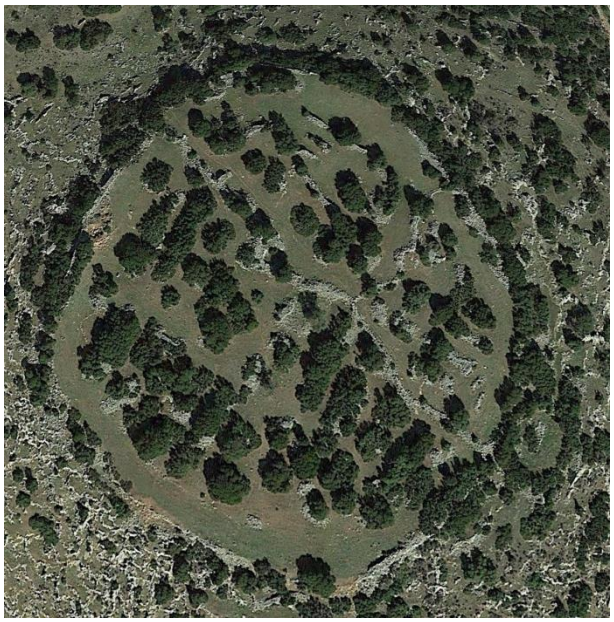
KASTROULI FIELD REPORT:
JULY 20 – AUGUST 3, 2016



Directors:
Thomas E. Levy (University of California, San Diego)
Athanasios Sideris (Thrace Foundation)
Ioannis Liritzis (University of the Aegean)

Field Supervisors:
Matthew D. Howland
Brady Liss

Graduate Students:
Tom Holm

Database Managers (*ArchaeoSTOR)*:
Rose Smith
Carolyn Breeze
Taylor Harman

Student Excavators:
Isaac Daviet
Erik Fleming
Haiming Hu
Andrew Johnson
Don Morley
Alex Perez
Tony Tamberino
Eugene Temlock

Outline

Final Stratigraphy and Loci List

Kastrouli Stratigraphy 2016	
I	Backfill from looting and previous excavations
II	Habitation postdating the tombs (Wall Sections and Wall/Activity Area in Square 7/19)
III	Secondary burial remains within tomb

Final Locus List - Kastrouli 2016

Number	Square	Area	Stratum	Description
100	6/19	A	I	Cleaning and weeding of square.
101	5/19	A	I	Cleaning and weeding of square.
102	6/19	A	I	Delineating southern end of lintel stone.
103	5/21 and 5/22	-	II	Northwestern wall section excavation - wall collapse removal.
104	6/19	A	I	Delineating northern end of lintel stone.
105	5/21 and 5/22	-	II	Northwestern fortification wall section - fill excavation.
106	7/19	A	I	Topsoil excavation in Southwestern corner of square.
107	6/19	A	I	Fill in eastern access hole to tomb in Area A.
108	5/19 and 6/19	A	I	Fill in dromos to tomb in Area A.
109	6/19	A	I	Topsoil and fill in Northeast corner of square.
110	5/19 and 6/19	A	I	Fill in entire dromos and tomb.
111	6/19	A	I	Fill in eastern end of tomb.
112	6/19	A	I	Dense concentration of human remains (possible secondary burial) in eastern end of tomb.
113	7/19	A	I	Topsoil in central area of square.
114	7/19	A	II	Fill possible above a surface.
115	7/19	A	II	Fire pit feature (dark, ashy sediment with worked/fire cracked stones)
116	7/19	A	II	Wall running northeast-southwest.
117	7/19	A	II	Fill in Southwestern corner of square.
118	21/2	-	II	Southern fortification wall section - fill excavation.
119	5/19 and 6/19	A	I	Topsoil and fill in southern half of squares.
120	6/19	A	III	Fill in southern chamber of tomb.
121	6/19	A	III	Dense concentration of human remains (possible secondary burial) in southern chamber of tomb.

Figure List (Figures at end of report)

Loci Photographs (at end of report)

Special Find Photographs (at end of report)

Introduction

Kastrouli (E375419.559, N4250792.352 meters), a small fortified site in the Phokis region of Central Greece (near the modern village of Desphina), was the focus of excavations in the summer of 2016 (July 20 – August 3). The project aimed to fully and systematically excavate the exposed tomb on the site's surface and to section its fortification wall. The site was previously excavated in 2005, but this short project (lasting only a day or two) performed little excavation (more likely just cleaning) to evaluate the condition of tombs at the site that were previously looted as evidenced by their disturbed nature (Raptopoulos 2012: 1074). Based on the brief excavations, the tomb was determined from the architecture to be a small Mycenaean Tholos tomb and it was dated to the Late Helladic IIIB2 from ceramic typology. These were the only excavations at the site to date.

The 2016 excavation season was directed by Thomas E. Levy (University of California, San Diego), Athanasios Sideris (Thrace Foundation), and Ioannis Liritzis (University of the Aegean). Graduate students Matthew D. Howland and Brady Liss (University of California, San Diego) functioned as field supervisors, and a team of undergraduate students from the University of California, San Diego were the primary excavators along with three local workers. In addition, three computer programmers (Rose Smith, Carolyn Breeze, and Taylor Harman) developing the *ArchaeoSTOR* artifact database joined the team to manage and organize all excavated artifacts.

Methodology

Survey

To facilitate high spatial accuracy for all recorded finds, the 2016 excavation season at Kastrouli began by establishing reliable control points throughout the site. Andreas Georgopoulos and Panagiotis Agrafiotis (National Technical University of Athens) headed the project to create a network of nine control points (numbered T1-T9, see Figure 1) which were referenced to the Greek (Hellenic) Geodetic Reference System (GGRS'87 – ΕΓΣΑ'87) (for a full, detailed discussion of the survey project, please see the report written by Georgopoulos and Agrafiotis). The locations for control points were selected based on the need to avoid any perceivable interventions at the archaeological site and to ensure the permanence of their position not only during the measurements but also for the future needs of the work. The nine points were permanently marked with concrete pillars, 0.1m diameter and 10-15cm height, equipped with steel marks to enable centering of the instruments (Total stations, GPS etc.). The coordinates of these locations were collected using a Topcon GPT 3003 total station, and the measurements are provided in Figure 2.

Unfortunately, the control points were not established before the first day of excavation. As such, recording of loci and artifact finds during the excavation were based on two control points established by GPS provided by Grigoris Tsokas (University of Thessaloniki) (Figure 3). These points provided the base control points for the total station/*ArchField* recording for the entire excavation to maintain consistency. However, in checking the accuracy of the coordinates of the GPS control points from the established control points described above, it was discovered that the GPS points were inaccurate by roughly 22 centimeters in the southeast direction. To correct this error, test points were recorded both from the GPS control point and from T1 by total station. By having the same point recorded from both positions, all points and polygons recorded based on the GPS control point could subsequently be shifted in GIS based on the apparent difference.

