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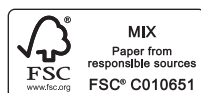
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Topographical Work in Ancient Kalydon, Aitolia (2015-18)*

OLYMPIA VIKATOU, SØREN HANDBERG,
NEOPTOLEMOS MICHAELIDES &
SIGNE BARFOED

Abstract

This report presents the preliminary results of extensive topographical surveys of the entire archaeological area of the ancient city of Kalydon in Aitolia conducted in the years 2015-2018. The fieldwork has resulted in the creation of a new detailed topographical map of the city that includes all visible monuments within the archaeological area. One of the main aims of the survey project was to document the city's extensive necropoleis, and three distinct burial areas dating to the Hellenistic period surrounding the city were identified. Furthermore, the survey demonstrated the existence of graves situated on the slopes of the acropolis within the fortified area of the city, which may date to the Classical period. The report also includes a presentation of more detailed surveys of one of the city's gates and a stretch of the fortification wall where ancient repairs are visible. The first evidence ever found for olive oil production in the city and the discovery of Mycenaean pottery are also discussed in the report.

1. Introduction

In 2015, the Kalydon Archaeological Project initiated an extensive, diachronic, topographical survey of the ancient city of Kalydon in Aitolia.¹ The purpose of the survey was to produce a new and detailed topographical map of the ancient city that included all the known and visible archaeological monuments and other features within the archaeological area, as no such map had yet been made. This report presents the new map, produced by the Kaly-

don Archaeological Project after four consecutive field campaigns, which began in 2015, and highlights some of the results (Fig. 1).

The survey covered an area of 634,080 m², and included the entire area of the fortified city and the sanctuary plateau to the west of the city, as well as substantial areas outside the city walls that had not previously been surveyed in detail. Several different survey techniques, in-

* The Kalydon Archaeological Project is a collaboration between the Danish Institute at Athens and the Ephorate of Antiquities of Aitolia-Acarmania and Lefkada, under the direction of the Ephor Dr. Olympia Vikatou and associate professor at the University of Oslo Søren Handberg. The project is grateful to the Hellenic Ministry of Culture and Sports for granting the permission to carry out archaeological fieldwork in ancient Kalydon, and to the Carlsberg Foundation for generous financial support. Many thanks are also due to Giorgos Stamatis (archaeologist) and Giorgos Manthos (guardian of the archaeological site) from the Ephorate of Antiquities of Aitolia-Acarmania and Lefkada, who participated in the project. The project also wishes to express its gratitude to Giannis Dikaioulias and all the archaeology students from Denmark and Norway who participated in the fieldwork.

¹ All the original data compiled during the survey is stored in the archives of the Danish Institute at Athens and the Ephorate of Antiquities of Aitolia-Acarmania and Lefkada.



Fig. 1. Topographical map of the archaeological area of ancient Kalydon. (N. Michaelides).

cluding advanced digital surveying tools, were employed in the creation of the topographical map.

In total, 777 new features were identified and included on the map of the archaeological area, including buildings, wall sections, graves, quarries and individual finds. The new map adds significant information that allows for reinterpretations of many parts of the city's topography, urban structure and historical development.

2. Methodology

The archaeological site of Kalydon covers an area of more than 600,000 m², and the size of the area alone presented a challenge for the project. In addition, the terrain is hilly, and several areas are heavily overgrown with thick vegetation, such as *Calicotome villosa* L. and *Quercus coccifera* L., which makes terrestrial surveying difficult and time consuming. Furthermore, some areas were completely inaccessible to survey teams on the ground. To meet these challenges, the project employed a range of different terrestrial and aerial surveying methods, which are described below. Even so, it is important to state that despite the difficult terrain, pedestrian survey teams carefully explored almost the entire area. The survey teams, usually consisting of three persons, would traverse the landscape and record features such as modern terrace walls, ancient wall structures, roads, fences, tombs, outcropping bedrock, single finds such as pieces of architectural blocks, production debris, etc. The survey teams recorded all features encountered with a short description including basic measurements and photographs. In this way, a comprehensive catalogue of the visible features within the archaeological area was produced.

An important part of the survey was the creation of a completely new and detailed base-map of the area with height curvatures, since no detailed map existed beforehand. The first archaeological site plan of ancient Kalydon was made during the fieldwork carried out by Frederik Poulsen and Konstantinos A. Rhomaios in 1926, with help from the Greek military.² However, the height

curvatures on this old map are not detailed enough and a comparison between the map and the physical landscape reveals some discrepancies in the topographical layout of the area. During the archaeological fieldwork conducted in Kalydon in the years 2001-2005, a new survey of the main monuments of the city was undertaken and a new and valuable map was produced.³ However, this map did not include detailed height curvatures and it showed almost exclusively excavated monuments.

2.1 UAV survey and the creation of a Digital Elevation Model of the archaeological site

Given the character of the pre-existing maps, the first step in producing a new topographical map of the archaeological area was therefore to create an entirely new base-map with detailed height curvatures. For this work, an Unmanned Aerial System (UAS) was used to produce a series of orthophotographs, which enabled the creation of a digital 3D point cloud of the site. From this cloud, a Digital Terrain-Terrestrial Model (DTM), a Digital Elevation Model (DEM) and a Digital Surface Model (DSM) covering c. 480,000 m² of the archaeological site were produced.⁴

Ground control points in the form of painted 20x20 cm aluminium targets were positioned in the surrounding landscape to mark significant alterations in altitude. In total, 70 control points were placed across the entire archaeological area during the 2017 summer campaign. The geographic positions of the control points' centres were recorded with the use of a Hi-Target V90Plus GPS (Fig. 2).⁵ Subsequently, a series of aerial photographs were taken with a remote-controlled multi-copter/octa-copter following a preconfigured flight path at 186 m altitude.⁶ The area was photographed with two different cameras, a Sony a7R II digital camera with 42.4 MP full-frame BSI CMOS sensor, which photographed the area vertically and laterally with 75% overlap of each photograph, and a Parrot Sequoia multispectral camera with 16 MP and 3 Bands (Blue 0.45-0.52, Green

2 Poulsen & Rhomaios 1927, 4-5 pl. 1, fig. 1.

3 See Dietz & Stavropoulou-Gatsi 2011a, 9-10, fig. 2.

4 For some examples of the use of UAV systems in monument surveys, see e.g. Achille *et al.* 2015; Colomina & Molina 2014; Nex & Remondino 2014.

5 The GPS receiver was adjusted to the EGSA-87 Greek reference system (EPSG:2100 GGRS87/Greek Grid).

6 The flight plan was created using the Ardupilot Mission Planner open source UAS Ground Station software, <http://planner.ardupilot.com> accessed 22 September 2018 (Avionics-Autopilot: Opensource Hardware Software PIXHAWK 2.1).

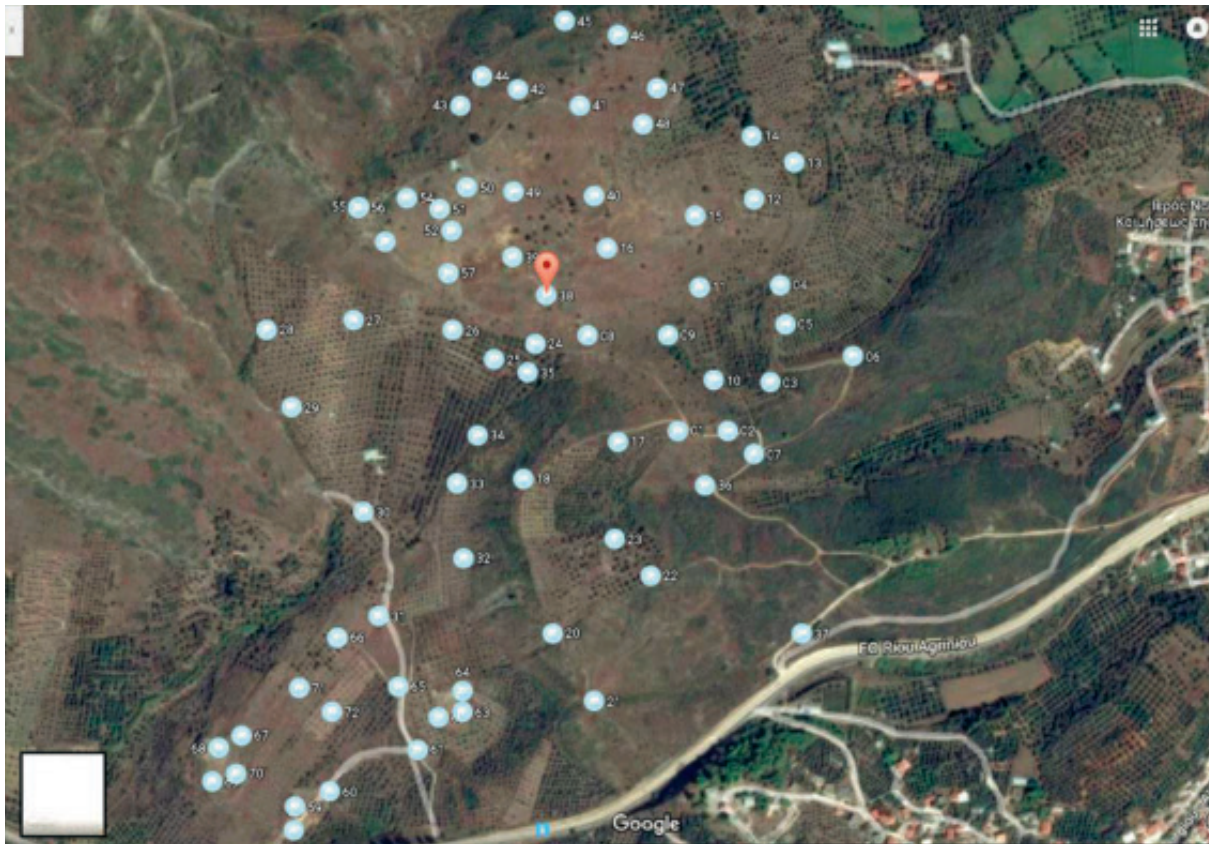


Fig. 2. Geographic position of ground control points located within the archaeological area of Kalydon.

