers of *in situ* structural remains make it difficult to provide any clear picture of the layout of the city through the architectural finds. But

some pointers to the locations of the city limits were established, and possible indicators for at least two larger (public) structures were found.

The hard limestone was the most used material, although the softer limestone provided better-finished blocks, which would have been suitable for either better-built structures, or possibly for subterranean foundations where the material was less vulnerable to weathering. The lack of marble is noticeable, and indicates that the city either lacked the funds to gain access to this material or, more likely, that what there was of the more precious material was entirely robbed from the site after its abandonment. The finds suggest that very rarely marble, usually in the form of inscribed blocks, was available to later generations, for whatever uses.

It is hoped that the study of architecture of Hyettos thus provides additional information to supplement the findings of the pottery and geophysical surveys, as well as opening up possibilities for future research into the architecture of Boeotian cities and towns.⁵

Notes

General note: On the original locations of the pieces now conserved in the two churchyards of Agios Nikolaos and Agios David, it should be explained that in 2018 we were referred to the conservator responsible for their protection, an octogenarian nun 'Yahya Kaloyera', resident in Pavlo, who in interview assured us that they had all been retrieved from the Lower Town of Hyettos (though without more precise provenances).

1. Preliminary reports on the Koroneia Urban Survey are available in *Pharos, The Journal of the Netherlands Institute in Athens*, volumes 14 (2006) – 22 (2016) and especially Piccoli (2018).
2. This 'digital' grid is different from the grid used during the field survey, as the cells used during the fieldwork are too small to accommodate the intended analyses.
3. The discovery of a large specimen with three end-apertures, the central larger, but with an additional hole at the other end, at MR villa site CN7, together with a stele, seem to point to *spolia* robbing from the Lower Town, with the first piece a likely former tripod-stand reused as a press weight. Nearby was found a press-base (See Ch. 4, and Figures 4.128–4.130).
4. Owing to greater erosion risk, soft blocks are usually employed for subsurface foundations and may thus have often larger dimensions.
5. This review does not repeat the information found in Étienne and Knoepfler's commentary on two aspects of the Hyettos Acropolis surface architecture, namely rock-cut foundations and partial walls carved into the limestone bedrock in the southwest area, associated with a fine and well-preserved stairway cut in the rock (see Figure 17.3).

Boeotia Project, Volume III: Hyettos

The urban and rural survey of the Greco-Roman town of Hyettos in Boeotia provides powerful insights into the rise and decline of a typical small city-state in a well-defined landscape. We follow village beginnings from Neolithic, early-farming times through the Bronze Age and into the dramatic appearance of the city in the Archaic era. Following an early Hellenistic climax the town and its countryside are transformed to a lesser agglomeration by the Imperial Roman period. After Late Antiquity and the final abandonment of the city, the survey reveals a return to a landscape of small rural communities, with a final reorganization into the present village network. Throughout, the volume combines archaeological surface ceramic survey with architectural study, geology and soil science, geophysics, geochemistry, aerial photography, and a steadily richer documentary record.

Authors:

John Bintliff was Professor of Classical and Mediterranean Archaeology at Universiteit Leiden NL, and is now Honorary Professor in the Department of Archaeology at the University of Edinburgh.

Emeri Farinetti is an Associate Professor at Roma Tre University.

Anthony Snodgrass is Laurence Professor Emeritus of Classical Archaeology of the University of Cambridge.



*Published by the McDonald Institute for Archaeological Research,
University of Cambridge, Downing Street, Cambridge, CB2 3ER, UK.*

Cover design by Dora Kemp and Ben Plumridge.

ISBN-13: 978-1-913344-27-6



UNIVERSITY OF
CAMBRIDGE