Excavation

Excavation at the site was based on an arbitrary site grid, consisting of 5m x 5m squares, covering the entire site. Squares were named based on their position in the grid by counting squares in the x and y directions, respectively, and separating these values with a slash (e.g. Square 4/20 is the fourth square east and the 20th square north from the arbitrary origin to the southwest of the site). During the 2016 season, excavation occurred in three areas: Area A, consisting of excavation in Squares 5/19, 6/19, and 7/19, and two small wall section samples in unnamed areas. One sampling of the Northwestern fortification wall of the site occurred in squares 5/21 and 5/22, while a sampling of the southern fortification wall occurred in Square 21/2. Since the tomb stretched across both Square 5/19 and 6/19, no baulk was established between these squares. During excavation in Area A, a 100% sieving strategy was adopted in order to ensure the collection of material culture missed in excavation or smaller finds not immediately apparent (1 cm mesh for loci outside the tomb, and ~3 mm mesh for those within the tomb). All artifact finds and locus boundaries were recorded using a total station (see below for further details).

Spatial/Context Recording and Artifact Collection

Excavations at Kastrouli employed the fully digital archaeological recording system developed by the Edom Lowlands Regional Archaeology Project (ELRAP) directed by Thomas E. Levy and Mohammad Najjar. The ELRAP on-site digital archaeology (OSDA) 3.0 system (Levy et al. 2010) melds together off-the-shelf technologies and custom computer programs/hardware developed specifically for solving archaeology/cultural heritage problems that researchers face worldwide. The current excavation season utilized several aspects of this spatial recording methodology in order to precisely document the coordinates of archaeological remains at the highest possible spatial resolution in three dimensions. Spatial data was collected with a Leica TS02 total station and the data interface software, *ArchField* (developed by Dr. Neil Smith), that provides real-time data recording and review in the field (the total station was connected to a Microsoft Surface with *ArchField* installed). *ArchField* allows the excavators to record and visualize both points and polygons (i.e. artifact finds and loci) in the field, and the relevant data (i.e. locus type, artifact type, etc.) can be immediately provided and databased. In addition, spatial information collected by *ArchField* is easily exported to a Geographic Information Systems (GIS) for further manipulation and analysis (Figure 4). All artifacts collected and recorded with *ArchField* were attributed a unique basket number and barcode to facilitate entry into the *ArchaeoSTOR* artifact database, another custom application allowing for the categorization and sorting of artifacts in the field and in the lab, along with spatial visualization and statistics applications (Gidding et al. 2011). Following field data collection, spatial data linked with artifacts through their basket number/barcode were processed into *ArchaeoSTOR* along with all relevant artifact information (weights, counts, material type, etc.). *ArchaeoSTOR* was recently redeveloped by three undergraduate students from the University of California, San Diego (Rose Smith, Carolyn Breeze, and Taylor Harman) who managed the database and artifact entry in the lab after each day of excavation. Qualitative data regarding archaeological contexts (i.e. loci) was recorded using a Microsoft Access database.

Aerial Photography and Structure from Motion

In addition to the recording of point finds and locus outlines using *ArchField*, the excavation team also adopted an intensive Structure from Motion (SfM) recording campaign in

order to document the site in 3D over the course of excavation. SfM is a software technology allowing for the creation of highly accurate and photorealistic 3D models through photogrammetric techniques. The team adopted a two-part approach to SfM data capture: terrestrial and aerial SfM photography. In both approaches, overlapping photographs encompassing the area of interest are captured with complete coverage to facilitate the construction of a 3D model. For aerial photography, a Canon EOS 50D digital single-lens reflex camera (outfitted with a 18mm lens) is attached by frame to a Kingfisher Aerostat balloon which is walked in overlapping transects over the area of interest. This data collection strategy, an ideal approach to SfM modeling developed through trial-and-error, was sufficient to develop high-quality 3D models on the site and excavation area scale. The same camera equipment was used terrestrially to capture data used for the production of SfM models at an excavation square scale. In both cases of data capture, these models were subsequently georeferenced, facilitating the export of high-resolution orthophotos which serve as an excellent basis for GIS based digitization of architectural features. This strategy was used for the digitization of top plans. Furthermore, SfM was used for section drawing the walls in the dromos and tomb; orthophotos provided a base for digitization within in GIS rather than hand-drawing in the field.

CAVEcam Stereo Photography

Along with SfM, many parts of Kastrouli were documented in 3D using the CAVEcam system (Ainsworth 2012). The CAVEcam is a platform for shooting stereo photography in 360 degrees. The system creates 3D gigapan images by shooting a grid of photographs across an area of interest with two cameras. To do so, it combines a dual-camera image capture system with a GigaPan EPIC Pro Robotic Controller (Ainsworth 2012). The dual-camera system includes two Panasonic LUMIX® GF-1 cameras which provide 12.1 megapixel resolution despite being relatively small for mounting side-by-side in the controller (Ainsworth 2012: 3). By bracketing the cameras next to each other, they collect two sets of images with slightly differing perspectives to provide stereoscopic vision (much like human eyes). The robotic mount affords automated movement for the cameras in 360 degrees horizontally and up to 180 degrees vertically; this is outfitted with an Ainsworth CC-1 Dual-Camera Controller to automatically capture images from both cameras simultaneously. The GigaPan mount can be programmed to accommodate the desired number of images for the location. Together, the dual-cameras and robotic platform create two grids of images (6x12 photos) covering up to 360 degrees from distinct perspectives. These grids of photographs are individually stitched (using the PTGui® Pro software) and displayed to create a single, high-resolution 3D image.

At Kastrouli, CAVEcam photography was captured (by graduate student Tom Holm, University of California, San Diego) at 7 locations of interest around the site (Figure 5). Locations 1 and 2 represent two of the excavations areas during the 2016 season, the northern wall section and the tomb excavations respectively. Location 3 was selected to capture part of the site's fortification wall and the valley in which the site is positioned. Location 4 similarly captured part of the fortification wall, but from an outside perspective, and some of the terracing around the site. Locations 5, 6, and 7 were all selected to image various architectural features around the center of the site.

Stratigraphy and Excavation

The 2016 excavations at Kastrouli are preliminarily divided into three strata. Surface materials and loci clearly disturbed by looting and/or the previous excavations are attributed to

Stratum I. The site's fortification wall is believed to be later in date than the tombs based on its close (potentially cutting) construction to the dromos entrance of the tomb. As such, loci associated with the wall section excavations are assigned Stratum II. In addition, undisturbed loci from square 7/19 (Wall 116, Fill 114, and Ashy-Feature 115) are also attributed to Stratum II as it is likely that they are later in date than the tomb (however, this requires further investigation through ceramic typology or other dating methods). Undisturbed loci from within the tomb itself (Loci 112 and 121) are attributed to Stratum III as they are likely the earliest excavated loci. These loci (112 and 121) are associated with the human remains and seem to be the only undisturbed contexts within the tomb.
Photographs of every locus excavated and mentioned are available at the end of the report in ascending order.

Area A

Squares 5/19 and 6/19 – Tomb Excavation

Stratum I

Stratum I in Squares 5/19 and 6/19 consist of all loci that are considered to have been disturbed by looting, excavation, or by general surface disturbance. These include Loci 100, 101, 102, 104, 107, 108, 109, 110, 111, 119, and 120.