0.52-0.60, Red 0.63-0.69).⁷

The digital 3D model of the site was created with Agisoft's Photoscan Professional photogrammetry software.⁸ The photographs from the digital and multispectral cameras, as well as the GPS coordinates of all the ground control points, were uploaded to the program and the images carefully georeferenced and aligned with the exact coordinates of the ground control points. From these, a dense point cloud, a mesh and textures were generated. Using the information from the multi-spectral images,

dense point cloud manipulation and classification tools were used to isolate the level of the vegetation from the soil level, thereby producing a DEM of the ground surface (Fig. 3). This procedure was critical, since high vegetation distorts contour lines in DEMs.⁹ A topographical base-map with detailed contour lines and an accuracy of 2.7 cm was finally extracted from the DEM.

7 280 photographs were taken with the Sony camera and 348 photographs with the multi-spectral camera. The following settings were used for the Sony Camera: image resolution (width/height): 7,952x5,304 pixels; shutter 1/2500; sensor (width/height) 35.814 x 23.876 mm; lens focal length: 22 mm.

8 Several other types of free and open source software, including freeware such as Regard3d, Meshlab, Autodesk ReMake, 3DF Zephyr Free and VisualSEM & OpenMVS, can be used in a similar way to produce photogrammetry models.

9 The final orthophotograph (3.75GB) consists of 40,448x44,836 pixels for a ground footprint of 1,426.88x1,581.71 m, so the ground resolution is 2.77 cm/pix. The DEM model resolution is 11.1 cm/pix with a point density of 81.4 points/m². The point cloud model of the archaeological site consists of 594,369 points and the 3D model of 5,812,493 faces.

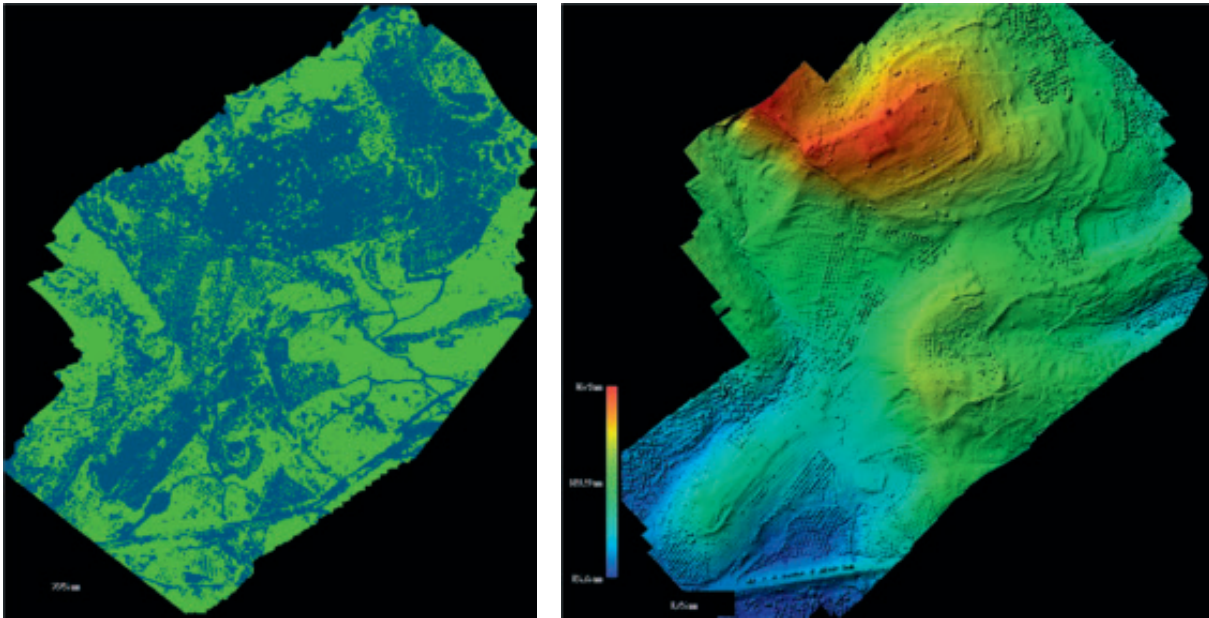


Fig. 3. A: Infrared photomosaic of the archaeological area. B: Digital Elevation Model of the archaeological area.

2.2 Mapping archaeological features within the archaeological site

The second step in the creation of the topographical plan involved the identification, recording and surveying of the visible archaeological features in the landscape. The whole archaeological area was divided into several smaller sections that were individually surveyed by survey teams, who traversed the area and recorded all visible features, both modern and ancient, in the landscape.

During the first two years of the survey (2015-2016), visible features in the landscape were recorded and surveyed with a Leica CS25 tablet with data corrections from Metrica's SmartNet through an installed SIM card, which allowed for an average accuracy between 1-3 cm. During those two years, mapping of the geographical position of visible archaeological remains on the entire acropolis hill was carried out using this system. However, the project experienced several operational difficulties with the system in the field, and the approach proved to be extremely time-consuming. Firstly, the tablet's battery quickly overheated in the warm Mediterranean conditions, demanding long breaks for the battery to cool down. Secondly, the satellite connection was unstable in the hilly area, which interrupted the work.

A different methodological approach was adopted for the surveys conducted in 2017 and 2018. During these

two years, major features in the archaeological area were identified in the georeferenced orthophotographs and positioned on the topographical map. The features were then subsequently surveyed by teams on the ground, who also identified and mapped other features.

3. Preliminary Results of the Topographical Survey

The new topographical survey has considerably expanded our knowledge of the topographical layout and historical development of the ancient city of Kalydon. In this section, we will briefly highlight some of the preliminary results. One of the most noteworthy results is the identification and mapping of tombs and burial monuments. The mapping of the precise location of both known and previously unidentified graves shows that several distinct necropoleis, which include monumental chamber tombs, surrounded the ancient city. Many new monuments, especially wall sections of houses and other monuments, were also identified during the work. The survey also revealed the existence of several ancient sandstone quarries in the archaeological area. They were mostly identified by the traces of cut grooves in the bedrock, but in some quarries, ashlar blocks that were almost completely cut out from the bedrock can be observed. In addition, the city's