Excavation of Squares 5/19 and 6/19 began with the opening of two general cleaning loci (L100 and L101), which related to the weeding and cleaning of the surface areas of squares 5/19 (L101) and 6/19 (L100) (Figure 6). These loci included the cleaning of some very disturbed fill/topsoil, which was sieved at 100% through 1 cm mesh. Also included in these loci was the cleaning of some disturbed fill inside the tomb.

Following the cleaning of the surface areas of each square and limited cleaning within the tomb, Locus 102 was opened below L100 in order to excavate the area immediately south of the tomb in Square 6/19 and to delineate the southern edge of the largest lintel stone covering the tomb. Excavation in this locus both defined the edge of the large lintel stone, and also cleaned and delineated the stones to the south of the lintel. Locus 104 was subsequently opened below L100 on the north end of the lintel stone in order to delineate its northern edge in Square 6/19. The excavated material was disturbed fill from the looting and previous excavation of the tombs. The locus successfully discovered the edge of the lintel stone, resulting in the complete exposure of the two lintel stones still in place over the top of the dromos and the leveling of fill to a height equivalent to the top course of stones in the walls of the tomb. Excavation in Locus 102 and 104 was ceased at this level to avoid destabilizing the tomb walls.

Locus 107 was a fill locus in Square 6/19 arbitrarily opened below Locus 100, and contemporary with L108. This locus represents excavation in the interior of the tomb within Square 6/19, accessed through the eastern "opening" to the tomb. The aim of the locus was to remove disturbed fill from the tomb while defining the northern and southern interior walls of the tomb. Excavation in this locus discovered some fragments of human remains and a stone spindle whorl. While the *ArchField* polygon for this locus represents only the eastern opening to the tomb, the interior of the tomb opens up into a larger area once inside. In practice, the western boundary of this locus was the eastern edge of the eastern lintel, with the entire interior of the tomb east of that line being considered part of L107, resulting in point finds appearing to be outside the locus. A collapsed lintel stone in the tomb was clarified through excavation in this locus. This stone also served as an informal western boundary of the locus in the tomb. This

large lintel stone was removed and a new locus (110) was opened in order to excavate the entire tomb and dromos as a single locus, resulting in the closing of L107.

Locus 108 was a fill locus in Square 5/19 arbitrarily opened below Locus 101 and contemporary with L107. This locus represented the dromos (western) entrance to the previously looted tomb in Area A. The aim of the locus was to remove disturbed fill from the area of the tomb in Square 5/19 and continue to define the northern and southern walls of the dromos. Excavation in this locus was rapid with large picks and hoes, due to the disturbed nature of the sediment. A conical stone bead was discovered in the sifted material excavated from the locus. This locus was closed after the collapsed lintel stone in the tomb was removed and a new locus (110) was opened in order to excavate the entire tomb and dromos as a single locus.

Locus 109 was opened below L100 and contemporary with L102 and L104 in order to remove the disturbed fill material on top of the lintel support stones around the eastern opening to the tomb. The goal of the locus was to delineate the edges of the lintel support stones (i.e. the top stones in the walls of the tomb, just below where the collapsed lintels would have sat) on the north, east, and south edges of the opening. L109 successfully discovered and defined the exterior edges of the lintel support stones, but it was left open in case excavation should continue. The locus was closed on the final day of the 2016 season.

Locus 110 was originally opened in order to excavate the sediment beneath the collapsed lintel stone (following its removal) within the tomb in square 6/19. Once the sediment immediately beneath the stone was leveled to be consistent with the rest of the tomb (loci 107 and 108), Locus 110 was extended to encompass the entire interior of the tomb and dromos, replacing Loci 107 and 108 and below them. The goal of the locus was to continue to excavate the fill material within the tomb to discover its floor and the founding levels of the walls. During excavation in the locus, a modern safety pin was discovered in the sieve reiterating the disturbed nature of the locus and the tomb. Locus 110 was excavated down to bedrock in the central part of the dromos. At the eastern end of the locus, a vertical slab of worked bedrock was discovered representing the eastern end of the tomb. However, the tomb appeared to have another chamber to the south and Locus 111 was opened in order to further pursue this possibility, at which time Locus 110 was closed.

Locus 111 was arbitrarily opened below L110 in Square 6/19 to excavate fill material in the eastern end of the tomb. The locus was opened beneath locus 110 when vertical, worked bedrock was discovered at the eastern edge of the tomb. The goal of the locus was to excavate the fill down to the floor of the tomb which was presumably bedrock and had been discovered in the dromos. During excavations of the locus, a modern fragment of film was discovered in the sieve reiterating the disturbed nature of the locus and the tomb. The locus was closed when a significant concentration of bone was discovered, a possible secondary burial, which was excavated as Locus 112.

Locus 119 was opened to the south of the eastern access hole to the tomb (Square 6/19) in order to excavate the top soil around the surface of the tomb. While the locus was initially restricted to only the area immediately south of the eastern access, it was subsequently expanded to the south and west, running into Square 5/19. Locus 119 was primarily excavated by three local workers, and it was excavated quickly with large picks. Despite the disturbed nature of the locus, it still yielded significant pottery and a broken Phi-figurine. As the locus was excavated to a lower elevation, many large stones were discovered that are potentially part of the tomb architecture. Two large slabs discovered in the southeast corner of Square 6/19 are possibly lintel stones (similar in size and shape to those associated with the tomb), and one is clearly collapsed

or disturbed by looters as it is tipped on its side. To the west of these large slabs, many smaller stones (ca. 30 cm in diameter) were discovered that are possible architectural collapse from the tomb(s) as well.

Locus 120, the final locus in Area A attributed to Stratum I, was opened to excavate the fill in the southern chamber of the tomb. This chamber was not excavated with the rest of the tomb/dromos and it appeared to be topped with a large, masoned lintel stone and backed by a vertical, flat slab. This initial locus consisted primarily of fill with some pottery and bone fragments. During excavation, a plastic cup was found, likely indicating that this locus was disturbed by looters or the recent excavations. Locus 120 was excavated down to the possible secondary burials within the tomb across its eastern end and southern chamber (opened as Locus 121 and contemporary with Locus 112).

Stratum II

No loci from Square 5/19 and Square 6/19 were assigned to Stratum II as loci in this stratum are in secure contexts that likely postdate the tomb.

Stratum III

The only loci attributed to Stratum III in Square 5/19 and 6/19 are Locus 112 and Locus 121. Moreover, these are the only loci that appeared to be from undisturbed contexts; this is evidenced by the well-preserved conditions of the human remains and the compact sediment in which they were embedded. Locus 112 was opened beneath Locus 111 in the eastern end of the tomb in Area A when a significant concentration of human remains was discovered against the worked bedrock. The goal of the locus was to excavate the bones and associated material culture. The human remains did not appear to be articulated but were significant in number (hundreds of complete bones and fragments). It is possible that these bones represent a secondary burial. This locus focused only on the human remains at the eastern extent of the tomb (against the worked bedrock), but the bones continued to the south into a possible second chamber (Locus 121). The locus was closed when all the bones were removed and the bedrock floor was discovered.

Locus 121 represents the continuation of the bones seen in Locus 112 into the southern chamber of the tomb (below Locus 120). Excavation in this locus uncovered hundreds of human bones (thousands of bone fragments) and many sherds of Mycenaean Stirrup Jars in situ. Excavation in this locus also recovered a spindle whorl, three figurines (Phi- and Psi-figurines), and a fragment of gold (crumpled gold foil) in situ. In addition a bone bead, a possible seal, and three gold fragments (also crumpled gold foil) were recovered from the sieve. The locus was closed on the final day of excavation; the bedrock beneath the locus was fully exposed and all of the human remains were excavated. Top plans and section plans of the fully exposed tomb are shown in Figures 6-9.

Interpretation

Tomb A represented the main focus of excavation during the 2016 field season. All loci in squares 5/19 and 6/19 are grouped into Strata I and III, reflecting a general divide in excavated loci between disturbed and undisturbed contexts, respectively. In the area of the tomb, the potential for disturbance was high given the recent occurrence of looting and limited archaeological excavation. Excavation in all loci now grouped in Stratum I corroborate the likelihood of disturbance, given a lack of clear stratification and the limited density of finds. The presence of two fragments of modern debris (a piece of photographic film and a fragment of a plastic cup), the latter of which was found during excavation, also evidence the disturbed nature of these loci. Loci (112 and 121) classified in Stratum III, however, seem to be undisturbed, based on the density of relatively intact human bones interspersed with relatively large fragments

of diagnostic pottery sherds. L112 and L121, which represent the same ancient context and are separated only for reasons of excavation process, seem to represent a multiple secondary burial, based on the disarticulation of the bones. The comingled bones of multiple individuals and grave goods with no apparent orientation also suggest that multiple burials in the tomb may have been collected and condensed in one part of the tomb in order to clear space for later burials or activities in ancient times. The discovery of gold foil fragments, figurines, and finely decorated ceramics indicate that at least one of the ancient burials would have contained grave goods of fine quality. Diagnostic figurines and Mycenaean Stirrup Jar fragments, along with the tomb architecture also suggest that the tomb was Mycenaean/Late Helladic in date, though verification of this and increasing the precision of the dating depends on subsequent typological and scientific dating.

Square 7/19 – Investigation of Geophysical Survey Results

Stratum I

Square 7/19 was opened to the immediate east of the tomb excavation with the primary goal of exploring a possible subsurface void in the area detected by geophysical survey (by Grigoris Tsokas and his team). Only the southern half of the square was opened for excavation due to the time constraints of the short season (Figure 10). In this square, only Locus 106 and Locus 113 were assigned to Stratum I because they were primarily topsoil. Excavation began in the southwest corner of the square with Locus 106 which was dedicated to excavating the topsoil in this area of the square. The locus was excavated quickly with large picks, and collected material culture consisted mostly of pottery. The top of a large stone was also discovered, but its edges were not fully delineated (it is unclear if this was simply a large stone or a bedrock outcropping). Locus 106 was closed in order to expand excavations to the east (Locus 113, still within the southern half of the square). Locus 113 was a roughly 0.5m x 3.5m trench opened to expand excavation across the east-west length of the square. During excavation, 1-2 rows of ca. 5 stones were discovered resembling a possible wall, and at this time Locus 113 was extended an additional 0.5m to the immediate south. Excavation in this newly expanded portion of locus revealed a continuation to these stones, and it also appeared that this possible wall continued outside the square to the southwest. To the east of the wall feature, excavation in Locus 113 also discovered a possible fire pit feature (Locus 115). With this discovery and the presence of the wall feature (Locus 116), Locus 113 was closed. Material culture collected from the locus included mostly pottery and a highly-fired loom weight.

Stratum II

In Square 7/19, Loci 114, 115, 116 and 117 were assigned to Stratum II. These loci were attributed to Stratum II based on their assumed later date than the tomb, but their undisturbed contexts would be inappropriate to include in Stratum I. Locus 116 represents the wall feature described above which included 1-2 rows and 1-2 courses of unworked stones. Locus 115 encompassed the fire pit feature (to the east of Wall 116) based on the presence of dark, ashy sediment and unique, possibly worked, stones. Locus 114 was opened in the immediate area around the burn feature and up to Wall 116. The area to the west of Wall 116 (and below Locus 106) was assigned Locus 117. Excavation focused in Locus 115 where some in situ pottery was collected (a possible cup base - Basket 20079) and the possible worked stones around the fire pit feature were excavated (Basket 20086-20088). These stones also appeared to be fire-cracked reiterating the possible presence of significant heat (the over-fired loom weight from Locus 113 also supports this understanding). Locus 115 was closed with the bottom of the ashy sediment, at

which time Locus 114 was excavated to a similar elevation. Locus 114 was closed once level with Locus 115. The excavations in Locus 117 west of the wall continued until the closing of the square, but it was unable to delineate the large stone originally discovered in Locus 106. The square and all associated loci were closed on 29 July in order to focus all excavations within the tomb. The square was covered with a thick plastic sheet and backfilled for protection during the off-season.

Interpretation

Despite the limited excavation in Square 7/19, it is possible that the wall and interior of a structure were partially excavated. While only a small part of the wall (Locus 116) was excavated, it appeared to be in line with several large stones to the southwest of the square suggesting both the wall and possible structure continued in that direction. Loci excavated to the immediate east of the wall were consistent with a possible habitation or activity area i.e. the interior of the structure. Locus 115 yielded a potential fire pit and the in situ pottery and loom weight from Loci 115 and 113 respectively reiterate the possibility of an activity area. In contrast, excavations to the immediate west of Wall 116 in Locus 117 only discovered some pottery and the presence of a large stone or bedrock outcrop; perhaps this area represents the exterior of the structure. However, due to the limited size of the excavation in Square 7/19, these conclusions remain highly speculative, but should be further pursued in the future.

Fortification Wall Section Excavations

Squares 5/21 and 5/22

Stratum II

The two wall section excavation (Square 5/21 and 5/22 and Square 21/2) attempted to discover the founding levels of the fortification wall that surrounds the site to facilitate its dating. Both wall section excavations (Loci 103, 105, and 118) were attributed to Stratum II based on the hypothesis that the wall postdates the tomb. The excavation in Squares 5/21 and 5/22 focused on a northwest section of the wall where there appeared to be two phases of construction. The earlier phase consisted of 2-3 courses of large, unhewn stones (50+ centimeters in diameter), while the later phase was constructed of smaller field stones of 5-6 courses (using the earlier wall as a foundation). It was assumed that the earlier, larger construction can be attributed to the Mycenaean occupation at the site, and excavations intended to address this hypothesis. Excavation focused on the exterior side of the wall where much of its construction was visible. Two loci were opened during excavation: Wall Collapse Locus 103 and Fill Locus 105. Locus 103 was dedicated only to removing the wall collapse (no excavation or material culture collected), and it was immediately closed once all stones were cleared. Locus 105 was dedicated to excavating the fill abutting the wall to reveal its lowest courses. The locus revealed one additional course of large stones before discovering its foundations directly on the local bedrock. In addition, pottery was discovered within the bottom course of the wall (Basket 20008), thus providing a secure dating method for its construction. After the bedrock foundation was discovered, Locus 105 was closed with all excavation in this area. For future analysis, samples for optically stimulated luminescence (OSL) were collected by Ioannis Liritzis to date the construction of the wall.