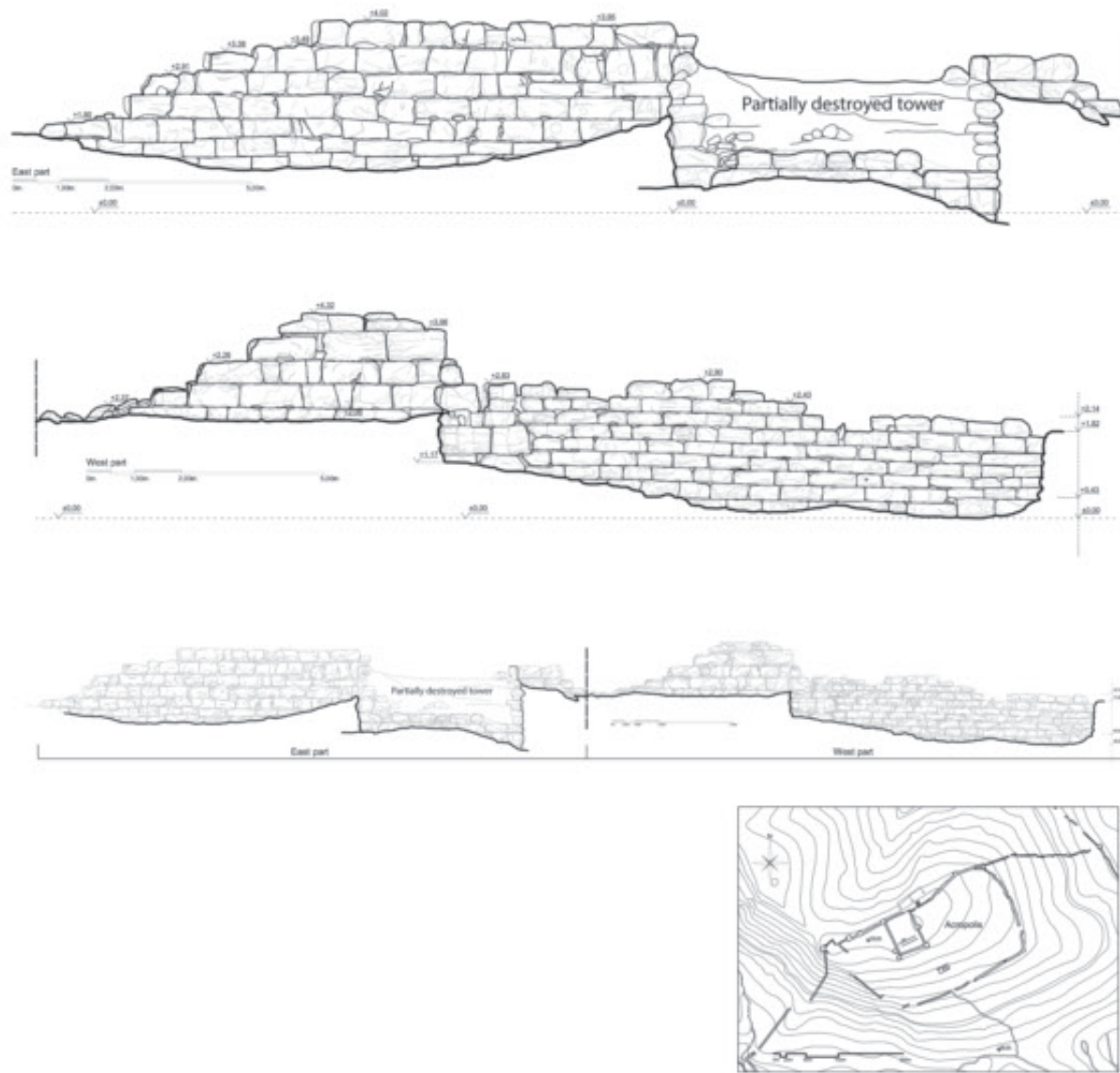


Fig. 4. Section drawing of the exterior of part of the northern fortification wall west of the Central Acropolis. (Drawing: N. Michaelides).

fortifications were also re-surveyed, and some areas and sections were investigated in greater detail. Finally, many important single finds were found scattered throughout the archaeological site. One of the most significant discoveries in terms of single finds was the Mycenaean pottery that was found at the highest point of the city in the northwestern corner of the acropolis. Another significant find is the first and, so far, only evidence for olive oil pro-

duction in the city in the form of a millstone from an olive crusher of the *trapetum* type.

3.1 The northern fortification wall and the Northwestern Gate

As part of the surveys of the fortification walls of the city, two separate parts of the fortifications were document-



Fig. 5. *The Northwestern Gate seen from the south. (Photograph: S. Handberg).*

ed in more detail: a stretch of the fortification wall on the northern side of the acropolis in 2017, and the so-called Northwestern Gate (or Gate A) near the northwestern corner of the fortifications in 2018 (Fig. 1, nos 1-2). These two areas were targeted for more detailed survey because they both provide new and important information about the construction and maintenance of the city's fortifications.

Repairs on the Northern Fortification

In 2017, a 50 m-long section of the exterior side of the fortification wall on the north side of the acropolis was surveyed in detail and a section plan was produced using photogrammetry and total station measurements (Fig. 4). This part of the fortification wall is particularly well-preserved with up to nine courses of sandstone ashlar blocks visible, and is particularly interesting because it provides

evidence for later repairs to the wall. Two different construction styles are clearly visible. In the western part, the wall is constructed with larger ashlar blocks; the blocks are smaller in the eastern part of the wall, where two courses of stones roughly correspond to one course in the western part. In one place, the smaller stones in the eastern part have been dressed to accommodate the larger blocks, and it is likely that the eastern part of the wall belongs to the Late Archaic–Early Classical fortifications of the acropolis, whereas the western part belongs to a later repair phase, which might be contemporary with the construction of the larger fortification enceinte of the city and the Northwestern Gate.¹⁰ The survey of the wall section also clearly shows that the ground in the eastern part has sunk, causing the stone courses of the wall to slant slightly downwards towards the east.

¹⁰ The Early Classical construction date of the Acropolis fortification wall is based on the dating of the fill of part of the wall that was excavated in the summer of 2014; see Vikatou & Handberg 2017, 203-4, Vikatou & Handberg 2018, 309-10.

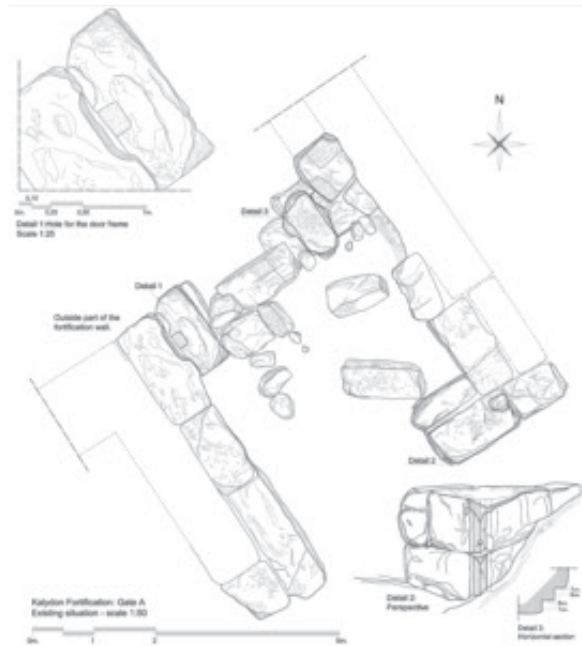


Fig. 6. Plan of the Northwestern Gate with details of the threshold and the south-eastern ante. (Drawing: N. Michaelides).

The Northwestern Gate

The Northwestern Gate is situated close to the northwestern corner of the city's fortification (Fig. 1, no. 1; Fig. 5). The main ancient road that ran along the interior of the western fortification wall led straight to the gate. The gate, which is not well-preserved, probably had a tower on its northeastern side (Fig. 6).¹¹ The course of the threshold, one course above and a foundation course below are preserved in the southwestern wall. The level of the threshold and two courses above are intermittently preserved in the northeastern wall.

The width of the gate's door opening is 2.57 m. A 47 cm-wide and 4 cm-deep recess has been cut into the stone block of the first course above and behind the threshold, and at the bottom of the recess there is a gap between the threshold block and the wall (Fig. 6 detail 1). The recess probably accommodated a wooden board that could be inserted into the cut at the bottom and thus fixed to the wall. The wooden post of the doorframe could

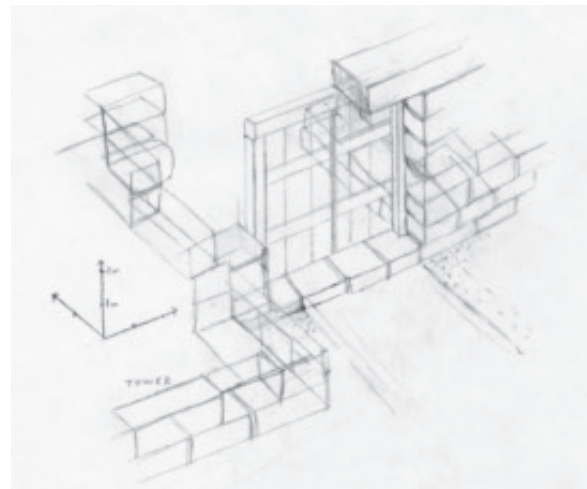


Fig. 7. Isometric reconstruction drawing of the Northwestern Gate showing how the doorframe was most likely constructed. (N. Michaelides).

then have been fixed to the wooden board with nails, which would have secured the whole doorframe (Fig. 7). No similar cuttings for a doorframe on the other side of the gate opening were identified on any of the preserved stone blocks, and no holes for a locking mechanism could be identified.

There is some evidence to suggest that the gate was a later addition to the fortification wall. The practice of corner cuttings (or drafted margins) was used in the construction of the two antae in the northeastern side of the gate (Fig. 6, details 2-3). Furthermore, the ante at the second interior gate opening is not connected to the northeastern wall, but only built up against it.

The use of corner cutting in Greek fortifications is already attested from around the middle of the 5th century BC, but the practice becomes much more common in the Late Classical–Early Hellenistic period.¹² It is found in the fortifications of Messene, which probably date to around the second quarter of the 4th century BC, and at the fortifications at Pangali near Chalkis, which are most likely contemporary with the fortifications in Messene.¹³ It has been suggested that the fortifications at Pangali could have been constructed during the Theban hegemony in

11 More extensive cleaning or even excavation is needed to understand how the gate is connected with the fortification wall.

12 Orlandos 1955-60, 258-9; Lawrence 1996, 168-9.

13 For Messene, see Müth 2014. For Pangali, see Mouritzen *et al.* 2016.

the Corinthian Gulf in the period 371-362/1 BC. The use of corner cuttings in Kalydon might therefore also suggest that the Northwestern Gate was installed after 367 BC, when Epaminondas “liberated” Kalydon from the Achaeans.¹⁴ The use of corner cuttings is also found in the partially destroyed tower in the surveyed section of the northern fortification.

The gate conforms to Frederik Winter’s Type I gate with a gate court, although at c. 9.5 m², it is small.¹⁵ According to Winter, the gate court becomes more common during the 4th century BC.¹⁶ The fact that the fortification of Kalydon did not take into consideration the higher ground on the hill to the west of the acropolis furthermore suggests that the fortifications were constructed before the development of catapults during the reign of Philip II (360/59-336 BC).¹⁷ Considering the points raised above, a likely date for the construction of the outer fortifications enceinte in Kalydon would be in the 370-360s BC.

3.2. Houses on the Lower Acropolis

A *prostas* house, the first identified in Kalydon, was excavated on the Lower Acropolis plateau in the years 2013-2016 (Fig. 1, no. 3),¹⁸ and during the survey, architectural remains that may belong to other houses of the same type were identified in several places on the acropolis hill. The remains of two such houses may be recognised in the southeastern area of the plateau (Fig. 1, no. 4). Traces of one or two other houses may perhaps be found immediately east of the Lower Acropolis fortification wall (Fig. 1, no. 5), and another house may be recognised on the south slope of the acropolis hill (Fig. 1, no. 6).