Square 21/2

Stratum II

Excavation in Square 21/2 occurred on the exterior edge of the fortification wall at the southern end of the site, and was assigned Locus 118 (Stratum II). The goal of the locus was to discover

the founding levels of the site's fortification wall to facilitate its dating. Excavation in this area uncovered stones likely collapsed from the wall embedded in a fine grayish brown fill. These presumably collapsed stones were not removed with excavation. As with the wall section excavated in the northwest, the wall was discovered to be constructed directly on bedrock, which was exposed at the western edge of the locus. The exposed wall consists of 5 courses of large (ca. 50 cm diameter) stones, with smaller stones placed into the gaps between the large stones. This wall appears to have been constructed in one phase. Excavation did not continue in this area and Locus 118 was closed following the exposing of bedrock in the western edge of the locus. As with the northwestern wall section, samples for OSL were collected by Ioannis Liritzis to date the construction of the wall.

Interpretation

The excavations at each wall section achieved the goal of discovering the founding levels of the site's fortification wall. In both cases, the wall constructed of large stones was constructed directly on the local bedrock. Post-excavation analysis will be critical in facilitating the dating of the walls. Both the ceramic typology from the pottery collected from Locus 105 and the OSL analysis will be critical in this investigation.

Conclusion

The 2016 excavation at Kastrouli was successful in achieving the goals of its research design. The exposed tomb in Area A was fully and systematically excavated down to its bedrock surface. All remaining material culture and human remains (following the looting and previous excavations) were excavated and will be critical in interpreting and dating the tomb. In addition, the site's large fortification wall was sectioned in two areas finding the foundations of its construction directly on the local bedrock. These excavations facilitated the collections of OSL samples which will be essential in providing an absolute date for the construction of the wall.

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Figures

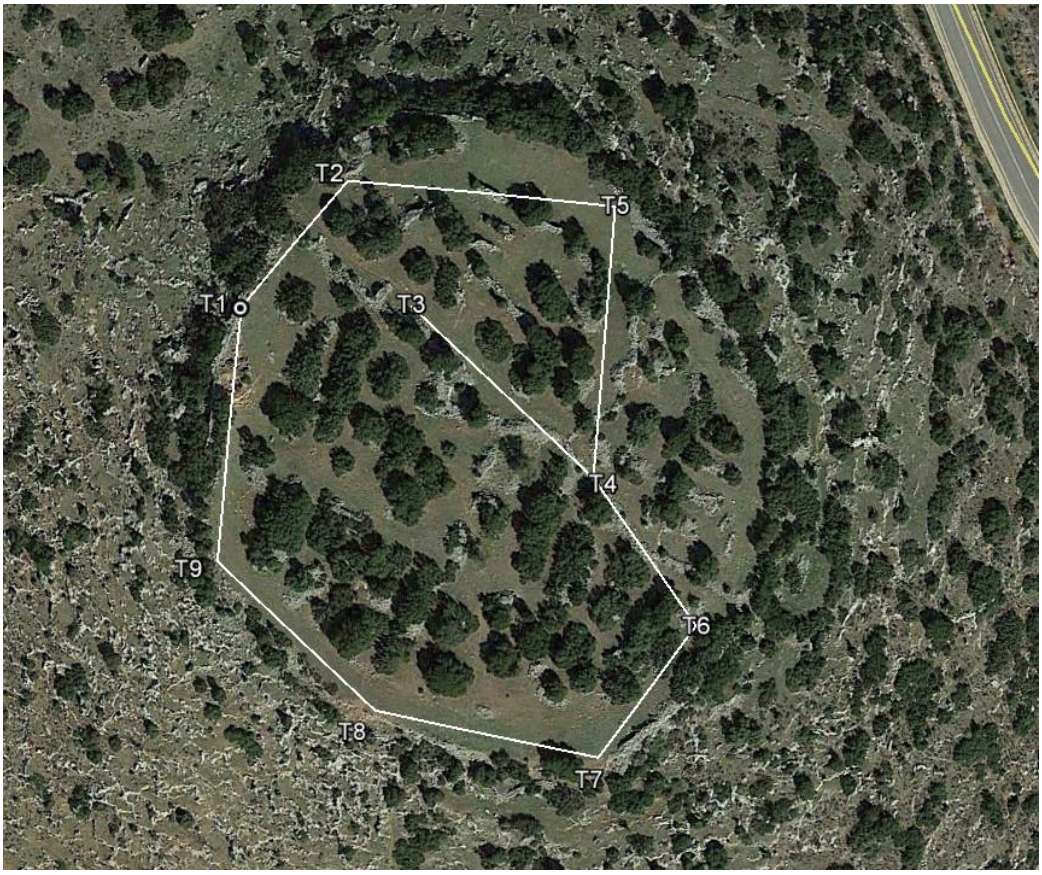

Figure 1: Map of control point network at Kastrouli (T1-T9) provided by Andreas Georgopoulos and Panagiotis Agrafiotis

Kastrouli Control Point Coordinates (m)				Standard Error σ0 (m)		
Point Name	**Easting**	**Northing**	**Elevation**	**Easting**	**Northing**	**Elevation**
T1	375359.215	4250816.72	547.578	0.002	0.003	0.008
T2	375385.464	4250846.394	548.052	0.003	0.003	0.008
T3	375400.279	4250816.125	549.36	0.004	0.003	0.013
T4	375443.318	4250774.422	547.775	0.002	0.002	0.007
T5	375449.559	4250839.396	547.394	0.003	0.003	0.008
T6	375467.651	4250738.371	544.375	0.003	0.002	0.006
T7	375443.609	4250706.277	542.125	0.003	0.001	0.006
T8	375389.142	4250718.491	542.08	0.002	0.001	0.006
T9	375351.359	4250755.546	543.048	0.002	0.002	0.007

Figure 2: Table of control point (T1-T9) coordinates provided by Andreas Georgopoulos and Panagiotis Agrafiotis

Kastrouli GPS Point Coordinates (m)			
Point Name	**Easting**	**Northing**	**Elevation**
d1	375364.1344	4250804.235	547.87001
d2	375372.1963	4250809.271	548.24936

Figure 3: Table of GPS points provided by Grigoris Tsokas used for recording artifact and loci locations

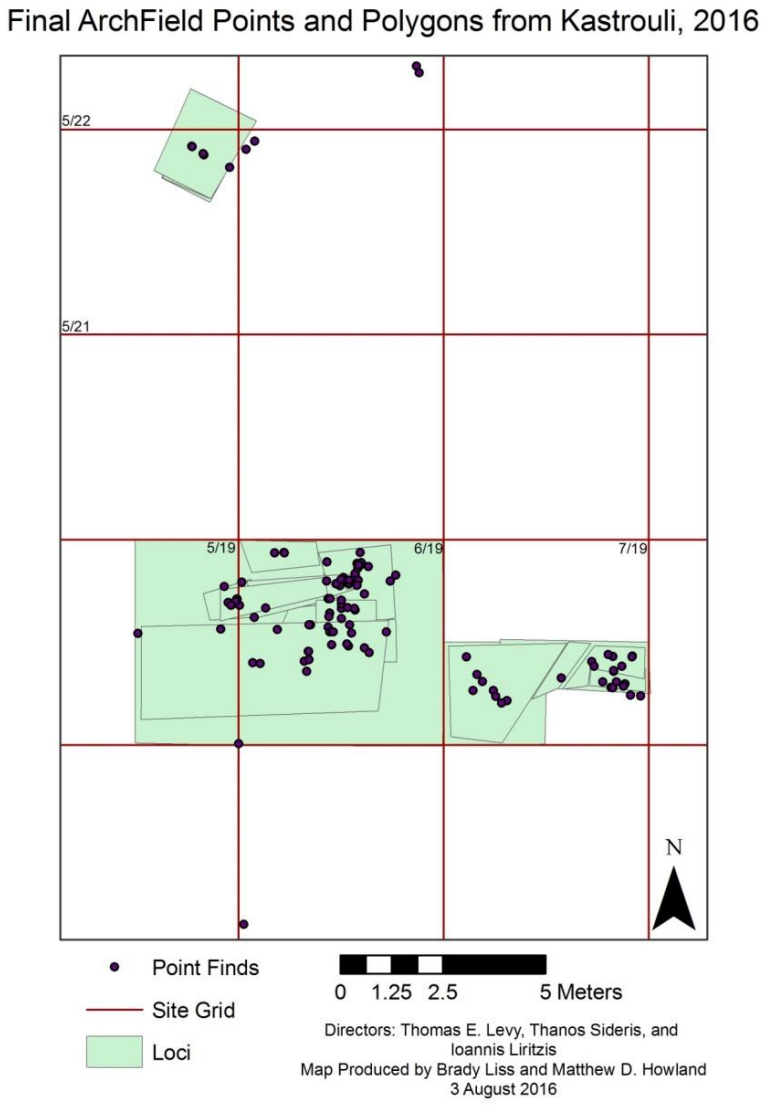

Figure 4: Final export of all *ArchField* points and polygons

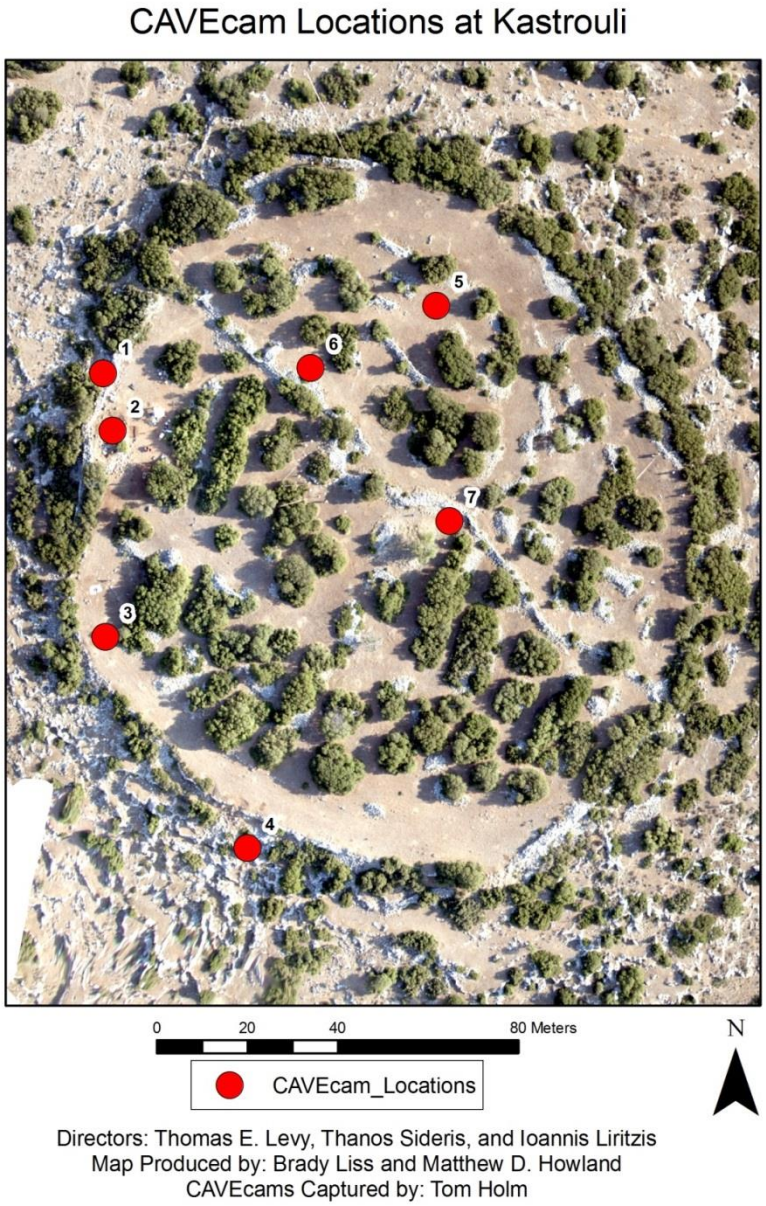

Figure 5: Locations of CAVEcam imagery around Kastrouli

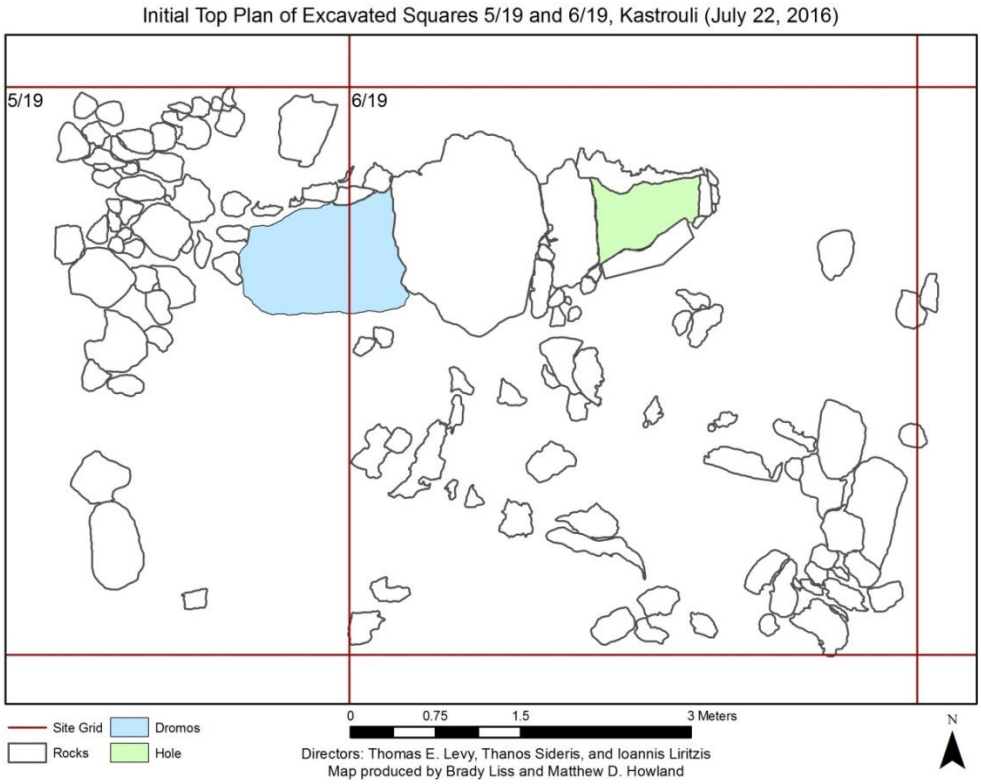

Figure 6: Top plan from the beginning of excavation in Squares 5/19 and 6/19 at Kastrouli