The reconstructed sizes of the two tentatively identified houses in the southeastern corner of the Lower Acropolis plateau correspond well with the size of the excavated *prostas* house (c. 160 m²). The dimensions of the other possible *prostas* houses are more difficult to estimate due to their poor state of preservation on the surface.

The results of both the excavation and the survey clearly show that the buildings on the acropolis and the slope closely followed the terrain, causing the buildings to have slightly different orientations. All around the acropolis, retaining terrace walls were constructed to create suitable spaces for the structures. This is especially clear in the area on the Lower Acropolis plateau directly below the Central Acropolis, where three terraced plateaus running in a southwestern/northeastern direction can be clearly observed. On the basis of geophysical surveys, a similar layout with houses located on terraced spaces around a hill has recently been proposed for ancient Chalkis, located c. 10 km east of Kalydon.¹⁹

3.3 The necropoleis of Kalydon

Few of Kalydon’s known burials have ever been included in topographical maps of the ancient city. The absence of a detailed topographical map of the graves and tomb monuments has impeded a comprehensive understanding of the spatial setting, layout and development of the city’s necropoleis. One of the priorities of the recent extensive survey was therefore to document and map both known and previously unidentified burials in the archaeological area. Now, for the first time, we have a complete topographical map with the location of almost all the known tombs in the city and the surrounding area. Since no coherent descriptions of the necropoleis of Kalydon exist, we will in this section give a brief diachronic summary of the available information.

The Bronze and Early Iron Age periods

The evidence for the earliest burial discovered near Kalydon comes in the form of a single vessel from a grave located close to the Evinos River, less than 1.5 km east of Kalydon’s acropolis. Lazaros Kolonas and Gioulika Christakopoulou, who reported the discovery of the vessel, dated it to the Middle Helladic period.²⁰ The vessel

14 See Freitag 1999, 56; Mouritzen *et al.* 2016, 247-8. For the Achaeans in Kalydon, see e.g. Bommeljé 1988.

15 See Winter 1971, 209-15 for this type. See also Dietz 2011a, 70-1, for a brief discussion of the gate.

16 Winter 1971, 215.

17 On this point see also Dietz 2011a, 66-7 with further references.

18 For preliminary reports on the excavation of the *prostas* house, see Vikatou & Handberg 2017; 2018.

19 Smekalova & Bevan 2016, 38-41, with fig. 16 (the buildings W2-W7) and the discussion in Dietz 2016.

20 Kolonas & Christakopoulou 2000, 240.

cannot be located today,²¹ and no illustrations of the piece have ever been published, so its date cannot be confirmed, but since a couple of possible Middle Helladic pottery sherds have been found in Kalydon,²² it would not be a great surprise to find contemporary graves, even if no other Bronze Age graves are attested in the area.

In 1965, Euthimios Mastrokostas excavated 20 cist and pithos burials dating to the Protogeometric period in several discrete locations east and southeast of the city.²³ Unfortunately, the exact location of the burials seems not to have been recorded at the time of excavation, but most of them were located close to the modern water reservoir near the Antirrio-Ioannina road (Fig. 1, no. 7). A single grave was found near the old railway station in Evinochori around half a kilometre southeast of the reservoir grave plot, and another near the Evinos River. The existence of a grave in the modern village of Evinochori suggests that the necropolis area stretched around half a kilometre towards the southeast. During the recent rescue excavations in connection with the new Ionian Road, two Protogeometric–Early Geometric graves were found at the Chondreika plot and two at the Stoumpeika plot immediately northeast of Kalydon's acropolis.²⁴

Combined, these finds reveal that in the Protogeometric–Early Geometric period, several burial clusters were located in an area stretching across a length of c. 1.5 km, from the centre of the modern village of Evinochori to the modern tunnel of the Ionian Road north of the city. No graves of the intervening period between the Protogeometric–Early Geometric and the Classical period have been identified with any certainty at Kalydon, except for one possible Archaic grave from the area of Evinochori (see the discussion below).

The Classical–Hellenistic necropoleis

Burials of the Late Classical–Hellenistic period are much better represented in Kalydon, and the recent survey has shown that three discrete necropoleis existed outside the area of the fortified city (Fig. 1). The South Necropolis covers the hill east of the so-called Heroon and the area towards the modern village of Evinochori. The West Necropolis is situated in the area north of the Laphrion Hill and on the southern spur of the Arakinthos mountain; this area has previously been described as the main necropolis of the ancient city, and might indeed continue much further beyond the city towards the west (see below).²⁵ The third and final burial ground that can be identified on the basis of the spatial distribution of the graves is the East Necropolis, located to the east and northeast of the Eastern Gate.

The South Necropolis

The most spectacular tomb known from the area of the South Necropolis is the underground chamber tomb of Macedonian type that was excavated underneath the northern exedra of the so-called Heroon by Poulsen and Rhomaios in 1926.²⁶ In the first publication from 1927, the excavators dated the Heroon complex to the second century AD based on the letterforms on inscriptions found in the building.²⁷ However, in the final publication from 1934, they revised the date based on the architectural elements, especially preserved column fragments, the floral decoration on a footstool in the burial chamber, and pottery from the foundation fill of the building, where, among other things, fragments of a mould-made bowl was found.²⁸ Considering these arguments, the excavators dated the construction of the complex, and hence the tomb, to somewhere between the late 2nd century BC and the foundation of Nikopolis in 27 BC, when according to

21 Stavropoulou-Gatsi 2011, 279 n. 17.

22 Stavropoulou-Gatsi & Dietz 2011, cat. no. 229, 275, 460, pl. 44. Another possible Middle Helladic sherd was found among the pottery assemblage from the Artemis Laphria sanctuary. Publication of this sherd is forthcoming by S. Barfoed.

23 Mastrokostas 1967, 320; Stavropoulou-Gatsi 2011.

24 Vikatou 2017, 33–8; forthcoming; Gatsi 2010a.

25 See Dietz 2011a, 66, where the hypothesis that the West Necropolis was the main necropolis of Kalydon is presented.

26 Poulsen & Rhomaios 1927, 51–84; Dyggve, Poulsen & Rhomaios 1934.

27 Poulsen & Rhomaios 1927, 53–5, fig. 84.

28 Dyggve, Poulsen & Rhomaios 1934, 397–414, 425. For details of the pottery found in the Heroon excavations see Dyggve, Poulsen & Rhomaios 1934, 415–27.



Fig. 8. A: Ceramic cremation urn from the burial chamber below the Heroon (after Poulsen et al. 1934, 127). B: Fragmented vessel found in Room 1 in the *prostas* house on the Lower Acropolis. (Photograph: S. Handberg).

ancient written sources Augustus moved the population of Aitolian towns to that city.²⁹

The tomb had unfortunately been robbed prior to the excavations, but a ceramic cremation urn was found inside the tomb chamber; the excavators did not propose a date for this particular urn (Fig. 8a).³⁰ During the excavations of a *prostas* house on the Lower Acropolis in the years 2013-16, a somewhat similar vessel was found in Room 1 of the house in a context that predominantly dated to the period from c. 250-125 BC (Fig. 8b).³¹

The best argument for the later date has been the tendril-scroll decoration on a footstool in the burial chamber, but later research has clearly shown that this specific type of floral decoration is also found earlier in the Hellenistic period.³² A chamber tomb of Macedonian type from New Pleuron, which was cleaned by E. Mastrokostas in 1967, included a stone *kline* with legs and pillows very similar

to the decoration of the *kline* in the chamber tomb in Kalydon. The tomb yielded a single find, a silver Silenus with a comic face.³³ New Pleuron was founded after the destruction of Old Pleuron in 235/4 BC by Demetrios II, so it is very likely that the tomb dates to after this period. The comic masks appear to be most common in the 3rd-century BC Athenian black-glossed pottery,³⁴ adding further evidence that might support a somewhat earlier date for the tomb in Kalydon.

The *terminus post quem* for the construction of the Heroon finally depends on the fragments of the mould-made bowl found in the fill layer underneath the southern part of the Heroon complex.³⁵ However, the original publication did not include any detailed information about the exact find context or the stratigraphy of the area, so the question of the date of the Heroon cannot be considered completely resolved.

29 For a discussion of the date of the Heroon building, see Charatzopoulou 2006, 76-85. For a discussion of the foundation of Nikopolis and the translocation of populations of the Aitolian cities to Nikopolis, see Isager 2009.

30 Dyggve, Poulsen & Rhomaios 1934, 425-7, cat. no. 36, fig. 147. The whereabouts of the urn is currently unknown.

31 For preliminary reports of the excavation of the *prostas* house, see Vikatou & Handberg 2017; 2018. Work on the finds from the *prostas* house is still ongoing, and the chronological limits of the context in Room 1 should be understood as preliminary at this stage.

32 See, for instance, Nalimova 2017; Kullberg 2014. Similar floral designs can also be observed on the Tertia Horaria from Rheneia, dated to the 2nd century BC; see Palagia 2016, 379-80, fig. 26.4.

33 Mastrokostas 1960, 195; Mastrokostas 1967, 321 pl. 228b; Zapheirou 1976, 169 pl. 119a. See also Stamatis 2018, 129-30 for the find of a grave stele with the name "Drakon" and further discussions of the grave.

34 See *Agora* 29, 92 and e.g. cat. nos 119-20, 126, 147, 172-3, 235, 255.

35 Dyggve et al. 1934, 419-27, cat. no. 40, figs 148-9.

Distinct but sporadic clusters of tombs have been recorded in the areas to the east and south of the Heroon. Some of these tombs were already identified and included on a map published in 1934.³⁶ One tomb complex, consisting of a larger burial chamber with two sarcophagi and two accompanying cist tombs located outside the chamber, is situated on the low hill northeast of the Heroon (Fig. 1, no. 8). These tombs were published by Ejnar Dyggve in 1951.³⁷

The location of another two tombs on a small spur at the western edge of the hill east of the Heroon is also marked on the 1934 topographical plan of the area, but not discussed in any detail in the publication (Fig. 1, no. 9). In 2018 when these tombs were photographed, and their exact location mapped, it became clear that one of the marked graves was in fact a larger tomb with two chambers connected by an anteroom (Fig. 9). The existence of another group of three graves on the 1934 map (Fig. 1, no. 10) could not be verified during the recent survey, but another cist tomb (Fig. 1, no. 11) was identified further south near the tunnel of the modern Antirrio-Ioannina road. In 2018, two additional tombs were also located in a very overgrown area between the fortification wall and the modern dirt road that cuts through the ancient fortifications (Fig. 1, no. 12).

The low hill east of the Heroon and the surrounding area is today mostly covered by thick vegetation, which is often impenetrable, but scattered groups of burials across the area suggest that it was covered with burial monuments and cist tombs in Antiquity. The larger and more prominent tombs probably had grave markers, such as columns, stelai or even sculptural groups to be visible from afar, even if no tangible evidence for this practice has so far been found in the area.

Today private properties of the residents in the village of Evinochori cover the area opposite the road from the archaeological site and the Antirrio-Ioannina road cuts through the southern spur of the hill, separating the village from the archaeological site. However, in 1972 a cluster of seven Early Hellenistic cist tombs were found on the opposite (southern) side of the road,³⁸ which shows



Fig. 9. Monumental chamber tomb on the hill east of the Heroon. (Photograph: S. Handberg).

that the necropolis originally stretched further towards the southeast. Four vessels (an Archaic Corinthian kotyle, two Classical lekythoi and a Hellenistic unguentarium) published by Jonas Eiring in 2004 are reported to have come from the garden of a private property in Evinochori, somewhere in the general vicinity of the seven excavated tombs c. 400 m southeast of the Heroon.³⁹ Eiring was convinced, mainly due to the vessels' good state of preservation, that they originated from graves. If that is indeed the case, the grave that contained the Corinthian kotyle must be considered unique, since it would be the only known grave dating to the Archaic period so far identi-

³⁶ Dyggve *et al.* 1934. 12, fig. 6.

³⁷ Dyggve 1951, 361-2, fig. 2.

³⁸ Papapostolou 1972. The exact geographic location of the seven graves remains unknown.

³⁹ Eiring 2004. The exact find spot of these four vessels is not reported by Eiring.



Fig. 10. Entrance to the so-called Heroon II burial chamber in the Western Necropolis. (Photograph: G. Stamatis. @ Ephorate of Antiquities of Aitolia-Acarmania and Lefkada).

fied in Kalydon.⁴⁰ Furthermore, graves of the Hellenistic period and two inscribed grave stelai have been reported from Kryoneri on the coast at the foot of the Varasova mountain, c. 5.5 km further southeast of Kalydon.⁴¹

The West Necropolis

In 1935, Dyggve found a monumental chamber tomb north of the Laphrion Hill across the so-called Kallirrhoë stream, which he named the “Heroon II” (Fig. 1, no. 13).⁴² The tomb is covered by an earth tumulus mound with a diameter of c. 25 m and consists of a single chamber with three sarcophagi (Fig. 10). When the project re-visited

the grave in 2018, cuttings for a cist tomb were found at the southern border of the tumulus. Additionally, a fragment of a fluted Doric column was found on top of the large stone slabs that constitute the roof of the chamber (Fig. 11). It is possible that the tomb had a grave marker in the form of a column similar to the column that marked the large memorial monument (*sema*) at Rigaiika c. 2.5 km west of Kalydon discovered in 2015.⁴³ Another single cist grave was found close to “Heroon II” near the Kallirrhoë stream (Fig. 1, no. 14).

Approximately 120 m northeast of the “Heroon II”, a peribolos grave was found in 2018 (Fig. 1, no. 15). Only one course of the ashlar blocks of the peribolos wall is exposed

40 It is possible that the four vessels actually come from the Laphria sanctuary; both Archaic Corinthian pottery and several lekythoi were found during excavation in the sanctuary area. It is well known, however, that there are ancient graves in the area of the private houses in Evinochori, and an Archaic site is known at Kryoneri on the coast at the foot of the Varasova mountain. The Kryoneri site remains unpublished, but Stavropoulou-Gatsi (2013) provides a preliminary report.

41 Mastrokostas 1967, 320 (Kryonerion).

42 Dygve 1951.

43 Vikatou 2017, 44-5; forthcoming; Vikatou & Michaelides, forthcoming.



Fig. 11. Fragment of a fluted column found at the Heroon II during survey in 2018. (S. Handberg).

on the surface and part of the monument remains buried at the foot of the hill. In front of the peribolos wall, half of a foundation stone for a grave stele, which was probably set up on top of the peribolos wall, was found (Fig. 12a). Such peribolos tombs with retaining walls enclosing cist tombs are well known from, for instance, nearby New Pleuron⁴⁴ and Rigaiika.⁴⁵ Further up the hill of the West Necropolis, another stele foundation base was found (Fig. 12b; Fig. 1, no. 16), and it is likely that the whole hill was covered in peribolos tombs in Antiquity.⁴⁶

Another well-preserved peribolos tomb was excavated in 2011 by the Ephorate of Antiquities of Aitolia-Acarania and Lefkada at the Fraxos plot, around half a kilometre west of Kalydon.⁴⁷ The encircling peribolos measures 12.75x2.70 m and is preserved to a height of 1.35 m. The peribolos contained six cist graves and a Macedonian-type tomb with a small antechamber as well as a grave stele. All the graves were found in undisturbed condition and contained a variety of objects dating to the Late Classical–Hellenistic period, among which were a gold earring, a silver disc and a bronze mirror and bucket.



Fig. 12. Stele bases from the West Necropolis most likely stemming from peribolos tombs. (Photographs: A: S. Handberg; B: N. Michaelides).

The East Necropolis

During survey work in 2018, the project identified at least 17 cist tombs to the east of the city, immediately outside the fortification wall (Fig. 1, nos 17-18; Fig. 13). Spatially the graves are situated in two discrete clusters; the southern one, consisting of 13 graves, is located close to the East Gate, whereas the northern and smaller cluster of four graves is close to the northeastern corner of the fortification wall. The layout of the tombs suggest that they lined an ancient road leading out of the East Gate and branching off towards the north. Other graves were

44 For a well-preserved peribolos tomb outside Gate A in New Pleuron, see Stamatis 2018, 127-9, 137-8, figs 2-3. For peribolos tombs in general, see e.g. Palagia 2016; Closterman 2007; Garland 1982.

45 Gatsi 2010b, 1057-8, figs 15, 18-9.

46 Frederik Poulsen and Konstantinos A. Rhomaïos published the inscriptions of three grave stelai found in the fields of the wine orchards around Kalydon and from the Artemis Laphria sanctuary, see Dyggve & Poulsen 1948, 296 with further references. Leake also reported a grave stele from Kalydon, see Leake 1935, 112. Several grave stelai are also known from New Pleuron, see Stamatis 2018, 130 n. 21-22; Zapheïropoulou 1976, 169 fig. 119b; Moschos 1999, 272.

47 Vikatou 2011; 2012; 2017, 46-47; forthcoming.

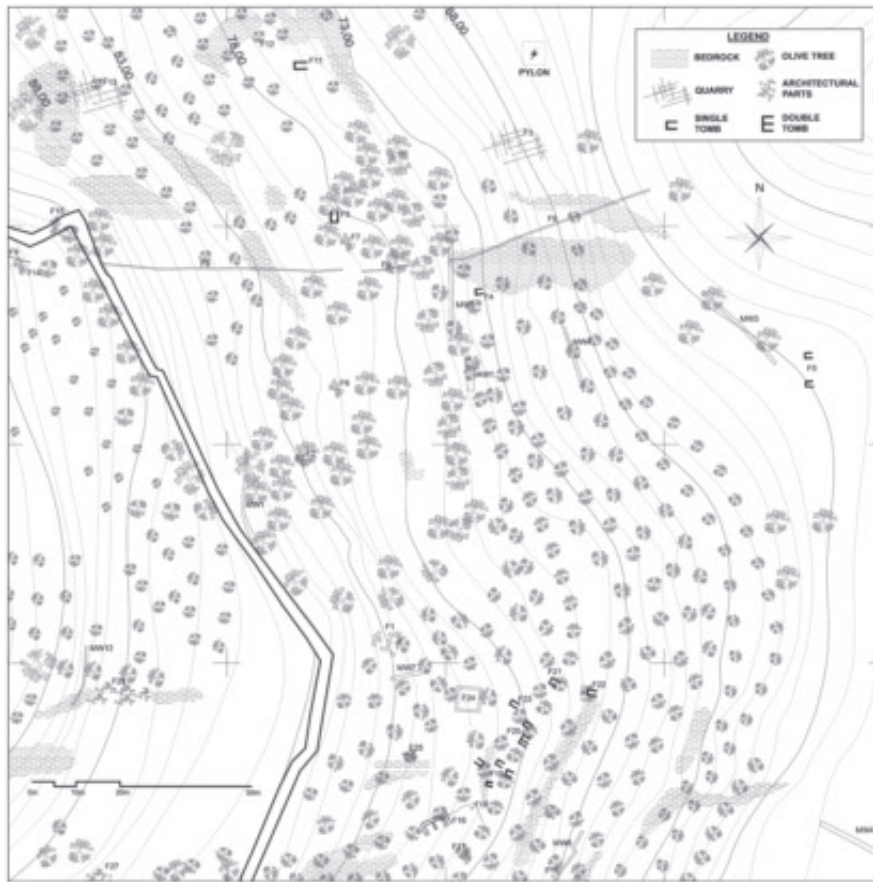


Fig. 13. Map of a part of the East Necropolis.
(N. Michaelides).

presumably located between the two clusters, but no clear evidence for tombs was found in this area.