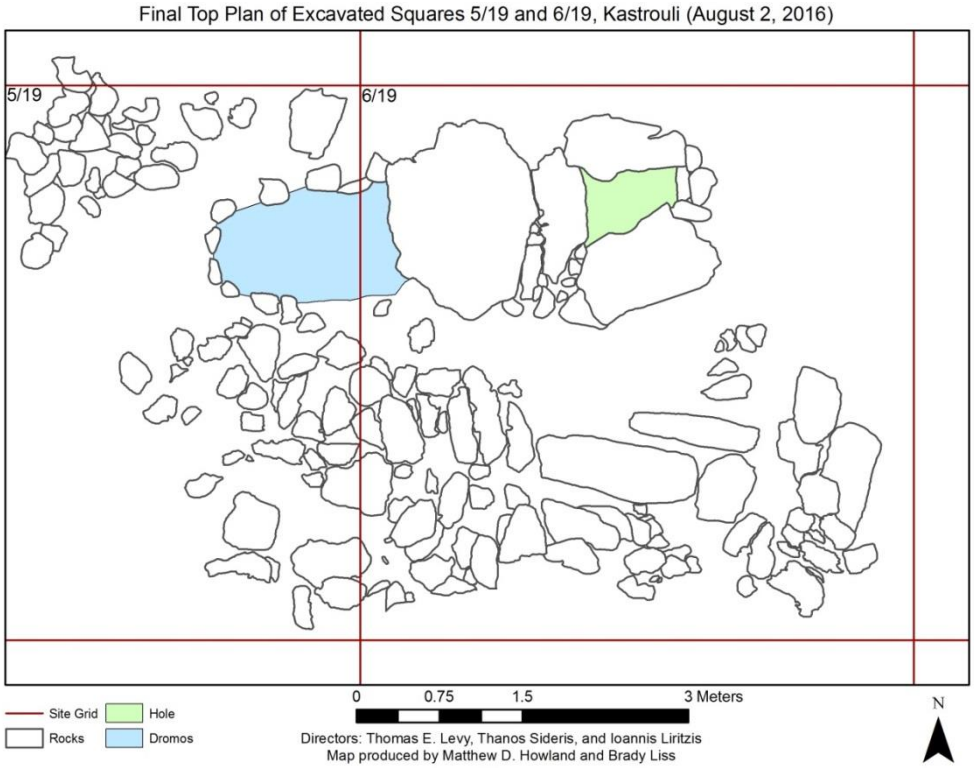

Figure 7: Final top plan from the last day of excavation in Squares 5/19 and 6/19 at Kastrouli

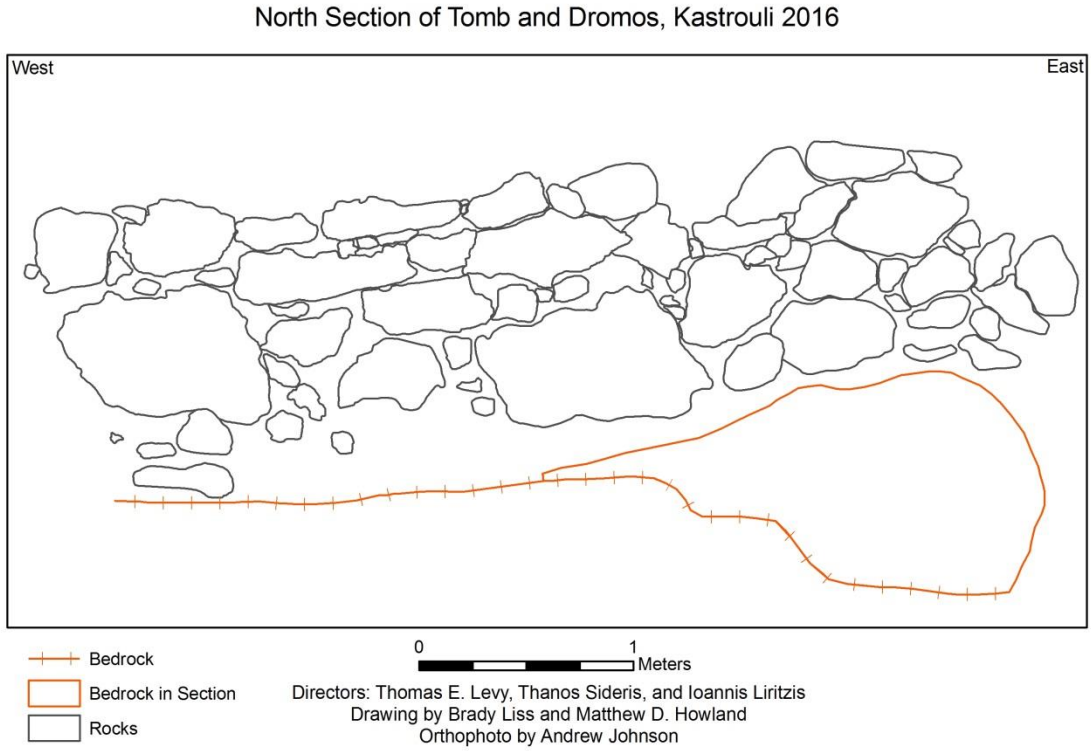

Figure 8: Northern section drawing of tomb and dromos.