Unfortunately, all the tombs had been disturbed and only the foundation cuttings in the bedrock, and in some cases the lower stone courses, are preserved (Fig. 14). The tomb walls would originally have been built up of larger dressed sandstone blocks, like the smaller tomb found behind the large burial memorial monument at Rigaiika and other tombs known from Macedonia.⁴⁸ Fragments of limestone stelai and porolithos stones, the stone normally used for columns and other architectural elements in Kalydon, were found scattered among the tombs of both the northern and southern clusters of graves.

During rescue excavations for the new Ionian Road, archaeologists from the Ephorate of Antiquities of Aitolia-Acarnania and Lefkada found eight cist graves dating to the Hellenistic period at the Chondreika site c. 400 m

north-northeast of the northern cluster of tombs.⁴⁹ One of the graves is a 3x4 m-large cist tomb of Macedonian type with a *thamos*. The tomb had been disturbed, but not robbed, and the grave goods included, among other objects, a golden *danake* and three bronze coins. Another grave contained five black-glossed vessels dating to the Early Hellenistic period. The existence of these graves shows that the East Necropolis covered an area of at least half a kilometre along the eastern border of the outer fortification wall.

The lower courses of several ancient walls belonging to smaller buildings or enclosures were found near the tombs. It is possible that these structures are family grave periboloi, or they could stem from smaller buildings or enclosures for burial associations. A terracotta antefix was found in one of the tombs in the southern cluster (Fig. 15). The provenience of this piece is very problem-

⁴⁸ For Rigaiika, see Vikatou 2017, 45 fig. 7. For Macedonia, see e.g. Themelis & Touratsoglou 1997.

⁴⁹ Vikatou 2017, 33-8; forthcoming.



Fig. 14. Monumental cist tomb in the East Necropolis. (Photograph: S.T. Tomter).

atic, but its presence in the tomb should probably be understood as a result of post-depositional processes. Even so, the existence of an antefix in the area is significant, since it signals the existence of a larger building in the area. A similar antefix, which was almost certainly produced from the same mould, has been found in upper stratigraphical layers in the excavation of the Peristyle House in the Lower Town.⁵⁰ In style it is close to the antefixes from the South Stoa in Corinth and should therefore most likely be dated to the Early Hellenistic period.⁵¹

A necropolis on the slope of the Acropolis in the Classical period

One of the most surprising results of the recent survey was the discovery of burials on the south slope of the acropolis hill inside the fortified area of the city. In 2018, two cist tombs were found on the south slope of the

acropolis (Fig. 1, nos 19-20). The two graves are constructed in the same fashion with larger stone slabs set vertically in the ground to form the cist (Fig. 16a-b).

In front of the western tomb, remains of an ancient wall can be traced for a length of 7.25 m. The wall might have served as a peribolos wall for one or more tombs, but the visible remains are too sparse to verify this. A stela fragment was found further down the slope, however, which might support the existence of a peribolos tomb on the acropolis slope.⁵²

No finds that could directly indicate the date of the two graves were found. However, in terms of construction, they are similar to the 5th-century BC graves at the Rigaiika necropolis, located c. 2.5 km west of Kalydon, that were recently excavated during salvage excavations in connection with the construction of the new Ionian Road.⁵³ The generic similarity might suggest a similar date for the two graves in Kalydon. Even though this idea must remain tentative, two circumstances support

⁵⁰ Dietz 2011c, 378, cat. no. 8.

⁵¹ Broneer 1954, pl. 21.1a.

⁵² For Classical period peribolos tombs in Pharsalos, see Stamatopoulou & Katakouta 2013.

⁵³ Vikatou 2017, 39-44; Stauropoulou-Gatsi 2010.



Fig. 15. Terracotta antefix from the East Necropolis. Find no. 18-1010. (Photograph: S. Handberg).

a date in the Classical period. First, since the graves are found inside the fortified area of the city, it is reasonable to suppose that they belong to the period before the construction of the outer fortification enceinte, which, as discussed above, was probably constructed in the Late Classical period. Secondly, during the excavations on the Central Acropolis in 2001-05, a pit burial probably dating to the Classical period was found. The pit, which was underneath the walls of the Hellenistic “palace”, is reported to have contained a human skeleton placed on the bedrock. The pottery from the pit is described as dating to the Classical period, and a gold finger ring found nearby might originally have belonged to the grave assemblage.⁵⁴ Unfortunately, none of the finds from this pit have been published, so its date must remain an open question.

In 2016, a stone urn was found directly southeast of the southeastern corner of the fortification wall (Fig. 1, no. 21, Fig. 17). Typologically the urn belongs to a series of cremation urns referred to as *osteotheken*, which are well known from the Kerameikos necropolis in Athens, where 50 examples have been documented.⁵⁵ A few examples of the type are known from Leukas, but it is rare outside Athens.⁵⁶ The stone used for the urn does not appear to be

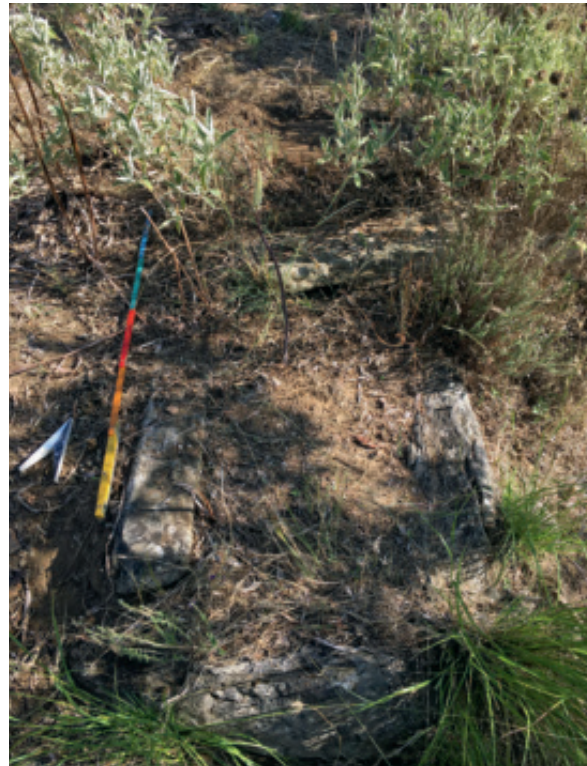


Fig. 16. Cist graves on the south slope of the acropolis hill. (Photographs: A: S. Handberg; B: N. Michaelides).

local, and it is possible that it was imported to Kalydon, possibly even from Athens. Morphologically the urn from Kalydon is closest to urns that can be dated around the middle of the 4th century BC, as well as one example

⁵⁴ Dietz 2011, 229 (Pit HS43). For mention of the finds from the pit, see Bollen 2011a, 465 (H8).

⁵⁵ Torben Kessler has recently compiled a convenient typology of the *osteotheken* from Kerameikos, see Kessler 2014/2015.

⁵⁶ Kessler 2014/2015, 190. For Leukas, see Andreou 1980, 75 fig. 2.



Fig. 17. Stone cremation urn (*osteothek*) found in the slope of the acropolis hill. (Photograph: A.D.K. Høj).

found in a Roman context.⁵⁷ However, the urn found in a Roman context in Athens might have been an earlier mortar that was re-used as a funerary urn, and another urn that is almost identical to the one from Kalydon has been found in a Hellenistic context in Kallipoli.⁵⁸ Since such *osteotheken* were often re-used mortars, it remains an open question whether the Kalydonian urn is in fact a mortar originating in a Hellenistic house on the acropolis slope or a funerary urn, and, if so, what period it should be ascribed to.⁵⁹ However, the surface treatment of the Kalydonian vessel conforms to a treatment that is often found in the Late Classical and Hellenistic examples in Athens.⁶⁰

57 Compare the urn from Kalydon with Kessler, cat. no. 8 (mid-4th century BC) and cat. no. 11 (Roman period).

58 Themelis 1980, 274 pl. 42.

59 For the re-use of mortars such as *osteotheken*, see Kessler 2016, 188-9.

60 Kessler 2014/2015, 190.

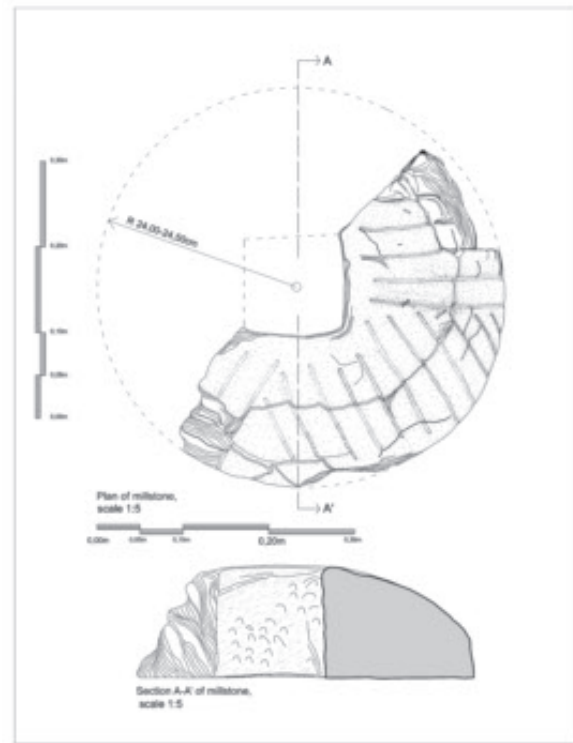


Fig. 18. Plan and section drawing of rotary crusher stone. (Drawing: N. Michaelides).

Concluding remarks

It is clear that at least 90 individual burials can be identified in Kalydon, most of which had not previously been included on a topographical map of the ancient city. The detailed recording of the spatial distribution of the tombs now allows us to identify three distinct necropoleis outside the fortification walls, and to presume the existence of earlier tombs on the acropolis hill within the fortified area. Comparatively few tombs are yet known from ancient Kalydon, and it remains difficult to say more about the spatial development of the necropoleis. However, two points can tentatively be made. First, it appears that the more elaborately constructed cist and chamber tombs are located closer to the city walls and along prominent roads, whereas simpler cist graves, such as those found in the modern village of Evinochori, are located further away

from city. Secondly, the most elaborate tombs appear to be placed in topographically very conspicuous places, such as the “Heroon II” in line of sight from the main sanctuary, the two-chamber tomb on the hill above the Heroon, and the chamber tomb excavated by the Ephorate in 2011, which lined the ancient road towards New Pleuron.

The tombs found on the slope of the acropolis are particularly interesting since they suggest that in an earlier period the city was confined to the acropolis. The recent excavations of a small section of the acropolis wall provided evidence for a *terminus post quem* of 500-480 BC, and it is likely that it was constructed in the Early Classical period.⁶¹ The new evidence from the excavations and survey provides significant information about the character and urban development of Kalydon in the pre-Hellenistic period, contributing to the scholarly debate about urban development in Aitolia in general, and specifically the question of the so-called refuge fortifications mentioned by ancient sources.⁶²

In Giorgos Sotiriades’ report on his archaeological work in Kalydon, published in 1908, he mentions that he found fragments of gold leaf foil in a grave north of the Laphrion hill, and when Dyggve investigated the “Heroon II”, he considered that this might have been the tomb where Sotiriadis found the gold fragments.⁶³ Fragments of gold leaves, presumably from a gold wreath, were also reported to have been found on the floor of the burial chamber underneath the Heroon.⁶⁴ The gold earring found in the undisturbed chamber tomb in 2011, the gold ring from the pit/grave on the Central Acropolis and the gold and silver objects found in the graves at the Chrondreika site are further testimonies of the wealth found in the Kalydonian tombs. Even though almost all the graves from Kalydon were found in a robbed condition at the time of excavation, we can begin to form a picture of the

elaborate and rich chamber and cist burials, which offer us a glimpse of the riches of Aitolia in the Hellenistic period as described in written sources.⁶⁵

3.4. Evidence for the production of olive oil in Kalydon in the Hellenistic or Roman period

During the survey in 2018, evidence for oil production was identified for the first time in Kalydon. A large fragment of a rotary olive crusher millstone made of the local sandstone (*psamitis*) of the *trapetum* type was found north of the Heroon and just outside the fortified area of the South Hill (Fig. 1, no. 22).

Only about half of the round millstone is preserved (Fig. 18). It has a hemispherical shape with a maximum height of 13 cm near the centre, which tapers towards the edge. The centre of the stone has a square hole to accommodate a wooden beam. There are clear traces of use-wear on the edges, but its reconstructed diameter is 48-9 cm. A series of shallow grooves are cut into the surface of the spherical side. The *trapetum* type of olive mill worked with two such hemispherical crushers that squeezed the olives into a pulp in a large stone mortar with a concave bottom. The grooved surface of the millstones and the mortar facilitated the crushing when the millstones were rotated around the mortar (Fig. 19).⁶⁶

The millstone from Kalydon was not found in its original context, but on the ground surface at the foot of the South Hill, where it seemed to have been moved. No obvious traces of buildings or a corresponding mortar were identified in the vicinity of the find spot, and it cannot be excluded that it eroded down from the South Hill, although the hill would not seem to be an ideal location for the processing of olives.⁶⁷ An area with many roof tiles and pottery dating to the 2nd century BC was found c. 50 m northwest of the crusher (Fig. 1, no. 23).

61 For the excavations at the acropolis fortifications, see Vikatou & Handberg 2017a, 203-5; 2018, 309-10.

62 For the question of fortified hills in Aitolia, see e.g. Funke 1987.

63 Sotiriades 1908, 100; Dyggve 1951, 361. For the mention of gold in graves at Kalydon, see also Dawkins 1909, 355.

64 Dyggve, Poulsen & Rhomaios 1934, 347.

65 For the riches of the Aitolian tombs, see also Grainger 1999, 188 n. 2.

66 For this type of crusher, see e.g. Foxhall 2007, 165-77.

67 During the recent survey, evidence for the existence of public buildings on the top of the South Hill was found. During an earlier intensive survey a few pottery sherds were found on the hill, and the area was especially void of finds dating to the Late Hellenistic and Roman periods. This has led the former director of the archaeological fieldwork in Kalydon, Søren Dietz, to propose that the South Hill was used as a grazing area inside the fortified area of the city in this period. See Dietz 2011b, 79.

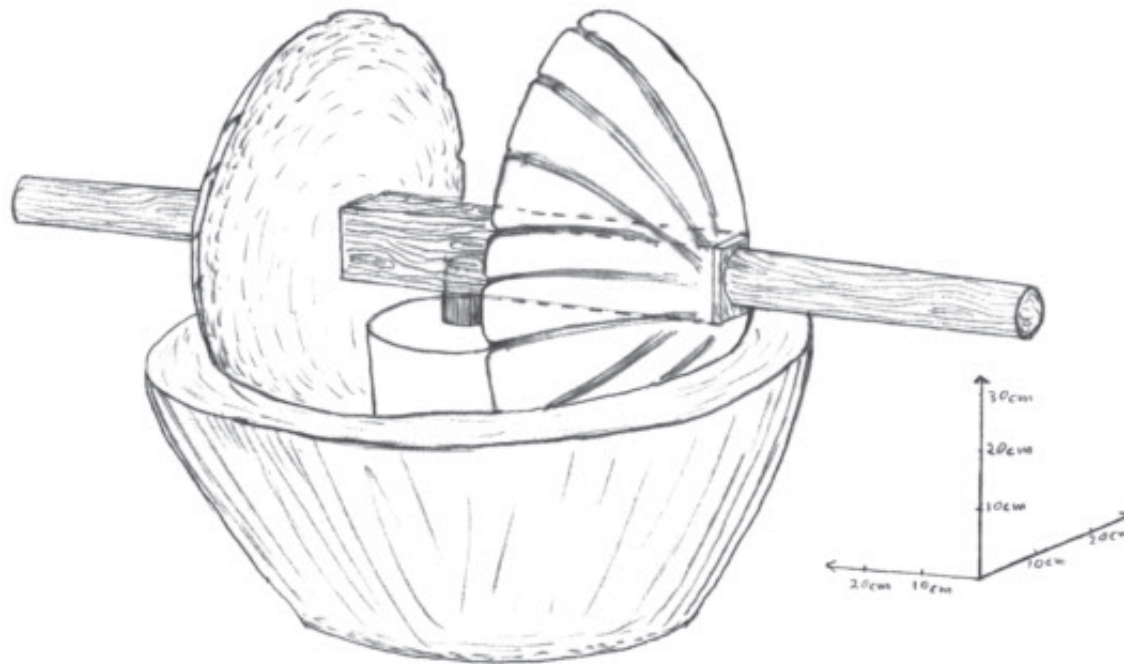


Fig. 19. Reconstruction drawing of an olive crusher of the trapezium type. (Drawing: N. Michaelides).

The millstone cannot be directly associated with this assemblage of pottery and roof tiles, but at least we can say that it was found in an area with Middle Hellenistic material.