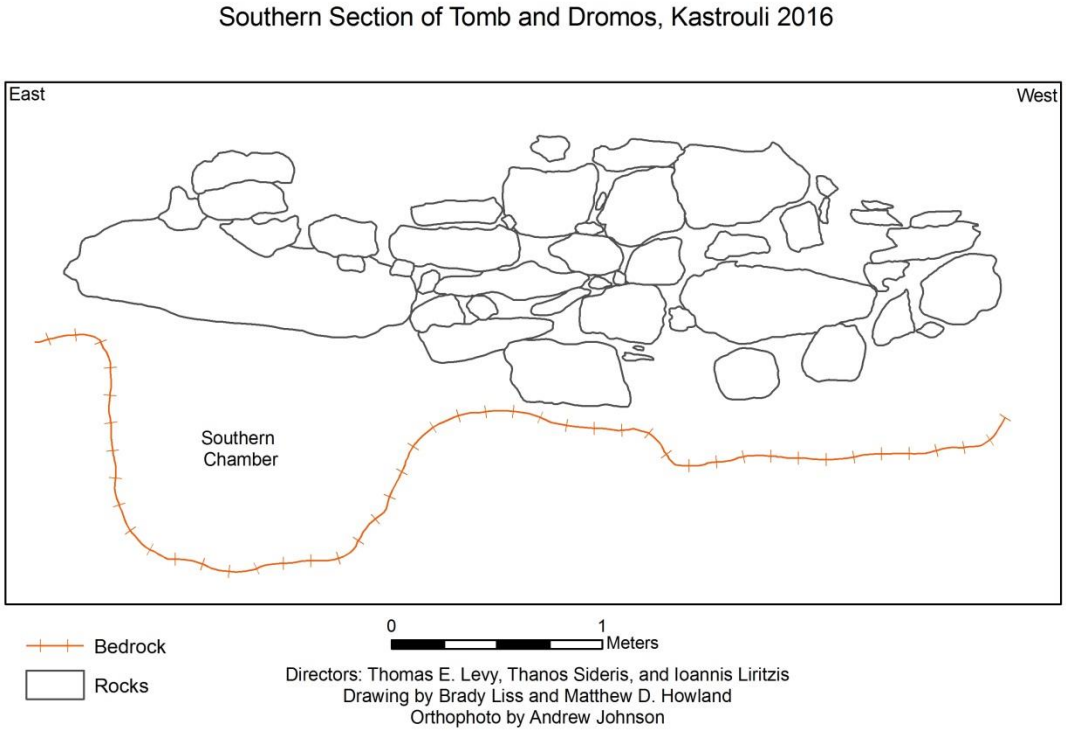

Figure 9: Southern section drawing of tomb and dromos.

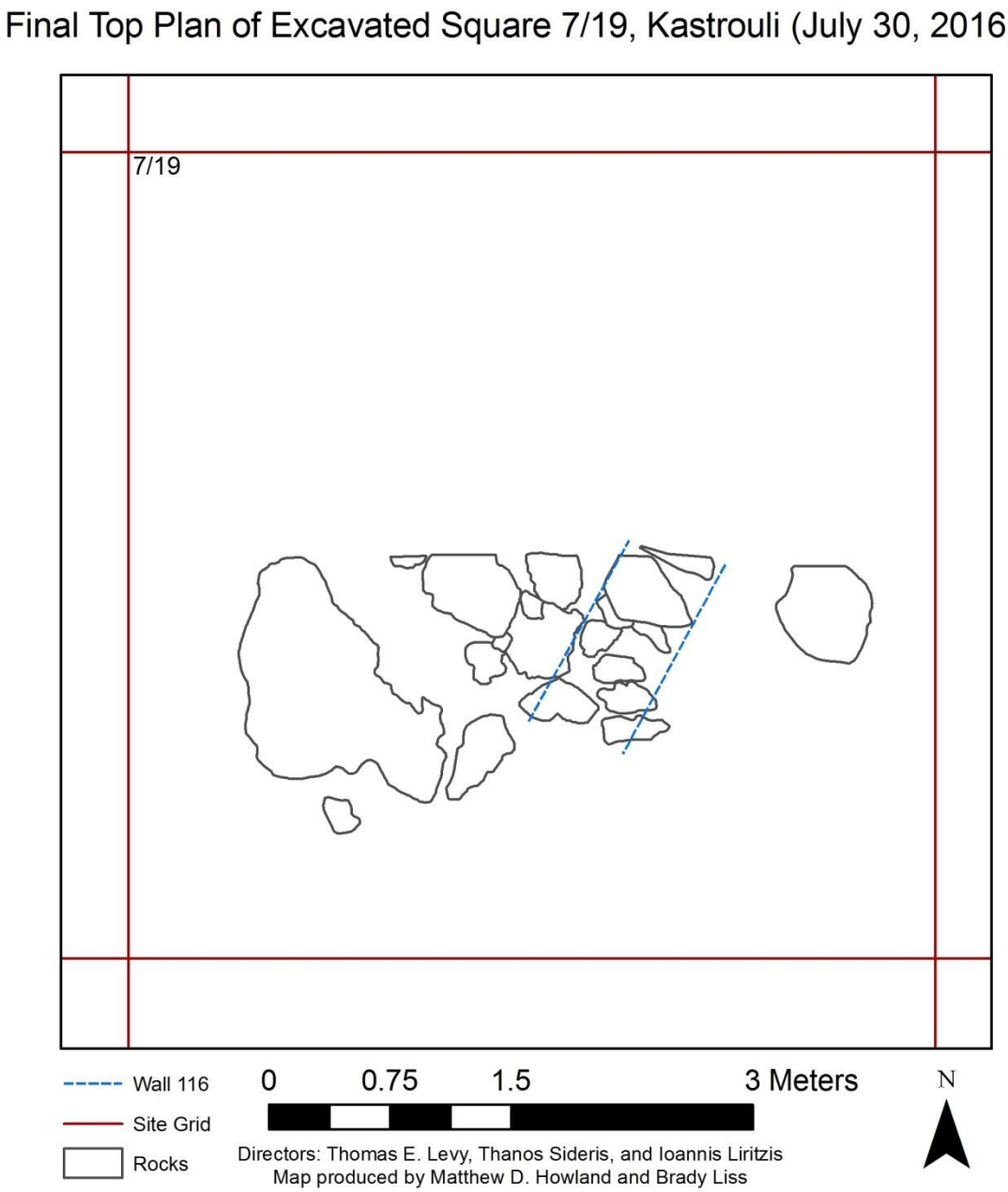

Figure 10: Final top plan from the last day of excavation in Square 7/19 at Kastrouli

Loci Photographs

Figure 11: Locus 100 - Cleaning locus of Square 5/19 and Locus 101 - Cleaning locus of Square 6/19

Figure 12: Locus 102 - Excavating southern end of lintel stone and Locus 104 - Excavating northern end of lintel stone

Figure 13: Locus 103 - Removing wall collapse at northwest wall section excavation and Locus 105 - Excavating fill at northwestern wall section

Figure 14: Locus 106 - Excavating topsoil in south western corner of Square 7/19

Figure 15: Locus 107 - Excavating in eastern access hole to tomb in Square 6/19

Figure 16: Locus 108 - Excavating in dromos in Square 5/19

Figure 17: Locus 109 - Excavating around eastern access hole to reveal lintel supports in Square 6/19

Figure 18: Locus 110 - Excavating across dromos and tomb in Square 5/19 and 6/19

Figure 19: Locus 111 - Excavating in eastern end of tomb in Square 6/19

Figure 20: Locus 112 - Dense collection of human remains, possible secondary burial, in Square 6/19

Figure 21: Locus 113 - Expanded excavations in Square 7/19 to the east

Figure 22: Locus 114 - Excavating to the east of Wall 116, possible structure interior in Square 7/19

Figure 23: Locus 115 - Excavation of possible fire pit feature in Square 7/19

Figure 24: Locus 116 - Wall feature in Square 7/19

Figure 25: Locus 117 - Excavating to the west of Wall 116 in Square 7/19

Figure 26: Locus 118 - Excavating southern wall section in Square 21/2

Figure 27: Locus 119 - Excavating fill to the south of the tomb in Squares 5/19 and 6/19

Figure 28: Locus 120 - Excavating fill (disturbed by looters) in the tomb in Square 6/19

Figure 29: Locus 121 - Dense collection of human remains, probably secondary burial, in Square 6/19

Special Find Photographs

Figure 30: Mycenaean stirrup jar sherds found in association with human remains in Locus 121, Square 6/19

Figure 31: Psi-figurine found in association with human remains in Locus 121, Square 6/19

Figure 32: Gold fragment (crumpled foil) found from sieve of Locus 121, Square 6/19