Few rotary crushers have so far been reported from western Greece, but one has been found in a house in Arta in Epirus.⁶⁸ The context of this millstone can only be dated between the 2nd century BC and the 1st century AD. Another example has recently been reported from a farmhouse in Sitaralona in Aetolia.⁶⁹

The chronology and morphological development of rotary crushers is not well documented. The type was most common in Roman times, but several examples dating to the Late Classical and Hellenistic periods are known from Greece.⁷⁰ The crushers of the Classical and

Hellenistic periods seem generally to have been twice the size of the crusher from Kalydon.⁷¹ The well-preserved crusher stones found in a Hellenistic house on the acropolis of Argilos in Macedonia appear to be slightly smaller than the ones from Olynthos.⁷² A millstone crusher very similar to the one from Kalydon but with a diameter of 60 cm has been found in a Roman villa dated between the 1st century BC and the 1st century AD at Akraiphia in Boeotia, and the crushers generally appear to be smaller in the Roman period compared to the earlier Greek examples.⁷³

The only other indication we have of olive cultivation in Kalydon is the few charred olive stones that were found in a predominantly 2nd-century BC context in Room 1 in the *prostas* house on the Lower Acropolis.⁷⁴ That olive

68 Morgan 2009/2010, 113 (Arta, Garouphilia Street); Aggeli 1999, 4602; 2000, 546-7.

69 Gatsi 2010c; Gerolumou 2013.

70 E.g. from Chios, see Boardman 1958-9, 304; from Olynthos, see e.g. Isager & Skydsgaard 1995, 63 pl. 3.10-11; from Delos, see Bruneau & Fraisse 1981.

71 Foxhall 2007, 168-9.

72 Bonias & Perreault 1997, 544-8.

73 For the millstone crusher from Akraiphia, see Vlachoyanni 2013, 494 fig. 9b. For the decrease in size in the Roman period, see Foxhall 2007, 168-70; Mattingly 1990, 85. See also White 1975, 229.

74 Vikatou & Handberg 2017, 194 fig. 5.

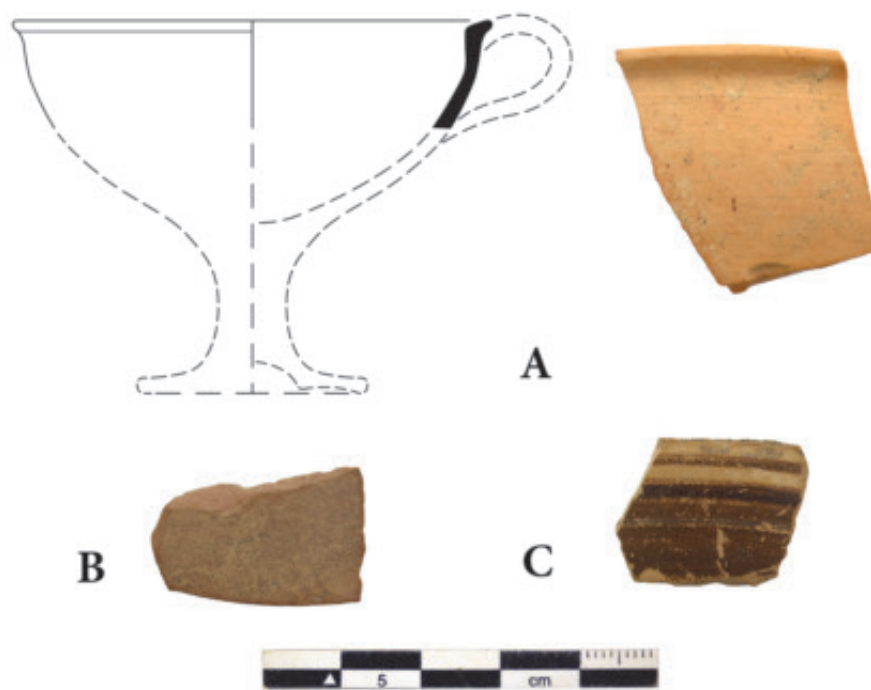


Fig. 20. A: Rim sherd of a Late-Helladic IIIA₁ kylix and reconstruction drawing (drawing not to scale). (Drawing: J. Melander). B: Body sherd possibly from a Middle-Helladic vessel. C: Body sherd of a Geometric? Vessel. (Photographs: K.E. Vinther).

oil was produced in the Late Hellenistic or Early Roman period in Kalydon can perhaps be supported by the find of three pieces of an *opus spicatum* floor that might originally have been part of a pressing floor. The pieces were found in the eastern part of the city (Fig. 1. no. 24). During the period from the 2nd century BC to the 1st century AD, this type of floor was widely used as the surface of pressing floors in the central Adriatic region in Italy.⁷⁵ The piece of *opus spicatum* floor was not found in any obvious connection with architectural remains, and no base blocks for the pressing lever, decantation tanks, or larger storage vessels were found in the surrounding area, which would have strengthened the idea that these floor pieces were indeed from a pressing floor.

If the millstone originally belonged to a processing facility north of the Heron, which seems likely, it provides valuable information about the organisation of land use in ancient Kalydon, since no farmhouses have so far been identified in the *chora*. Surely, it would have been

more efficient to process the olives closer to the olive groves, rather than transporting them back to the city.⁷⁶ In Halieis, for instance, many presses have been found inside the town, but no rotary crushers, which could suggest that the crushing of the olives into pulp took place in the countryside.⁷⁷ The existence of a millstone in Kalydon might therefore reinforce our current picture of a countryside devoid of farmhouses, which is indeed noteworthy in comparison to the many Late Hellenistic and Roman farmhouses that are known from the countryside of Patras.⁷⁸

3.5. A Mycenaean “platform”

In 1908, the archaeologist Giorgos Sotiriades explored Kalydon and made a small excavation in the northwestern corner of Kalydon’s acropolis.⁷⁹ There he discovered walls that he interpreted as belonging to a Mycenaean defensive tower. He supported the date with reference

⁷⁵ Van Limbergen 2011, 75-80.

⁷⁶ Foxhall 2007, 198-9.

⁷⁷ Ault 1994, 200; 1999, 652-4; Jameson 1969, 324; 2001, 283-4. For a discussion, see also Foxhall 2007, 143-8.

⁷⁸ See most recently Stavropoulou-Gatsi & Alexopoulou 2013.

⁷⁹ Sotiriades 1908, 99-100.

to the presence of Mycenaean and Geometric pottery sherds.⁸⁰ However, in his brief report he did not include any illustrations of the walls or the pottery. In 2018, Sotiriades' excavation trenches and "tower" in the northwestern corner of the acropolis were re-surveyed and a small rectangular "platform" was identified (Fig. 1, no. 25). Like Sotiriades, the survey team found Mycenaean pottery on the surface near this "platform", which included a handful of plain-ware body sherds and a rim fragment of a Late Helladic IIIA₁ kylix (Fig. 20a). Additionally, a body sherd possibly dating to the Middle Helladic period was found (Fig. 20b), as well as a fragment of an open vessel that could date to the Geometric period (Fig. 20c). In the years 2001-2004, a few Mycenaean sherds were found in the same area during an intensive survey in the city.⁸¹ A few additional sherds were also found in the excavations on the Central Acropolis,⁸² and one sherd comes from the excavations of a kiln in the Lower Town.⁸³ It remains uncertain whether Sotiriades' walls are indeed of Mycenaean date, but any clarification of this question would require extensive cleaning of the area and perhaps excavations.

An ongoing research project that aims at a full publication of the pottery from F. Poulsen, K. A. Rhomaios and E. Dyggve's excavation in the Artemis Laphria sanctuary in the 1920s and 30s has shown that a substantial amount of Mycenaean pottery was found in the sanctuary area.⁸⁴ The number of Mycenaean finds known from Kalydon has thus been steadily growing ever since exploration of the site began, and we are now able to suggest that occupation at the site in this period was more than just intermittent.

4. Conclusion

Through the extensive surveys conducted in the archaeological area of Kalydon over four summer campaigns, the project produced a new and more detailed topographical map, which will be an invaluable tool for future exploration of the city and research into its development.

The important work of mapping Kalydon's necropoleis likewise adds new essential evidence for the character of burial customs, not just in Kalydon but also across the region of Aitolia.

The new survey of the city's monuments has allowed for some corrections of the topographical plan of the sanctuary on the Laphrion hill, which was surveyed during the excavations conducted there in the 1920s and 30s. A comparison between the old plan and the results of the new survey shows that the location of some of the monuments in the old plan was offset by up to two metres.

The discovery of a few Mycenaean ceramic sherds in the northwestern part of the Acropolis, and the few additional sherds found at various locations on the site, combined with the larger group of Mycenaean pottery excavated in the sanctuary in the 1920s and 30s, are clearly powerful indications of the Mycenaean habitation of Kalydon, and future excavations may confirm the strong Mycenaean mythological background of the ancient city.

OLYMPIA VIKATOU

Ephorate of Antiquities of Aetolia-Acarmania and Lekada
Ag. Athanasiou 4
GR-302 00 Mesolonghi
ovikatou@culture.gr

SØREN HANDBERG

Department of Archaeology, Conservation and History
University of Oslo, P.O. Box 1019, Blindern
N-0315 Oslo
soren.handberg@iakh.uio.no / shhandberg@hotmail.com

NEOPTOLEMOS MICHAELIDES

5 Mavromixali, P. Peteli
P.O. Box GR-15236 Athens
nemosmich@yahoo.com

80 Sotiriades 1908, 100.

81 For the survey, see Methenithis 2011. The Mycenaean sherds found in the northwestern corner of the Acropolis are discussed in Stavropoulou-Gatsi & Dietz 2011, 275.

82 In the trenches H1 and H6, Stavropoulou-Gatsi & Dietz 2011, 275.

83 Bollen 2011 (the kiln pottery), cat. no. 2, 201, fig. 140.

84 Barfoed 2019.

SIGNE BARFOED

University of Kent

School of European Culture and Languages, Department
of Classical & Archaeological Studies Canterbury,

UK-CT2 7NF Kent

sb711@kentforlife.net / barfoed.sign@gmail.com

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